Labour of Love

A review of patent cases in 2023

February 2024

GOWLING WLG

CONTENTS

Page

A Labour of Love

Annual review of patent cases – 2023

1 INTRODUCTION

"I knew when I set myself the task of analysing recent trends in patent litigation that I had undertaken a task of Herculean proportions."

With those words I opened the first of these annual reviews way back in the 1990s. Back in those days the judges exercised commendable brevity in their judgments, and the process of reviewing was a mere shadow of the task now involved. Of course, back then I did not have the invaluable service of Ailsa Carter, who spends so much time sorting and summarising all the cases. I am massively in her debt.

Last year I summarised this paper by sending up a flare – a warning that at precisely the moment when the UK courts most needed to be perceived as genuinely competitive with the new Unified Patents Court, some worrying traits had evolved that might damage that perception.

I identified three things in particular –

- the unwillingness of the courts to grant interim relief in patent cases, as particularly demonstrated in the *Neurim* litigation

- the confusion underlying principles relating to insufficiency arising from some inconsistent judgments at the highest level

- the significant delays in the handing down of judgments, extending beyond 12 months in some cases.

What progress, if any, have we seen on these issues, and how do we perceive the threat from the UPC? We do not yet have any trial outcomes from the UPC, but there have been a lot of applications and hearings already, and it is fair to say that the early signs are very positive.

The cost of litigation in the UK has always been a major issue and certainly represents a significant threat to our competitiveness. Do we have any good news on this point?

I will adopt the usual format – construction, infringement, defences, remedies, validity and procedure in roughly that order.

2 INFRINGEMENT

a) Construction

General principles on claim construction

A fitting place to begin our discussion of the patent case law in 2023 is with the first judgment addressing validity and/or infringement given by Charlotte May KC, sitting as a deputy judge in ***Ensygnia v Shell* (26 June 2023)**[1]. The judgment marks an impressive start to a career in the judiciary.

Ensygnia's patent was to an information security method/system. Ensygnia alleged that it was infringed by Shell's use of a mobile payment system; Shell challenged the validity of the patent. An interesting feature of the dispute was that a post-grant amendment had been made to the language of the description in the patent. The amendment was relevant to the construction of the claim language, with important consequences for the outcome of the dispute.

On the principles governing the construction (meaning / interpretation) of a patent claim, Charlotte May KC noted the parties' referral to *Saab Seaeye v Atlas Elektronic*[2] (which cited *Virgin Atlantic v Premium Aircraft*[3]) for its summary of the main principles of construction, these being ([114]):

> "(i) The first overarching principle is that contained in Article 69 of the European Patent Convention.
>
> (ii) Article 69 says that the extent of protection is determined by the claims. It goes on to say that the description and drawings shall be used to interpret the claims. In short the claims are to be construed in context.
>
> (iii) It follows that the claims are to be construed purposively - the inventor's purpose being ascertained from the description and drawings.
>
> (iv) It further follows that the claims must not be construed as if they stood alone - the drawings and description only being used to resolve any ambiguity. Purpose is vital to the construction of claims.
>
> (v) When ascertaining the inventor's purpose, it must be remembered that he may have several purposes depending on the level of generality of his invention. Typically, for instance, an inventor may have one, generally more than one, specific embodiment as well as a generalised concept. But there is no presumption that the patentee necessarily intended the widest possible meaning consistent with his purpose be given to the words that he used: purpose and meaning are different.
>
> (vi) Thus purpose is not the be-all and end-all. One is still at the end of the day concerned with the meaning of the language used. Hence the other extreme of the Protocol - a mere

[1] *Ensygnia IP Limited v Shell Oil Products Limited & Ors* [2023] EWHC 1495 (Pat) (26 June 2023) Charlotte May KC

[2] *Saab Seaeye Ltd v Atlas Elektronik GmbH* [2017] EWCA Civ 2175

[3] *Virgin Atlantic Airways Limited v Premium Aircraft Interiors UK Limited* [2010] RPC 8

guideline - is also ruled out by Article 69 itself. It is the terms of the claims which delineate the patentee's territory.

(vii) It follows that if the patentee has included what is obviously a deliberate limitation in his claims, it must have a meaning. One cannot disregard obviously intentional elements.

(viii) It also follows that where a patentee has used a word or phrase which, acontextually, might have a particular meaning (narrow or wide) it does not necessarily have that meaning in context.

(ix) It further follows that there is no general 'doctrine of equivalents'.

(x) On the other hand purposive construction can lead to the conclusion that a technically trivial or minor difference between an element of a claim and the corresponding element of the alleged infringement nonetheless falls within the meaning of the element when read purposively. This is not because there is a doctrine of equivalents: it is because that is the fair way to read the claim in context.

(xi) Finally purposive construction leads one to eschew the kind of meticulous verbal analysis which lawyers are too often tempted by their training to indulge."

(Note that in *Saab Seaeye*, Floyd LJ then added ([19]):

"Sub-paragraph (ix) must now be read in the light of the Supreme Court's judgment in *Actavis v Lilly* [2017] UKSC 48, which explains that, at least when considering the scope of protection, there is now a second question, to be asked after the patent claim has been interpreted, which is designed to take account of equivalents. ")

Charlotte May KC then focused in on the three considerations identified by Arnold LJ as key, earlier in the year, in ***InterDigital v Lenovo* (9 February 2023)**[4]. These were ([81]):

"…always….first, the wording of the relevant integer of the claim, secondly, the context provided by the specification, and thirdly, the inventor's purpose".

Charlotte May KC noted too the reasoning of Meade J in two recent judgments (*ADD2 v dSpace*[5] and *Promptu v Sky*[6]) to the effect that ([116]):

"…a patentee is likely to have a generalised concept in mind for his or her invention and the claims are not presumed to be limited to the preferred embodiment(s), particularly if general language is used in the claims".

She rejected a submission from Shell that embodiments of Ensygnia's patent that were expressly stated to be outside the scope of the claims were not relevant to construction and so should be ignored for the

[4] *Interdigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWCA Civ 105 (9 February 2023) Lewison, Asplin & Arnold LLJ

[5] *Add2 Research and Development Ltd v dSPACE Digital Signal Processing & Control Engineering GmbH* [2021] EWHC 1630 (Pat)

[6] *Promptu Systems Corp v Sky UK Ltd* [2021] EWHC 2021 (Pat)

purposes of determining what the claim meant. In this context, Charlotte May KC noted the Supreme Court's judgment in *Wood v Capita*[7], where Lord Hodge said ([118]):

> "10. The court's task is to ascertain the objective meaning of the language which the parties have chosen to express their agreement. It has long been accepted that this is not a literalist exercise focused solely on a parsing of the wording of the particular clause but that the court must consider the contract as a whole and, depending on the nature, formality and quality of drafting of the contract, give more or less weight to elements of the wider context in reaching its view as to that objective meaning. …"

Wood v Capita was a case about contractual interpretation, not a patent dispute, but the principles expressed by the Supreme Court in that case were drawn upon by Lord Neuberger in his seminal judgment in *Actavis v Eli Lilly*[8] explaining the need for a "normal interpretation" of patent claim language (in the context of an assessment of infringement). The construction of a patent claim is to be determined through the eyes of the skilled person and is based on what he/she would understand the words of the claim to mean, as emphasised by Lord Hoffmann in *Kirin-Amgen v TKT*[9]. Charlotte May KC said that, therefore, to ignore embodiments that were expressly excluded from the invention as claimed when interpreting the claim language would be contrary principles (ii) to (iv) from *Virgin* (noted above), which require construction of the claims in the context of the description as a whole. It would also be contrary to "common sense".

Charlotte May KC also said that she bore in mind the limited role that expert evidence can play on a question of construction ([124]):

> "Beyond evidence relating to terms of art, construction is a matter for the court and not the experts: see *Qualcomm v Nokia* [2008] EWHC 329 per Floyd J (as he then was) at [9]-[10]."

Claim 1 of Ensygnia's patent (as amended into the C specification) was in the following terms ([122]):

> A method comprising:
>
> a portable device:
>
> > obtaining a graphical encoded information item which is displayed on a display of a computing apparatus, wherein **the computing apparatus comprises the display and an electronic apparatus**, and **wherein the display is a sign**;
> >
> > decoding the encoded information from the encoded information item; and
> >
> > transmitting a **first message** to first server apparatus, the first message including the decoded information and a first identifier identifying the device or a user of the device, wherein the decoded information includes an apparatus identification information item for allowing identification of the computing apparatus,
> >
> > the first server apparatus,

[7] *Wood v Capita Insurance Services Limited* [2017] UKSC 24

[8] *Actavis UK Limited & Ors v Eli Lilly and Company* [2017] UKSC 48

[9] *Kirin-Amgen Inc & Ors v Hoechst Marion Roussel & Ors* [2004] UKHL 46

receiving the first message from the device;

establishing the identity of the user of the device, where establishing the identity of the user comprises using the first identifier to determine if the user is registered with the first server apparatus;

in response to establishing the identity of the user, authorising the user to access a service; and

using the apparatus identification information item to transmit a signal to the electronic apparatus, and

the electronic apparatus providing the service to the user.

The key issue on construction, impacting multiple disputes in the case, was whether the "display" in claim 1 meant an electronic display. (Shell argued that an electronic display was covered, Ensygnia argued that an electronic display was not covered). The first two terms in dispute were considered together because they formed part of the same integer.

Charlotte May KC explained that it was clear from the language of the integer that the display was a part of the computing apparatus; it might or might not be physically distinct or separate from the electronic apparatus of which the computing system was also comprised. The term "computing apparatus" was not a term of art. It was intended to encompass any kind of apparatus that had computing functionality. Hence the skilled person would not understand the term "display" to be limited to a computer monitor or a conventional computer display. The natural reading of the language "graphical encoded information item…is displayed on a display of a computing apparatus", on its face, was that the display was an electronic display which was capable of displaying the encoded information item. The wording that followed ("wherein the computing apparatus comprises the display and an electronic apparatus") would not be understood to indicate that the display was not electronic.

Charlotte May KC then broadened her consideration to the context provided by the specification, in particular a key passage on page 22 of the specification. In the context of a building security embodiment exemplified by reference to an electronic door lock, in which the user used their mobile phone to scan the graphical object (GO), the passage stated:

> "In such an embodiment, the computing apparatus 10 may comprise an electronic door lock. The encoded information item 112, 312, such as a GO as described above, may be displayed on a sign geographically proximate to the electronic door lock. **In embodiments outside the scope of the claims, the GO 112, 312 may be provided on an electronic display geographically proximate to the electronic door lock. In such embodiments, the encoded information item may be periodically updated following receipt of signals from the first server apparatus 14."**

This, explained the judge, pointed towards the display of the claim not being electronic. In particular, from the third sentence, a sign provided on an electronic display geographically proximate to the electronic door lock was expressly outside the scope of the claim. Therefore, whatever "sign" meant, it did not mean an electronic display. Further, the last sentence of the passage was limited to the embodiments expressed as being outside the scope of the claims - that was the normal way to read the language.

Different parts of the patent's teaching appeared to be in direct conflict. But while some of the teaching was clearly directed at (and in some cases limited to) an electronic display, and this was the more natural reading of the claim language in isolation, the key passage on p.22 could not be ignored. It was the only passage that shed any light on what "sign" meant, and it provided important context against which the claim was to be read and understood. Charlotte May KC continued ([153]):

> "The passage says expressly that the GO may be displayed on a sign but that an electronic display is outside the scope of the claim. The only way to make sense of this teaching is that the patentee intended a sign within the meaning of the claim to be something which is not an electronic display. Moreover, since the option for periodic updating in the context of this passage only relates to the electronic display (as I have explained …), the skilled reader will understand that the sign is not electronic and does not change between transactions.
>
> …To resolve construction in favour of either party effectively requires the skilled reader to ignore the teaching that the other party relies on. However, I consider that the Claimant's construction is consistent with *Virgin* principles (v) - (vii). In particular, since the patentee has deliberately limited the claim to a display on a sign, this limitation cannot be disregarded even though it conflicts with some of the teaching of the Patent and does not provide all the advantages of the invention that an electronic display would bring…"

The corollary of this construction was that a sign which could be updated was necessarily electronic (as Ensygnia accepted in closing), impacting the arguments on added matter and extension of protection.

Purposive construction in action

Another interesting look at construction in 2023 may be found in ***AutoStore v Ocado*** **(30 March 2023)[10],** a judgment of HHJ Hacon sitting as a judge in the Patents Court.

AutoStore asserted two patents concerning automated storage and retrieval of containers. One claimed a remotely operated vehicle for picking up storage bins from a storage system (EP 794), the other claimed a system comprising a remotely operated vehicle (EP 027). Judge Hacon did not set out the key authorities that he drew upon in the form of a neatly quotable chunk of reasoning, but his analysis illustrates the process of applying such principles in the course of undertaking a purposive/normal construction of the claim language, interweaving discussion of them.

For example, one issue was the meaning of "vehicle body" in the following EP 794 claim language ([52]):

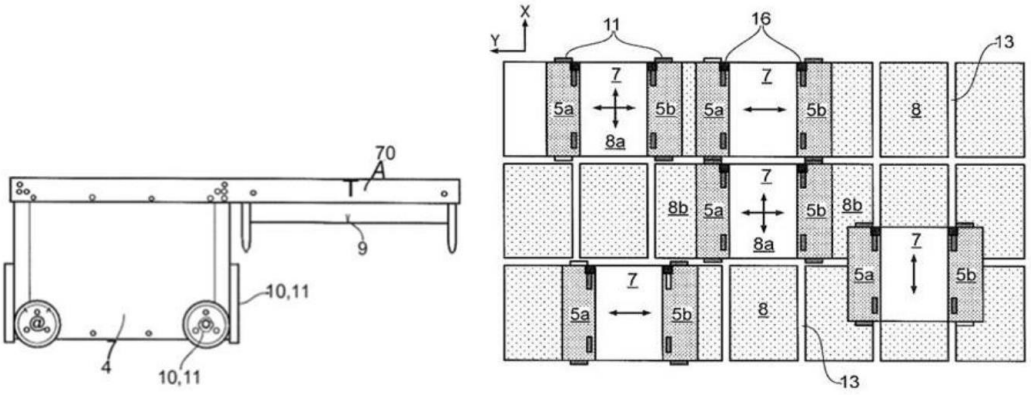
> "1. Remotely operated vehicle for picking up storage bins from a storage system, comprising a **vehicle body** comprising a first section for storing **vehicle driving means** and a second section for receiving any storage bin stored in a storage column within the storage system, a vehicle lifting device at least indirectly connected to the **vehicle body** for lifting the storage bin into the second section, a first set of vehicle rolling means connected to the **vehicle body** allowing movement of the vehicle along a first direction (X) within the storage system during use and a second set of vehicle rolling means connected to the **vehicle body** allowing movement of the vehicle along a second direction (Y) in the storage system during use, the second direction (Y) being perpendicular to the first direction (X),

[10] *Autostore Technology AS v Ocado Group plc & Ors* [2023] EWHC 716 (Pat) (30 March 2023) HHJ Hacon

characterized in that

the second section comprising a centrally arranged cavity within the **vehicle body**, the cavity having at least one bin receiving opening facing towards the storage columns during use, and at least one of the sets of vehicle rolling means is arranged **fully within the vehicle body**."

Illustrated embodiments within the specification included the following:



One issue on construction was, did the "vehicle body" include the lifting device, the wheels and/or the outer casing?

Judge Hacon said that as neither side suggested "vehicle body" was a term of art, the court was not much assisted by expert evidence as to its meaning.

The specification of EP 794 told the reader what the term "vehicle body" meant in paragraph [0002]:

> "The inventive vehicle or robot **comprises** a vehicle body, which vehicle body further comprises a first section for storing vehicle driving means and a second section for receiving any storage bin stored in a storage column within the storage system, a vehicle lifting device which is at least indirectly **connected** to the vehicle body … , a first set of vehicle rolling means **connected** to the vehicle body … and a second set of vehicle rolling means **connected** to the vehicle body …"

Conventional use of the word "comprises" would allow for the possibility of the vehicle body consisting of something more. AutoStore submitted that if something was connected to the vehicle body it could, depending on context, become part of the vehicle body (and this applied to the vehicle lifting device and the wheels). But the judge said ([56]):

> "Possibly, but not in this instance. That would not be the usual interpretation of “connected to” as a matter of ordinary English and there is nothing in the specification to suggest that an unusual meaning is intended. I think that the reader would infer that neither the lifting device nor the two sets of rolling means is part of the vehicle body."

In respect of the outer casing, Autostore relied upon the (fairly vague) reference numbering in the figures. Judge Hacon said ([57]):

"…**reference numerals are not to be used in the construction of a claim**. In an instance of construction having some similarity with the present one, the Court of Appeal said this in *Jarden Consumer Solutions (Europe) Ltd v SEB SA* [2014] EWCA Civ 1629:

> "[33] The judge was, therefore, in my judgment, allowing the numerals themselves to influence the construction of the claim in violation of Jacob L.J.'s primary injunction in [17] of [*Virgin Atlantic Airways Ltd v Premium Aircraft Interiors UK Ltd* [2009] EWCA Civ 1062]. This was not a use of numerals simply to identify the parts of the patented device, or, to use Jacob L.J.'s analogy, to enable the reader to get the map the right way up. It was the use of numerals to direct the skilled reader to which parts of the patented device were to be read in the claims as being included when a particular term was used. ..." ".

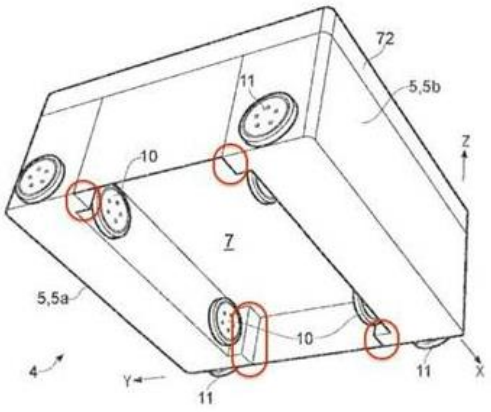
Judge Hacon's view was that a passage in the description clearly implied that an enclosing cover, or outer casing, was not part of the vehicle body. Consequently ([62]):

> "In my view the "vehicle body" is what paragraph [0002] says it is: the two sections referred to in that paragraph and elsewhere, no more than that. It does not include the lifting device, the wheels or the outer casing. This is the vehicle body of the robot and therefore the two sections are defined by structural elements of the robot."

Another issue on construction was, did "fully within the vehicle body" mean that one set of "rolling means" had to be positioned so that no part of it was located exterior to the vehicle body? The issue went to infringement.

The words "fully within the vehicle body", at face value, meant one set of rolling means needed to be positioned so that no part of it was located exterior to the vehicle body. But the construction needed was the purposive construction. To consider the purposive meaning of the words, Judge Hacon explained the teaching in the specification as to the advantages of having one set of wheels fully within the body, and the expert evidence on the subject. The specification taught that the arrangement provided additional stability during the lifting process because the rolling means were situated closer to the storage bin to be lifted, and that it was more space efficient than the prior art. The experts agreed that having the wheels within the vehicle body led to greater space efficiency, with the vertical columns of storage bins being more densely packed.

So Ocado argued that *fully* within the vehicle body would be understood by the PSA as the sort of arrangement illustrated in figure 3 of EP 794 ([42]):



Ocado further argued that the "nubbins" (circled in red) needed to be immediately above the pillars of the storage columns, so there were only two places the "X" wheels marked 10 could go: either as shown in figure 3 or outside the side parts 5, in which case the only rails available would be one grid square away on each side.

AutoStore argued that the invention did not necessitate maximising volumetric efficiency, and any arrangement leading to an improvement would be enough.

Judge Hacon observed that the experts seemed to have "taken as read" the desirability of keeping standard bins of the same fixed dimensions, and so improving efficiency by changing the dimensions of the storage columns and thus the spacing of the rails. Overall, the experts' understanding was that volumetric efficiency was improved by the invention because rail spacing was in play. He observed that by closing, Ocado had developed an assumed premise that the prior art was near enough 100% volumetrically efficient, that placing the relevant wheels adjacent to the bin offered 100% efficiency and this matched the prior art, and placing the wheels any greater distance from the bin must reduce efficiency relative to the prior art. Judge Hacon thought this lacked evidential basis and was contrary to what the experts said. His conclusion was that the closer the rail separation was to the standard width of the bins, the greater the bin density and volumetric efficiency in the warehouse. The skilled person would not interpret the invention claimed as being limited to achieving the maximum volumetric efficiency. Any positioning of the wheels which achieved an improvement in bin density compared to the prior art was covered by the invention. In principle, this might include moving the wheels so that they were only partially within the vehicle body. Whether or not that was realistically the case, the patentee had chosen to limit the invention to arrangements wherein the wheels were fully within the vehicle body. That language should be given its ordinary meaning, which was that no part of the rolling means could be located exterior to the vehicle body.

As the advantage of better volumetric efficiency promised by the invention depended on reduced rail separation, and the only parts of the relevant set of wheels that mattered for this purpose were those in contact with the rails, the "rolling means" meant the traction surfaces of the wheels. Further, as the vehicle body consisted of structural elements that defined the space for containing the vehicle driving means and the cavity for receiving the storage bin, the wheels must not be positioned so that any part in contact with the rails extended outside those structural elements. Judge Hacon added ([115]):

> "Mr Purvis drew homely analogies: a person standing on a veranda is not fully within the house even though the veranda is part of the house; eyes are not fully within the skull even though the eye cavities are part of the skull. These did not really advance the argument. EP 794 and the robots alleged to infringe have vehicle bodies with substantially straight sides. Subject to the points of construction, it is not difficult to take a view as to whether the wheels are fully within the vehicle body. I need not worry about skulls and verandas."

Validating construction

In ***InterDigital v Lenovo*** **(31 January 2023)**[11], InterDigital's patent acknowledged key prior art (essentially the cited prior art) on its front page and addressed it in the body of the specification. Did this mean that a validating construction should be taken, as InterDigital contended?

[11] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 172 (Pat) (31 January 2023) Mellor J

Mellor J reiterated that the "normal interpretation" of the claims remains an exercise in purposive construction, this being an objective exercise in which the question is always "what a skilled person would have understood the patentee to be using the words of the claim to mean".

Mellor J noted the validating construction principle, with reference to extracts from *Stretchline v H & M*[12], *Beloit v Valmet*[13] and *Electric and Musical Industries v Lissen*[14]. In short, while it is not normally legitimate to construe claims using the prior art (because there is normally no reason to suppose that the patentee, when they set the limit of their claims, knew of any individual item of prior art) the position is different if the prior art is specifically acknowledged in the patent. Then the purposive construction would lead to a construction of a claim which would not cover that acknowledged prior art because the patentee would not readily be taken to be intending to claim something they expressly recognised as old. However, as soon as one departs from documents specifically acknowledged in the specification, the skilled reader has no basis for assuming that the patentee was aware of the document in question. A patentee may have been isolated from the CGK. Where the objection is one of obviousness rather than lack of novelty, a value judgment is involved. Deliberate limitations in a claim must have a meaning. Much depends on the way in which the prior art is acknowledged – a mere reference to a prior patent does not necessarily require the addressee to dig it out and study it in detail, but if the specification identifies some particular feature as disclosing a problem which the inventor claims to have been overcome, it may be of considerable relevance in interpreting the claim. Mellor J stated that he agreed with all of this.

Mellor J also noted that the Supreme Court in *Warner-Lambert v Generics*[15] stated that an issue as to the construction of a claim should be addressed, as far as possible, by deciding what it really does mean, rather than by too readily accepting there is an ambiguity and then resolving it by inventing a meaning which saves the claim from invalidity.

InterDigital's patent concerned a method, for use in wireless communication, comprising "sending scheduling information, SI, by a wireless transmit/receive unit, WTRU, **in response to** having a non-zero grant smaller than **needed** to transmit a protocol data unit, PDU, of a scheduled medium access control-d, MAC-d, flow". What was the meaning of "in response to"? Mellor J thought that within the claim, the expression could be read in each of the ways contended for by the parties. However, on Lenovo's construction, none of the subsidiary claims would limit the invention to the new trigger described in key paragraphs of the specification of the patent ([0027]-[0028]), which would strike the skilled person as unusual, given the well-known technique of phrasing the principal claim broadly and introducing limitations in subsidiary claims. Lenovo's construction would also mean that the claim covered what was described in the acknowledged prior art. Mellor J said ([82]):

> "This case is perhaps a paradigm case for the application of the principle described in *Beloit v Valmet (No.2)*, in that the prior art is not only expressly acknowledged on the face of the Patent, it is CGK, the problem addressed by the Patent is described by reference to it and, on Lenovo's construction, it anticipates claim 1. This would be a foolish result which the patentee could not have possibly contemplated."

[12] *Stretchline Intellectual Properties Ltd v H&M Hennes & Mauritz Ltd* [2017] EWCA Civ 199

[13] *Beloit Technologies Inc v Valmet Paper Machinery Inc (No 2)* [1995] RPC 255

[14] *Electric and Musical Industries Ltd & Anr v Lissen Ltd* (1936) 56 RPC 23

[15] *Warner-Lambert Company LLC v Generics (UK) Ltd & Anr* [2018] UKSC 56

Therefore the purposive construction of InterDigital's patent required a meaning which did not claim what was old.

The impact of embodiments on claim construction

EnOcean v Far Eastern **(24 October 2023)**[16] concerned EnOcean's patent to an electromagnetic energy converter. A question arose as to whether claim language about a "spring element" covered the operation of repulsive magnetic forces.

Nicholas Caddick KC, sitting as a deputy judge, reiterated guidance given by Meade J in *ADD2 v dSPACE*[17] that ([34]):

> "Even where there is only one preferred embodiment the patentee is likely to have had a generalised concept in mind, and it is necessary to work out from the language whether that is so, and what the concept is. Multiple preferred embodiments may, by their consistency, give further clues as to what the claims were intended to mean, but general claim language cannot be restricted to the preferred embodiment just because there is only one."

Each of the specific embodiments of the invention described in EnOcean's patent envisaged a physical spring, and the judge said that it was "significant" that in framing the claim language, the patentee had used the words "spring element" and not the words (of which they were clearly aware) "spring force". Therefore the claim language "spring element" meant a physical device operating mechanically to return the moving element, and so the claim was not anticipated by (nor obvious over) prior art Goiran, the relevant disclosure of which concerned the operation of magnetic forces. (EnOcean's patent was, however, invalid over different prior art).

In ***Philip Morris v Nicoventures*** **(25 October 2023)**[18], Nicoventure's/BAT's patent was to an e-cigarette heated by induction "characterised in that a maximum temperature to which the heater is heatable by penetration with the varying magnetic field in use is **exclusively determined** by a Curie point temperature of the heating material…".

Philip Morris (PMI) argued that exclusively determined meant that the Curie point of the material, and only that Curie point, determined the maximum temperature to which the heater may be raised. BAT argued for a broader meaning, with reference to the teaching of the specification, for example express contemplation that the Curie point may be lower than the maximum temperature of the heater and that there may be a sensor, a control mechanism for the temperature other than the Curie point.

HHJ Hacon concluded that "exclusively determined" meant there must at all times be a fixed relationship between a Curie point of the heater material and the maximum temperature of the heater. It could be decided that the maximum temperature would always be, for instance, 10 degrees Celsius lower than a Curie point. That fixed relationship would still mean that the maximum temperature was exclusively determined by a Curie point within the meaning of the claim. On the other hand, a relationship between the two which was flexible, where the maximum temperature of the heater at any time was at least in

[16] *EnOcean GmbH v Far Eastern Manufacturing Limited & Anr* [2023] EWHC 2615 (IPEC) (24 October 2023) Nicholas Caddick KC

[17] *Add2 Research & Development Limited v dSPACE Digital Signal Processing & Control Engineering GmbH & Anr* [2021] EWHC 1630 (Pat)

[18] *Philip Morris Products S.A. & Anr v Nicoventures Trading Limited & Anr* [2023] EWHC 2616 (Pat) (25 October 2023) HHJ Hacon

part determined by one or more factors other than a Curie point of the heater material, would not comply with the claim on a normal construction.

An interesting aspect of the judgment though was that, having succeeded on construction, Nicoventures/BAT nevertheless did not succeed on questions of infringement or validity. More on that below.

Construction of life sciences patent claims

In a number of judgments in recent years, pharmaceutical product claims have been construed as impliedly incorporating a functional limitation in view of the teaching in the specification as to the invention. This happened, for example, in *Pharmacia v Merck*[19] and *Idenix v Gilead*[20]. In the *Idenix* case, the claims were, on their face, pure compound claims (defined by a Markush formula) but the parties agreed that their validity should be assessed on the basis that they were claims to compounds which had *anti-Flaviviridae* activity. Arnold J concluded that the disclosure of the patent, read in light of the common general knowledge of the skilled team, did not make it plausible that the invention would work across the scope of the claims (that the compounds covered by the claim would have anti-Flaviviridae activity) and so they were invalid for lack of technical contribution obviousness and excessive claim breadth insufficiency.

The courts' approach to the assessment of insufficiency for excessive claim breadth and lack of technical contribution obviousness has since developed. The modern approach is discussed below, informed by the Court of Appeal's judgment in *Fibrogen v Akebia*[21]. The focus on the promise of the invention in the assessment of validity means there is no longer any need to import it into the construction of the claim.

Consistently with this approach, in ***Gilead v NuCana* (21 March 2023)**[22], the claims of NuCana's patents were all product claims, defined by a Markush formula. Gilead accepted that they were to be construed as being to the products per se. The patents were found invalid.

***Astellas v Teva* (17 October 2023)**[23] raised a different point on construction. Astellas' patent was to a modified release formulation of mirabegron, with claim 1 reading ([195]):

> "A **pharmaceutical composition for modified release**, comprising: (1) 10mg to 200mg of (R)-2-(2-aminothiazol-4-yl)-4'-[2-[(2-hydroxy-2-phenylethyl)amino]ethyl]acetic acid anilide, or a pharmaceutically acceptable salt thereof…".

The issue was the meaning of "a pharmaceutical composition for modified release". Did it incorporate *in vivo* parameters?

[19] *Pharmacia Corporation & Anr v Merck & Co, Inc & Anr* [2001] EWCA Civ 1610

[20] *Idenix Pharmaceuticals, Inc v Gilead Sciences, Inc & Ors* [2014] EWHC 3916 (Pat)

[21] *FibroGen Inc v Akebia Therapeutics Inc & Anr* [2021] EWCA Civ 1279

[22] *Gilead Sciences Inc & Anr v NuCana Plc* [2023] EWHC 611 (Pat) (21 March 2023) Meade J

[23] *Astellas Pharma Industries Limited v Teva Pharmaceutical Industries Limited & Ors* [2023] EWHC 2571 (Pat) (17 October 2023) Mellor J

Mellor J said that his task was to undertake the "normal" interpretation of the claims (as per the Supreme Court's judgment in *Eli Lilly v Actavis*[24]), and this remained an exercise in purposive construction (*Icescape v Ice-World*[25]) ([197]):

> "It is an objective exercise and the question is always what a skilled person would have understood the patentee to be using the words of the claim to mean."

The specification distinguished the dissolution of a conventional formulation from that of the "pharmaceutical composition for modified release". It promised that in the latter, drug release was controlled to the extent that the effects by food were reduced.

Mellor J said that ordinarily and subject to insufficiency arguments, a claim need not specify what the medicament is for, and Astellas' claims on their express wording did not do so. However, the whole premise of Astellas' invention was that the effects by food were reduced. Ultimately, he was not persuaded that in giving measures for reduction in food effect the patentee was just being helpful. The patentee could have provided that information without defining the term "the effects of food are reduced"; the definitions provided in the specification were the patentee's own choosing. Therefore the claim language was to be construed by the definitions provided. This was not over-meticulousness because a careful approach by the skilled team would find the expression in [0022] of the specification - the definition of "pharmaceutical composition for modified release", which then drew in the promise that the "effects by food are reduced", which referred to measurements of *in vivo* effect (C_{max} and AUC). Therefore *in vivo* parameters formed a part of the meaning of "a pharmaceutical composition for modified release".

"Adapted to"

The Court of Appeal's judgment in ***Optis v Apple*** **(4 July 2023)**[26] addressed the construction of a claim to "A radio communication apparatus of a mobile station **adapted to** spread and transmit an ACK/NACK signal or a CQI signal in accordance with a code-multiplexing structure for code-multiplexing ACK/NACK signals and CQI signals from a plurality of mobile stations, the radio communication apparatus comprising:…". In short, Birss LJ confirmed that the claim was to a mobile **capable** of doing what was required. Provided a mobile was capable of doing the right thing (operating within the relevant code-multiplexing structure) when required, it would be within the claim irrespective of whether the relevant code-multiplexing cyclic shift was in fact in use at the time. The consequence was that Apple's handsets infringed, because they had this capability, even though in the UK, the standard did not use mixed resource blocks and so a method implementing the invention was not in use.

"Washbowl"

The Court of Appeal's judgment in ***Vernacare v MFP*** **(18 July 2023)**[27] is worth a read if only for the difficulty for the courts in understanding the meaning of "washbowl".

---

[24] *Actavis UK Limited & Ors v Eli Lilly and Company* [2017] UKSC 48

[25] *Icescape Limited v Ice-World International BV & Ors* [2023] EWCA Civ 2219

[26] *Optis Cellular Technology LLC & Ors v Apple Retail UK Limited & Ors* [2023] EWCA Civ 758 (4 July 2023) Newey, Arnold & Birss LLJ

[27] *Vernacare Limited v Moulded Fibre Products Limited* [2023] EWCA Civ 841 (18 July 2023) King LJ, Arnold LJ, Sir Christopher Floyd

At first instance, Nicholas Caddick KC had concluded that one Vernacare patent (GB 793, about the shape of a moulded fibre washbowl) was valid but not infringed. Another Vernacare patent (GB 947, about the composition of moulded paper pulp used to make a washbowl) was found valid and infringed by MFP's washbowl. MFP appealed the finding that GB 947 was not obvious.

The Court of Appeal's reasoning was given by former LJ Sir Christopher Floyd. He began by dismissing a ground of appeal pursued on the basis that the judge's construction of "washbowl" had been inadequately reasoned ([28]):

> "It is not, however, universally true that a judge must articulate a comprehensive definition of every word or phrase used in the claim. In some cases it may be sufficient to point out that, whatever else the term covers, it does not cover the particular disclosure alleged to fall within the claim, provided, of course, that the judge identifies the reason why this is so. "

The judge had identified that "washbowl" excluded things like egg boxes and plant pots, and that a "washbowl" must contain sufficient water to be used for washing. That was enough.

MFP's second ground of appeal seemed to entail elements of construction, interpretation of the prior art and obviousness. It argued that: by defining the inventive concept of the patent as being that a detergent resistant washbowl *can be made* using a fluorocarbon agent, the judge introduced an illegitimate purpose-based element in the claim when it had no such element; the consequence of this construction was that the judge wrongly excluded from the claim a detergent resistant washbowl which was made for reasons other than achieving detergent resistance; and as per *Hallen v Brabantia*[28]*,* essentially, something that is obvious for reason (a) is not made inventive by non-obvious reason; (b) for making the same article.

The obviousness challenge was over prior art "Shimooka", which Sir Christopher Floyd described as disclosing that a wide range of shaped articles, including tableware, could be made by moulding paper pulp and that if a fluorocarbon was added at the wet end the shaped articles would have enhanced water, oil and grease resistance. Shimooka said nothing about resistance to soap or detergent.

Vernacare's position was that this argument was artificially constructed with the benefit of hindsight. A washbowl needed to have a degree of *detergent resistance* (this was common ground), and the skilled person would not understand from Shimooka that its products would have this property.

Sir Christopher Floyd noted that the Patents Act (section 2) precludes the grant of a patent for an invention which is obvious in the light of the state of the art. Although the structured tests are useful, they are only an aid, not a substitute for the statutory test. In the *Pozzoli* approach, questions 2 and 4 refer to the inventive concept. In view of the ultimate purpose of the test, "it is clear that inventive concept is synonymous with "the invention"". The use of the inventive concept allows focus on the important features *of the claim*; it is not a licence to re-write the claim. Therefore the first step is to construe the claim.

So, a washbowl must be a bowl capable of holding a sufficient quantity of water to be useful in washing a patient and (it was agreed) it must have a degree of resistance to water containing soap or detergent. It followed that the inventive concept of claim 1 was a washbowl (as defined) made from paper pulp

[28] *Hallen Co. & Anr v Brabantia (UK) Ltd* [1991] RPC 195

containing a fluorocarbon. With this understanding, Sir Christopher Floyd's view was that the judge had erred ([39]-[41]):

> "By formulating the inventive concept as the appreciation that a detergent resistant washbowl can be made from pulp containing a fluorocarbon, rather than as a detergent resistant washbowl so made, the judge introduced an additional element into the claim. In my judgment, he fell into error in doing so. **Properly construed, there was no requirement in the claim that the fluorocarbon be added for the purpose of conferring detergent resistance, or that the maker of the washbowl appreciates that the fluorocarbon is added for that purpose**. The claim would be infringed whether or not the fluorocarbon was added for that purpose and whether or not the infringer appreciated that the consequence of adding the fluorocarbon was to achieve detergent resistance.
>
> Given the nature of the attack on the patent, namely that it was obvious to make a bowl which fell within claim 1 for a reason other than achieving detergent resistance, it is unfortunate that the judge was not referred to *Hallen v Brabantia*... That case brings home the proposition that an invention may be rendered old or obvious by a disclosure which does not articulate all the benefits of the claimed invention.
>
> *Pozzoli* question 4 was therefore whether a washbowl (as I have defined it) made from paper pulp containing a fluorocarbon was obvious to a skilled but unimaginative person armed with Shimooka and the common general knowledge."

The skilled person would understand Shimooka to be suggesting that an object appropriately described as a bowl could be made using the fluorocarbon containing pulp which Shimooka suggested would confer water, oil and grease resistance. As to whether a bowl obtained following the teaching of Shimooka would hold a sufficient quantity of water to be useful in washing a patient – the evidence of Vernacare's factual witness was that a bowl the size of a cereal bowl contained sufficient quantity of water to be useful in washing, albeit not enough for a full bed wash. This meant there was "no surviving distinction between a bowl made by following Shimooka (for Shimooka's purposes) and a washbowl according to claim 1". It would not require invention to make a bowl the size of a cereal bowl from the teaching of Shimooka. Stepping back Sir Christopher Floyd said ([46]):

> "Shimooka provides perfectly good reasons for making a bowl which would, in fact, have all the requirements of claim 1".

It is interesting that after upholding the judge's reasoning on construction – that a skilled person would know what a washbowl is and how to distinguish it from other articles like plant pots and egg boxes – the Court of Appeal nevertheless overturned the judge's conclusion on obviousness on the basis, essentially, that a cereal bowl could be used as a washbowl (and Shimooka taught a grease/oil/water resistant cereal bowl). In consequence, the reasoning seems to resemble a finding of anticipation more than obviousness.

Patent infringement/validity determination by non-IP specialists

In 2023, three of the patent validity/infringement judgments delivered have been given following a trial heard by a judge of the High Court who is a specialist in *competition* law or *tax* law, rather than IP law.

One of those judgments was of Richards J, in ***Abbott v Dexcom*** **(18 October 2023)[29].** The case concerned Abbott's patent to an apparatus for inserting a medical device into the skin of a subject.

Under the heading "Construction", Richards J addressed construction and infringement together, beginning with the following introduction ([55]):

> "In the Appendix to this judgment, I set out Claims 1 and 7 of the Patent broken down, as is customary, to various "integers" that formed the battleground for the parties' arguments on construction and infringement. I remind myself that breaking down the claims of the Patent into integers in this way is simply a convenient way of structuring those claims and ordering discussion of the parties' arguments. Ultimately the claims of the Patent have to be construed as a whole and accordingly, by breaking those claims into integers, I do not signal that I am following a compartmentalised approach to their construction."

Richards J said that there was no dispute as to how Dexcom's G7 Applicator worked; the dispute on infringement concerned whether the G7 Applicator contained all integers of the claims alleged to be infringed. He continued ([66]):

> "It is unnecessary to get unduly caught up in the extent to which this is a dispute about construction (i.e. what the claims of the Patent mean) or a question of whether the features of the G7 Applicator answer to the various integers of the Patent's claims once those claims have been properly construed. As Jacob LJ said in *Technip France SA's Patent* [2004] RPC 46, in infringement proceedings it is sensible to identify the areas of dispute in relation to construction by reference to the alleged infringement:
>
> > Although it has often been said that the question of construction does not depend on the alleged infringement ('as if we had to construe it before the defendant was born' per Lord Esher MR in *Nobel v Anderson* (1894) 11 RPC 519 at 523), questions of construction seldom arise in the abstract. That is why in most sensible discussions of the meaning of language run on the general lines 'does it mean this, or that, or the other?' rather than the open-ended 'what does it mean?'"
>
> With that approach in mind, the parties at my request helpfully prepared a "Construction Schedule" that set out their respective positions on questions of construction of the Patent, formulated by reference to relevant features of the G7 Applicator and the prior art. Determining those questions of construction is a necessary step in determining the question of infringement and also in the prior art based challenges…."

Oh dear. This describes the old Purposive Approach, which was ended by the Supreme Court's 2017 judgment in *Actavis v Eli Lilly*[30]. Construction, now, is supposed to be done without reference to the alleged infringement (*Kwikbolt v Airbus*[31], *IPCom v Vodafone*[32], *Regen v Estar*[33]) or, usually, the cited

---

[29] *Abbott Diabetes Care Incorporated & Ors v Dexcom Incorporated & Ors* [2023] EWHC 2591 (Ch) (18 October 2023) Richards J

[30] *Actavis UK Limited & Ors v Eli Lilly and Company* [2017] UKSC 48

[31] *Kwikbolt Limited v Airbus Operations Limited* [2021] EWHC 732 (IPEC)

[32] *IPCom GmbH & Co KG v Vodafone Group plc & Ors* [2020] EWHC 132 (Pat)

[33] *Regen Lab SA v Estar Medical Ltd & Ors* [2019] EWHC 63 (Pat)

prior art (*InterDigital v Lenovo* (31 January 2023)[34], *Regen v Estar*). The normal construction of the claim is confined to interpreting the words of the claim in the context of the specification as a whole, in a manner akin to the interpretation of a contract (*Regen v Estar, Network Homes v Maurice Harlow*[35]).

Richards J did refer to the principles governing construction identified by the Court of Appeal in *Saab Seaeye v Atlas* (set out above). He noted that considerations of "purpose" featured prominently in those principles, and that before him Abbott placed emphasis on the EPO Technical Board of Appeal's conclusions as to the overall purpose of the invention. He then said ([73]):

> "However, quite rightly, Abbott does not suggest that the TBA's conclusion is binding on me. In *Human Genome Sciences v Eli Lilly* [2012] RPC 6, Lord Neuberger emphasised, at [83] to [85] of his judgment, the importance of UK patent law aligning itself, so far as possible with the jurisprudence of the EPO. However, he emphasised the statement of Lord Walker at [35] of his judgment in *Generics* [2009] RPC 13 to the effect that national courts may reach different conclusions as to the evaluation of the evidence in the light of relevant principles even though the principles themselves should be the same, stemming as they do from the European Patent Convention. Accordingly, the EPO and a national court may come to different conclusions because they have had different evidence or arguments or because they assess the same competing arguments and factual expert evidence differently."

Richards J did not mention that the EPO does not "do" construction, at least for the purposes of the assessment of infringement. Nor did he mention that claim construction in the UK in recent years has repeatedly been framed by reference to principles going to the construction of contractual documents.

All of which suggests that the judge had not properly grasped the necessary principles. Turning to the determination of the points of construction in issue, the suspicion is confirmed: his reasoning interwove considerations of the claim language and the operation of Dexcom's F7 Applicator device. We will return to the reasoning in *Abbott v Dexcom* later on!

b) Infringement

Back in 2017, in *Actavis v Eli Lilly*[36], Lord Neuberger said that a question of infringement is best approached by addressing two issues, each of which is to be considered through the eyes of the notional addressee of the patent in suit, i.e. the person skilled in the relevant art:

> i) does the variant infringe any of the claims as a matter of normal interpretation; and, if not,
>
> ii) does the variant nonetheless infringe because it varies from the invention in a way or ways which is or are immaterial?

If the answer to either issue is "yes", there is an infringement; otherwise, there is not. Lord Neuberger explained that issue (i) self-evidently raises a question of interpretation, whereas issue (ii) raises a question which would normally have to be answered by reference to the facts and expert evidence. In

[34] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 172 (Pat) (31 January 2023) Mellor J

[35] *Network Homes Ltd v Maurice Harlow* [2018] EWHC 3120 (Ch)

[36] *Actavis UK Limited & Ors v Eli Lilly and Company* [2017] UKSC 48

addressing issue (ii) – considering what it is that makes a variation "immaterial" - some "reformulated" questions, derived from Hoffmann J's three questions in the *Improver* case[37], provide helpful assistance. Lord Neuberger emphasised that those questions were guidelines, not strict rules.

In *Icescape v Ice-World*[38], the Court of Appeal (Lord Kitchin) tweaked the approach explained by Lord Neuberger to express it as follows, "considered through the eyes of the notional addressee" ([66]):

> "i) Does the variant infringe any of the claims as a matter of normal interpretation?
>
> ii) If not, does the variant nevertheless infringe because it varies from the invention in a way or ways which is or are immaterial? This is to be determined by asking these three questions:
>
> > a) Notwithstanding that it is not within the literal (that is to say, I interpolate, normal) meaning of the relevant claim(s) of the patent, does the variant achieve substantially the same result in substantially the same way as the invention, i.e. the inventive concept revealed by the patent?
> >
> > b) Would it be obvious to the person skilled in the art, reading the patent at the priority date, but knowing that the variant achieves substantially the same result as the invention, that it does so in substantially the same way as the invention?
> >
> > c) Would such a reader of the patent have concluded that the patentee nonetheless intended that strict compliance with the literal meaning of the relevant claim(s) of the patent was an essential requirement of the invention?"

A finding of infringement is reached if question (i) is answered "yes", or if question (ii) is answered "yes", and question (ii) is answered "yes" if "reformulated" questions (a), (b) and (c) are answered "yes", "yes", and "no", respectively.

In 2023, in ***AutoStore v Ocado* (30 March 2023)[39]**, AutoStore's two patents concerned automated storage and retrieval of containers. After citing *Actavis v Eli Lilly* and *Icescape v Ice-World,* Judge Hacon said that both parties had referred to a point he made in *Kwikbolt v Airbus[40]* in 2021 ([132]):

> "… a correct assessment of the inventive concept cannot be achieved with the variant in mind. The correct identification of the inventive concept must be done through the eyes of the skilled person, who has no notion of what the variant is. The skilled person has only the relevant claim, the specification as a whole and his or her common general knowledge to work with. Only after the inventive concept has been identified does the variant and with it the integer(s) in issue come into play so that the three *Actavis* questions … may be considered".

Judge Hacon rejected Ocado's submission that infringement by equivalents could never work if the advantage conferred was a continuum, where the more it was used the greater the advantage ([136]):

> "I fail to see why. An inventive concept may be exploited efficiently to gain maximum advantage. Alternatively, a defendant may infringe badly in the sense that his product or

[37] *Improver Corp v Remington Consumer Products Ltd* [1990] FSR 181

[38] *Icescape Limited v Ice-World International BV & Ors* [2018] EWCA Civ 2219

[39] *Autostore Technology AS v Ocado Group plc & Ors* [2023] EWHC 716 (Pat) (30 March 2023) HHJ Hacon

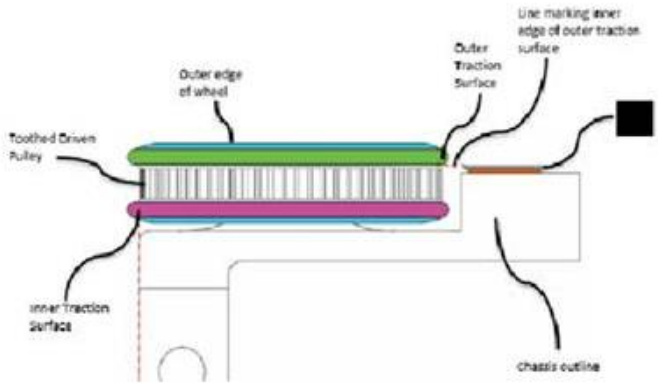
[40] *Kwikbolt Limited v Airbus Operations Limited* [2021] EWHC 732 (IPEC)

process exploits the inventive concept, but in a way that confers no benefit. And there may be a range (or continuum) of possibilities in between. The third *Actavis* question is one of interpretation of the patent. Wherever the defendant is on the foregoing range, the court may interpret the patent to infer that strict compliance with one or more integers of the claim was intended by the patentee or may not."

There were a number of issues of infringement. Beginning with the assessment of infringement on the normal interpretation **-** was **"a first section for storing vehicle driving means"** met**? No**. As construed, the claim integer required a first section for storing vehicle driving means, defined by structural elements; and cladding was not part of the vehicle body. Taking Ocado's bot without cladding, AutoStore's argument involved notionally drawing a perimeter around the outermost parts of the robot and then asserting that the zone captured was the first section – but this just amounted to a virtual volume. There was no first section for storing driving means.

Was the claim feature requiring **one set of rolling means fully within the vehicle body** met**? No.** In the Ocado bots all the wheels were attached to the exterior of the structural elements that defined the two sections, so all their traction surfaces were exterior to the vehicle body, with or without cladding.

Nor did Ocado's "Mod 4A" bot (for which Ocado sought a declaration of non-infringement) meet this claim feature. On the construction of "vehicle body" reached, the judge accepted AutoStore's argument that the wheels protruded 27.5%, therefore on the normal and purposive construction of the claim it made no sense to say that they were fully within the body of the vehicle ([166]):



Moving to the assessment of infringement on issue (ii) – the doctrine of equivalents – as usual the parties disagreed as to the inventive concept. Judge Hacon accepted neither and reached his own view, explaining that the inventive concept had two aspects:

- the centrally located cavity which provided greater stability and speed of operation and allowed access by one robot to all available storage columns in the system; and

- the technical insight that having at least one set of vehicle rolling means fully within the robot body resulted in greater space efficiency of the storage system.

Addressing the first reformulated question, the issue was whether moving the wheels partly inside the vehicle body achieved substantially the same result in substantially the same way as the invention of the patent. Therefore the question was "whether the Mod4A would give rise to a significant improvement

in space efficiency relative to the cantilever prior art". On the evidence in the case, there was no way for him to tell.

Judge Hacon then turned to the third reformulated question, which he said rested "on the correct interpretation of the patent and whether the skilled reader would understand the patentee's choice of words in the claim and in the specification as a whole was intended to inform the reader of a bright line requirement for performance of the invention – strict compliance". His answer was ([175]):

> "The reader is told, both in the description and the claims, that at least one set of vehicle rolling means must be arranged *fully* within the vehicle body. The alternative of saying "arranged within the body" was not adopted. In my view, the words used are strong enough for the reader of the patent to take this to be a bright line requirement. Mod 4A falls outside claim 1 of EP 794. Ocado is entitled to a DNI."

The third reformulated question and the "disclosed but not claimed" principle

In a similar way, Judge Hacon settled upon an inventive concept that differed to each of the parties' contentions in ***Philip Morris v Nicoventures*** **(25 October 2023)**[41]. The case was about Nicoventure's/BAT's patent to an e-cigarette in which the maximum heater temperature was exclusively determined by a Curie point of the heating material. The relevant claim integer was ([56]):

> "characterised in that a maximum temperature to which the heater is heatable by penetration with the varying magnetic field in use is **exclusively determined** by a Curie point temperature of the heating material that comprises an alloy comprising iron and nickel; and…**"**

BAT argued that the inventive concept was that ([75]):

> "… 'magnetic hysteresis' can be harnessed as a practical manner of *heating* the tobacco in an HNB product and that the maximum temperature of the heater of the HNB product may be controlled by use of the Curie point temperature of the heating material, such that there is a defined functional relationship between the maximum temperature of the heater and the Curie point temperature."

Judge Hacon said that he did not believe the principle of harnessing magnetic hysteresis as a means of generating heat formed part of the inventive concept because the principle formed part of the CGK and use of inductive heating would inevitably involve it. Additionally, the term "defined functional relationship" was "difficult to pin down".

PMI argued that the inventive concept was ([76]):

> "The use of the Curie point of the heating material in the apparatus inherently to self-regulate the maximum temperature to which the heater is heatable, in order to prevent over heating or combustion of the heated material, so that [the] system is able to be free of any other means to limit the temperature to which the heater is heatable."

Judge Hacon said that since BAT had expressly accepted that the IQOS system was a variant in part because its heater was in the consumable, it was common ground that the inventive concept was

[41] *Philip Morris Products S.A. & Anr v Nicoventures Trading Limited & Anr* [2023] EWHC 2616 (Pat) (25 October 2023) HHJ Hacon

confined to a system in which the "article" – the consumable containing the smokeable material – did not contain the heater. "Self-regulate" impliedly limited the concept to one in which the maximum temperature was limited solely as a matter of physics, but (as discussed above in section 2(a)) the invention encompassed the use of a sensor and a system in which the maximum temperature was below any Curie point. So Judge Hacon said that he would define the inventive concept as follows:

> "An HNB system in which (i) an article containing smokeable material is inserted into the heating zone of a heating apparatus, (ii) the smokable material is heated by inductive heating and (iii) the maximum temperature of the heater in the apparatus is exclusively determined by a Curie point of the heating material. 'Exclusively determined' means that the maximum temperature is at all times fixed by reference to a Curie point and dependent on no other factor."

Therefore ([84]):

> "The result to which the inventive concept aims is the induction heating of smokable material in an HNB system such that the smokable material is heated sufficiently to volatilise nicotine and other compounds without burning the smokable material. The inventive concept achieves this result by using a Curie point of the heater material, exclusively, to determine the maximum temperature of the heater which is located in the main apparatus."

With reference to his judgment in *Regen v Estar*[42], Judge Hacon reiterated that "when the variant embodies more than one difference from the inventive concept, its status as an equivalent falls to be considered in one step taking into account all differences".

The differences in PMI's IQOS system were that: (a) while the system relied on a Curie point, during calibration the relationship between maximum temperature and Curie point changed; and (b) the heater was in the consumable. Evidence in the case went to whether it made a practical difference whether the heater was in the consumable or the apparatus. Judge Hacon said ([86]):

> "It seems to me that practical pros and cons between an aspect of the inventive concept and an aspect of the variant are not necessarily relevant to the first *Actavis* question. A variant may work less well but still achieve exactly the same result in exactly the same way as the inventive concept."

However, no reason was given as to why the IQOS system's way of using the Curie point (with or without the difference in heater location) substantially changed the result in which the relevant result was achieved. Therefore Judge Hacon said that he answered the first reformulated question "YES", and (as usual), reformulated question 2 was answered in the same way.

Reformulated question 3 asks whether the skilled reader of the patent would have concluded that the patentee nonetheless intended that strict compliance with the literal meaning of the relevant claim(s) of the patent was an essential requirement of the invention. Judge Hacon noted that in *Akebia v Fibrogen*[43], Arnold J drew upon a principle established in the German Federal Court of Justice and said ([89]):

---

[42] *Regen Lab SA v Estar Medical Ltd & Ors* [2019] EWHC 63 (Pat)

[43] *Akebia Therapeutics Inc & Anr v Fibrogen Inc* [2020] EWHC 866 (Pat)

> "If the description discloses a plurality of possibilities for achieving a specific technical effect, but only one of those possibilities is catered for in the patent claim, the utilisation of any other possibilities properly does not constitute infringement of the patent with equivalent means."

Judge Hacon said that this "disclosed but not claimed" principle had since been relied upon at least twice, in *Facebook v Voxer*[44] and *Shenzhen Carku v The Noco Company*[45], and he accepted that it applied in this case: figures 1 & 2 in the specification of the patent disclosed a "heat not burn" system in which the heater was in the consumable, but such a system was not claimed. He dismissed BAT's arguments that its patent claimed the system as a whole, not the article and apparatus separately, and that the disclosed but not claimed principle, in a case such as this, would mean the patentee must claim every possible configuration even when the reader would understand that selecting this or that configuration would be immaterial to the inventive concept ([94]):

> "Where … the patentee says in the description that the technical effect identified can be achieved either by means A or B but goes on to claim only means B, this is a clear indication from the patentee that means A does not fall within the scope of the claims, whether as a matter of normal construction or equivalence. Any other approach to construction would sanction patents likely seriously to mislead the public."

Therefore the third reformulated question was answered "YES", and so infringement on the doctrine of equivalents was not found.

Evidence in support of infringement

The patent case law in 2023 surprisingly includes many examples of parties' evidence failing to meet the level of support needed to establish a relevant legal test. Understanding what evidence is needed, and whether it actually exists/can be written down, is a crucial part of the job of being a lawyer. In order to meet the evidential requirement, one needs to understand the relevant legal test.

An example of a patentee's evidence not adequately addressing the legal test for the asserted claim of infringement emerged in ***Cipla v Salix* (21 April 2023)**[46]. Cipla claimed, under section 68 of the Arbitration Act of 1996, for an order remitting an arbitral award made by "the Rt Hon. Lord Neuberger of Abbotsbury". (There is judicial life after the Supreme Court!). The arbitration concerned a patent dispute: Cipla alleged that Salix' drug product sold under the name XIFAXAN (an antibiotic used to treat various conditions including diarrhoea and irritable bowel syndrome), would (absent a licence) infringe Cipla's patent and therefore royalties were due pursuant to a 2009 agreement. The arbitral Tribunal was appointed in April 2020. The merits hearing was held between 25 and 30 October 2021, followed by written and oral closing submissions in January/February 2022. The Tribunal's Award was dated 3 May 2022.

The Tribunal's conclusion was that Cipla could only succeed if it established that XIFAXAN tablets contained amorphous rifaximin which produced the XRPD pattern shown in Figure 1 of Cipla's patent; it was not enough for Cipla to establish that XIFAXAN tablets contained amorphous rifaximin. The onus was on Cipla to prove infringement, not on Salix to prove no infringement. Cipla had not established that any of the rifaximin in XIFAXAN had a Figure 1 XRPD. Nor was there evidence suggesting that all

---

[44] *Facebook v Voxer* [2021] EWHC 1377 (Pat)

[45] *Shenzhen Carku v The Noco Company* [2022] EWHC 2034 (Pat)

[46] *Cipla Limited v Salix Pharmaceuticals, Inc* [2023] EWHC 910 (Comm) (21 April 2023) Dame Clare Moulder DBE

amorphous rifaximin inherently had a Figure 1 XRPD. Therefore Cipla's claim in the arbitration was dismissed.

Before the court, Cipla's case was that, on the basis of a ruling made by the Tribunal on 26 October 2021, by which certain evidence that Salix had sought to introduce late in the proceedings was excluded, the Tribunal ruled that the issue of whether XIFAXAN produced the Figure 1 XRPD pattern was not an issue between the parties. Therefore it was unfair for the Tribunal to conclude that Cipla had failed to discharge the burden of showing that the amorphous rifaximin in the tablets produced the Figure 1 XRPD pattern. The judge disagreed with Cipla.

In oral openings, the Tribunal had raised a question as to whether there might be multiple forms of amorphous rifaximin that could produce XRPD patterns other than that of Figure 1. Salix's counsel responded that there could be such polymorphism, and that Figure 1 was not the inherent feature of all amorphous rifaximin. Cipla interjected that there was no evidence going to the point. Cipla then sought to introduce evidence in the form of a slide from its expert witness – making the contrary point. Salix then informed Cipla that it intended to put documents to their expert in cross-examination. Cipla objected to this; Salix objected to the slide; Cipla withdrew the slide. The Tribunal concluded that it would be wrong to allow the evidence in, because the proper answer to the question was that it did not arise. This was the "26 October ruling".

Extracts from the transcripts of the merits hearing make clear that the arbitrator explained to Cipla's counsel that on the face of it, it was for Cipla to show infringement. However he recognised Cipla's argument as being that, given the way the pleadings had developed, it was for Salix to show (if this was its case) that there were multiple amorphous forms with different XRPDs.

In the Award, the Tribunal explained that Salix, in its 27 January 2021 defence, contended that XIFAXAN tablets were neither essentially free of crystalline rifaximin nor characterised by the Figure 1 XRPD pattern. That should have put Cipla on notice as to the point relied upon by Salix in closing - that Cipla had not established that any of the XIDAXAN rifaximin had a Figure 1 XRPD pattern. There was no basis for Cipla to say that it was up to Salix to show that amorphous rifaximin did not always produce a Fig 1 XRPD pattern; and on a fair view of the evidence, there was nothing to suggest even faintly that the Fig 1 XRPD pattern was always thrown up by amorphous rifaximin.

Cipla's focus in its application to the court was on the unfairness that, in light of the 26 October ruling, it conducted its case on the basis that polymorphism was not an issue.

The judge's view was that, on its face, the 26 October ruling was to the effect that the new evidence could not be put (by Salix) to Cipla's expert. The wider context of the ruling made clear that it was that the evidence should not be admitted. Although there was a reference to the issue being a new point, it was not a ruling on what issues were live. In closing before the Tribunal, Cipla did not assert that the issue of whether XIFAXAN produced the Figure 1 XRPD pattern was not an issue between the parties. Hence the judge concluded ([82]):

> "…Cipla had to prove its case that the patent was infringed. Its pleaded case was that it had the Fig 1 pattern. It could have proved that element by establishing that it is inherent that amorphous rifaximin had the XRPD pattern. The contrary is of course that if it is not the position that amorphous rifaximin necessarily has that pattern, then there must be more than one form of amorphous rifaximin. However as the Tribunal held, it was not necessary for Salix to prove

polyamorphism. It was for Cipla to prove that the Figure 1 XRPD pattern was present. As the Tribunal said in the course of closing submissions to Mr Saunders (above):

> "It is for you to show that the amorphous rifaximin in these tablets had this diffraction pattern, not for them to show that there are others to show that it did not.""

Therefore, in light of the 26 October ruling, Cipla was not entitled to proceed on the assumption that the question of whether the amorphous rifaximin in the XIFAXAN® tablets produced the Figure 1 XRPD Pattern was no longer in issue. The onus was on Cipla to prove its case. There was no breach by the Tribunal of its duty to act fairly and impartially and the Tribunal gave each party a reasonable opportunity of putting its case. Nor had the Tribunal overlooked the evidence: Cipla had had the opportunity to raise its complaint in closing but it did not; and the judge inferred that this was because it did not (then) regard the matter as having been determined or as being common ground.

In ***Astellas v Teva*** **(17 October 2023)**[47], the gap in the evidence going to infringement arose as a consequence of the judge concluding that claim 1 of Astellas' patent should be construed as the defendants' contended, as including *in vivo* (food effect) parameters. Astellas had not submitted evidence going to infringement to address that scenario.

Late in the trial, with an eye on the issue, Astellas' counsel made an oral application (without an application notice or supporting evidence) for specific disclosure of pharmacokinetic data relating to co-defendant Sandoz' product in fed and fasted studies. Sandoz' position was that it did not have comparative *in vivo* data – meaning data comparing the *in vivo* effects of its product with an immediate release mirabegron product. The pharmacokinetic data Sandoz held were bioequivalence data (i.e. comparing Sandoz' generic mirabegron product with Astellas' Betmiga product). Sandoz argued that Astellas had failed to prove infringement because it had failed to establish (in fact, or on the balance of probabilities) that the Sandoz products reduced the effects of food as against a conventional formulation. (On Astellas' construction though, Sandoz admitted their product fell within the claim). Concluding that Astellas' infringement claim against Sandoz failed, Mellor J added ([447]):

> "For the sake of completeness, I am conscious that I have rejected the Defendants' insufficiency arguments on the basis that the Patent makes it plausible that a reduction in food effect is achieved across the breadth of claim 1. However, plausibility is a different standard to that required to prove infringement and I have held that, to prove infringement, at least some reduction in food effect must be demonstrated. For Sandoz Mirabegron, Astellas did not attempt to establish this, either directly or by inference via expert evidence."

Promptu **pleadings point**

Procedural manoeuvrings geared towards exposing a gap in the evidence were shut down by Meade J in ***AIM v Supponor*** **(30 January 2023)**[48].

The trial took place in November 2022. Ahead of that, in July 2022, AIM's solicitors wrote to Supponor's solicitors saying that AIM would be content for the court's decision regarding the validity of claim 1 to apply to claim 13. Supponor agreed to this. Then in October 2022, AIM's solicitor informed Supponor's

---

[47] *Astellas Pharma Industries Limited v Teva Pharmaceutical Industries Limited & Ors* [2023] EWHC 2571 (Pat) (17 October 2023) Mellor J

[48] *AIM Sport Vision AG v Supponor Limited & Anr* [2023] EWHC 164 (Pat) (30 January 2023) Meade J

solicitor that AIM no longer contended that claim 1 as granted was valid, therefore claim 12 was the only granted claim that fell to be considered at trial.

Supponor's solicitors made a Part 18 request asking which features of claim 12 AIM would be contending were not in claim 13 and "upon which the Claimant will rely at trial to assert that claim 12 as amended is independently valid of claim 13". AIM's response was that Supponor was not entitled to that information because claim 13 was not in issue and the differences between it and claim 12 were not relevant to any issue. Supponor's position was that because AIM had to be taken to have accepted that claim 13 was obvious, if there was not inventive difference between claim 13 and claim 12 then claim 12 was invalid. In support of this approach, AIM relied upon reasoning in Meade J's 2021 judgment in *Promptu v Sk*[49]. AIM submitted evidence to the effect that it had not alleged infringement of claim 13 and its proposal that claim 13 should stand or fall with claim 1 had been a pragmatic one.

Meade J quoted a number of paragraphs from his reasoning in *Promptu*, before summarising what had happened. He said that he had not purported to decide any issue of principle in *Promptu*, and for the most part the issue in that case was resolved because the patentee took a reasonable stance after discussion during its submissions. Therefore he did not see that *Promptu* could be cited for any principle applicable to the present case.

Turning to the arguments before him, Meade J noted that AIM did not admit that claim 13 was invalid if claim 1 was, it just made a pragmatic concession that there was no point defending claim 13 separately. AIM never admitted that claim 12 was invalid if claim 13 was, and never admitted that claim 12 was invalid. Meade J said that he did not think it was legitimate to combine admissions and matters said logically to flow from admissions to reach a result which was expressly not accepted by the party making admissions. The case was quite different from *Promptu*, in which the admission that had been made was clear and explicit and not in dispute, and the debate was over the consequences. A reasonable person in the position of Supponor would not have interpreted AIM's conduct as admitting by implication that claim 12 was invalid. Meade J also did not believe that Supponor in fact thought this.

Therefore Supponor's conduct had been "opportunistic and a distraction". It would be "extremely unjust" to prevent AIM from relying on claim 12. It would also be unfortunate to discourage patentees in this sort of situation from making sensible admissions about claims other than the main ones for fear of an unforeseen consequence.

Redaction of/limited reasoning on infringement in order to address confidentiality concerns

Where information about a product or process alleged to infringe a patent is integral to the determination of the legal question of infringement, there can be strain between the principle of open justice and the protection of any confidentiality in the information concerned. Sometimes key information is kept to a confidential part or version of the judgment. Sometimes judges simply keep to a minimum their discussion of the product or process, with a view to navigating a path through the strain. Both courses can reduce the clarity of a judge's reasoning on infringement, and therefore the contribution made by the judgment to the body of case law explaining the application of the principles.

In 2023, in several judgments, discussion of the facts relevant to a question of infringement was limited in the public version/parts of the judgment in order to preserve confidentiality in those facts. Examples

[49] *Promptu Systems Corporation v Sky UK Limited & Ors* [2021] EWHC 2021 (Pat)

may be found in ***Ensygnia v Shell*** **(26 June 2023)**[50], ***Sycurio v PCI-PAL*** **(25 September 2023)**[51] and ***Philip Morris v Nicoventures*** **(25 October 2023)**[52]. In each of those cases the patent asserted was found invalid, so (subject to invalidity being overturned on appeal) the reasoning on non-/infringement is subsidiary. Nevertheless, the contribution to the development of the law on infringement is restricted by the approach taken. The contrast in the clarity of the court's reasoning, for the unconnected reader, on the validity issues compared with the infringement issues is quite apparent. In *Sycurio*, Bacon J's discussion of the principles indicates there was argument about the applicability of the *Formstein* defence, which is a developing area in the law in the UK, and so a subject on which comprehensive reasoning would be of value.

The Court of Appeal's judgment in ***JCB v Manitou*** **(17 July 2023)**[53] directly addressed the balance. In 2022, finding one of JCB's four asserted patents both valid and infringed[54], Judge Hacon said ([160]):

> "It is not possible to attempt a coherent discussion of the issues arising in relation to JCB's allegations of infringement in an open judgment. Consequently almost all of my judgment on infringement must be confined to the confidential annex."

A dispute then arose as to whether an order under CPR r.31.22(2) should be made restricting the use of parts of various documents read or referred to at the trial on the ground that the documents contained information that was confidential to Manitou. The Court of Appeal's judgment is discussed in section 4 below. Overturning Judge Hacon, Arnold LJ explained that in the context of this case, open justice should give way to the protection of Manitou's trade secret and that the confidentiality in the relevant documents, including the confidential annex to the judgment containing the judge's reasoning on infringement, should be made the subject of a final order under r.31.22(2) preserving confidentiality.

Patent infringement/validity determination by non-IP specialists

In ***Heraeus v Noblelight*** **(31 July 2023)**[55], the case concerned Heraeus' patent to a method for securing a tungsten "pin" electrode into the end of a quartz glass tube. Competition specialist Zacaroli J approached his assessment of issues of construction and infringement in an unconventional way. For example, unusually, the judgment did not recite the language of any of the claims in issue, beyond noting alignment with certain examples in the specification (for claim 1, example 17).

Under the heading "Infringement on purposive construction", Zacaroli J recited the principles listed by the Court of Appeal in *Virgin v Premium*[56] on the "approach to the construction of patents".

Heraeus contended that "no bigger than" (in the claim language) would be understood by the skilled person as not a hard limit, but a "fuzzy" one, meaning "not materially bigger". Zacaroli J agreed ([80]):

---

[50] *Ensygnia IP Limited v Shell Oil Products Limited & Ors* [2023] EWHC 1495 (Pat) (26 June 2023) Charlotte May KC

[51] *Sycurio Limited v PCI-PAL Plc & Anr* [2023] EWHC 2361 (Pat) (25 September 2023) Bacon J

[52] *Philip Morris Products S.A. & Anr v Nicoventures Trading Limited & Anr* [2023] EWHC 2616 (Pat) (25 October 2023) HHJ Hacon

[53] *J.C. Bamford Excavators Limited v Manitou UK Limited & Anr* [2023] EWCA Civ 840 (17 July 2023) The President of the Family Division, Arnold LJ, Elisabeth Laing LJ

[54] *J.C. Bamford Excavators Limited v Manitou UK Limited & Anr* [2022] EWHC 1724 (Pat)

[55] *Heraeus Noblelight Limited v First Light Lamps Limited* [2023] EWHC 1950 (Pat) (31 July 2023) Zacaroli J

[56] *Virgin Atlantic Airways Ltd v Premium Aircraft Interiors UK Ltd* [2009] EWCA Civ 1062

> "I conclude that – construed objectively – the protection sought in the Patent is not limited to a method in which beads are precisely no bigger than the outer diameter of the tube, but include variants in which the bead is not materially bigger than the outside diameter of the tube to an extent "which could have no material effect upon the way in which the invention worked" (per Lord Diplock in *Catnic Components Ltd v Hill & Smith Ltd* [1982] R.P.C. 183, at p.243). In this case, that means not bigger so that it impairs the strength or utility of the seal. As a matter of fact, that encompasses any bead made within CGK tolerances. If that is wrong, then alternatively the phrase is to be construed as not bigger by reference to CGK tolerances."

This led to a finding of infringement "on a purposive construction" ([81]):

> "In reaching this conclusion, I keep in mind that it is a method patent, not a product patent. Mr Hall suggested that using oversized beads, per the Annex C method, did have a material effect on the way in which the method worked. It was less efficient than the method taught in the Patent as it required (at least potentially) the use of tooling to eliminate bulging on the side of the tube as a result of the use of the oversized bead, and it was one of the trumpeted benefits of the Patent that it avoided the need for tooling. I am satisfied, however, that the elimination of tooling referred to in the Patent is the tooling required to form the seal in the first place, as in the CGK GS10 Dome Method. It was tooling during the formation of the seal that introduced inefficiencies and potential weakness (as a result of the carbon tool contaminating the molten glass before it was formed in the seal). The tooling contemplated by Annex C is undertaken after the lamp has been assembled, in order to work down any bulging that has occurred as a result of using a bead that was at the upper end of CGK tolerance – such a bead having been chosen for no technical purpose other than to seek to incorporate a change from the Patent."

The "Annex C" referred to was an annex to Noblelight's product and process description.

Zacaroli J then moved to the assessment of infringement on the doctrine of equivalents, noting that the parties were agreed that determination was by reference to the three questions posed by Lord Neuberger in *Actavis v Eli Lilly*[57]. Noblelight accepted that the variant achieved the same result as the claimed invention, but contended that it did not do so in the same way, because the defendant's method involved the use of an oversized bead. This argument depended on Noblelight succeeding on construction though, which it had not done, and so Zacaroli J rejected it. (He did not address what his conclusion would be on reformulated question 1 if he was wrong on the construction of "not bigger than"). The second reformulated question was agreed to follow the first. The third reformulated question was agreed, on the facts, to raise a question of purposive construction, so it similarly pointed the same way. Hence equivalents on the doctrine of equivalents was found too.

Zacaroli J then addressed Haraeus' case of "literal infringement". Heraeus' case was that, while Noblelight's process required the lamp assemblers to use oversized beads, in fact, due to error not design, they had on occasion used beads that were no bigger than the outside diameter of the tube, and this amounted to infringement. With reference to Arnold J's judgment in *Napp v Dr Reddy's*[58], Zacaroli J said ([97]):

---

[57] *Actavis UK Limited & Ors v Eli Lilly and Company* [2017] UKSC 48

[58] *Napp Pharmaceutical Holdings Limited v Dr Reddy's Laboratories (UK) Limited & Anr* [2016] EWHC 1517 (Pat)

> "Where…the only basis on which it is alleged that infringement occurred was due to the inadvertent failure of First Light's employees to follow the Annex C process, there will have been no infringement unless this has occurred on a more than *de minimis* basis."

He was not satisfied that it had been established to have occurred on a more than *de minimis* basis. Once a lamp was made, it was impossible to measure the bead that was used in its making. No attempt at reverse engineering had been made and there were no contemporaneous records going to the bead sizes used. An "inspection" had taken place of the process employed by two of the defendant's employees, but those individuals had stopped assembling lamps in 2020, noted the unnatural and uncomfortable circumstances of the inspection, and considered that they had not performed their best work in the course of the inspection under the gaze of many onlookers. They both recalled using beads that were bigger than the outer diameter of the tube. Zacaroli J said that "mistakes do happen" was an insufficient basis for concluding infringement on a more than *de minimis* basis.

Zacaroli J's dismissal of the "literal infringement" case seems entirely sensible. However, his assessment of infringement "on a purposive construction" failed to note the guidance of Lord Neuberger in *Actavis v Eli Lilly*[59] on the first issue to be addressed in respect of infringement: does the variant infringe any of the claims as a matter of normal interpretation. While this question involves interpreting the claim language, and subsequent case law has explained that this is a purposive construction, and a purposive construction may entail consideration of the principles explained by the Court of Appeal in *Virgin v Premium* (subsequently updated in *Saab Seaeye v Atlas Elektronic*[60]), that alone is not enough. Crucially, in *Actavis v Eli Lilly*, Lord Neuberger explained why the conflation of claim construction and determination of the scope of the monopoly could lead to error. Hence the move to Lord Neuberger's two-issue approach to the determination of infringement. In light of that change, earlier case law going to the construction of patent claims needs to be considered with real caution, and with an understanding of how the law has since changed. Consideration of whether the variant "could have no material effect upon the way in which the invention worked", as contemplated by the House of Lords in *Catnic v Hill & Smith*[61] and drawn upon by Zacaroli J in his construction of the patent, now has no place in the correct construction of patent claim language or the assessment of infringement on the normal interpretation.

When Zacaroli J tackled the doctrine of equivalents, he pointed to features in example [0017] of the patent as containing the core teaching which solved the problem underlying the invention, but he did not specifically identify the inventive concept. Noblelight accepted that the variant achieved substantially the same result, but not that it was achieved in substantially the same way. Zacaroli J said that it was, because of the conclusion reached on construction, without comparing the respective ways. He then said that both parties agreed that on the facts of the case, the third question was essentially the same as that raised by the purposive construction case. (Lord Neuberger, however, had been at pains to explain that although "the language of the claim" is important, the fact that the language of the claim does not on any sensible reading cover the variant is not enough to justify holding that the patentee does not satisfy the third question. Consideration of that question does not exclude the specification of the patent and all the knowledge and expertise which the notional addressee is assumed to have).

It is difficult to know whether the application of the principles expressed in the modern authorities would lead to the same result between the parties. Court users have a right to expect that it is the modern

---

[59] *Actavis UK Limited & Ors v Eli Lilly and Company* [2017] UKSC 48

[60] *Saab Seaeye Ltd v Atlas Elektronik GmbH* [2017] EWCA Civ 2175

[61] *Catnic Components Limited & Anr v Hill & Smith Limited* [1982] R.P.C. 183

authorities that are applied. Specialist IP judges and deputy judges drawn from the IP Bar bring this background with them. *Terrell*, unfortunately, is no substitute.

c) Defences, acts of infringement, stays, evidence

There is little of note to report on for 2023 regarding defences and stays. Arnold LJ made some notable comments on the infringement of Swiss form claims. A strong theme has been the evidence.

Infringement of Swiss form claims

Many readers will recall discussion in previous years of numerous judgments in a number of cases about *Warner-Lambert's* patent to pregabalin for various types of pain. Parts of the dispute have continued to rumble in 2023 in claims brought by Dr Reddy's and a number of NHS entities. The claims seek compensation under cross-undertakings given by Warner-Lambert/Pfizer, and for threats.

The Court of Appeal's judgment in ***Dr Reddy's v Warner-Lambert*** **(1 February 2023)**[62] is discussed below in the context of remedies. The judge's decision to refuse Warner-Lambert permission to amend its defence was confirmed: Warner-Lambert could and should have advanced a claim for infringement of the inflammatory pain claims as part of its case against Dr Reddy's prior to the conclusion (by Birss J's order) of the liability stage of the case, and it was an abuse of process for Warner-Lambert to do so now. Arnold LJ added ([107]-[110]):

> "Although, for reasons that will appear, it is not necessary to rest my decision upon the point,…. So far as the claim under section 60(2) is concerned, the Supreme Court in *Warner-Lambert SC* was unanimous in holding that the preparation of the pharmaceutical composition was undertaken by the manufacturer and not by a pharmacist who merely applied a patient label. Although that holding was obiter, it was based on *Menashe Business Mercantile Ltd v William Hill Organisation Ltd* [2003] 1 WLR 1462, which is binding Court of Appeal authority. In my opinion there is no realistic prospect of the Supreme Court reaching the opposite conclusion in future. The fact that the present claim is concerned with dispensing pregabalin for off-label use makes no difference to this.
>
> … A claim under section 60(1)(b) requires the person using the process to have the relevant state of mind, while a claim under section 60(2) requires the supplier of the means to have the relevant state of mind. Both claims are directed at the pharmacist, and thus it is the pharmacist who must have the relevant state of mind. Counsel for Warner-Lambert also submitted that it was sufficient that it would have been foreseeable that some of the pregabalin had been prescribed off-label for a claimed condition, but this submission faces two difficulties. The first is that the Supreme Court unanimously rejected foreseeability as the test of what was required by the word "for" in the claims. Secondly, even if foreseeability is sufficient to satisfy the claims, section 60(1)(b) and section 60(2) – unlike section 60(1)(c) – both require the presence of a specific mental element for each act of alleged infringement.
>
> The judge expressed the view that, if the affixing of a label to a packet of pregabalin did constitute preparation of a pharmaceutical composition, then there was a strong case for saying

[62] *Dr Reddy's Laboratories (UK) Limited & Ors v Warner-Lambert Company LLC* [2023] EWCA Civ 73 (1 February 2023) Males, Arnold & Nugee LLJ

> that it also constituted the "extemporaneous preparation … of a medicine" within section 60(5)(c) of the 1977 Act, and thus was exempted from infringement. He concluded, however, that this was a novel point of law which ought not to be decided on an amendment application, but rather should be determined after full argument at trial in the light of the facts. Given my conclusions above and below, it suffices to say that I find it very hard to see how affixing a label could be "preparation of a pharmaceutical composition" but not "extemporaneous preparation … of a medicine"."

Arnold J's view of the length of a Swiss form process i.e. whether it ends at the factory gate or may encompass the acts of a pharmacist for the purposes of s.60(2) and/or s.60(1)(b), has long been consistent with this. So too his view on the mental requirements for infringement under these subsections. This is evidenced by his earliest judgments in the pregabalin litigation, dating to January 2015. The Court of Appeal at the time (Jacob LJ) was in heated disagreement with him. The Supreme Court's intervention on the subject was *obiter*, apparently without full argument. It was also inconsistent with rulings by the Supreme Court the previous year in *Actavis v Eli Lilly*[63], confirming the Court of Appeal's rulings in that case. No doubt the subject will be revisited in the future!

Evidence – general principles

We talk about evidence issues year-in, year-out. Getting the evidence right involves two key things:

> i) Understanding and applying the general procedural rules about expert evidence, and the principles developed in the case law, in particular going to the role of expert evidence, the obligations of an expert, how they should be instructed and how they should give their evidence.
>
> ii) Understanding the relevant legal tests (i.e. the principles going to the determination of the particular legal points in issue), identifying the facts and opinions relevant to that legal issue, finding and instructing an expert who is suitable and willing to act as an expert witness in that context, and submitting from them reasoned evidence that addresses the full breadth of the legal tests in play.

Marrying these two things together is an art form, the responsibility for which lies with the solicitors (or patent attorneys) instructed on a case. Repeatedly in 2023, we have seen parties' cases coming unstuck at point ii). Less frequently, deficiencies are identified in respect of point i), but in 2023 there was some pretty firm judicial guidance delivered in this area too.

***Sycurio v PCI-PAL* (25 September 2023)[64]** concerned Sycurio's patent to a method of processing a phone call. Sycurio asserted that it was infringed by PCI-PAL's cloud-based secure card payment system known as Agent Assist. Bacon J (a competition law specialist) made the following preliminary points, which should not be news to any IP lawyer ([9]-[14]):

> "There is no dispute that an expert witness in a patent case is subject to the rules of CPR Pt 35. These include under r. 35.3(1) the duty of experts “to help the court on matters within their expertise”, and under r. 35.10(1) the requirement for an expert’s report to comply with Practice Direction 35.

[63] *Actavis UK Limited & Ors v Eli Lilly and Company* [2017] UKSC 48

[64] *Sycurio Limited v PCI-PAL Plc & Anr* [2023] EWHC 2361 (Pat) (25 September 2023) Bacon J

Practice Direction 35 includes the following requirements:

> "2.1 Expert evidence should be the independent product of the expert uninfluenced by the pressures of litigation.
>
> 2.2 Experts should assist the court by providing objective, unbiased opinions on matters within their expertise, and should not assume the role of an advocate."

The starting point in both CPR Pt 35 and the accompanying Practice Direction is therefore that the expert witness must give evidence on matters which fall "within their expertise". That may of course require the expert to do some further research to enhance their existing knowledge in the field, so as to be able to assist the court with the specific issues in the case. An expert may also wish to do background reading in relation to a related field in which they do not profess specific expertise, so as to be able to understand the context of the questions which they are asked which do fall within their field of expertise, and thereby to give useful answers to those questions.

What the expert should not, however, do is to give evidence on the basis that they have sought to read in and educate themselves in the relevant field for the purposes of the case in question. A person does not become an expert by virtue of having acquired knowledge in the course of the case itself. Nor should an expert give evidence on a subject which falls outside their expertise, but which they consider they understand "well enough" to express a view on the matter. An expert is not instructed for court proceedings on the basis that they believe that they have "sufficient" grasp of the matter to express a view, or are able to teach themselves what they need to know in the course of preparing their evidence. They are instructed on the basis that they are a genuine expert in the relevant field, whose opinions may be relied upon and given weight by the court.

As to the process by which an expert report is prepared in a patent case, both parties agreed that the position was correctly set out by Arnold J in *Medimmune v Novartis* [2011] EWHC 1669 (Pat), §§99–114. In particular, both parties endorsed the propositions that the specialist nature of such cases and the likely fields of expertise of the expert witnesses instructed in such cases mean that expert witnesses in patent actions require a "high level of instruction by the lawyers", and that in practice expert reports in patent cases are often drafted by the lawyers on the basis of what the expert has told them, with the expert then amending the draft report as appropriate (§110).

That process must not, however, obscure the duties of the expert as set out in CPR Pt 35 and Practice Direction 35. In particular it must not lead to an outcome where the expert strays into giving evidence on matters falling outside their expertise, on the basis that they have been asked questions by their solicitors which they have endeavoured to answer. That is an outcome which both the expert and their instructing legal team must be vigilant to avoid. The instructing solicitors should not simply assume that the expert will understand the requirements of CPR Pt 35 and the Practice Direction. It is their responsibility to ensure that the expert has the necessary expertise and is aware of the duties imposed on an expert witness."

Sycurio's main expert witness in the action was Mrs Concepta Penn. A consultant specialising in payment card processing, she had in-depth knowledge of payment card scheme rules and standards.

She did not, however, have any expertise in the technical solutions used to implement the card processing systems which she had worked on and designed.

In keeping with the expertise of Mrs Penn, Sycurio's position was that the patent was directed at the level of a payment card systems problem, not at someone with expertise in telephony (i.e the technical field involving the design and implementation of systems for call centres). The judge disagreed: the skilled team had a cross-section of expertise that included both telephony and payment systems, and neither of them had the "controlling mind". Further, two items of cited prior art – Van Volkenburgh and Shaffer – were highly technical documents.

The consequence of this was that Mrs Penn's lack of expertise in telephony was a problem for Sycurio's case. So was the way that she had been instructed. Bacon J explained that in cross-examination, it became apparent that Mrs Penn was struggling to understand and answer the questions put to her on the technical documents, including Van Volkenburgh and Schaffer and PCI's product and process description (PPD) ([19]):

> "Her answers became increasingly confused, and on several occasions she was unable to explain points that she had specifically commented on in her written evidence."

Mrs Penn was subsequently recalled, and in cross-examination gave "entirely candid" explanations for her difficulties. There was a medical issue and dyslexia, which had contributed. The real problem though was that she was giving evidence about matters which fell well outside the scope of her expertise ([22]):

> "She explained that she had not written the first draft of her expert reports herself, but had sent copious notes to her instructing solicitors, who had then spent many months putting her reports together, with further input from her on specific points. She frankly admitted that she had struggled to understand PCI-Pal's PPD and had spent many days and a "huge amount of research" to be able to do so. The Shaffer patent had been, she said, "an absolute nightmare" to try and understand, but she said that she had eventually got through it. She had done research on various other technical points to reach what she considered to be an adequate level of understanding to enable her to comment on them in her evidence. She maintained that the final written reports were entirely her own evidence, and that she had read them carefully and agreed with the points made. She said, however, that because her own language was so non-technical, the solicitors had sometimes reformulated what she said to put it into the right form of words."

Bacon J said that the fact that telephony technology was not within Mrs Penn's field of expertise, and that she should not have been giving evidence on those points, "should have been readily apparent to her instructing solicitors". It had consequences for the case because the disputed matters were those in the field of telephony. They were matters on which Mrs Penn had opined. Sycurio's case relied upon that evidence in defending against the obviousness challenges brought by PCI and supported by the evidence of their expert Mr Robinson. Sycurio's submissions on the technical points could not be maintained without evidential support, and so they were unsuccessful. (Sycurio did rely upon the evidence of an expert in telephony (Prof Leung) but in a limited context going to infringement, and the judge said that most of his evidence was uncontroversial).

In contrast, PCI's expert witness on telephony points (Mr Robinson) was "very impressive and knowledgeable", giving consistently careful and comprehensive responses to highly technical questions and providing considerable assistance to the courts. Sycurio's patent was found invalid.

It is perhaps worth reiterating that a key authority on expert evidence from the Patents Court remains the 2011 judgment in *MedImmune v Novartis*[65]. Arnold J made clear that a principle condensed into CPR Part 35 is that "what is required is that an expert witness should express an independent and impartial opinion which is unaffected by the identity of the party instructing him". The lawyers who instruct expert witnesses have important responsibilities too. It is their responsibility to ensure that the expert is properly instructed and put in a position to express an independent and impartial opinion. This may involve more than simply telling the expert that that is his or her duty and providing them with copies of the Practice Direction and the Protocol on the instruction of experts. For example, experts must guard against the "natural tendency" to focus on parts of the prior art document which support the opinion they hold. Experts should also reveal past involvement with the invention in issue or a similar invention and, where appropriate, explain it.

On the general principles as to expert evidence Judge Hacon's judgment in ***AutoStore v Ocado*** **(30 March 2023)**[66] is notable too. A Professor specialising in the law of the Russian Federation gave evidence for AutoStore on Russian law concerning confidentiality, in the context of a prior disclosure of the invention made to a Russian bank. He had previously given evidence on Russian law in a fraud case (*OJSC TNK-BP v Lazurenko*[67]), and he disclosed that he had given evidence in that case. Judge Hacon, however, looked at some of the detail of that evidence and found that it was "difficult to reconcile" with the evidence the Professor gave in the *AutoStore* case. He also occasionally "avoided giving a clear answer to a straightforward question, as if reluctant to be pinned down to an answer unhelpful to AutoStore". On the key issue of the effect of Russian law, Ocado succeeded.

Expert evidence in financial enquiries

In recent years we have seen a trend for comment on the way that expert evidence should be given in financial aspects of patent disputes. For example, in her 2022 judgment in *Geofabrics v Fiberweb*[68], Charlotte May KC observed that in the context of a damages inquiry it was not helpful or appropriate to "prefer" the evidence of one expert over another in the way that can sometimes be seen in respect of technical expert evidence in patent cases. Instead, the court must approach each issue in turn, doing its best to determine what would have happened in the counterfactual by reference to the available evidence with respect to that issue. She stressed the importance of the reasons given by an expert for their opinion.

Two patent judgments in 2023 followed lengthy, evidence-heavy "FRAND trials". In ***InterDigital v Lenovo*** **(16 March 2023)**[69], Mellor J explained that InterDigital's expert on accounting matters had given his evidence on the basis of fundamental assumptions that were unrealistic, perhaps indicating that he identified too much with InterDigital's case. In ***Optis v Apple*** **(10 May 2023)**[70], Marcus Smith J concluded that the expert evidence of both sides in relation to comparable licences was "of little, if any, probative value". In the "unpacking" of the licences, the parties had set the "direction of travel" for their experts, with the result that the experts' work on the numbers was "unreliable and liable to mislead". The experts' reports should have given reasons for the approaches they had taken, not just followed

[65] *MedImmune Limited v Novartis Pharmaceuticals UK Limited & Anr* [2011] EWHC 1669 (Pat)

[66] *Autostore Technology AS v Ocado Group plc & Ors* [2023] EWHC 716 (Pat) (30 March 2023) HHJ Hacon

[67] *OJSC TNK-BP Holding & Anr v Igor Lazurenko* [2012] EWHC 2781 (Ch)

[68] *Geofabrics Limited v Fiberweb Geosynthetics Limited* [2022] EWHC 2363 (Pat)

[69] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 539 (Pat) (16 March 2023) Mellor J

[70] *Optis Cellular Technology LLC & Ors v Apple Retail UK Limited & Ors* [2023] EWHC 1095 (Ch) (10 May 2023) Marcus Smith J

without question the approaches they had been given. This is guidance that lawyers would be wise to heed in any quantum dispute.

Expert witness involvement in proceedings outside the jurisdiction

Nokia v OnePlus **(16 January 2023)**[71] concerned a SEP asserted by Nokia against a number of OnePlus/Oppo defendants. Essentiality was conceded; the trial concerned validity.

OnePlus/Oppo's expert had been involved with parallel litigation in the Netherlands, in the course of which he had provided written evidence. In cross-examination before Meade J, it transpired that the he had also contributed extensively to legal briefs in the Netherlands. Meade J said ([27]-[29]):

> "I do not think there was anything wrong, in itself, with Dr Cooper reusing text that he had written for another purpose previously, but I do think it was unfortunate that he did not acknowledge how the overall exercise was done, and in particular that he had been so intimately connected with [Oppo's] case being developed.
>
> The overall effect is a significant lack of transparency about the way in which Dr Cooper's views were formed, and an inability, in particular, to have any confidence that the idea of combining ZTE and LGE came from Dr Cooper himself, originally.
>
> Dr Cooper's evidence was also appreciably inconstant in relation to the way in which he envisaged the skilled person combining ZTE and LGE. At one important point in his oral evidence he accepted that the skilled person would not spot the problems with ZTE unless they had read LGE. This was quite different from his written evidence…Dr Cooper did not have a clear picture in his own mind of the overall shape of what he was putting forward, and this reduced my confidence in him as being able to put himself in the shoes of the ordinary skilled person."

Taking all these points together, Meade J said that he put significantly more weight on the evidence of Nokia's expert.

Savvy IP lawyers should of course be aware that the way in which legal briefs are prepared in many civil law jurisdictions – blending technical points (which sensible lawyers would get ok'd by the expert) with legal arguments – is very different from the approach in the Patents Court. The rules governing the preparation of expert evidence, the obligations on an expert witness, and the weight given to expert evidence, can be very different in other jurisdictions. Therefore the use of an expert witness already subsumed in a case in a civil law jurisdiction can present an Achilles heel.

Gilead v NuCana **(21 March 2023)**[72] concerned two NuCana patents to products defined by Markush formulae. Gilead accepted that if the claims were valid they would be infringed by its anti-viral drug compound Sofosbuvir; so again the trial concerned validity.

Gilead's challenge of undue burden insufficiency relied in part on evidence of work done by real teams (one of them Idenix) at around the priority date. NuCana's expert had first been instructed for the EPO proceedings in respect of NuCana's patent, not the English proceedings. Meade J said that while he

[71] *Nokia Technologies OY & Anr v OnePlus Limited Technology (Shenzhen) Co., Ltd & Ors* [2023] EWHC 23 (Pat) (16 January 2023) Meade J

[72] *Gilead Sciences Inc & Anr v NuCana Plc* [2023] EWHC 611 (Pat) (21 March 2023) Meade J

was sure that Professor Davies had understood that he should act honestly and fairly, such a general understanding was not a complete substitute for the more specific obligations of Part 35, in particular in relation to the overriding duty to the court.

At the outset of his instruction, Professor Davies was given Gilead's EPO Opposition Statement, which informed him of the points run by Gilead on undue burden and of the routes tried and failed by Idenix. Meade J said ([62]):

> "This posed an obvious risk of hindsight. One can understand rational reasons why it may have been done, not least because NuCana may have wanted Prof Davies' input to assess the strength of its position, but to the extent that the intention was to have him replicate what the ordinary skilled person could do armed only with the Patent and the CGK, that was bound to be undermined by telling him how not to do it (as it were) and where the difficulties would be said to lie. Similarly, he was later given the judgment of Arnold J in *Idenix v Gilead* which accentuates the problems."

Meade J observed that the sense he got from the documents and Professor Davies' oral evidence was of him providing high level ideas from his own knowledge and experience, without thought to whether they were routine, to support the notion of synthesis being possible. For example, he suggested that his own SuperQuat technique be used, without checking that what he was proposing was supported by the literature. Further, NuCana's US advisers (KIPS), in particular "Ms Knowles", had been responsible for turning Professor Davies' high level suggestions into instructions for the contract research organisations engaged by NuCana to synthesise relevant compounds (originally for the EPO proceedings). This meant it was Ms Knowles, rather than Prof Davies, who went looking for supporting common general knowledge references. Meade J said ([68]):

> "That was far from optimal. If Prof Davies was in due course to give evidence that the ordinary skilled person could carry out the syntheses correctly and without any hindsight, then this is an exercise he should have carried out himself, or overseen more closely (I note that he did "sign off" the schemes as being based on materials available in 2003/4 on 1 April 2019 but it does not appear that his review was a close one)."

(Relatedly, two of the synthetic routes taken forward by NuCana in its litigation strategy, in respect of the undue burden case, appeared to come from Ms Knowles. Therefore she had not merely been filling in gaps in points of detail). Meade J concluded that Professor Davies' instructions in the EPO were such as to nudge him towards putting forward synthetic routes that were more likely to succeed, and led him to have an approach which was some distance from that which would have been taken by the ordinary skilled chemist. In addition, significant details of the routes put forward came not from him but from KIPS (NuCana's US advisers). This was not dishonest on his part or on the part of NuCana's advisers, and it may have been a function of time pressure as much as anything else. It did not disqualify Prof Davies' evidence. However, Meade J said that he took it into account when considering whether and to what extent Prof Davies' evidence represented what the ordinary skilled chemist would have done armed with the Patents and the CGK. Meade J ended up concluding that no person genuinely representative of the ordinary skilled person and unassisted by "super-experts" and/or hindsight had been shown to have succeeded, and NuCana's patent was invalid for undue burden insufficiency.

The comments in the above cases all point back to the fundamental duty of an expert to the court. Expert evidence should be an expert's own independent work product uninfluenced by the pressures

of litigation, given in order to assist the court by providing objective, unbiased opinions on matters within their expertise. An expert should not assume the role of an advocate.

Expert evidence on issues of patent law

As noted above, getting the evidence right also involves understanding the relevant legal tests, finding and instructing an expert who is suitable and willing to act as an expert witness, and submitting from them evidence that addresses the full breadth of the legal tests in play. We pick up on some instances of evidence falling short of this in the context of specific aspects of patent law below and in other sections of this paper.

In *American Science & Engineering v Rapiscan*[73] and *Fisher & Paykel v Flexicare*[74], the Patents Court built upon the guidance given in *MedImmune v Novartis*[75], particularly on the importance of avoiding hindsight, the order in which an expert should be asked to consider the relevant documents in a patent case and the questions that should be asked of them. Which documents are involved, and exactly in which order they should be considered, will depend upon the issues and the dates of the relevant documents in the case.

In ***Ensygnia v Shell* (26 June 2023)**[76], patentee Ensygnia's expert witness, Prof Martin, had been given the original cited prior art before he was asked about the common general knowledge. Charlotte May KC said ([16]-[18]):

> "…this approach was contrary to the established way in which an expert in a patent case should be instructed (at least where possible): the expert should generally discuss the CGK first, before being shown the prior art and then the patent in suit (see *Fisher & Paykel Healthcare Ltd v Flexicare Medical Ltd & Anr* [2020] EWHC 3282 (Pat) at [20])….
>
> … as Meade J made clear in *Fisher & Paykel* at [22], it is normally possible to direct initial discussions with an expert about CGK in a practical or workable way by describing the area of interest in general terms. That approach is preferable to showing the expert the prior art first."

The importance of avoiding hindsight, and what this means for expert evidence, was addressed by Michael Tappin KC in ***Nicoventures v Philip Morris* (18 April 2023)**[77]. This was another judgment in the multi-patent, multi-jurisdiction e-cigarette patent battle between the British American Tobacco (BAT) and Philip Morris (PMI) groups. In this case, two PMI patents were the subject of BAT's invalidity challenge; PMI counterclaimed for infringement.

BAT's expert, Mr Wensley, had given evidence in each of the previous two trials between the parties. PMI submitted that this meant his evidence involved hindsight. Michael Tappin KC noted the following observations of Meade J in *Fisher & Paykel v Flexicare* ([14]):

---

[73] *American Science & Engineering Inc v Rapiscan Systems Limited* [2016] EWHC 756 (Pat)

[74] *Fisher & Paykel Healthcare Limited v Flexicare Medical Limited & Anr* [2020] EWHC 3282 (Pat)

[75] *MedImmune Limited v Novartis Pharmaceuticals UK Limited & Anr* [2011] EWHC 1669 (Pat)

[76] *Ensygnia IP Limited v Shell Oil Products Limited & Ors* [2023] EWHC 1495 (Pat) (26 June 2023) Charlotte May KC

[77] *Nicoventures Trading Limited v Philip Morris Products SA* [2023] EWHC 854 (Pat) (18 April 2023) Michael Tappin KC

> "Where the expert already knows the invention there may yet be value in sequencing the documents that he or she reviews to focus the mind on avoiding hindsight, but the opportunity to give a completely untainted view of the prior art does not exist; the expert has to discipline themself carefully to avoid hindsight. If they do so well then there is no reason why they cannot give cogent evidence on obviousness, but in such a situation I think it must be important for the expert to identify how they knew about the invention and when, and to reflect carefully on how that might influence them."

Michael Tappin KC thought that Mr Wensley had not complied with this expectation ([15]):

> "… in my judgment those observations apply equally when the expert is already aware of a product which contains a feature which forms an important part of the invention which distinguishes it from the prior art. There was nothing in Mr Wensley's evidence to suggest that he had reflected carefully on how his knowledge of the first iteration 'glo' product might have affected him."

Therefore Mr Wensley had "no doubt unconsciously" been influenced in his evidence by knowing that the first iteration of the "glo" product had two thin-film heaters arranged as they were.

In contrast, BAT's expert on tobacco chemistry, Dr McAdam, had been "carefully shielded from the issues and evidence in the case, to the extent of not being shown the Patents or the reports of either of the other experts and only attending the trial when the time came for him to give his evidence, which was confined to the nature of the skilled team, the CGK of the tobacco chemist member of the skilled team, and brief comments on Pienemann". The judge said that he was not sure why quite so much shielding was thought to be necessary, but in any case it did not prevent accusations of hindsight either – because Dr McAdam had not reflected on whether his knowledge of the post-priority "glo" and IQOS systems could have affected his views – but the point was in relation to matter which ultimately turned out to be of little or no significance.

PMI's patents survived the invalidity challenge. Before leaving the case, it is perhaps interesting to note too that the judge recorded that both parties cross-examined the other's expert(s) by reference to extracts from reports of experts called by the other party in previous cases between the parties and/or from trial transcripts of cross-examination. Declining to place any weight on extracts from the evidence of other experts in other cases, Michael Tappin KC said ([19]):

> "This seemed to me to be tantamount to seeking to rely on the opinion evidence of those other experts. I doubt whether, without seeking the court's permission, that course was open…"

Optis v Apple **(25 April 2023)**[78] was the case in which at first instance, Meade J concluded that Optis' expert witness, Ms Johanna Dwyer, was "materially outside her area of expertise" and as a result her evidence was of "extremely limited help on the key issues in this case". Arnold LJ said that Meade J had been right to give himself that warning ([5]):

> "It is because of the function of expert witnesses in patent cases. Experts usually have little or no expertise in the issues which confront the court, such as the obviousness of a claimed invention to a person skilled in the art. Thus the experts' primary function is to educate the court in the relevant technology. This was explained by Jacob LJ in a number of judgments. It is

[78] *Optis Cellular Technology LLC & Ors v Apple Retail U.K. Limited & Ors* [2023] EWCA Civ 438 (25 April 2023) Arnold, Nugee & Birss LLJ

sufficient for present purposes to cite what he said in *SmithKline Beecham plc v Apotex Europe Ltd* [2004] EWCA Civ 1568, [2005] FSR 23:

> "52. … although it is inevitable that when an expert is asked what he would understand from a prior document's teaching he will give an answer as an individual, that answer is not as such all that helpful. What matters is what the notional skilled man would understand from the document. So it is not so much the expert's personal view but his reasons for that view—these the court can examine against the standard of the notional unimaginative skilled man. …
>
> 53. Thus in weighing the views of rival experts as to what is taught or what is obvious from what is taught, a judge should be careful to distinguish his views on the experts as to whether they are good witnesses or good teachers—good at answering the questions asked and not others, not argumentative and so on, from the more fundamental reasons for their opinions. Ultimately it is the latter which matter—are they reasons which would be perceived by the skilled man?"'

Apple's obviousness case was based on prior art Ericsson. It involved the skilled person finding standard reference text "NRC", and how NRC should be interpreted. Arnold LJ explained the role of the court, and the expert evidence, in the interpretation process as follows ([133]):

> "The interpretation of NRC3, as with any other technical document, is a question for the court once educated as to the identity and attributes of the skilled person through whose eyes the document is to be read and as to their common general knowledge (including the meaning of any technical terms). Expert evidence is admissible, and usually essential, to assist the court to understand those matters; but it is not admissible, let alone determinative, as to the meaning of the document: see *Terrell on the Law of Patents* (19th ed) at 9-181 to 9-195 and the authorities cited. It is, of course, true that expert evidence is also admissible, and often vital, on the question of what the skilled person would think and do after reading the document, but that is a separate question: see *Terrell* at 9-179. "

Birss LJ said ([180)]:

> "…it is well established that construction of a document is for the court, but expert evidence about what the skilled person would think in the light of a document, is admissible expert evidence."

Fact witness evidence

In ***Optis v Apple*** **(10 May 2023)**[79], as well as criticising the expert evidence in the FRAND trial, Marcus Smith J was unimpressed with some of Optis' fact evidence (as explained in section 2f below). He reiterated that witness statements are supposed to be frank statements of the truth, the whole truth and nothing but the truth; they are not supposed to be drafted so as to convey a particular impression but with enough wriggle room included to enable the witness to resile from that impression without actually being accused of lying.

[79] *Optis Cellular Technology LLC & Ors v Apple Retail UK Limited & Ors* [2023] EWHC 1095 (Ch) (10 May 2023) Marcus Smith J

The judgment of Mr Campbell Forsyth, sitting as a deputy judge in ***Cook v Boston*** **(30 August 2023)**[80] addressed a niche technical point about fact witness evidence. CPR Practice Direction PD57AC, on trial witness statements in the Business and Property Courts, states that a trial witness statement must be endorsed with a "certificate of compliance" in terms provided in that paragraph, signed by the party's legal representative. By paragraph 4.4, any application to dispense with the certificate of compliance "generally should be made, without notice, for determination without a hearing".

Stepping back into the wider CPR, rule 23.9 is stated to apply when the court has disposed of an application which it permitted to be made without service of a copy of the application notice. It states:

> "(**2) Where the court makes an order, whether granting or dismissing the application, a copy of the application notice and any evidence in support must, unless the court orders otherwise, be served with the order on any party or other person –**
>
> **(a) against whom the order was made; and**
>
> **(b) against whom the order was sought**.
>
> (3) The order must contain a statement of the right to make an application to set asidehttps://www.justice.gov.uk/courts/procedure-rules/civil/glossary or vary the order under rule 23.10."

At an earlier stage in the litigation, Mellor J had made an order for the certificate of compliance with PD57AC to be varied in respect of a number of the Cook witness statements. The application had been made without notice and the decision made on the papers without an oral hearing. Reasons were set out at the end of the order. Boston argued that it was entitled to see the application notice and the supporting evidence. Mr Campbell Forsyth agreed: the wording of r.23.9 "against whom an order was made" applied to Boston as the receiving party of an order made pursuant to an application notice under PD57AC 4.4.

New evidence on appeal

Finally on evidence, the Court of Appeal's judgment in ***Anan Kasei v Neo*** **(17 January 2023)**[81] emerged in one of those cases that just keeps on giving. The appeal was against the first instance judgment of Bacon J in the damages inquiry.

The particulars of claim in the liability proceedings were served on 13 April 2016. They pleaded that the second claimant (Rhodia) was the exclusive licensee of the patent – which was true because an exclusive licence between the claimants had been entered into on 8 April 2016. In their defence, Neo did not admit that the second claimant was the exclusive licensee, but Neo also did not seek disclosure of the licence relied upon. In October 2016, Rhodia applied to register the licence at the UK IPO. Later that month Anan commenced proceedings against Neo UK in Germany for infringement of the German designation of the same patent, and in that context (annexed to the statement of claim) provided to Neo

---

[80] *Cook UK Limited v Boston Scientific Limited & Anr* [2023] EWHC 2163 (Pat) (30 August 2023) Mr Campbell Forsyth

[81] *Anan Kasei Co. Ltd & Anr v Neo Chemicals & Oxiodes (Europe) Limited & Ors* [2023] EWCA Civ 11 (17 January 2023) Jackson, Coulson & Arnold LLJ

a copy of the 2016 licence. In the litigation in the UK, Neo subsequently admitted that the second claimant was the exclusive licensee of the patent.

After judgment was handed down in the damages inquiry, Neo raised the exclusive licence. Neo contended that as the claim was for damages alleged to have been sustained as a result of infringing acts committed from March 2013, Rhodia's claim was legally insufficient. They applied for permission to raise the point as a new argument in the appeal, and for disclosure of an earlier "Master Distribution Agreement" between the claimants.

Arnold LJ said that it was far too late for Neo to seek to raise the point now. It was clear that neither side had turned their mind to the question of whether the second claimant had been an exclusive licensee at the dates that were relevant to its claim for damages. If Neo had applied to strike out the second claimant's damages claim in 2020, Rhodia would have responded by applying to amend its case so the pleadings position would have been resolved.

Then, applying the *Ladd v Marshall* [1954] 1 WLR 1489 test on whether fresh evidence may be adduced on appeal, Arnold LJ said that it was too late for Neo to adduce the 2016 Licence. By exercising reasonable diligence Neo could have adduced the 2016 Licence in evidence before the judge in the damages inquiry; it was also debatable whether that evidence would have an important influence on the outcome of the inquiry because the losses claimed (i.e. on sales outside the UK) were sustained at a time when the second claimant *was* an exclusive licensee.

As for the "Master Distribution Agreement" that Neo sought disclosure of – even if the document were disclosed, Neo would need permission to adduce it as fresh evidence. Since it was referred to in the 2016 licence, Neo would run into the same *Ladd v Marshall* difficulties with respect to reasonable diligence as they had with the 2016 licence itself. Neo's application for disclosure of the MDA was therefore refused too.

d) Remedies and costs

Financial relief for instances of infringement not determined at the liability trial

It is commonplace in IP proceedings for liability to be decided by reference to particular instances of the activity alleged to infringe, but that the scope of the quantum stage is general. In 2019, the Court of Appeal, in its judgment in *Anan Kasei v Neo*[82], noted that the practice direction to CPR Part 63 prevents patent proceedings becoming over-complicated by numerous factual allegations of infringement by requiring the patentee only to provide examples of each “type of infringement” at the liability phase. The liability trial then proceeds by reference to the exemplary infringements alleged, and can focus on whether the accused product or process infringes the claim. The split of cases into liability and quantum therefore avoids long and complicated financial inquiries if the patent is invalid or not infringed; and once liability is established, quantum can usually be settled. The approach also means that the patentee may be able to bring in further alleged infringements at the quantum stage.

However, the case law in 2023 flags that decisions made at the liability stage by the patentee can, nevertheless, limit the scope of the quantum stage inquiry.

[82] *Anan Kasei Co. Inc & Anr v Neo Chemicals and Oxides Limited* [2019] EWCA Civ 1646

The ***Lufthansa v Astronics*** dispute has produced at least five judgments in the quantum stage of proceedings in 2023. The case concerned Lufthansa's patent to voltage supply apparatus for aircraft seating. In 2020, Morgan J concluded that the patent was valid and the defendants had committed certain acts of infringement[83]. The defendants' appeal, limited to validity, was dismissed by the Court of Appeal in 2022[84].

Following Morgan J's 2020 judgment on the merits, there was a dispute about the form of the final order that the court should make, which led to a further judgment[85] from Morgan J explaining his reasons for settling upon the form of wording that he had decided to use. The order (paragraph 12) required the defendants to pay Lufthansa 98% of its costs without limitation (i.e. including the costs of the adjourned issues). The fourth recital and paragraph 11 were in the following terms:

> "AND UPON the Adjourned Issues no longer needing to be determined in the light of the Court's judgment
>
> The parties shall have liberty to apply for further directions on the Inquiry/Account."

Morgan J explained that the defendants' position before him was that Lufthansa had not abandoned the Adjourned Issues but wished to keep them alive (and so the defendants should not be ordered to pay Lufthansa's costs in respect of them). Morgan J explained that that was not his understanding of Lufthansa's position. Infringement having been found, Morgan J said that those issues were "no longer material at first instance". Overall, Lufthansa had succeeded and the defendants had failed on infringement.

The quantum stage began to proceed. On 2 September 2022, Lufthansa elected for an account of profits. A couple of months later, Lufthansa sought to amend its points of claim to advance a case on the infringement allegations which had given rise to the Adjourned issues and certain "unresolved issues" heard at trial. A dispute arose about the proposed amendment.

In ***Lufthansa v Astronics*** **(12 May 2023)[86]**, Douglas Campbell KC considered first the "unresolved issues". In view of the key modern authorities (*Unilin v Berry[87], AP Racing v Alcon[88], Fabio Perini v LPC[89], Warner Music v TuneIn[90]*), the legal test was whether it was "just and convenient" to extend the account to cover the new issues, and this would be sensitive to the facts in any given case.

All of the infringement allegations that Lufthansa sought to introduce in the "unresolved" category were arguable. The trial had taken place during the Covid pandemic and the parties had accordingly wished to streamline matters. Case management directions were made accordingly. Lufthansa succeeded on the three infringement allegations pursued at trial, and Morgan J said ([25]):

---

[83] *Lufthansa Technik AG v Astronics Advanced Electronic Systems & Anr* [2020] EWHC 1968 (Pat)

[84] *Lufthansa Technik AG v Astronics Advanced Electronics Systems & Ors* [2022] EWCA Civ 20

[85] *Lufthansa Technik AG v Astronics Advanced Electronic Systems & Anr* [2020] EWHC 2296 (Pat)

[86] *Lufthansa Technik AG v Astronics Advanced Electronic Systems & Anr* [2023] EWHC 1136 (Pat) (12 May 2023) Douglas Campbell KC

[87] *Unilin Beheer BV v Berry Floor NV* [2007] EWCA Civ 364

[88] *AP Racing v Alcon Components* [2016] EWHC 815 (Ch)

[89] *Fabio Perini S.P.A. v LPC Group Plc & Ors* [2012] EWHC 911 (Ch)

[90] *Warner Music UK Limited & Anr v TuneIn Inc* [2019] EWHC 3374 (Ch)

> "This conclusion means that it is not necessary in this case to consider the further arguments which the Claimant has put forward. In his closing submissions, Mr Cuddigan invited me to decide the case against Panasonic on this basis and not to deal with the other arguments. I agree that I ought not to deal with the other arguments. A decision on those points is not necessary in this case. Some of the points raised are not straightforward and are better left for decision in a case where they need to be addressed."

In light of this, Douglas Campbell KC said he could see no reason why it would be either just or convenient to prevent Lufthansa from raising the unresolved issues of infringement in the account. In fact the reasons of justice and convenience pointed the other way. Lufthansa (and the defendants) had been concerned to ensure the liability trial was as efficient as possible. It was never suggested to Lufthansa that by streamlining the case it would forever after be prevented from raising such matters. The judge had not been not saying that Lufthansa was prevented from raising the other arguments at the quantum stage; and further Lufthansa actually won on all the infringement issues at trial. If Lufthansa were prevented from raising the new allegations now, it would likely result in a significant and pointless increase in costs for the liability phase of split trials. Lufthansa's allegations related to the same parties and the same product. The defendants also wished to raise some infringement issues on the account. It did not matter that Lufthansa had already been compensated in costs for the time spent on the unresolved issues.

Douglas Campbell KC then turned to consider the issues which had been formally adjourned in the course of case management ahead of trial, and in that context had been referenced in the judge's final order. After noting a number of authorities (*Pan Petroleum v Yinka Folawiyo Petroleum*[91], *Federal Bank v Hadkinson*[92], *Sans Souci v VRL*[93], *SDI v Rangers, Banca*[94] *Generali v CFE*[95]), he summarised that court orders are to be construed objectively and in the context in which they are made, including the reasons given by the court for making the order at the time it was made. Caution should be exercised though in using the parties' submissions as a guide to the interpretation of a court order.

The fourth recital (set out above) implied that in paragraph 11 of the order there was no liberty to apply to raise the Adjourned Issues on an inquiry or account. Morgan J had expressed his understanding as being **not** that Lufthansa wished to keep alive the Adjourned Issues. This was why he ruled they no longer needed to be determined. Hence Lufthansa was not permitted to assert the Adjourned Issues in the account. If Lufthansa wanted to raise those issues, it needed to appeal against Morgan J's order.

Lufthansa appealed against Douglas Campbell KC's judgment and sought to appeal Morgan J's order. It also applied to the court to change the terms of Morgan J's order. It was the last of those courses that resulted in the next judgment – ***Lufthansa v Astronics*** **(10 October 2023)[96]** – given by Sir Paul Morgan (who had retired from the High Court bench in 2021).

Lufthansa brought its application on two legal bases. The first was CPR r. 40.12(1), which is known as "the slip rule". It states:

---

[91] *Pan Petroleum AJE Limited v Yinka Folawiyo Petroleum Co Ltd & Ors* [2017] EWCA Civ 1525

[92] *Federal Bank of the Middle East Limited v Hadkinson & Ors* [2000] 1 WLR 1695

[93] *Sans Souci Limited v VRL Services Limited* [2012] UKPC 6

[94] *SDI Retail Services Limited v The Rangers Football Club Limited* [2021] EWCA Civ 790

[95] *Banca Generali S.P.A. v CFE (Suisse) SA* [2023] EWHC 323 (Ch)

[96] *Lufthansa Technik AG v Astronics Advanced Electronic Systems & Anr* [2023] EWHC 2547 (Pat) (10 October 2023) Sir Paul Morgan

> "The court may at any time correct an accidental slip or omission in a judgment or order."

Sir Paul Morgan did not accept that this applied ([65]):

> "…the simple fact is that I did not intend to leave the Adjourned Issues to be dealt with at the quantum hearing."

The second legal basis asserted by Lufthansa was CPR r.3.1(7), which states ([66]):

> "A power of the court under these Rules to make an order includes a power to vary or revoke the order."

Assuming in the claimants' favour that his order had been an interim one, Sir Paul Morgan summarised the principles on the application of r.3.1(7) – as per *Tibbles v SIG*[97] - as including the following:

> The rule is apparently broad and unfettered, but **considerations of finality, the undesirability of allowing litigants to have two bites at the cherry, and the need to avoid undermining the concept of appeal, all push towards a principled curtailment of an otherwise apparently open discretion**.
>
> While warning against an attempt at an exhaustive definition of the circumstances in which a principled exercise of the discretion may arise, there is firm guidance as to **the primary circumstances in which the discretion may, as a matter of principle, be appropriately exercised, namely normally only (a) where there has been a material change of circumstances since the order was made, or (b) where the facts on which the original decision was made were (innocently or otherwise) misstated**.
>
> There is room for debate in any particular case as to whether and to what extent misstatement may include omission as well as positive misstatement, or concern argument as distinct from facts. Ultimately this is a matter for the exercise of discretion in the circumstances of each case.
>
> Similarly, questions may arise as to whether the misstatement (or omission) is conscious or unconscious; and whether the facts (or arguments) were known or unknown, knowable or unknowable. These are also factors going to discretion: but where the facts or arguments are known or ought to have been known as at the time of the original order, it is unlikely that the order can be revisited, and that must be still more strongly the case where the decision not to mention them is conscious or deliberate.
>
> The case of ***Edwards v. Golding*** **is an example of the operation of the rule in a rather different circumstance, namely that of a manifest mistake on the part of the judge in the formulation of his order**.
>
> The successful invocation of the rule is rare. Such is the interest of justice in the finality of a court's orders that it ought normally to take something out of the ordinary to lead to variation or revocation of an order, especially in the absence of a change of circumstances in an interlocutory situation.

[97] *Tibbles v SIG Plc* [2012] EWCA Civ 518

Noting particularly the passages flagged above in bold, Sir Paul Morgan said that they showed three types of case in which the rule might be invoked. There was some overlap between the slip rule and the third possible approach in *Tibbles* (manifest mistake). That being so, the conclusions in respect of the slip rule did "double-duty" here. It was manifest there was no mistake. Hence this was a "very clear case where the application must be dismissed". For good measure, Sir Paul Morgan explained what he thought was really going on ([48]-[50]):

> "…Lufthansa's position on costs has entirely changed…
>
> … it suited Lufthansa, in July and August 2020, to say that the Adjourned Issues did not need to be decided to improve their prospects on costs. Now they want to have those Adjourned Issues available to them. The costs they gained in August were, in the context of this case, very modest, some £50,000, and they now consider that it is far better to give up the £50,000 than to lose the benefit of these arguments on the quantum inquiry, where the sums of money involved are potentially many times more significant.
>
> Therefore, what the claimants are doing is blowing hot and cold. To enable them to do that, they now suggest that the court has made mistakes and it is the court's duty now to correct those mistakes."

A few weeks later, in ***Lufthansa v Astronics*** **(9 November 2023)**[98] the Court of Appeal confirmed Douglas Campbell KC's refusal to permit Lufthansa to pursue a quantum claim in respect of the Adjourned Issues. It also dismissed Lufthansa's application for relief from the implied sanction in r. 51.12.(2)(b) and appeal against Morgan J's order.

Arnold LJ's judgment included some succinct expressions of principle, on the role (and advantages) of split trials in patent cases, and in particular on the patentee being entitled to claim relief for types of infringement not the subject of a determination on liability. This included ([3]):

> "It is well established that, on an inquiry as to damages or an account of profits, the patentee is in principle entitled to claim relief for types of alleged infringement which have not been the subject of determination in the judgment on liability. If such claims are made, and denied by the defendant, then the quantum phase of the proceedings may include those additional issues of liability: see *Unilin Beheer BV v Berry Floor NV* [2007] EWCA Civ 364, [2007] FSR 25 at [49] (Jacob LJ). I say "in principle" and "may include" because circumstances can exist which prevent a patentee from raising certain infringement claims during an inquiry or account. This may be because it is procedurally inapposite, and the better course would be for the patentee to bring fresh proceedings; or, more fundamentally, because it is not open to the patentee to advance the new infringement claims at all. The Defendants' position is that the present case falls into the latter class."

Arnold LJ noted as relevant background that not long before trial on infringement/validity was listed to be heard (February 2020), Lufthansa applied to amend its particulars of infringement to introduce allegations of joint tortfeasance between Astronics and Safran and between Astronics and Panasonic, and an allegation of continuing offers for sale of Astronics' EmPower System alleged to fall within claim 2 of the patent. In view of the timings, the parties agreed that Lufthansa should have permission to amend its particulars but that the allegations should be adjourned to any damages inquiry (or, impliedly,

[98] *Lufthansa Technik AG v Astronics Advanced Electronics Systems & Ors* [2023] EWCA Civ 1306 (9 November 2023) Jackson, Arnold & Phillips LLJ

any account of profits). Hence an order was made on 14 January 2020 that those issues "be adjourned with liberty to apply". The trial was subsequently adjourned for other reasons and relisted to start in June 2020. Preparation was then affected by Covid. The parties agreed to limit the number of witnesses at trial. An order was made setting an agreed list of issues to be determined at trial and stating that all other issues in the case were "adjourned with liberty to apply".

Arnold LJ (with whom Phillips LJ and Peter Jackson LJ agreed) explained that Recorder Campbell KC had been right to approach the issue by determining whether Morgan J's order precluded Lufthansa from raising the Adjourned issues on the account, and that the question depended on the interpretation of the court order. Recorder Campbell KC had not erred by taking into account the fourth recital when interpreting the order, or the terms of the earlier adjournments of the Adjourned Issues. Most importantly, Recorder Campbell had been entirely correct in taking into account Morgan J's reasons when interpreting the order. This was particularly so given that (a) the wording of the fourth recital and paragraph 11 adopted by the judge was not that proposed by either side and (b) the order was made simultaneously with the giving of the reasons.

Morgan J had found that Lufthansa did not wish to seek a determination of the Adjourned Issues in order to seek a wider remedy than the remedy it would be entitled to on the basis of the findings in the liability judgment, but on the contrary Lufthansa had abandoned the Adjourned Issues. That was why the order recited that those issues no longer needed to be determined, and why it did not contain any liberty to apply with respect to those issues, contrary to the apparently agreed wording of the draft order. With the benefit of hindsight, it might have been better if the order had instead recited "AND UPON Lufthansa abandoning the Adjourned Issues"; but it was clear from the form of order judgment that that was the order's intended meaning.

***Island Records* disclosure**

Before leaving the *Lufthansa* quantum stage proceedings, there is yet another judgment to note. *"Island Records"* disclosure, named after the case in which such an order was first made (*Island Records v Tring*[99]), is commonly ordered following a finding of liability for patent infringement, in order to enable the patentee to make an informed, rational choice between pursuing a damages enquiry or an account of profits. These two types of financial remedy have different legal basis and can lead to a different level of quantum award in any particular case, but only one may be pursued.

In accordance with this practice, back in 2020, Morgan J ordered Panasonic (in the same order discussed above) to provide to Lufthansa information about their sales revenue for the relevant infringing goods, along with information about the costs. The information was to be provided by a director. Panasonic duly served a witness statement of Mr Steven Varner which, on the face of it, contained the required information. He was not a director. No point about that was taken at that time. On 2 September 2022, Lufthansa elected an account of profits. Three weeks later, Panasonic's solicitors informed Lufthansa's solicitors that there would be "updates" to the information provided in Mr Varner's witness statement. These were eventually provided on 2 December 2022 in the form of a witness statement of Mr Ryogen Takahashi, a director of Panasonic. The information introduced a sales credit which reduced the gross revenue down by about $30 million from about $165 million. Lufthansa's solicitors raised concern about what had happened. Panasonic's solicitors responded offering Lufthansa an opportunity to revisit the election.

[99] *Island Records Ltd v Tring International Plc & Anr* [1996] 1 WLR 1256

Lufthansa made an application seeking an order that Panasonic could not rely on the additional costs and deductions. Panasonic applied for an extension of time for compliance with the terms of Morgan J's order until the date of service of Mr Takahasi's statement.

The applications were heard by Douglas Campbell KC in April 2023[100]. Both parties argued that the nature of what was before the court was a matter of relief from sanctions (r.3.9). So Douglas Campbell KC considered and determined the applications on that basis, applying the three-stage test set out in *Denton v TH White*[101] and concluding that Panasonic's application should be refused.

Panasonic appealed. In the Court of Appeal, Panasonic ran its primary case not on the basis of breach sanctions, but on the basis that the matter was one to be governed by ordinary case management principles under CPR rule 3.1 in accordance with the overriding objective. The Court of Appeal agreed with Panasonic, in ***Lufthansa v Panasonic*** **(1 November 2023)**[102].

There is a fair bit of analysis of procedural law in Birss LJ's judgment (along with some useful background on *Island Records* orders and what is required of them). In particular:

- CPR rules 3.8 and 3.9 do not themselves create a sanction but apply when a sanction exists and relief from it is sought from the court by the applicant seeking to disapply the sanction. A sanction may be expressly provided for in a court order, a CPR rule or a practice direction, or it may be implicit. When considering an application brought under r. 3.8/ 3.9, the starting point is that the sanction has been properly imposed and complies with the overriding objective[103]. The three-stage test in *Denton v TH White*[104] then considers (1) the seriousness and significance of the breach, (2) why the failure occurred, and (3) all the circumstances. On question (1), the fact a trial date would not be imperilled is not a trump card[105]. But not every breach of an order, rule or practice direction requiring something to be done within a certain time necessarily requires a relief from sanctions application if it is breached.

- The overriding objective requires the court to deal with cases justly and at proportionate cost. Rule 3.1(2) states that (except as otherwise provided by the CPR) the court may extend or shorten the time for compliance with any rule, practice direction or court order. Birss LJ said that when looking at all the relevant circumstances and applying the overriding objective, it is still useful to consider the seriousness/significance of the breach and the reasons for it, but (in contrast from a r.3.8/3.9 situation), the starting point is not that the sanction has already been imposed. The court has a free hand to make whatever order is appropriate in the circumstances, being a proportionate response to the breach which has occurred.

Birss LJ explained that Morgan J's *Island Records* order, which was in "conventional form", said nothing about what would happen if the defendant failed to serve the witness statement or breached the order in any other way. Contrary to Lufthansa's submission, CPR rule 31.21 did not provide an express sanction for breach of the *Island Records* disclosure order. Although an order had been made in the liability phase for disclosure under Part 31 rather than under the disclosure pilot, and r.31.21 prevents

[100] [2023] EWHC 1043 (Pat)

[101] *Denton & Ors v TH White Limited & Anr* [2014] EWCA Civ 906

[102] *Lufthansa Technik AG v Panasonic Avionics Corporation & Ors* [2023] EWCA Civ 1273 (1 November 2023) King, Newey & Birss LLJ

[103] *Mitchell v NGN* [2014] 1 WLR 795

[104] *Denton & Ors v TH White Limited & Anr* [2014] EWCA Civ 906

[105] *Clearway Drainage Systems Limited v Miles Smith Limited* [2016] EWCA Civ 1258

a party from relying on a document they have failed to disclose unless the court gives permission, the purpose of *Island Records* disclosure is not to function as the main disclosure obligation in the inquiry/account. Full disclosure follows later, after the election, and the *Island Records* process envisages that figures given in witness statement form (which could be said to be "in lieu of disclosure") can be estimated, and minor deviations are to be expected. Thus when introducing a sanction based on r.31.21, a distinction would be needed between minor variations and more significant ones, but there was no basis for that.

Nor was there basis for saying that an implicit sanction existed on policy grounds. The most that policy considerations would support was the idea that when the patentee learnt that the information was inaccurate to a significant extent, they would be entitled to seek permission to revisit the election, since the purpose of the order had been frustrated.

Therefore rules 3.8/3.9 were not the correct basis on which to consider the application. The court had a free hand to make whatever order was appropriate in the circumstances, being a proportionate response to the breach which had occurred. This was to permit the extension of time and to give Lufthansa two weeks to re-make its election. It would not put the October 2024 quantum trial date in jeopardy even if Lufthansa elected an enquiry rather than an account.

Damages

Last year we discussed the different headline types of damages that may be awarded for patent infringement, and the detailed judgment of Bacon J in *Anan Kasei v Neo*[106] concluding that there was nothing legally objectionable in the notion of a UK licence, the royalty for which is calculated on the basis of the sales outside the UK that are made after the product has been approved in the UK. Nor is such a licence illogical as a matter of fact if the UK licence provides the gateway to overseas sales. However, Bacon J concluded that while Rhodia's global royalty claim was sustainable in principle, the notional licence awarded had to be valued on an assumption that the licence would not have given Neo global rights.

In one of the first patent judgments of 2023, ***Anan Kasei v Neo* (17 January 2023)**[107], the Court of Appeal dismissed all points of appeal against Bacon J's judgment. Arnold LJ addressed in detail the authorities on the measure of damages for tort, before explaining the tweaks to them needed for application when the tort in question is patent infringement. He explained that:

- The harm which may be recovered in a claim for patent infringement is pure economic loss. This usually takes the form of one or more of (i) lost profits on sales, (ii) losses due to price depression, and (iii) lost royalties (including negotiating damages quantified on a reasonable royalty basis).

- The duty not to infringe a patent is not a duty of care, but a statutory duty of strict liability. The purpose of the duty is to confer a monopoly of defined scope and limited duration upon the patentee (and, if applicable, its exclusive licensee), and thereby to enable the patentee (and/or exclusive licensee) to reap the economic benefits of that monopoly.

[106] *Anan Kasei Co. Ltd & Anr v Neo Chemicals & Oxides (Europe) Ltd & Ors* [2022] EWHC 708 (Ch)

[107] *Anan Kasei Co. Ltd & Anr v Neo Chemicals & Oxiodes (Europe) Limited & Ors* [2023] EWCA Civ 11 (17 January 2023) Jackson, Coulson & Arnold LLJ

- In order for liability for damages to arise, there must be a breach of that duty, in the form of an act of patent infringement (i.e. a finding or concession of patent infringement).

- In order to be recoverable, the loss for which the claimant seeks damages must be the consequence of the defendant's infringing act. This is a **factual causation** question: the 'but for' test. Loss that would not have occurred **but for** the infringement therefore **may** be recoverable, but it is not enough that the loss would not have occurred but for the infringement - legal causation must be satisfied too, on which see the next bullet point.

- In order to be recoverable, the loss for which the claimant seeks damages must be **legally caused** by / the legal responsibility of the defendant. The law does not impose responsibility on a defendant for everything that follows from his or her act or omission, even if it is wrongful. The fact that an infringing act creates an opportunity to make a non-infringing sale does not mean that the former is legally a cause of the latter: **it is necessary to consider whether the infringing act is a sufficiently significant driver of the non-infringing sale that it may be regarded as a "proximate cause" (i.e. common sense cause; not too "remote" in the broader sense in which the word has been used in the case law) and without intervening brake of the causal connection.** A question of legal causation is a matter for the evaluative judgment of the court. Intention, expectation and foreseeability alone cannot create a sufficiently direct link between infringing supplies and non-infringing sales for which damages are claimed, but they are factors that may weigh in the court's assessment of whether proximate cause / common sense legal causation is established.

By the application of these principles, damages may be awarded for infringing sales and also for non-infringing convoyed goods (i.e. sold with infringing goods), spare parts and servicing; and for sales made outside the UK. Arnold LJ dismissed Neo's argument that as a matter of policy, the territorial nature of patent protection means that recovery should be restricted to losses arising from acts within the jurisdiction. The authority cited by Neo in support of its position was a ***dissenting*** judgment in a 2018 US case (*WesternGeco LLC v Ion Geophysical Corp*[108]). The ***majority*** judgment, however, expressed the view that the dissenting judgment wrongly conflated legal injury with the damages arising from that injury. Therefore, Arnold LJ concluded ([77]-[78]):

> "… Rhodia are correct that there is no duty nexus question in cases of patent infringement, and thus the judge was right to reject Neo's territoriality argument. On the other hand,…it is important carefully to consider whether the losses claimed were legally as well as factually caused by the infringing acts of the defendant.
>
> By way of a footnote…I would add that in an article cited by counsel for Rhodia, "Extraterritorial Damages in Patent Law" (2021) 39 Cardozo Arts & Ent LJ 1, Professor Thomas F. Cotter discusses cases from Canada, Japan, England (*Goucher v Clayton*) and Germany in which he says damages or profits have been awarded in respect of extraterritorial sales made as a result of domestic infringements. We were not referred to the Canadian, Japanese or German decisions themselves, however. I note that Prof Cotter argues that patent owners should be able to recover damages for extraterritorial losses subject to three limiting principles: first, the domestic infringement must be the cause-in-fact (or "but for" cause) of the defendants' subsequent foreign sales; secondly, the patent owner cannot recover damages unless those sales are also proximately caused by the domestic infringement; and thirdly, there must no

[108] *WesternGeco LLC v Ion Geophysical Corp* 138 S Ct 2129 (2018)

double recovery if the patent owner has obtained damages in a foreign jurisdiction. This analysis is consistent with my own conclusion."

Nor did Neo's other arguments against recovery in respect of extraterritorial sales succeed. These were based on, in particular: proportionality (the damages claimed by Rhodia in respect of supplies outside the UK being three orders of magnitude larger than the damages agreed for supplies within the UK); and the requirements of article 3 of the IP Enforcement Directive (which the Court of Appeal confirmed is retained EU law).

However, in view of the evidence before the court, Bacon J had been entitled to reach her conclusion that the infringing supplies (in the UK) were not a proximate cause of the losses in respect of sales made outside the UK claimed by Rhodia.

The principles explained by Arnold LJ in *Anan Kasei v Neo* (17 January 2023) draw upon and are very largely consistent with earlier case law. However, there may be a difference in the role of foreseeability. In *Ultraframe v Eurocell*[109], Kitchin J stated foreseeability of the loss as part of the test for recoverability. Arnold LJ explained that foreseeability is a factor that may weigh in the assessment of legal causation, but did not state foreseeability to be a standalone requirement for recoverability. A niche point that might need to be explored another day.

Dr Reddy's v Warner-Lambert **(1 February 2023)**[110] arose in the context of a claim for damages (i) under a cross undertaking given at the liability stage, and (ii) for making threats of patent infringement proceedings.

As noted above, the *Warner-Lambert* "pregabalin" litigation began in 2014. It involved applications for interim injunctions (some of which were successful), multiple defendants, and judgments up to the Supreme Court concluding that key claims of Warner-Lambert's patent were invalid for insufficiency (in particular claim 3, which was to pregabalin for neuropathic pain). At the liability stage the lead case involved Warner-Lambert and Pfizer, on the one hand, and Generics and Actavis, on the other. Warner-Lambert asserted infringement of claim 3 of its patent. Like Dr Reddy's, Generics and Actavis were seeking to supply "skinny label" generic pregabalin which did not include pain indications covered by the patent and only covered epilepsy and generalised anxiety disorder as authorised indications. From June 2015, the proceedings against Dr Reddy's were stayed by consent pending the outcome of the Generic and Actavis proceedings. Eventually, as well as claim 3 being found to be invalid, Warner-Lambert/Pfizer were found liable for making threats of infringement proceedings.

Warner-Lambert did not assert infringement of its inflammatory pain claims, and those claims were not found invalid.

In January 2020, some 14 months after the Supreme Court's judgment, Dr Reddy's applied for directions in its proceedings. Birss J made an order, by consent: dismissing Warner-Lambert's claim against Dr Reddy's on the basis that “claims 1, 3, 4, 6, 10, 11, 12, 13 and 14” of the patent were invalid; declaring that Warner-Lambert had made unjustifiable threats; ordering an inquiry as to damages suffered by Dr Reddy's pursuant to Warner-Lambert's cross-undertakings and/or by reason of threats; and ordering Warner-Lambert to pay Dr Reddy's costs “of the liability phase of the action”. In May 2020,

---

[109] *Ultraframe (UK) Limited v Eurocell Building Plastics Limited* [2006] EWHC 1344 (Pat)

[110] *Dr Reddy's Laboratories (UK) Limited & Ors v Warner-Lambert Company LLC* [2023] EWCA Civ 73 (1 February 2023) Males, Arnold & Nugee LLJ

Dr Reddy's served points of claim in the damages inquiry. Warner-Lambert served its points of defence in June 2020. In October 2021, Warner-Lambert applied to amend its points of defence.

The amendments that Warner-Lambert sought to make were geared towards preventing Dr Reddy's and the NHS claimants from being compensated for loss of profit they would have made, or for costs that they would have avoided, as a result of pregabalin being prescribed and dispensed for conditions covered by the inflammatory pain claims (even if no-one infringed those claims).

In short, the Court of Appeal wasn't having any of it. They confirmed Zacaroli J's 2022 decision refusing Warner-Lambert permission to make the amendments sought. After the court's order bringing the liability phase of the litigation to an end, it was an abuse of process for Warner-Lambert to now seek to reduce its liability for damages by asserting a claim that could have been asserted at the liability stage.

Arrow declarations

After some notable activity on *Arrow* declarations in 2022, 2023 has been quieter. There is one judgment to note. In ***Philip Morris v Nicoventures*** **(25 October 2023)**[111], as well as seeking revocation of Nicoventure's/BAT's e-cigarette patent, Philip Morris sought an *Arrow* declaration.

The declaration that PMI sought was that the marketing and sale in the UK of certain products would have been acts in respect of products that, on 31 August 2015, were not new and/or were obvious over cited prior art (Mironov and Wu). (This was different prior art to that upon which PMI based its invalidity challenge against Nicoventure's/BAT's patent).

Judge Hacon indicated that if the proposed declaration had the effect merely of declaring the subject-matter of Mironov to be old, it would be pointless. It was therefore to be expected that the subject-matter was different. He noted, from earlier authorities, in particular *Fujifilm v AbbVie*[112], *Glaxo v Vectura*[113] and *Mexichem v Honeywell*[114], the following principles ([190]):

> "(1) The court has a broad and flexible discretion to grant Arrow declaratory relief, *Mexichem* at [13].
>
> (2) The circumstances in which an Arrow declaration will be justified are likely to be uncommon, *Fujifilm* at [95].
>
> (3) **The discretion should be exercised only where the declaration will serve a useful purpose**, which requires critical examination by the court, *Glaxo* at [25]; *Mexichem* at [13].
>
> (4) The requirement of a useful purpose will not be fulfilled solely because the respondent has pending patent applications and the applicant would like to know whether it will infringe any patents which may be granted pursuant to those applications, *Fujifilm* at [93] and [94(iv)) and (v)]; *Glaxo* at [25].

[111] *Philip Morris Products S.A. & Anr v Nicoventures Trading Limited & Anr* [2023] EWHC 2616 (Pat) (25 October 2023) HHJ Hacon

[112] *Fujifilm Kyowa Kirin Biologics Co., Ltd v AbbVie Biotechnology Limited & Anr* [2017] EWCA Civ 1

[113] *Glaxo Group Limited & Ors v Vectura Limited* [2018] EWCA Civ 1496

[114] *Mexichem UK Limited v Honeywell International Inc.* [2020] EWCA Civ 473

(5) The usual course envisaged by the statute is that the applicant should wait and see what, if any, patents are granted and where necessary use the remedy of revocation, *Fujifilm* at [93].

(6) Where it appears that the statutory remedy of revocation is being frustrated by shielding the subject-matter from scrutiny by the national court, this may be a reason for the court to intervene with a declaration, *Fujifilm* at [93].

(7) The court must guard against the application being used as a disguised attack on the validity of a granted patent, *Fujifilm* at [81]-[82] and [98(ii)].

(8) A declaration may be sought in relation to one or more features of a product or process, as opposed to a product or process in its entirety, *Mexichem* at [18]-[20].

(9) Where a declaration is sought in respect of only one feature or some features of a product or process, the level of generality of the proposed declaration may be relevant to whether it serves a useful purpose, *Mexichem* at [18].

(10) The court may take into account the possibility that a declaration is likely to be useful solely in arguments on obviousness in which it is deployed in an illegitimate step-by-step analysis of obviousness, although it may be difficult to know that this is likely to arise, *Mexichem* [22]-[25].

(11) The features in respect of which the declaration is sought must be defined with sufficient clarity, *Glaxo* at [30].

(12) Equally, the useful purpose said to justify the declaration must be clearly identified, *Mexichem* at [13]."

Judge Hacon explained that although an *Arrow* declaration will almost always be useful to the party applying for it, something more is required. Useful purpose is not to be found in punishing unattractive behaviour on the part of the patentee but, in the absence of certainty, an *Arrow* declaration can give the potential infringer the reassurance that it will not be prevented from using the relevant aspect of the technology. So, for example, in *Fujifilm/FKB*, AbbVie had sought to protect their market for Humira after expiry of the SPC in any way they could, including by shielding patent applications from scrutiny by abandoning applications in the EPO, and making public statements about vigorous enforcement of their patent estate. In *Glaxo*, Vectura had pursued a strategy of filing multiple applications to create patent thickets describing essentially the same inventive concept in a variety of ways.

Against that background, Judge Hacon then added the following to his above list of principles ([198]):

"(13) Subject always to the qualifications referred to in (7), (11) and (12) above, an Arrow declaration is likely to serve a useful purpose if the applicant can show that (a) the respondent's portfolio of patent applications and/or patents creates real doubt, likely to continue for a significant period, as to whether technical subject-matter which the applicant wishes to exploit can lawfully be used, (b) the applicant's reasonable intention to exploit that subject-matter would be of significant commercial advantage to it and (c) the declaration sought would, if granted, eliminate or significantly reduce the delay.

In this context "significant" means cumulatively sufficient to warrant the intervention of the court.

(14) The court will more readily find that there is a useful purpose where the respondent's behaviour has been consistent with an intent to prolong the doubt."

BAT argued that its prosecution of relevant patent families had been exactly in line with what any reasonable party would do. It had consented to amendments in the claims, as is usual; if the claims were absurdly broad they would inevitably be narrowed before grant. Its consent to the revocation of one patent in issue (EP(UK) 080) came 6 months before trial, and this had been a pragmatic decision, not shielding, indeed oral proceedings were taking place before the EPO.

Judge Hacon agreed that BAT's behaviour had been pragmatic, not shielding. He would be reluctant to discourage parties from consenting to revocation of their patents pleaded in an action where it was prudent to do so because it saved court time and costs. BAT had not behaved intentionally in a manner analogous to the defendants in *FKB*, *Glaxo* and *Mexichem*. It was not clear, though, what PMI's commercial goal was in seeking the *Arrow* declaration. If PMI had been concerned to ensure that a finding of non-infringement was a green light to marketing its OQOS ILUMA system in the UK, it could have drafted its proposed declaration accordingly. Instead, the declaration sought was in terms of just some of the features of that system; but a court hearing an obviousness argument would be as astute as in any other context to guard against an illegitimate use of a step-by-step argument. Nor had PMI established what it would gain from the declaration.

Therefore useful purpose was not met; the *Arrow* declaration sought was refused.

Costs

The general rules governing costs recovery in civil proceedings, including patent litigation, are contained in CPR Part 44. This provides that the court has discretion as to whether costs are payable by one party to the other(s), the amount of those costs and when they should be paid. The general rule is that the unsuccessful party will be ordered to pay the costs of the successful party, but the court may make a different order. In deciding what order (if any) to make about costs, the court will have regard to all the circumstances.

Costs may be assessed on the standard basis or the indemnity basis (or, occasionally, on the "solicitor and client" basis). Neither the standard nor indemnity basis permits the recovery of costs that have been unreasonably incurred, or which are unreasonable in amount, but the approach to proportionality and resolution of doubt differs between the two. To be recoverable on the standard basis the costs must be "reasonable and proportionate", with any doubt resolved in favour of the paying party. To be recoverable on the indemnity basis, the costs must have been reasonably incurred (the requirement of proportionality does not apply) and any doubt must be resolved in favour of the receiving party.

Usually, costs are awarded on the standard basis. An order for indemnity costs will be justified where either the conduct of the parties or other particular circumstances of the litigation (or both) are such as to take the situation outside of the norm.

In 2023, an award of **indemnity costs** was made in ***Price v Flitcraft*** **(3 April 2023)**[115], by Nicholas Caddick KC. This was the case in which, in 2022, the second claimant, Supawall, succeeded in some of its patent infringement claims, but first defendant Mr Price's claims for patent infringement and copyright infringement failed for lack of title[116]. The claimants' claim for passing off failed too. The judge's

[115] *Price & Ors v Flitcraft Limited & Ors* [2023] EWHC 695 (Pat) (3 April 2023) Nicholas Caddick KC

[116] *Price & Ors v Flitcraft Limited & Ors* [2022] EWHC 3381 (Pat)

conclusion was that Mr Price's claim to have assigned the patents at a particular point was a "fiction" created to keep the patents out of the hands of his trustee in bankruptcy. Following this, the parties were miles apart on what should be done about costs. After talking through the relevant provisions of CPR r.44.2, Nicholas Caddick KC said ([5]):

> "… where a party has succeeded overall but has been unsuccessful on a specific issue or issues, the court has power to make an issue based costs order (i.e. allowing or disallowing the costs of particular issues). However, such orders can lead to considerable difficulties in an assessment as it may not be easy for a costs judge to divide the costs between the various issues. In such cases, a "broad brush" approach, whereby the trial judge makes an order for a proportion of the overall costs to be payable by the unsuccessful party, can be preferable to an issue based order."

Both parties invited the court to consider the case "in the round". Nicholas Caddick KC did not think it was possible to say that either side had won. He therefore decided to apportion the costs of the action as a whole between the patent, copyright and passing off issues, and then, in relation to the patent claims, apportion the costs between Mr Price and Supawall. Adopting this approach, the overall costs could be apportioned 75% as to the patent claims (as these were by far the more important in terms of value and time spent at trial), 20% as to the copyright claims and 5% as to the passing off claims.

As regards the costs of Mr Price's failed patent claim, the defendants were the successful parties and there was no reason to depart from the general rule that as such the defendants were entitled to their costs – the relevant figure being 60% of 75% of the defendant's total costs. Further, because of the “fiction" in his case, Mr Price should pay these costs on an indemnity basis.

As regards the costs of Supawall's claim, overall Supawall had succeeded and so was entitled to the costs of its patent claim, but deduction was made to reflect elements on which Supawall had failed or to reflect its conduct – in particular abandoning a claim under the 989 patent, not succeeding on a new version of a product and giving evidence in support of Mr Price's fiction. Supawall was awarded 30% (rather than 40%) of the 75% of the claimants' total costs of the action.

Additionally, as the claimants' copyright (20%) and passing off (5%) claims had failed, they must pay the defendants 25% of their total costs.

Where the court orders a party to pay costs to another party, it may make a "**summary assessment**" of costs or it may order a detailed assessment. In a summary assessment of costs, the judge who has heard the relevant case or application determines the costs award to be made based on the information provided to the court by the parties and (typically) after hearing argument about the "overall winner" and how comprehensive their win has been. Each party that intends to claim costs in this way must prepare a written statement of those costs showing separately a number of items, including the number of hours claimed, the hourly rate claimed, and the grade of fee earner. The statement of costs must be filed at court and copies of it must be served on any party against whom an order for payment of those costs is intended to be sought, not less than 24 hours before the time fixed for the hearing.

In two cases in 2023, ***Oxford Innovation v Oxford NanoImaging* (26 January 2023)**[117] and ***InterDigital v Lenovo* (28 June 2023)**[118], summary assessment was refused because the legal representatives of the party requesting it (OUI and non-party Apple, respectively) had not provided adequate information to the court ahead of the hearing. Mellor J (in *InterDigital v Lenovo*) flagged that any request for payment of the costs of a third party ought to be flagged clearly in advance. Daniel Alexander KC (in *Oxford Innovation v Oxford NanoImaging*) said ([18]):

> "…summary assessment…where substantial sums are in issue is only appropriate where there is sufficiently complete information for the court properly to evaluate the reasonableness and proportionality of the costs claimed. To do that, the court should be placed into a position in which it can examine, at an appropriate level of detail, things like hourly rates, time spent and staffing of tasks. It is true that a significant part of the costs has been budgeted, setting a benchmark of reasonableness. However, given the sums involved and the relatively limited information on certain aspects of costs here, justice is best done by ordering an interim payment which aims to be a realistic estimate of what would be awarded on detailed assessment without shutting the parties out from pursuing a more detailed assessment if they wish."

In ***Siemens Gamesa v GE* (6 February 2023)**[119], Meade J addressed the interpretation of an order about costs. The key point emerging is that the practice direction to CPR Part 44 contains a list of definitions of phrases commonly used in court orders. The order concerned stated ([4]):

> "Save that the Defendants shall pay the Claimant's **costs of and occasioned by** the amendments to its Amended Grounds of Invalidity pursuant to the June Order [which is the one I just mentioned] the Claimant shall pay the Defendants' costs of the EP 503 claim and the EP 503 Counterclaim on the standard basis to be the subject of detailed assessment if not agreed."

The Practice Direction to Part 44 paragraph 4.2 provides that “costs of and caused by” has the effect that: "Where, for example, the court makes this order on an application to amend a statement of case, the party in whose favour the costs order is made is entitled to the costs of preparing for and attending the application and the costs of any consequential amendment to his own statement of case".

Meade J accepted that "costs of and caused by" was (at least for the purposes of the dispute before him) synonymous with "costs of and occasioned by". The effect was therefore to look forward and direct that the party making the amendment had to pay costs which came up in future, i.e. post the amendment, as a result of the amendment. Costs which had been incurred earlier, under the previous version of the pleading, were not caught. But Meade J said there could be reasons for that e.g. that the parties thought those costs were very minor or there were other countervailing factors. It was not irrational to conclude that the words were intended to have their ordinary meaning.

Nevertheless, the judgment exemplifies why it is so important to take care with every word chosen for inclusion in a draft order.

---

[117] *Oxford University Innovation Limited v Oxford NanoImaging Limited* [2023] EWHC 138 (Pat) (26 January 2023) Daniel Alexander KC

[118] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 1577 (Pat) (28 June 2023) Mellor J

[119] *Siemens Gamesa Renewable Energy A/S v GE Energy (UK) Limited & Ors* [2023] EWHC 254 (Pat) (6 February 2023) Meade J

Finally on costs, the Court of Appeal's judgment in ***Vodafone v IPCom*** **(10 February 2023)**[120] arose in another case in which the UK courts moved more quickly to determination than the opposition proceedings in the EPO.

Vodafone's application under **CPR 3.1(7)**, to vary/revoke the Court of Appeal's order that Vodafone pay a substantial proportion of IPCom's costs of the infringement/validity litigation, was dismissed. Although the EPO had since revoked IPCom's patent (so it was common ground that if IPCom were to proceed with the inquiry into damages Vodafone would be able to rely on the revocation of the patent to argue that IPCom had suffered no loss), Vodafone had failed to protect its position on costs against the foreseeable events which had transpired (e.g. by seeking a stay, or adjournment of the question of costs, or asking for any order as to costs to be contingent on the final outcome in the EPO opposition, or asking for liberty to apply in the event the patent was revoked by the EPO). Lewison LJ did, however, indicate that recourse for Vodafone might be available under **CPR r. 52.30** if the Supreme Court refused Vodafone's application for permission to appeal, or if Vodafone withdrew its application for permission to appeal.

e) Threats

A notable judgment on the threats regime emerged at the end of the year, in **The NOCO Company v Shenzhen Carku Technology (19 December 2023)**[121]**.**

Carku sued NOCO for making threats of infringement proceedings. The alleged threats were contained in communications made to Amazon in the course of NOCO's use of Amazon's "Infringement Form" complaints procedure (following which various of Carku's products were delisted). NOCO denied that its communications amounted to threats, pleaded a s.70C(3) defence to the threats claim (that an act in respect of which proceedings were threated constitutes an infringement of the patent) and asserted a GB patent to apparatus for jump-starting a vehicle engine.

In 2022[122], Meade J concluded that NOCO's patent was invalid for obviousness and so dismissed NOCO's defence to Carku's threats claim. He also concluded that NOCO's Infringement Form communications did amount to threats. It was the first judgment applying the updated (2017) threats regime in a patent dispute. NOCO appealed the threats finding, presenting the Court of Appeal with its first opportunity to consider the new regime. Lewison LJ gave the only reasoned judgment.

The modern form of the threats provisions is to be found in sections 70-70F of the Patents Act 1977. Lewison LJ said that there were a number of points to be made about the legislation ([21]).

> "First, the recipient of the communication must understand that a person intends to bring infringement proceedings against "another person". That "other person" need not be the recipient of the communication. Second, a threat is not actionable if the allegation is an allegation of primary infringement (i.e. manufacturing or importing a patented product, or using a patented process) or if it is made to a primary infringer….. Third, proceedings may be brought

[120] *Vodafone Group Plc & Ors v IPCom GmbH & Co KG* [2023] EWCA Civ 113 (10 February 2023) Lewison, Asplin & Arnold LLJ

[121] *The NOCO Company v Shenzhen Carku Technology Co. Ltd* [2023] EWCA Civ 1502 (19 December 2023) Lewison, Arnold & Falk LLJ

[122] *Shenzhen Carku Technology Co., Ltd v The Noco Company* [2022] EWHC 2034 (Pat)

> by "any person aggrieved by the threat". That person need not be the recipient or, indeed, the person against whom the threat is made. Fourth, a threat is not actionable if it is not an express threat, and is contained in a permitted communication (i.e. one that is made for a permitted purpose, and all the information that relates to the threat is necessary for that purpose). Although the concept of a permitted communication is defined flexibly, a communication which requests a person to cease doing, for commercial purposes, anything in relation to a product, cannot be a permitted purpose. Thus, a request to a distributor to stop distributing a product or a request to a retailer to cease selling the product cannot be a permitted purpose."

Lewison LJ explained that case law on previous forms of the statutory prohibition on making of threats established that a "threat" covered any intimation that would convey to a reasonable person that some person had rights under a patent and intended to enforce them against another person. The tight definition of "permitted purposes" in the modern provision (s.70B) suggests that the concept of a threat remains a wide one. Consistently with this, s.70(1) makes clear that the applicable test is what the communication would convey to a reasonable person, and s.70A(5) envisages a threat which is not an express threat. The meaning of the communication is to be judged by reference to "a reasonable person in the position of the recipient". What the actual recipient understood the communication to mean, and what the actual recipient did in response to it, is not, therefore, directly relevant. In considering the meaning of a communication, first impressions are important. Lewison LJ said that where there is a sequence of communications, they must be looked at as a whole – a document which is not threatening when taken in isolation may well be so when read in the context of the rest of a sequence of correspondence.

A number of interim judgments in earlier cases considered arguments about whether communications made in the use of eBay's takedown procedure amounted to threats, but there were some key differences with the communications made in the present case using Amazon's infringement form. In particular, NOCO's complaints to Amazon had both asserted infringement and requested the removal of the impugned products from sale (before any investigation of the complaint). Lewison LJ said ([38]):

> "I find it difficult to see how an explicit allegation of patent *infringement*, coupled with a request to remove (i.e. stop selling) the product is not, at the least, an implicit (or veiled) threat that if the request is not complied with infringement will be pursued through the courts."

Lewison LJ agreed with Meade J that in most contexts, a communication asserting the existence of patent rights, asserting infringement of those rights and calling for action to be taken to end the infringement would amount to threats, and in the present case, the context did not lead to a different answer. The statutory scheme does not require that the communication be understood as a threat to bring proceedings against the recipient. It is sufficient that the threat is one to bring proceedings against "a person". What caused loss to Carku was Amazon's delisting. Whether Amazon took that action because it perceived a threat to itself or someone else did not, on the face of it, alter the causative potency of the threat.

This conclusion did not mean that, viewed objectively, every one of the communications that Amazon receives under its IPR complaints procedure would be understood by Amazon to be a threat of IPR litigation against Amazon itself. Lewison LJ identified two flaws in such an argument ([49]):

> "First, the question is not (at least directly) what Amazon would have understood. The question is what a reasonable person in the position of Amazon would have understood. Second, mere resort to the IPR complaints procedure may or may not be so understood, depending on what

the complaint actually says. The "boilerplate" part of the "Infringement Form" simply invites provision of neutral information, the provision of which is capable of being a permitted communication. In this case, it was the Additional Information that went further by positively requesting Amazon to remove the impugned products before any investigation had been carried out."

This gives important guidance. It reinforces the need for IP right owners to be aware of, and to comply with, UK law on threats of infringement proceedings when utilising online platforms' IP right complaint/takedown procedures that might impact the availability of products in the UK. The provision of information in a complaint that goes beyond the safe harbours of the UK's threats regime may lead the right owner, and their agent, to incur tortious liability, for which damages may be awarded.

f) FRAND

Last year we reported that two FRAND trials had taken place in the Patents Court. The judgments were duly handed down in 2023. They make very interesting reading, individually and in combination. Before discussing them, for those less familiar with SEP/FRAND litigation, here is some background.

Background on SEP / FRAND litigation

Technological standards are needed in order to facilitate interoperability of products and competition. For example, the development of technical standards in telecommunications technology enables phones manufactured by different companies to be connected to, and operate with, each other through the telecommunications infrastructure. Telecommunications have a number of generations of standards technology: 5G, 4G, 3G, 2G and (going back quite a long time now) 1G.

Technological standards are developed and set by standards setting organisations (SSOs). For example, in Europe the SSO behind the development of telecommunications standards is ETSI. Delegates participating in the development of standards contribute technological ideas for consideration, which may be patented/the subject of patent applications; they are generally required to indicate whether they are prepared to give an undertaking to licence any such patent on “[fair] reasonable and non-discriminatory” ([F]RAND) terms. A technical contribution contributed by a delegate will only be included in the standard if the delegate is prepared to give a FRAND undertaking.

Once a technological standard is finalised, any patent that is necessarily infringed by compliance with it is a "Standard Essential Patent" (SEP). In order to use a standard/sell devices for use with it, the manufacturer (“implementer”) needs a licence to the stack of SEPs covering that standard. But SSOs usually do not get involved in details of licencing - it is up to the owners of the SEPs and the implementers to agree licence terms between themselves. If they do not agree to terms, the SEP owner's redress is through the courts, for patent infringement; the implementer can go ahead and sell standards compliant products subject to any remedy for patent infringement ordered by the courts.

As the standards arrangements emerged, SEP owners potentially had the ability to “hold-up” users of a standard by refusing to licence on appropriate terms and seeking injunctive relief. Implementers potentially had the ability to "hold-out" against entering into a licence on appropriate terms while nevertheless manufacturing and selling products that used the standardised technology. In the last 10 years or so, this state of affairs has led to many multi-jurisdictional disputes about SEP licensing.

In the UK in *Unwired Planet v Huawei* (**UPHC**)[123], following a finding of essentiality, infringement and validity of two Unwired Planet patents (SEPs), Birss J awarded a new form of injunctive relief, which he called a “FRAND injunction”. This was an injunction to restrain patent infringement in the UK, which would be enforceable unless the implementer entered into a licence on FRAND terms as settled by the Court (the parties having failed to agree what FRAND terms might be over several years). In setting the FRAND terms in view of the evidence in the case, Birss J relied principally on the analysis of comparable licences and used the "top down" method as a cross-check. The licence he settled was global, in view of the evidence of licensing before the court.

Birss J stayed the FRAND injunction pending appeal (but imposed a sizeable ongoing interim payment on account of licence fees). In 2018, the Court of Appeal almost completely confirmed Birss J's approach, in *Unwired Planet v Huawei* (**UPCA**)[124]. Birss J and the Court of Appeal also dismissed Huawei's arguments that the award of injunctive relief contravened the CJEU's judgment in *Huawei v ZTE*[125], a case in which Huawei (as a SEP owner) had sought an injunction from the German court.

The Supreme Court dismissed Huawei's appeal, in *Unwired Planet v Huawei* (UPSC)[126]. It confirmed that the courts in the UK have jurisdiction to grant a FRAND injunction in cases where the patent in suit is held to be infringed, essential and valid. The FRAND injunction is an injunction to restrain infringement but it provides the defendant with the opportunity to avoid the injunction by taking a FRAND licence on terms to be settled by the court if not agreed. It is a choice for the defendant to take, which is only open to the defendant due to the standards essential nature of the patent. The terms of the FRAND licence settled by the court will reflect the evidence before the court of what is FRAND in the circumstances. Competition law does not require the lowest rate previously agreed to bind future terms.

As to when an implementer must commit to enter into the FRAND licence determined by the court in order to avoid an injunction, aside from the *Unwired Planet* judgments, by the end of 2022 there was reasoning to note in two cases. In *TQ Delta v ZyXEL*[127], following a finding of SEP infringement, Henry Carr J found that ZyXEL had "blown hot and cold" as to whether they would accept whatever licence was considered by the court to be RAND and refused to agree to submit to the outcome of an appropriate RAND determination while claiming the benefit of TQ Delta's RAND undertaking to the SSO. He found that this was a case of hold-out by ZyXEL and awarded injunctive relief, without a stay or carve-out. In *Optis v Apple*[128], Meade J concluded that in the circumstances of that case Apple was liable to be enjoined, by way of a FRAND injunction, from the point at which it was found to infringe. The circumstances of the case included that Apple had not committed and continued not to commit to enter into the FRAND licence to be determined at the forthcoming FRAND trial. The Court of Appeal confirmed Meade J's approach[129]. Therefore following a finding of infringement of a valid SEP, if the implementer did not, at that point, undertake to commit to take a FRAND licence in the form determined by the court, then the implementer was liable to be injuncted immediately. It was not enough, to avoid an injunction, for the implementer to say that they were willing to take a FRAND licence on the terms determined by another court in a different jurisdiction. Nor could the implementer wait to find out what

---

[123] *Unwired Planet International Ltd v Huawei Technologies Co. Ltd & Anr* [2017] EWHC 711 (Pat), [2017] EWHC 1304 (Pat)

[124] *Unwired Planet International Limited & Anr v Huawei Technologies Co. Limited & Anr* [2018] EWCA Civ 2344

[125] Case C-170/13 *Huawei v ZTE* [2015] Bus LR 1261

[126] *Unwired Planet International Ltd & Anr v Huawei Technologies (UK) Co Ltd & Anr* [2020] UKSC 37

[127] *TQ Delta LLC v ZyXEL Communications Limited* [2019] EWHC 745 (Pat) (18 March 2019) Henry Carr J

[128] *Optis Cellular Technology LLC & Ors v Apple Retail UK Limited & Ors* [2021] EWHC 2564 (Pat)

[129] *Optis Cellular Technology LLC & Ors v Apple Retail UK Limited & Ors* [2022] EWCA Civ 1411

the FRAND terms determined by the court turned out to be, and then decide whether or not to take them.

Mellor J's FRAND determination in InterDigital v Lenovo

The first of the FRAND judgments handed down in 2023 was in ***InterDigital v Lenovo*** **(16 March 2023)**[130]. Mellor J said that the development of the correct approach to setting global FRAND terms is a global endeavour, so there had rightly been reference before him to case law in other jurisdictions, notably the US and China. However, his own approach focused on the case law in the UK, and in particular the judgments in the *Unwired Planet v Huawei* and *Optis v Apple* cases.

While apparently respecting and applying the principles expressed in those authorities, Mellor J also made some key rulings of his own:

First, on the role of limitation periods. Mellor J said that in an ideal world, a willing licensee would agree FRAND terms before starting to use the relevant SEP technology, and so would pay FRAND royalties from the outset of that use. While the ETSI materials recognise that FRAND terms may not be agreed until later, before FRAND terms are actually agreed and FRAND royalties are paid, the willing licensee would recognise that it has the benefit of the use of those monies in the meantime. Therefore the willing licensee will, notionally or otherwise, set aside funds to pay for its licence. **If for some reason the willing parties are not able to reach a deal for some time, a willing licensee will not refuse to pay whatever licence fees are eventually determined to be applicable in respect of units produced and sold for more than the period(s) of limitation prior to the determination**, A licensee who did that would no longer qualify as "willing". Limitation periods do not have a role in the relationship between willing licensor and willing licensee; indeed they are inconsistent with that relationship.

Mellor J explained that while there are well-founded policy reasons behind the imposition of national limitation periods, those reasons are not sufficient to override or alter the fundamental relationship of willing licensor and willing licensee established by the ETSI IPR Policy (clause 6.1). The implementer ought not to be rewarded for the delay between the start of its infringements and the taking of the FRAND licence. The perceived influence of national limitation periods was the principle reason for the practice which had grown up of waiving or heavily discounting past royalties.

Second, on the royalties paid and payable for each functional unit. Mellor J said that these should be the same between implementers and should not depend on the price of the phone (or tablet or computer), which reflects many other features (such as screen size or processor power).

Third, on the position of larger and smaller market players. Mellor J said that a position in which it is FRAND for the largest implementer market players to pay less would involve discrimination. The corollary of this is that a smaller SEP licensor should not be disadvantaged vis-à-vis an owner of a larger share of the SEP universe in a given generation of technology.

Fourth, on running royalties and lump sum payments. Mellor J said that even if the prevailing industry practice is to agree upon running royalties (and whether with caps or floors or not), that does not mean that running royalties are necessarily FRAND or that FRAND rates must be expressed in terms of running royalties.

---

[130] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 539 (Pat) (16 March 2023) Mellor J

Turning to the InterDigital v Lenovo dispute, the primary indicator of the appropriate FRAND financial terms deployed by InterDigital was the comparables analysis. InterDigital's "top-down" analysis was deployed as a cross-check.

Mellor J explained that in any licence negotiation between a SEP owner and an implementer, there are many moving parts. One set of adjustments will enable a deal to be reached with one implementer, whereas different adjustments are required for a deal with another.

InterDigital and Lenovo disagreed as to which patent licence agreement(s) (PLA(s)) already entered into by InterDigital in respect of its SEP portfolio were the best comparable(s). The dispute was interwoven with dispute as to how the amounts paid by each licensee should be "unpacked" in order to facilitate comparison. Mellor J said that **in the unpacking analysis, the court must employ only objective measures**. It is the top line number and the value of the licence that is important – the sum which is paid by licensee to licensor. This can be divided by the observer's best estimate of the number of units covered by the deal to calculate, on a rough basis, the rate implied by the PLA. When estimating the number of units likely to be sold during the term of a PLA, it is more appropriate to rely on independent third party analysis or data than a party's own internal estimates. Unpacking prior licence agreements involves significant uncertainties.

Mellor J said that when the sums payable by the larger implementers (often lump sum deals) were at least a degree of magnitude higher than the costs of litigation, it seemed logical to assume that the unpacked rate was more likely to represent the "true value" of the licensed technology. By contrast, where the costs of litigation would be around or greater than the total sum payable under a licence, it was far more likely that the implementer had little choice but to accept what the licensor was demanding. Discounts reflecting the time value of money (e.g. accelerated receipt of royalties, the advantage to the SEP licensor or receiving a lump sum and so forth) were entirely fair and consistent with FRAND. But other discounts, like volume discounts, could result in discrimination.

Mellor J said that Lenovo's total cellular units under consideration were not comparable to the total units of any of the licences relied upon by InterDigital as comparables. They were more than an order of magnitude greater. Hence Mellor J did not consider the licences relied upon by InterDigital to be comparables for the purposes of the determination of FRAND terms. He considered the licences (also to InterDigital's share of the SEP stack) relied upon by Lenovo to be more probative. They had been concluded with some of the largest implementers. Mellor J considered one of those - the "LG 2017" PLA - as the best comparable to start from.

From LG 2017, in view of the expert evidence in the case, for the years 2012-2018 Mellor J applied a single adjustment ratio of 0.728 to reflect all the differences between LG and Lenovo. This led to a per cellular unit rate of $0.175. For the years preceding and following on from 2012-2018, Mellor J's view was that LG 2017 remained the best comparable, and he applied the same rate. The $0.175 rate yielded $138.7m as the lump sum which Lenovo had to pay to InterDigital for a FRAND licence down to 31 December 2023.

Mellor J accepted that a top-down cross-check might be a way of quantifying the degree of hold out which a SEP licensor has experienced. However, on the evidence before the court, he said that InterDigital's case made assumptions that he did not agree with or ignored points that would reduce the value of the rate reached. He criticised evidence going to "hedonic regression", an econometric analysis.

Both parties alleged that the other was not a willing licensee. Having explored their negotiation history, and in view of the FRAND rate already reached, Mellor J said that InterDigital's offers and positions had been too high to be within the FRAND range. By consistently seeking supra-FRAND rates, InterDigital did not act as a willing licensor. Consequently, for most of the period of the negotiations, Lenovo were correct not to agree to any of InterDigital's offers and justified in seeking further information.

However, at the latest on the hand down following the conclusion of Trial A in the case (finding InterDigital's EP(UK) '558 was valid, essential and infringed), when Lenovo failed to undertake to take a licence the terms of which were to be determined by the court as FRAND, Lenovo did not act as a willing licensee. Lenovo should have been subject to a FRAND injunction in respect of the Trial A patent at the latest from the date of the form of order hearing. Mellor J added that that he had been left with strong suspicions that Lenovo delayed the form of order hearing from Trial A until after it knew that its expert evidence of French law (for the FRAND trial) would have been served, so as to provide Lenovo with arguments at the Trial A form of order hearing against the grant of injunctive relief on that occasion. Mellor J said ([238]):

> "Although I have little doubt that the ingenuity of lawyers will be used to generate fresh, undecided issues surrounding the correct approach to injunctive relief in this type of case, this type of manoeuvring is to be deprecated and is more likely to be seen as such in the future."

Mellor J expressed "some regret" that he himself had not awarded a FRAND injunction at the conclusion of the FRAND trial, as InterDigital's counsel had urged. He said that upon the hand-down of his FRAND judgment he proposed to put Lenovo to its election, and he would want to be informed of the size of the bank guarantee provided by Lenovo and when it was put in place.

Mellor J's subsequent form of order judgment, ***InterDigital v Lenovo* (27 June 2023)**[131], addressed (among other things) the question (postponed in his FRAND judgment) of interest payable on the lump sum awarded. He said that the jurisdictional basis to award interest is the FRAND obligation in the ETSI IPR Policy. The question was whether it was FRAND to award interest or, put another way, whether the willing licensor and willing licensee would agree that interest should be payable on past royalties. Overall, there were several pointers towards an award of interest being appropriate. In particular, the FRAND rate determined should have been paid by Lenovo to Interdigital in 2011 and Interdigital should be compensated now for the delay in receipt of those sums.

Interest was awarded at 4% (the rate agreed between the parties in the draft licence), compounded quarterly, on the US$138.7 million lump sum award, yielding an interest payment of US $46.2m. The total payment from Lenovo to Interdigital, for a FRAND licence from 2007 to the end of 2023, was therefore US $184.9million. Lenovo was ordered to pay the US$184.9m lump sum to InterDigital within 14 days of the 27 June 2023 Order. Mellor J observed that if a FRAND rate had been agreed between the parties back in 2012, covering 2007-2012, it would likely have been at a higher rate than the US$0.175 determined in his FRAND judgment, although by how much was a matter of speculation. Therefore the award of interest might compensate InterDigital for this to some degree.

[131] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 1578 (Pat) (27 June 2023) Mellor J

Marcus Smith J's FRAND determination in Optis v Apple

In the meantime, the second FRAND judgment of the year had been handed down, in ***Optis v Apple* (10 May 2023)**[132].

As Mellor J had done, Marcus Smith J extensively referenced the judgments in the *Unwired Planet* case as authority for the principles governing his approach. He also made clear that in commercial negotiations, a degree of "hold out" and "hold up" is inevitable, intrinsic to any negotiation, and neither is unlawful. That said, the evidence as to the parties' approaches to negotiation was relevant.

Optis' approach to negotiating licences was found to have been "inept", its offers "no more than a series of demands for money" without rational underpinning for the prices put forward. However, as things presently stood (in view of inter alia *Unwired Planet*), serious prospect of "hold up" had been removed. Apple had not been injuncted or forced to agree to an abusive price. Apple's complaint of abuse of dominance appeared to lie in complaint that Optis' conduct, in the negotiations, was such as to prevent meaningful negotiations. Dismissing it, Marcus Smith J said that Apple's contention was a disguised attack on a party's freedom to negotiate price, "a novel and remarkably dangerous contention". Apple's case on *abuse* of dominance was "hopeless"; nor was Optis in a "dominant" position.

Apple had attempted to apply its own "FRAND Framework" to the negotiations. Marcus Smith J said that while the transparency and possibility for consistent application presented by the Apple Framework was an inherently attractive means for resolving the FRAND question, in practice the framework was materially defective and not FRAND. Overlapping with this, Apple's argument that royalty rates should be calculated for the SEP stack (and each SEP owner) as a portion of the estimated US$5 profit on the chip contained in a handset – on the basis that the chip was the Smallest Saleable Patent Practising Unit – was soundly rejected. So was Apple's insistence on patent-by-patent assessment and on SEP owners not being compensated for any contribution to the standard aside from their particular SEPs. Nevertheless, Apple had engaged in the negotiations in good faith, and any degree of hold out was not illegitimate. In any case, Marcus Smith J said he knew of no cause of action constituted by an allegation of illegitimate hold out, and Optis did not assert abuse by Apple of a dominant position.

Key to the approach that Marcus Smith J eventually took when determining FRAND terms was that Optis' factual evidence fell apart. Among other things, Optis' assertions as to the "quality" of its portfolio could only be probed/substantiated by reference to documents over which Optis asserted privilege, but when certain such documents were provided they did not support Optis' case. Some of Optis' fact evidence drew upon expert evidence (of Ms Dwyer) that Optis later withdrew reliance upon. Optis' factual witness Mr Blasius was "cagey, unimpressive and tendentious" and his evidence in cross-examination "unimpressive". It was also parasitic on Mr Born (another Optis factual witness) and Ms Dwyer, so was clouded by the defects in their evidence. Mr Born's evidence involved "a concerning lack of frankness" and possibly a withholding of material. The witness statements given by Mr Born and Mr Blasius fell short of the expected standard.

Aspects of Optis' expert evidence also fell apart. Optis withdrew reliance on Ms Dwyer (going to the essentiality/quality of Optis' portfolio) and the judge made an adverse inference as to Optis' original assertions of essentiality, concluding that (as Apple contended) the Innography data (rather than PA

[132] *Optis Cellular Technology LLC & Ors v Apple Retail UK Limited & Ors* [2023] EWHC 1095 (Ch) (10 May 2023) Marcus Smith J

Consulting data) should be used in the numerator and denominator when determining what proportion of the Stack was made up by the Optis portfolio.

As a result, there was no credible evidence that Optis' portfolio was above average in quality and no point to a qualitative assessment of Optis' portfolio as part of the stack.

Marcus Smith J also concluded that the opinion evidence adduced by both sides in relation to comparable licences was "of little, if any, probative value". In the unpacking of the licences, the fact the parties set the direction of travel for their experts meant their work (on the numbers) was unreliable and liable to mislead. The experts' reports were not in the form traditionally understood. They provided the court with no independent judgement on which the court could rely. The experts should have given reasons for the approaches they had taken, and not just followed without question the approaches they had been given. It also would have been better if both had better dovetailed their reports more closely with the position papers to reduce misunderstanding as to what they were doing. The judge's attempts to seek more useful financial information from the experts ahead of trial (and with which Apple and its expert engaged) were kyboshed by Optis.

The PLAs relied upon by Optis as comparables (the Optis Comparables) concerned Optis' portfolio of SEPs. Their expert's unpacking analysis led to a price of the overall stack that was indefensible. The *ad valorem* (price per unit expressed as a percentage) rates contended for by Optis were "overstated to a remarkable degree". This could be explained (at least in part) by the identities of Optis' counterparties, who were small players with much less bargaining power and for whom the transaction costs suggested a "floor price" for the licence agreed. Marcus Smith J's view was that Optis had only pursued those counterparties for licences in order to generate comparables that could be used in litigation. Optis' top down cross check, which attributed an *ad valorem* rate of 15% to the stack, did not support the *ad valorem* rates asserted by Optis in reliance upon their comparables. Nor did Optis seek to justify the use of an *ad valorem* rate rather than a lump sum.

The PLAs relied upon by Apple as comparables (the Apple Comparables) concerned licences taken by Apple to other parts of the stack (sometimes with a cross-licence). While noting defects in the Apple Framework, Marcus Smith J said that he had not seen any evidence that the rates Apple had achieved were unduly low through the exercise of hold out.

Marcus Smith J explained why, by the application of economic principles, "FRAND" is "a price, but not a market price", which obtains in very particular monopolistic conditions and must be derived or imposed by reference to factors that proxy to a market price. However, what is FRAND is informed indirectly by what is going on in the market, so comparables matter. Further, he said that:

- "ND" requires implementers to pay the same respecting all material differences; it does not mean that the same rate is always required. ND does not *require* different implementers to pay the same *ad valorem* rate; a lump sum rate must also reflect proper differences between implementers.

- There is a case to be made for differential pricing, with floors and ceilings calculated at non-*ad valorem* rates bookending an *ad valorem* rate applying in the middle ground.

- ND applies not just as between the SEP owner and the implementer, but also between SEP owners. ND requires the price charged by SEP owners to vary as to the proportion of the stack owned by each SEP owner. There will be an issue of discrimination if the same implementer

pays different SEP owners according to different bases (*ad valorem*, dollar per unit or lump sum).

- "FR" are words of ordinary usage; their requirements may also be understood by reference to the case law on excessive pricing. The question is what price would obtain in a competitive market: an excessive price is one that is materially higher than the one that would be informed by the average producer surplus that would exist in a competitive, but not perfectly competitive, market.

- The FRAND price involves valuing the access to the Standard because that is what the implementer is paying for. What is being quantified is the *value* to the *implementer* of the SEP portfolio as part of the Standard, not the value a consumer places on cellular connectivity or on the iPhone they have just purchased. The value to the implementer turns on a hard-nosed assessment of how many handsets at a given average sale price the implementer could sell when deploying cellular connectivity within the handset. That is best assessed in absolute, monetary terms because there is competition not just between sellers of handsets but also between the sellers of components that go into handsets, one of which is cellular connectivity, and at the end of the day a monetary price is what a market will generally produce.

Against this background, Marcus Smith J then articulated a methodology for determining the appropriate (FRAND) price that an implementer should pay to a SEP owner holding a proportion of the stack (more specifically the value to Apple of Optis' Portfolio) ([456):

> "The best approach, as it seems to me, to resolving this articulation of the FRAND Question is to seek to price the value of the entire Stack to Apple, and then to apportion that price *pro rata* amongst the co-owners of the Stack in proportion with their holding, as calculated by Innography. In calculating the price, I am not making any assessment of the value of the individual patents. I am pricing the Stack and what Implementers (and, specifically, Apple) should pay for it."

The stack could be valued at a total *ad valorem* rate or at a total lump sum rate (given the available comparables). But on the evidence: (1) no implementer could stay in business paying Optis' rates – the Optis Comparables produced outcomes that were commercial and defensible on their own terms but which could not be used to draw any wider conclusions and they were "worse than useless" at deriving a rate for Apple; and (2) the process of unpacking the Apple Comparables, where the payment mechanism was a lump sum, was unreliable in deriving an *ad valorem* price for the Stack.

However, Marcus Smith J was satisfied that the Apple Comparables were sufficiently reliable to justify their use in calculating the value of the stack on a lump sum basis. This was because, despite Apple's insistence in negotiations on aspects of its framework that were not defensible, such arguments were not badges of illegitimate hold out (at least at the relevant time), Apple's counterparties were "big beasts" able to look after themselves, and Optis' case that the rates in the Apple Comparables were unduly low had been rejected.

From the Apple Comparables (adopting a minimum 1% stack share in all cases where the actual share was less than that), Marcus Smith J found a value for a year's licence on 100% of the stack. (Although redacted, the Stack *appears* to be $1.35bn annually taking Optis' share of 0.61% and value of $8.235m). However, for reasons that were redacted, Apple only required a licence to *part* of Optis' Portfolio (0.38% rather than 0.61% of the stack) hence an annual fee of US$5.13million.

Marcus Smith J said that the FRAND licence would be worldwide, intended to achieve patent peace (and so 5G should be dealt with now too). The term would run until expiry of all the patents in the portfolio. The price paid for this (from 1 January 2023) should be 5 years' annual rate (US$25.66million) up front. For release from past infringements Apple would pay 6 years' the annual fee (2017-2022: US$30.78million). The judge's preliminary view was that interest should be payable on the release fee at 5%, compounded. Any past payments should be credited and any overpayments repaid.

The order of events in SEP / FRAND cases

You may recall the case of *Kigen v Thales*[133] reported last year, an "upside down" FRAND dispute brought by the implementer, Kigen, against SEP owner Thales. In November 2022, Fancourt J confirmed the jurisdiction of the court to hear the claim but stayed it until Kigen either (i) amended its case to plead that it should not be required to give a declaration to enter into the licence determined to be FRAND until it knew which patents were valid and essential, or (ii) gave the undertaking to enter into a licence for all Thales' relevant Essential IPR.

Kigen duly undertook to take a licence on FRAND terms. Therefore its claim for a FRAND declaration was a free-standing one, rather than one arising out of a defence to any infringement action.

In 2023, in ***Kigen v Thales* (2 February 2023)[134]**, Recorder Douglas Campbell KC held that against this background and in view of the overriding objective, the best way of dealing with the litigation expeditiously and fairly, and allotting to it an appropriate share of the court's resources, was for the FRAND trials to go first, before the technical trials. He also resolved a spat about costs budgeting, apparently enabling the technical and FRAND budgeting processes to be separated

Meanwhile, in the *Nokia v Oppo/OnePlus* dispute, a conventional SEP / FRAND dispute progressing in the Patents Court, three technical trials (A-C) had been scheduled, to be followed by a FRAND trial (D). By February 2023, following the first of the technical trials, one patent (admitted to be essential and infringed) had been found valid in *Nokia v Oppo* (16 January 2023)[135].

Oppo applied to the court to adjourn trial B from March to June 2023 and trial C from June to September 2023. (FRAND trial D was listed to float in October 2023). Oppo based its application primarily on the EPO's scheduling of the final appeal in the opposition to the trial C patent (EP '626) on 5 July 2023 i.e. very soon after trial C was scheduled to take place.

In ***Nokia v OnePlus* (10 February 2023)[136]**, Meade J eventually (by way of a postscript dated 20 February 2023) agreed to the adjornment of trial C. He was unimpressed that again litigants before the Patents Court had failed to keep the court up to date about EPO scheduling ([7]):

[133] *Kigen (UK) Limited v Thales Dis France SA* [2022] EWHC 2846 (Pat)

[134] *Kigen (UK) Limited v Thales Dis France SA & Anr* [2023] EWHC 313 (Pat) (2 February 2023) Recorder Douglas Campbell KC

[135] *Nokia Technologies OY & Anr v OnePlus Limited Technology (Shenzhen) Co., Ltd & Ors* [2023] EWHC 23 (Pat) (16 January 2023) Meade J

[136] *Nokia Technologies Oy & Anr v One Plus Technology (Shenzhen) Co., Ltd & Ors* [2023] EWHC Civ 346 (Pat) (10 February 2023) Meade J

> "I reiterate that it is very important that the parties should bring clashes to the court's attention, because it is not just up to them when UK trials happen relative to EPO proceedings, it is a matter that the court wants to scrutinise itself and, if necessary, case manage."

Meade J attached no blame to Nokia for bringing forward a patent which was under opposition. Sometimes that just happens. Applying the legal principles applicable to an application to move a trial, as identified by the Court of Appeal in *IPCom v HTC*[137], the prospect that costs could be wasted if the trial went ahead and then the TBA invalidated the patent would normally be outweighed by the need for commercial certainty. In the present context, that certainty included litigation certainty. Nokia had a real and valid concern that it should have a result in trial C before trial D, lest it be said that FRAND trial D could not go ahead. This was a consequence of the approach to the litigation that Oppo had taken, on which Meade J had some strong words ([16]):

> "**I have previously expressed on a number of occasions the frustration that is caused by Oppo's continued insistence on having technical trials. It accepts that it needs a licence to Nokia's portfolio. It therefore accepts that there are bound to be patents in the Nokia portfolio that are valid and essential. In my view, it ought long ago to have concluded that the real dispute in this jurisdiction, and indeed worldwide, was the setting of a FRAND rate**. One has to respect the fact that it wants to contest whether that rate should be set in Chongqing, in China, or in this court, and it has had Trial E listed in order to ventilate that argument. However, that is no reason for it to continue to insist on technical trials. As I have previously explained, it could perfectly well do that contingently. It could perfectly well indicate that it simply wishes to reserve the right to fight out the Chongqing/UK point and that it will not take a licence unless it is unsuccessful in Trial E. However, it has declined to do that and continues to fight the technical trials, even having lost Trial A. I have previously concluded and expressed in a judgment, which I think may still be private, but which I intend in due course to make public, that this was a timing strategy by Oppo to slow things down."

Also ([31]-[32]):

> "I have been frustrated by Oppo's tactical position for a while. I understand from a litigation strategic perspective why they feel they have to take that obstructive approach, but all that was required to move Trial C to a slot, which was pragmatically speaking more attractive, was for them to agree that they would not take strategic advantage from getting that which they had asked for. I reject the submissions by Mr. Lykiardopoulos that it was too complicated for them to do that. I do not think it is very complicated. The issue was flagged quite some time ago in Mr. Vary's evidence and it would not have been a difficult choice for Oppo to make.
>
> …as a responsible litigant there is no reason why it cannot cooperate to ensure the efficient management of litigation, even litigation that it would prefer not to be in at all."

Meade J therefore rejected Oppo's application, while saying that it was still not too late for Oppo to change its mind. He subsequently added by way of postscript ([34]):

> "Following my judgment above, Oppo proposed an agreement by which it would not seek advantage from an adjournment of Trial C from June to September. Its initial proposal was

[137] *IPCom GmbH & Co KG v HTC Europe Co Limited & Ors* [2013] EWCA Civ 1496

> criticised by Nokia and following indications from me it was refined into a form which I considered gave adequate comfort. I therefore adjourned Trial C to September 2023."

Subsequently, following the mentioned trial E, in ***Nokia v OnePlus*** **(26 July 2023)**[138] Meade J put to bed another argument from an implementer (Oppo/OnePlus) going to when and how they must commit to taking a licence on the terms determined by the court to be FRAND, in order to avoid being injuncted.

The position following the key authorities, and in particular *Optis v Apple*[139] was that the implementer was liable to be injuncted, by way of a FRAND injunction, from the point at which it was found to infringe. Oppo contended that the approach developed so far did not apply to its position in the light of the undertakings that it had offered - to take a licence on terms decided in proceedings in Chongqing. Oppo's position was that its undertakings changed the relevant circumstances, and meant that either it was already licensed under the ETSI IPR Policy or it was at least a "Clause 6.1 Beneficiary" pursuant to that Policy, and therefore entitled to get a licence in due course and not liable to be injuncted. (Meade J observed that Oppo's proceedings brought in Chongqing were reactive to Nokia's UK claims).

Meade J noted that in the *Unwired Planet* case (*UPCA*), the Court of Appeal[140] said ([120]):

> "…In our judgment it is unreal to suggest that two parties, acting fairly and reasonably, will necessarily arrive at precisely the same set of licence terms as two other parties, also acting fairly and reasonably and faced with the same set of circumstances. To the contrary, the reality is that a number of sets of terms may all be fair and reasonable in a given set of circumstances.
>
> …If the SEP owner and prospective licensee cannot agree upon the terms and royalty rates of a FRAND licence and the question of what is FRAND falls to be decided by a tribunal, whether a court or an arbitrator, then the tribunal will normally declare one set of terms as FRAND and that will be the set of terms the SEP owner must offer to the prospective licensee. If, however, the outcome of the proceedings is that two different sets of terms are each found to be FRAND then in our judgment the SEP owner will satisfy its obligation to ETSI if it offers either one of them. It will in that way be offering an irrevocable licence of its SEPs on FRAND terms…."

Meade J rejected Oppo's case that it was already licensed. It was common ground that Nokia's relationship with ETSI was subject to French law, and Nokia's relationship with implementer Oppo was not necessarily subject to French law. Clause 6.1 of the ETSI IPR Policy must have a single, uniform meaning that works generally. Under Oppo's approach, an implementer could put itself in a contractual relationship with a patentee when they had had no previous dealings at all with each other and not even any negotiating history. Everything about their relationship would be at large: the licence duration, whether it was a lump sum or running royalty, applicable law, price, etc. If French law were applicable to the relationship between the SEP owner and the implementer, the test of determinability under the relevant provision of French law would not be met in the sort of case where all the terms were at large. The notion that (as Nokia contended) clause 6.1 required the patentee to make an offer, fit with the importance attached to negotiation by the ETSI regime. It was also more consistent with the existing case law (in particular *UPCA*) and, relatedly, the concept that the patentee is entitled to choose between two different sets of terms if both are FRAND.

---

[138] *Nokia Technologies OY & Anr v OnePlus Technology (Shenzhen) Co., Ltd & Ors* [2023] EWHC 1912 (Pat) (26 July 2023) Meade J

[139] *Optis Cellular Technology LLC & Ors v Apple Retail UK Limited & Ors* [2022] EWCA Civ 1411

[140] *Unwired Planet International Limited & Anr v Huawei Technologies Co. Limited & Anr* [2018] EWCA Civ 2344

Meade J then addressed how the obligation of clause 6.1 on the patentee to make an *offer* which was FRAND and capable of acceptance, worked in practice ([259]-[261]):

> "In the Patents Court, a FRAND matter such as this comes on for trial with a concrete set of terms for consideration (sometimes more than one set of terms if there has been more than one offer by the patentee, and there may also be offers from the implementer to consider; it does not matter to the practical point I am making).
>
> The court applies the standard of whether the offer was FRAND or not. Because it is almost impossible to hit the nail on the head, it is usually found that the offer was not FRAND, but the court is able to say what would be FRAND. **In cases to date the patentee has always (at least since *Unwired*), as far as I am aware, given an undertaking before trial that it will offer what the court decides is FRAND. So it then complies with Clause 6.1 and its undertaking to the court by doing so.** Similarly, implementers have usually, following a finding of infringement at a technical trial, given an undertaking that they will accept the offer at the FRAND stage (see *Optis F*, and the same applied as I understand it in *InterDigital v Lenovo*; it had not happened in *Unwired Planet* and a lesson was learned from that).
>
> In the unlikely event that the patentee had not prior to trial given an undertaking to make an offer on the FRAND terms decided by the court then it would have the choice whether to do so, but if it did not then it would not have complied with Clause 6.1 and would not be entitled to an injunction."

Meade J also rejected Oppo's case that its undertaking (to Nokia or the court) to take the terms determined in the Chongqing proceedings made Oppo a beneficiary under clause 6.1, entitled to enforce Nokia's undertakings to ETSI. Oppo's case was founded on its position was that it was willing to take a licence, that its willingness was unqualified, and that it would bind itself to the result of the Chongqing proceedings however they turned out. Meade J accepted that this was a distinction from the position of the implementer in the *Optis v Apple* case, because Apple would not commit to take a licence unless the terms on offer turned out to be to its liking. However, he did not think that the distinction made a difference, and explained his rejection of Oppo's argument in two ways.

The first was because, according to *UPCA,* patentees in Nokia's position may choose between more than one FRAND alternative, and Meade J thought the principle of the patentee choosing was applicable in a situation where more than one court was considering FRAND. By way of example, Meade J explained [(271)]:

> "Results from two different courts might be very different in structure while both being FRAND and there may be powerful reasons why the patentee would prefer one over the other. In the present case Trial D will lead to a lump sum decision while the Chongqing proceedings will at least in form be a per unit royalty rate; Oppo meets that point by saying that there is no material difference on the particular facts of this case and there is something to that. But what if it was clearly going to be that way and Nokia had a business practice of always preferring lump sums because it did not want to have to audit its licensees' sales volumes, or did not like taking the risk of licensees' sales dropping unexpectedly? That would seem a perfectly valid reason to choose between two FRAND alternatives…"

Meade J observed that given the substance of the two outcomes was not yet known, the arguments/procedural choices in the present dispute gave rise to a suspicion that some points about

choice of FRAND options had more to do with forum. Nevertheless, Nokia had a concern of substance about cross-licensing. Nokia's failure to agree to a cross-licence being covered in the Chonqing proceedings was not wilfully obstructive. Nokia ought to be able to choose a licence which included a cross-licence, which Trial D would decide. The fact the Chongqing proceedings would not result in a cross-licence with a value assigned to it was a real difference, which allowed Nokia to say that it was making a choice between two different FRAND options, as it was entitled to do.

The second was that the English court has a responsibility to ensure that an effective remedy is given for infringement of a valid SEP. Meade J said ([299]-[300]):

> "… it is right to approach the current kind of situation with it firmly in mind that the defendant has been found to infringe a valid monopoly right. The English court does have an obligation to ensure that an effective remedy is given. Oppo's approach presents the risk that an implementer found to infringe could stave off any danger of an injunction by opting for a FRAND assessment in a court abroad which either would be unacceptably slow or which might ultimately not set FRAND terms at all, or might not compel the implementer to enter into a licence.
>
> The Chongqing court is plainly not unacceptably slow and I have found the risk of its not setting terms is low. But in another case the situation might be different. I also find it shaky and unsatisfactory that the means of compelling Oppo to take the Chongqing terms is an undertaking to the English court, because the Chongqing court itself will not compel Oppo to do so. That might work in the present case, but it illustrates the unsatisfactory structure of another court in a different jurisdiction dealing with a matter so closely related to the grant of relief in the English court."

However, while these matters militated in favour of Nokia's position, Meade J did not accept Nokia's assertion that the English court is always and without any possible exception obliged to set FRAND terms for itself ([301]-[302]):

> "… Precisely when it might leave it to another court is a matter for another day, but it is possible to imagine a situation where proceedings abroad were already far advanced when this court came to deal with the matter, and the proceedings abroad gave effect to the patentee's right to choose between different licences which were all FRAND, and it was clear that the proceedings abroad would give a prompt and enforceable result.
>
> Similarly, it cannot be ruled out that a FRAND judgment abroad would be enforceable here, or give rise to a *res judicata*, but that too is a matter for another day."

Meade J then addressed arguments made by each side about the practicality of the other's preferred legal analysis (i.e. should one side try to game the system to its advantage). On Oppo's approach, there seemed a possibility for an implementer, faced with proceedings and worldwide rate-setting in county A, to render itself a licencee when the country A proceedings were far advanced, insisting on determination in country B instead, thereby causing delay and possibly hold-out. Nokia's approach raised the possibility of a patentee suing in the UK at a time that suited it and thereby effectively curtailing a rate-setting exercise elsewhere. Meade J observed that the English courts would try hard, and would have the tools, to prevent FRAND rate-setting in respect of identical or overlapping geographical territories being conducted at the same time here and in another jurisdiction purely by the

patentee's own election. He added to the observations of other justices his own thoughts on the dysfunctional nature of the current system ([310]):

> "I do not shrink from the fact that these are difficult issues and that there is no clear or fully satisfactory solution. In large part that is because the current system, lacking a central dispute resolution mechanism for global FRAND, is, as Arnold LJ said, dysfunctional. It does not help to say that Nokia (or Oppo) must be wrong because the course it proposes leads to some problems. That is to assume that a problem-free course exists, and it does not. However, I think that Nokia's approach, as well as being consistent with the case law of this jurisdiction, makes better practical sense and is fairer."

Dismissing Oppo's request for a declaration that Nokia was not a willing licensor, Meade J said that **whether Nokia was a willing licensor had to be considered alongside whether Oppo was a willing licensee**. The situation has to be seen in the round. **Oppo was not a willing licensee because its willingness was qualified** by insisting on terms set in the Chongqing proceedings. **Nokia was a willing licensor because it had made an unqualified commitment to offer and then, if Oppo wanted, to grant a licence on whatever FRAND terms the Patents Court decided**. **That met the standard of willingness decided in *Unwired*.** Nokia was not willing to assent to terms set in Chongqing, but that did not make it unwilling, mainly because **the patentee can choose among different FRAND terms. That was also the reason for the asymmetry between the parties, with Nokia being able to elect for that which the Patents Court decided, and Oppo not being able to insist on terms set in Chongqing**.

On the above points, the trial had proceeded on the assumption that Nokia held a dominant position. However, Meade J said that it was necessary to look to see what the alleged *abuse* was. **None of the abuse allegations raised by Oppo succeeded** because: Oppo would not be excluded from the UK market so long as it agreed to pay FRAND licence fees; any allegation (not supported by evidence in this case) going to disruption of negotiations related to the past and could not prevent an injunction for the future (as in *Optis F*); seeking a declaration from the court entailed nothing unfair about the rate-setting process; and there was nothing pointing to the Chongqing court providing a better or better-informed result on rate-setting.

Further, as in the *Optis v Apple* case, any past abuse in seeking and imposing excessive licence fees was precluded for the future by Optis' undertaking to give a licence on the court's terms.

Finally, Meade J stepped back and said that he thought the result he had reached was fair, but that it was becoming ever clearer that technical trials were not really where the issue lay in these sorts of disputes. The FRAND system was there to provide *access* to the standards on FRAND terms, and it worked. Oppo had been able to practice the ETSI standards and it could do so in the future – all it had to do was to agree to a FRAND determination in a court system with experience of the task and procedural methods for doing it. Oppo might elect not to use the access on FRAND terms, but if self-interest meant that Oppo might overall be better off by withdrawing from the UK market (as it had withdrawn in Germany), that would not mean there was a failure of the FRAND system. If Oppo had not insisted on the technical trials, it would already know the terms of the FRAND licence.

In these sorts of disputes, what was really in issue was FRAND terms. **Sequencing FRAND trials after technical trials tended to defer focus on (and procedural steps going to) FRAND issues**, and so seemed likely to impede progress towards the parties' understanding of their positions, negotiation and potential settlement. Looking to future cases, Meade J said ([360])-[362]):

"I do not see why it should not be possible to prioritise the FRAND issues more than has been the case to date, and, for example, to schedule at the start of a case such as this a single trial, or two trials which are simultaneous or very close in time, covering technical issues and FRAND. If the patentee failed to show that there was a SEP that was valid and essential then the FRAND terms could not be imposed on the implementer by putting it to its election. ….

… I doubt if implementers would be so keen to contest technical trials if they knew as a matter of practical reality that they needed a licence, that their chances of winning on all the technical issues were small, and that the FRAND issue was going to be tried. They might well decide to concede the need for a licence and focus on FRAND, as Oppo (belatedly) did in this case. This approach would also promote provision of information enabling discussion and possibly settlement a good deal earlier. Of course, an implementer that positively wants FRAND determined can start proceedings without the need for any technical trials, as Fancourt J decided in *Kigen*."

While stressing that he was not making rules about the case management of this kind of litigation, noting that all situations are different, Meade J said that there was now sufficient experience of these disputes to take a considered view of whether the general approach to date can be improved.

The take homes from FRAND litigation in 2023?

There are some broad themes that can be taken from the judgments in FRAND cases in 2023, albeit some points of reasoning across the different judgments are not entirely consistent. They are:

- Following a finding of infringement of a valid SEP in the UK, an implementer must immediately (and at the latest at the form of order hearing following hand down of the judgment) commit to taking a FRAND licence on the terms determined by the court in the UK to be FRAND, or be injuncted.

- In the context of the UK courts' approach to determining SEP / FRAND cases:

    - if a SEP owner gives an undertaking to the UK court before trial that it will offer what the court decides is FRAND, then it complies with clause 6.1 of the ETSI IPR policy;

    - following a finding of infringement of a valid SEP by the UK courts, abuse of dominance arguments against the award of injunctive relief are unlikely to succeed (absent some sort of new, untested conduct by the patentee).

- In determining FRAND terms, there may be value in comparables from both the SEP owner's portfolio (which is the subject of the FRAND determination) and the implementer's licences to other parts of the stack. Which PLA(s) prove most influential in any particular case will depend upon the way in which each party's case is put and the quality of the evidence relied upon in support. There may also be value in a top-down approach.

- In FRAND determination proceedings in the UK, the role of evidence is central. Expert evidence and fact evidence must comply with the standards (and spirit) required by the Civil Procedure rules. The rules are there to maintain the standard of evidence; if those standards are not met, the evidence will, in practice, be at high risk of failing to withstand the scrutiny to which it is subjected in the cross-examination process. It is the evidence that withstands that process that

will influence the court's determination on matters of fact and of opinion. (These evidential considerations explain why, in *InterDigital v Lenovo*, it ended up being *a* licence from the SEP owner's portfolio that the court used as the basis for setting FRAND terms in that case, whereas in *Optis v Apple* it was a number of licences taken by the *implementer* to other parts of the stack that proved most influential as comparables in the determination of FRAND terms for the implementer's access to the SEP owner's portfolio).

- In the future in SEP / FRAND litigation in the UK, FRAND trials are likely to be scheduled to take place broadly in parallel with technical trials, rather than some months afterwards.

There is also judicial comment of a less cohesive nature, but which is nevertheless important to note. In particular, Mellor J, in *InterDigital v Lenovo*, expressed the view that:

- implementers should take active steps to seek out the licences that they need and, as a first step, this means making contact with the SEP owners, whose identities can be readily ascertained from ETSI; on the other hand, Marcus Smith J in *Optis v Apple* suggested that SEP *owners* should instigate contact with licensees;

- SEP owners should be more transparent about the FRAND licences they enter into, particularly in the course of FRAND negotiations; and

- before a FRAND licence is agreed, a willing licensee would set aside, whether notionally or otherwise, funds to pay for the licences needed to implement a particular standard, even where the precise amounts required may well be uncertain. Furthermore, pending agreement or determination as to the actual FRAND royalties due, a willing licensee might well make certain payments on account to demonstrate their willingness.

The Patents Court, Court of Appeal and Supreme Court have together established a well-explained system for determining FRAND disputes. Reflecting the common law nature of our legal system, the outcome of any particular dispute will reflect the evidence before the court and how well that evidence stands up to scrutiny. There is scope to tweak the order of events in future cases, but the fundamentals are well established. The UK is now a strong and experienced jurisdiction for the determination of FRAND disputes.

3 VALIDITY

a) The person skilled in the art and the common general knowledge

The identity of the person skilled in the art

The concept of the **"person skilled in the art" (PSA)**, also called the **"skilled person"**, does heavy duty in patent law. Many questions are determined through the "eyes" of the skilled person, as they are identified in the circumstances of any particular case. Long considered a fairly settled area of the law, in recent years two subtly different descriptions of the skilled person have emerged.

The conventional description of the skilled person stems from the idea that a patent specification is addressed to those persons likely to have a practical interest in the subject matter of the claimed

invention, as noted, for example, in *Actavis v Eli Lilly*[141] and *MedImmune v Novartis*[142]. A comprehensive summary of the attributes of such a person was set out by Henry Carr J in *Garmin v Koninklijke Phillips*[143]. The skilled person, or team of persons, must have the skill in the art with which the invention described in the patent is concerned; practical knowledge and experience of the field in which the invention is intended to be applied. Each such addressee is uninventive and has no inventive capacity. While the skilled person or team is a hypothetical construct, its composition and mind-set is founded in reality. As Jacob LJ explained in *Schlumberger v EMGS*[144], the combined skills (and mindsets) of real research teams in the art is what matters when one is construing the notional research team to whom the invention must be obvious, if the patent is to be found invalid on this ground.

However, in *Schlumberger*, Jacob LJ suggested that the "person skilled in the art" for performing the invention once it was made was not necessarily the same person as the "person skilled in the art" for the assessment of obviousness. This was because if the patent suggested combining the skills of two different arts to solve a problem, when it was not obvious to do so, and it resulted in a real technical advance, then in the two different contexts the phrase "person skilled in the art" would have a different meaning. Birss LJ picked up the baton in 2021, in *Illumina v Latvia MGI*[145]. He said that the approach to take when it was necessary to define that skilled person is: to start by asking what problem the invention aims to solve; and then to consider what the established field which existed was, in which the problem in fact could be located. It was the notional person or team in that established field that was the relevant "person skilled in the art". Birss LJ adopted this approach in the *Illumina* case without saying whether the invention of the patent in suit was one in which the skilled person needed to be defined differently from the norm.

A notable departure from the basis for identifying the person skilled in the art, Birss LJ's approach has since been followed in a number of first instance judgments, for example by Meade J in *Alcon v Actavis*[146] and *Optis v Apple*[147]. A case has yet to emerge in which the court, when following Birss LJ's approach, has done so after finding the invention in question to have been "art-changing" – one in which the invention lies in the marriage of different technical fields - as contemplated in *Schlumberger*, or in which the court has indicated that the two approaches would result in a notable difference in outcome for the parties. The Court of Appeal has yet to enter the debate.

In ***Ensygnia v Shell* (26 June 2023)**[148], Charlotte May KC observed that the case was again not of the type contemplated in *Schlumberger*, but she thought it helpful nevertheless to start by identifying the problem that the invention aimed to solve. Having considered the patent and the expert evidence, Charlotte May KC concluded that the problem that the patent aimed to address sat at the intersection between an information security generalist and automatic identification systems. The skilled person could therefore originate from either. She thought this probably explained why, even though the parties' experts came from different technical backgrounds, they largely agreed on the CGK.

---

[141] *Actavis UK Limited & Ors v Eli Lilly and Company* [2017] UKSC 48

[142] *MedImmune Limited v Novartis Pharmaceuticals UK Limited* [2012] EWCA Civ 1234

[143] *Garmin (Europe) Limited v Koninklijke Philips NV* [2019] EWHC 107 (Ch)

[144] *Schlumberger Holdings Limited v Electromagnetic Geoservices AS* [2010] EWCA Civ 819

[145] *Illumina Cambridge Limited v Latvia MGI Tech SIA & Ors* [2021] EWHC 57 (Pat)

[146] *Alcon Research LLC & Anr v Actavis Group PTC EHF & Anr* [2021] EWHC 1026 (Pat)

[147] *Optis Cellular Technoloigy LLC & Ors v Apple Retail UK Limited & Ors* [2021] EWHC 1739 (Pat)

[148] *Ensygnia IP Limited v Shell Oil Products Limited & Ors* [2023] EWHC 1495 (Pat) (26 June 2023) Charlotte May KC

In ***Sycurio v PCI-PAL*** **(25 September 2023)**[149], competition law specialist Bacon J had a crack at combining the two lines of authority on the identity of the person skilled in the art. She said ([30]):

> "i) The skilled team is a hypothetical construct, used to identify the notional research team to whom the patent is addressed, and whose combined experience and way of thinking is used by the court to determine the teaching of the patent, the sufficiency of the patent, the teaching of the prior art, and what it would be obvious to do in light of the prior art.
>
> ii) A patent specification is addressed to those persons likely to have a real and practical interest in the subject matter of the invention. The skilled team must therefore consist of persons with practical knowledge and experience of the kind of work in which the invention is intended to be used: see Kitchin LJ in *Medimmune v Novartis* [2012] EWCA Civ 1234, §72.
>
> iii) The attributes and experience of the skilled team are to be identified by asking the objective question "what problem does the invention aim to solve?": Birss J in *Illumina Cambridge v Latvia MGI Tech* [2021] EWHC 57 (Pat) §§68–9.
>
> iv) It is also relevant to ask whether there are real research teams operating in the field: Mellor J in *Alcon v AMO* [2022] EEWHC 955 (Pat), §214.
>
> v) Every member of the skilled team is deemed to be unimaginative with no inventive capacity: Henry Carr J in *Garmin (Europe) v Koninklijke Philips* [2019] EWHC 107 (Pat), §85(iv).
>
> vi) Once the skilled team is identified, the patent and the prior art are considered on the basis of the "knowledge and assumptions" which are attributed to that skilled team: Lord Hoffmann in *Kirin-Amgen v Hoechst Marion Roussel* [2004] UKHL 46, §32."

That is a respectable conflation that is likely to operate well for most purposes!

Sycurio's patent was to a method of processing a phone call so as to send signals including sensitive transaction data to an external entity for processing while continuing the voice call. The issue was whether someone with technical expertise in the design and implementation of telephony systems for call centres would be subject to the "controlling mind" of the expert (also in the skilled team) in payment systems and card security. She concluded that since, on its face, the problem that the patent aimed to solve was a technical one, directed at a telephony solution to the problem of agent fraud in call centre remote transaction systems, neither member of the skilled team would have a controlling mind.

The mindset of the skilled person

HHJ Hacon's judgment in ***Philip Morris v Nicoventures*** **(25 October 2023)**[150] concerned BAT's e-cigarette patent about the maximum heater temperature being exclusively determined by a Curie point of the heating material. On the mindset of the skilled team when addressing the prior art, Judge Hacon said ([35]):

> "To the extent that there was pressure from management to investigate inductive heaters in the real world, it seems to me that this should be assumed for the skilled team. The hypothetical

[149] *Sycurio Limited v PCI-PAL Plc & Anr* [2023] EWHC 2361 (Pat) (25 September 2023) Bacon J

[150] *Philip Morris Products S.A. & Anr v Nicoventures Trading Limited & Anr* [2023] EWHC 2616 (Pat) (25 October 2023) HHJ Hacon

team of patent law does not consider possible developments of the prior art as if isolated in a laboratory. Motive is relevant, see *Actavis Group PTC EHF v ICOS Group* [2019] UKSC 15, at [70] and an incentive that would have existed at the priority date to pursue a particular alternative should be given appropriate weight even if it is not a technical incentive…"

The common general knowledge of the person skilled in the art

The long-explained principles going to the identification of the **common general knowledge** (CGK) continued to be drawn upon in 2023, with occasional reiterations and tweaks in the case law. A good place to start for a capture of the general principles remains Henry Carr J's judgment in *Garmin v Philips*[151], drawing upon Arnold J's judgment in *KCI Licensing v Smith & Nephew*[152], in a passage subsequently approved by the Court of Appeal[153]. A more succinct exposition of the general principles may be found in the Court of Appeal's judgment in *Idenix v Gilead*[154], in which, drawing on reasoning in *Beloit v Valmet*[155] and *Raychem Corporation's Patents*[156], Kitchin LJ (as he then was) said ([72]):

"…the common general knowledge is all that knowledge which is generally regarded as a good basis for further action by the bulk of those who are engaged in a particular field. It is that knowledge which those working in that field will bring to bear when they are reading or learn of a piece of prior art. It is not necessary that those persons have that knowledge in their minds, however. The common general knowledge includes material that they know exists and which they would refer to as a matter of course if they cannot remember it and which they understand is generally regarded as sufficiently reliable to use as a foundation for further work."

In 2023, in ***Nokia v OnePlus* (16 January 2023)**[157], Meade J contributed the following statement of the law applicable to the dispute before him ([40]):

"i) The CGK is the common knowledge of the skilled person, necessary to the competent performance of their work. It also has to be regarded as a "good basis for further action", and in general something which has never in fact been used will not be CGK, although this last point has to be modified by the proposition (not applicable in the present case) that it can be common general knowledge that something is the subject of scientific doubt. See Terrell on the Law of Patents, 19th Ed., 8-61 to 8-67, General Tire & Rubber v Firestone [1972] RPC 457 at 482, Merck v Ono [2015] EWHC 2973 (Pat) at [24].

ii) The mere publication of information in a patent specification or scientific journal does not prove that it is CGK. The information has to rise to the standard just identified (General Tire again).

[151] *Garmin (Europe) Limited v Koninklijke Philips N.V.* [2019] EWHC 107 (Ch)

[152] *KCI Licensing Inc & Ors v Smith & Nephew plc & Ors* [2010] EWHC 1487 (Pat) at [105]-[115]

[153] *KCI Licensing Inc & Ors v Smith & Nephew plc & Ors* [2010] EWCA Civ 1260

[154] *Idenix Pharmaceuticals Inc v Gilead Sciences Inc & Ors* [2016] EWCA Civ 1089

[155] *Beloit Technologies Inc & Anr v Valmet Paper Machinery Inc & Anr* [1997] EWCA Civ 993

[156] *Bourns Inc. v Raychem Corporation* [1997] EWHC 372 (Pat)

[157] *Nokia Technologies OY & Anr v OnePlus Limited Technology (Shenzhen) Co., Ltd & Ors* [2023] EWHC 23 (Pat) (16 January 2023) Meade J

iii) CGK is not limited to what the skilled person has memorised and has at the front of their mind but includes that which they know exists, and would refer to as a matter of course, but this does not make everything “on the shelf” CGK: Raychem’s Patent [2009] RPC 23 at [25].”

Meade J added that the concept of CGK has to be applied flexibly. In some mature fields there are well known and detailed textbooks, which are a classic way of proving CGK. But other fields, younger or less academically directed, are not the subject of textbooks. That does not mean there is no CGK, it just means that it comes from other sources and its proof may be more challenging. Nokia's patent concerned an invention in a narrow field of communications technology. Developments in communications were rapid. Therefore it was especially important to bear in mind that "one is concerned with information that was generally accepted". It could be misleading to focus on particular documents.

The point was illustrated at the end of the year, in ***Safestand v Weston*** **(19 December 2023)**[158]. The case concerned three Safestand patents to builders' trestles. On the CGK, the main difference between the parties (and their experts) was how many of the 25 or so trestle products marketed in the UK at the priority date formed part of the CGK. Mr Lohmann, for Safestand identified four as CGK; Dr Santos for Weston said the other 21 were CGK too.

In his written evidence, Dr Santos had referred to a passage from *Raychem Corp's Patents* (Laddie J), and apparently understood it to support what he had been told by Weston's solicitors, which was that the CGK can include information which, even if not retained in the skilled person's memory, they would refer to as a matter of course. Judge Hacon said ([45]-[47]):

> "The key qualification left out is that the CGK can include information which the skilled person would refer to as a matter of course ***to use as a foundation for further work or to help understand the pleaded prior art***. In other words, such further information only becomes part of the CGK if the skilled person is appropriately prompted to consult it, which will usually be in order to elucidate an item of prior art. To take an arbitrary example, if the prior art says that a process must not be conducted at or above the melting point of lead, the skilled person can be taken to look up that temperature. In *Raychem* Laddie J did not mean that every piece of information not held in the skilled person's mind but which he or she knows to exist is hoovered up into the CGK.
>
> …I am forced to conclude that Dr Santos was provided with a flawed understanding of the concept of CGK in law. That is not a criticism of Dr Santos. But I must treat his evidence on CGK with considerable caution."

Weston did not provide any evidence to support Dr Santos' assertion that the additional 21 products were CGK. Judge Hacon concluded that while the skilled person knew that other systems existed and could be found, this did not qualify that information as CGK. It was not.

Practice/administration of PSA and CGK in litigation

Finally on the skilled person and their CGK, the case law in 2023 reflects the continuation of the practice developed by the Patents Court in recent years of encouraging the parties to prepare an agreed statement of the common general knowledge ahead of trial. As well has helping to narrow the issues for consideration at trial, such statements form a useful source for judges looking for uncontentious text

[158] *Safestand Limited v Weston Homes plc & Ors* [2023] EWHC 3250 (Pat) (19 December 2023) HHJ Hacon

on the background technology that may readily be incorporated into their judgment. In ***Gilead v NuCana* (21 March 2023)**[159], Meade J actually attached the agreed statement to his judgment as Annex A.

In ***InterDigital v Lenovo* (31 January 2023)**[160], Mellor J observed that the practice adopted in that case, of the parties indicating which paragraphs in the CGK sections of the experts' reports were agreed to be CGK and preparing a list of points in dispute, was not as useful for the court as the preparation of a statement of agreed CGK. He added ([25]):

> "The preparation of a statement of agreed CGK should be relatively easy, precisely because it is not necessary for the lawyers to get involved in arguing over detailed points of wording."

b) Priority and anticipation

Priority of anticipation-only prior art

2023 began, in ***Nokia v OnePlus* (16 January 2023)**[161], with a judgment looking at the interpretation of a novelty-only citation where only some of the matter contained in the prior art had the necessary priority. Oppo's challenge was based on EP application 'Woo'. The Patents Act, s.2(3) states ([107]):

> "(3) The state of the art in the case of an invention to which an application for a patent or a patent relates shall be taken also to comprise matter contained in an application for another patent which was published on or after the priority date of that invention, if the following conditions are satisfied, that is to say—
>
> (a) that matter was contained in the application for that other patent both as filed and as published; and
>
> (b) the priority date of that matter is earlier than that of the invention."

Woo therefore could only be relied upon for the purposes of s.2(3) in respect of matter that it contained and which had an earlier priority date than that of the patent (which was the patent's filing date). The Woo priority document asserted as relevant was "PD8", an LGE US provisional application.

Woo contained material that was not present in PD8. Patentee Nokia contended that such material informed the interpretation of the parts of Woo that Oppo *could* rely upon. Meade J agreed ([121]-[123]):

> "Neither side pointed me to any authority or commentary which bears on this. It feels intuitively rather odd that a document, in this case PD8, whose contents would (Oppo says) anticipate when written if they were published, and whose matter then becomes part of the state of the art through s. 2(3), could fail to anticipate because of some further text added only later in a

---

[159] *Gilead Sciences Inc & Anr v NuCana Plc* [2023] EWHC 611 (Pat) (21 March 2023) Meade J

[160] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 172 (Pat) (31 January 2023) Mellor J

[161] *Nokia Technologies OY & Anr v OnePlus Limited Technology (Shenzhen) Co., Ltd & Ors* [2023] EWHC 23 (Pat) (16 January 2023) Meade J

published version, after the priority date of the patent in question, which changes the context and therefore the meaning of the original.

However, on reflection and after hearing oral submissions, I think Nokia is right. The way that s. 2(3) works is to make some of the matter in the relevant patent application (Woo) prior art; PD8 is not prior art. The limitation is that matter in the relevant patent application can only be relied on if it has an earlier priority date; that is where PD8 comes in. So one identifies matter in Woo and then asks if it has priority from PD8. Matter for these purposes means information and one determines the information in Woo by interpreting it. There is nothing in s. 2(3) that says that only part of Woo must be read for the purpose of interpreting it, and to not read all of it might give its individual parts a meaning which was not (objectively) intended. What if a part of Woo that did not have priority expressly said that the part that Oppo relied on did not cover what Oppo said? There could be no valid reason to ignore it.

I also think, although I was not addressed on it, that this conclusion is at least consistent with avoiding double patenting."

General principles on the assessment of an anticipation challenge

Continuing with our discussion of ***Nokia v OnePlus*** **(16 January 2023), o**n the principles governing the assessment of novelty more generally, Meade J said that to anticipate, there had to be clear and unmistakable directions (*General Tire v Firestone*[162], approved by the House of Lords in *Synthon v SKB*[163]). There also had to be enablement. Further:

- the test is objective and it is not necessary that the author of the prior art knew they were "planting the flag";

- a prior art document may, to the relevant standard, disclose two or more discrete things and if one of them anticipates then that is enough, even if the other does not – but the disclosure must be of two discrete possibilities – a generic disclosure merely embracing both is not enough;

- the existence of an argument over the meaning does not mean there is a lack of clarity or ambiguity;

- the court should not be quick to find something ambiguous; a patent disclosure is intended by the author to be meaningful and the court should try diligently to identify the meaning, but the very fact that the test is one of unmistakeable/unambiguous disclosure necessarily implies that the court can find that a disclosure is too unclear to amount to an anticipation.

(Meade J said that in this part of his judgment he used the words "ambiguous" and "ambiguity" to mean a failure to meet the "clear and unmistakable directions" standard).

On the role of expert evidence in the context of anticipation, Meade J said ([115]-[117]):

"There was extensive expert evidence about Woo's teaching. In my view it was admissible where it elucidated the technical considerations relevant to understanding the document and

[162] *General Tire and Rubber Co v Firestone Tyre and Rubber Co Ltd* [1972] R.P.C. 457

[163] *Synthon BV v Smithkline Beecham plc* [2005] UKHL 59

> inadmissible where it descended into mere analysis of words. Attributing meaning (or lack of it) once the technical context has been explained is the Court's function.
>
> It was also admissible for the experts to put forward possible ways to work Woo that would (as they saw it) satisfy the teaching in a sensible way consistent with the parties' contentions on claim interpretation. This was particularly done by Prof Purat in answer to Dr Cooper's evidence that Nokia's interpretation of the key passage in Woo would not make technical sense.
>
> Subject to the point that the mere existence of an argument does not imply ambiguity, I also think some forensic weight can be attached to the fact that both experts have genuinely struggled to understand a teaching."

It was not permissible to try to understand Woo by reference to actual events in "RAN1" (a standards working group), or by reference to the patent. The reader of Woo "would just try to understand its teaching with an open mind". Meade J explained ([119]):

> "Hindsight can creep in if the analysis is "does Woo mean X?", where X is something designed to fall inside claim 1, rather than "what does Woo mean?"."

Meade J said that the parties' arguments on Woo were very long and detailed, going well beyond the analysis that the ordinary skilled person would undertake. Also ([152]):

> "…both sides, but especially Oppo, picked the meaning that would suit their case in this litigation and then went looking for ways to shape Woo's disclosure toward it. I would also say that Oppo's arguments focused unduly on attacking what Nokia said that Woo meant, without taking on board that Nokia does not have to say that Woo is perfectly clear. On the contrary, Nokia says that Woo is unclear, so it would not be surprising if there were problems with seeking to explain it. Nokia's interpretation does not have to resolve all the problems with Woo for Oppo to fail."

So this forms a reminder to keep in mind the legal burden that needs to be met.

After discussing the evidence and arguments, Meade J said that in view of the extent of the agreement between the experts as to what Woo disclosed, Oppo could not argue that Nokia's approach lacked any technical sense. The experts had "struggled severely" with understanding Woo, which did not gel at all well with the document being clear and unambiguous, and the ambiguity in and around a key part of it was fatal to Oppo's anticipation case.

In ***InterDigital v Lenovo*** **(31 January 2023)**[164], Lenovo challenged InterDigital's EP(UK) 318 for anticipation by prior art "Kim", a US patent application. The central issue was how the person skilled in the art would read paragraphs [0092]-[0094] of Kim. Having discussed the evidence, Mellor J said that the answer was provided by considering the context within which the teaching of Kim would be read and understood by the skilled person.

Only two possible specific contexts were put forward: the person skilled in the art would read and consider Kim's disclosure in the context of (a) implementing HSUPA or (b) a WiMAX system.

---

[164] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 172 (Pat) (31 January 2023) Mellor J

WiMAX was not discussed in any of the written expert reports, and while Mellor J accepted that the skilled person would have been able to take the central idea of Kim and apply it in other communication systems, such as WiMAX, this did not progress the analysis further. Mellor J accepted the view of InterDigital's expert that the person skilled in the art would read Kim with their HSUPA CGK in mind. On that basis, Mellor J accepted the same expert's view as to what the Figure 9 embodiment of Kim would disclose to the person skilled in the art – that it would not be understood as adding a new trigger for scheduling information which was not in the CGK. (Indeed Lenovo's expert accepted that Figure 9 could be read in that way, and absent knowledge about focusing on scheduling information, the person skilled in the art would do so).

Mellor J therefore accepted that Lenovo's expert's alternative reading of Figure 9 was "a hindsight view prompted by the particular way in which he was invited to consider Kim". Lenovo's case of anticipation over Kim was rejected.

In the midst of a busy few weeks for the *InterDigital v Lenovo* dispute, in ***InterDigital v Lenovo* (9 February 2023)**[165] the Court of Appeal unusually overturned a finding of anticipation in respect of InterDigital's EP(UK) '537. (Mellor J's first instance judgment had followed technical trial B in the case).

The Court of Appeal's conclusion was that the judge had been "beguiled by a sleight of hand in the cross-examination" of InterDigital's expert. Anticipation was not the inexorable result of the construction of the claim that the judge had adopted, and so far as was material, there was no difference between the judge's construction and that adopted by Arnold LJ in the Court of Appeal. Arnold LJ observed that the conclusion he had arrived at was supported by the following:

- the changing of Lenovo's case on prior art Filiatrault over time and the late emergence of DXX/14 (a pointer against anticipation although not determinative);

- the judge's comment that Lenovo's argument had struck him as akin to one rejected in *Hickman v Andrews* [1983] RPC 147 (in which Graham J warned of avoiding "falling into the trap of being astute after the event by ex post facto synthesis to build up an anticipation out of a prior art document or prior user in order to make it fit the claim") – Arnold LJ's view was that the judge's instinct about Lenovo's argument had been well-founded; and

- although Filiatrault was not in terms acknowledged in the Patent, it was common ground between the experts that the earlier part of the specification was based upon it (or an earlier draft of v6.2.0 which was not materially different); moreover it was clear that the skilled reader would appreciate that; therefore the validating construction principle was applicable.

Having just mined the legal principles from the depths of two SEP judgments, Charlotte May KC's well-written judgment in ***Ensygnia v Shell* (26 June 2023)**[166] provides a refreshingly more accessible reminder of the basic principles governing questions of novelty/anticipation.

---

[165] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWCA Civ 105 (9 February 2023) Lewison, Asplin & Arnold LLJ

[166] *Ensygnia IP Limited v Shell Oil Products Limited & Ors* [2023] EWHC 1495 (Pat) (26 June 2023) Charlotte May KC

This was the dispute concerning Ensygnia's patent to an information security method/system. Shell alleged that the patent was invalid for anticipation by prior art Schmidt. Charlotte May KC noted as not in dispute that ([219]):

> "…in order for a piece of prior art to anticipate a patent, it must clearly and unambiguously disclose all the features of the claims in issue (*General Tire & Rubber Co v Firestone Tyre & Rubber Co Ltd* [1972] RPC 457 at 485). Disclosure can be implicit as well as explicit (*Edwards v Boston Scientific* [2017] EWHC 405 (Pat) at [139])."

It was common ground that Schmidt disclosed all integers of claim 1 (and 7) except "wherein the display is a sign". On the evidence, the judge did not accept Shell's case that Schmidt taught that the barcode described must be dynamic, in the sense that it must change for each individual transaction or every time the system was used. There was no express teaching in Schmidt to the effect that the barcode must be different with every transaction. Whether or not that was the case would depend on the nature of service in question. There was no clear and unambiguous disclosure that the barcode *would* be the same with different transactions or would not change between transactions.

Noting that "a disclosure that is capable of being carried out in a way which would infringe a patentee's claim but equally could be carried out in a way that is not infringing will not anticipate a claim", the judge concluded that there was no clear and unambiguous teaching that the barcode would necessarily be the same in Schmidt. So the requirement of the claim, that the "sign" be static, was not taught by Schmidt. Hence claim 1 (and 7) was not anticipated. (However Shell did succeed with its obviousness challenge based on Schmidt, as noted below).

The most factually entertaining consideration of an anticipation challenge in 2023 is to be found in ***Philip Morris v Nicoventures*** **(25 October 2023)**[167]. The case concerned Nicoventure's/BAT's e-cigarette patent about the maximum heater temperature being exclusively determined by a Curie point of the heating material.

Philip Morris alleged anticipation by prior art "Egzoset", a thread of posts on the "Fuck Combustion" online forum ("Egzoset" being the username behind some of the posts). The thread involved a suggestion that cannabis could be vaporised using an induction hob, a metal sheet with its Curie point set between 160C and 204C cut into a disc, and a ceramic maze. A user called "MagicFlight" (whom the judge presumed might have some association with a Californian HNB company one of the experts knew of) pointed out that induction heaters in a domestic context had an automatic shutoff in the event no pot was detected on the surface. MagicFlight also reported that an induction system vaporiser had been built as a laboratory prototype but it was "extremely expensive and hard to make – not at all portable".

Judge Hacon observed ([112]):

> "If an item of prior art sufficiently discloses an invention as claimed, it may make no difference that the prior art goes on to point out this or that shortcoming in the invention, especially commercial drawbacks. The invention has still been disclosed."

Judge Hacon's view was that the notional reader Egzoset would conclude that in such a system the maximum temperature of the heater would not be determined by the Curie point of the heating material;

[167] *Philip Morris Products S.A. & Anr v Nicoventures Trading Limited & Anr* [2023] EWHC 2616 (Pat) (25 October 2023) HHJ Hacon

the no-load cut-out of the domestic hob would be the determining factor. An attempt by the skilled team to follow the idea of Egzoset would not have resulted, inevitably, in something that fell within the claims of EP 830. Very likely it would not have done. Therefore the anticipation challenge failed. (Philip Morris' obviousness challenged based on Egzoset did succeed though, as discussed in section 3c below).

c) Obviousness

Conventional obviousness

The leading authority on obviousness remains the Supreme Court's 2019 judgment in *Actavis v ICOS*[168]. After noting the relevant statutory provisions, Lord Hodge observed that in the assessment of obviousness it is common for English courts to adopt the so-called *Windsurfing/Pozzoli* structure:

> "(1) (a) Identify the notional 'person skilled in the art';
> (b) Identify the relevant common general knowledge of that person;
>
> (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
>
> (3) Identify what, if any, differences exist between the matter cited as forming part of the 'state of the art' and the inventive concept of the claim or the claim as construed;
>
> (4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?"

The fourth question which is the statutory question, the preceding questions being a means of disciplining the court's approach to it. The approach (like the EPO's problem-and-solution approach) focuses on the inventive concept put forward in the claims. It should not be applied in a mechanistic way. The identification of the inventive concept does not require literalist approach to the claim wording.

Lord Hodge noted that the following guidance from Kitchin J's judgment in *Generics v Lundbeck*[169] had been endorsed by the House of Lords in *Conor v Angiotech*[170]:

> "The question of obviousness must be considered on the facts of each case. The court must consider the weight to be attached to any particular factor in the light of all the relevant circumstances. These may include such matters as the motive to find a solution to the problem the patent addresses, the number and extent of the possible avenues of research, the effort involved in pursuing them and the expectation of success."

Adding that Kitchin J's list of factors was "illustrative and not exhaustive", he then listed and discussed factors which the Supreme Court considered to be relevant considerations in the *Actavis v ICOS* case. These included: whether at the priority date the invention was "obvious to try"; the routineness of the research and any established practice of following such research through to a particular point; the

[168] *Actavis Group PTC EHF & Ors v ICOS Corporation & Anr* [2019] UKSC 15

[169] *Generics (UK) Ltd v H Lundbeck* [2007] RPC 32

[170] *Conor Medsystems Inc v Angiotech Pharmaceuticals Inc* [2008] UKHL 49

burden and cost of the research programme; the necessity for and the nature of the value judgments which the skilled team would have in the course of a testing programme; the existence of alternative or multiple paths of research; the motive of the skilled person; if the results of research which the inventor actually carried out were unexpected or surprising; one must not use hindsight, which includes knowledge of the invention, in addressing the statutory question of obviousness; and it is necessary to consider whether a feature of a claimed invention is an added benefit in a context in which the claimed innovation is obvious for another purpose.

At the start of 2023, in ***Nokia v OnePlus*** **(16 January 2023)**[171], Meade J reiterated some further general principles. These included that:

(1) Information which falls short of CGK can be brought into an obviousness attack if it is proven that the skilled person faced with the problem to which the patent in suit is addressed would acquire it as a matter of routine (*KCI v Smith & Nephew*[172]) - this is conceptually distinct from CGK and arises as part of the obviousness analysis;

(2) The skilled person is deemed in law to read each prior art citation with interest, but that does not mean they approach any particular citation with the expectation in advance that it will contain something useful, as Laddie J discussed in *Inhale Therapteutic Systems v Quadrant*[173];

(3) For obviousness it is permissible to make a mosaic, but only if it is one which "can be put together by an unimaginative man with no inventive capacity" (*Technograph v Mills & Rockley*[174]). An obvious mosaic can arise from a cross-reference in one of the documents to the other. That is not the only way an obvious mosaic can arise, but the mosaic must be an obvious one to make.

(4) An obvious course is not made less so by the mere fact of other obvious options (*Brugger v Medicaid*[175]);

(5) There are dangers in a step-wise analysis of obviousness (*Technograph v Mills & Rockley*).

Between Nokia and OnePlus, there was little dispute as to what prior art "ZTE" disclosed. The experts agreed that it was a workable scheme that appeared to resolve the problems that it identified.

Oppo's obviousness case from ZTE proceeded through a number of steps, including that the skilled person would realise that ZTE had problems, and appreciating them would lead the skilled person to look for a solution in other Tdocs submitted to the RAN1 working group. The skilled person would find their way to a different Tdoc submitted to RAN1 ("LGE") because they would have read it for the RAN1 proceedings. Having identified LGE, it would then be obvious to the skilled person to combine it with LTE in a way which would fall within claim 1. (ZTE did not contain a cross reference to LGE).

The "problem" with ZTE on which Oppo relied was found by the judge not to be CGK. Oppo's fallback argument was that the problem would be obvious in the context of ZTE, but on the basis of the evidence,

---

[171] *Nokia Technologies OY & Anr v OnePlus Limited Technology (Shenzhen) Co., Ltd & Ors* [2023] EWHC 23 (Pat) (16 January 2023) Meade J

[172] *KCI Licensing Inc & Ors v Smith & Nephew plc* [2010] EWHC 1487 (Pat): [2010] EWCA Civ 1260

[173] *Inhale Therapeutic Systems Inc v Quadrant Healthcare plc* [2002] RPC 21

[174] *Technograph Printed Circuits Ltd v Mills & Rockley (Electronics) Ltd* [1972] RPC 346

[175] *Brugger & Ors v Medic-Aid Ltd* [1996] RPC 635

Meade J concluded that the skilled person would not, without invention, think of the problem on which Oppo relied. If he was wrong about that though, and the skilled person would have identified a problem of the kind relied upon by Oppo, they would not have had any positive reason to think that there was any likelihood that there was a solution to the postulated problem to be found in other RAN1 submissions. That did not make it impossible that there might be one, but the exercise of going looking would be an entirely uncertain one. The looking would entail sifting what were likely to be other novel proposals, which would further reduce the skilled person's expectation of a good result. Concluding his rejection of Oppo's case, Meade J said ([225]):

> "I…accept that once the skilled person had studied all the Tdocs they would appreciate that ZTE and LGE were both "hybrid" proposals. I accept that the skilled person would think that looking at a Tdoc which was of a totally different kind to ZTE was even less likely to bear fruit, but it is a non-sequitur to say that just because they were of a broadly similar kind it would be obvious to connect the one to the other. This segues into the analysis of how the skilled person would react if they did get to the stage of considering the two documents together…but I find that they would not by obvious means progress from ZTE to LGE and come to consider them together."

A few days later, in ***InterDigital v Lenovo*** **(19 January 2023)**[176], the Court of Appeal confirmed Judge Hacon's conclusion that InterDitigal's patent, to a method implemented by a wireless transmit/receive unit comprising a number of steps, was valid (and essential and infringed). Lenovo's grounds of appeal were limited to obviousness, and presented the Court of Appeal with an opportunity to state some broad points of principle that arise relatively infrequently in obviousness judgments:

First, Birss LJ said that **there is no general requirement that a patent needs to state what advantages an invention provides over the prior art**. This is a consequence of an important piece of legal policy: that in order to be valid, a patent claim must satisfy the legal tests of novelty and inventive step over any prior art the party challenging validity cares to bring forward. However, a person accused of infringement has more acute motivation than a patent office, and in some cases deeper pockets, to find relevant prior art. So it is very common for prior art relied upon in court to be something which the patent office examining the application did not find. The practical consequence of the policy is therefore that the features of the claimed invention that take on significance in litigation may differ from those focused upon previously. Birss LJ explained ([30]):

> "…Inventions are often combinations of known features, say A, B and C. From one prior art starting point which disclosed (say) feature A, the advantage of the invention may seem to the inventor to derive from one of the other features of the combination. So a statement in the patent of the advantage provided by the invention may rightly focus on feature B. But then it may turn out at trial that the defendant pleads an item of prior art which discloses feature A and feature B, so suddenly the advantage given by B may not be so relevant after all. Feature C in the claim then takes on more significance. Since feature C is a feature of the claim, that claim only lacks inventive step if the combination of A, B and C is obvious. Therefore the patentee is entitled to rely on it. Adding C to A and B may or may not be obvious, but the rule against added matter (rightly) prevents the patentee from amending the patent after the event to write in new text which explains what the benefit of feature C would be over the combination of A and B."

[176] *InterDigital Technology Corporation & Ors v Lenovo Group Ltd & Ors* [2023] EWCA Civ 34 (19 January 2023) Birss, Warby & Falk LLJ

Birss LJ said that the general rule that advantages need not be stated in the patent is supported by the House of Lords' reasoning in *Conor v Angiotech*[177], in which Lord Hoffmann noted that there was no requirement in the Patents Act or the European Patent Convention for the patent to explain why the invention will work, or provide experimental proof that it does. Birss LJ said that this was subject to the question of plausibility, but that did not arise in the present case.

(We can take from this that the requirement developed in the case law (discussed below) that the promise of the claimed invention be plausible – needed to defeat a challenge of invalidity for lack of technical contribution obviousness, or *Agrevo* obviousness or excessive claim breadth insufficiency – nevertheless does not need to be shown to defeat a challenge of conventional obviousness).

Birss LJ said that there are, however, some important **exceptions to the general rule**. One of these is **"prejudice" cases**. With reference to the Court of Appeal's judgments in *Philips v Asustek*[178] and *Pozzoli v BDMO*[179], Birss LJ explained ([33]):

> "The reasoning works in the following way. The idea is that invention can lie in finding out that something which the skilled person thought should not be done, because they thought the idea would not work or be impractical, in fact is practical. The idea that the known proposal was thought not to work is called a prejudice because even though the skilled person would conceive of the proposal, they would not implement it for that reason. Since the purpose of patent law is to provide incentives to innovation, one would expect there to be a patent incentive for dispelling a prejudice of this sort. However a simplistic analysis of the circumstances might lead one to conclude the invention was obvious, because in order for the skilled person to think something was impractical, they do have to have thought of it, and if they have thought of it, that seems to be a conclusion that it is obvious. So a more sophisticated approach is employed. The approach is to characterise the skilled person's thinking as including both the proposal and its impracticality. Then one can accept that invention can lie in dispelling the prejudice that the idea is impractical, but only if the invention disclosed in the patent does actually dispel the prejudice. In other words the patent document has to explain why the proposal is in fact practical. So in metaphorical terms, what was thought to be a "lion in the path" has turned out to be a "paper tiger"."

Birss LJ added that the prejudice exception only arises if the prejudice relates to something which is a feature of the claim.

The Court of Appeal's judgment in ***Advanced Bionics v Med-El*** **(9 June 2023)**[180] concerned Med-El's patent to a cochlear implant system with attachment magnets having a magnetic dipole parallel to the plain of the implant coil housing, the implant magnet being rotatable in the plane of the implant coil housing and having a planar disc shape or cut away disc shape.

At first instance, Mr Campbell Forsyth described the critical dispute as whether it was obvious at the priority date for the uninventive skilled person, from prior art Zimmerling, to think of using the CGK

---

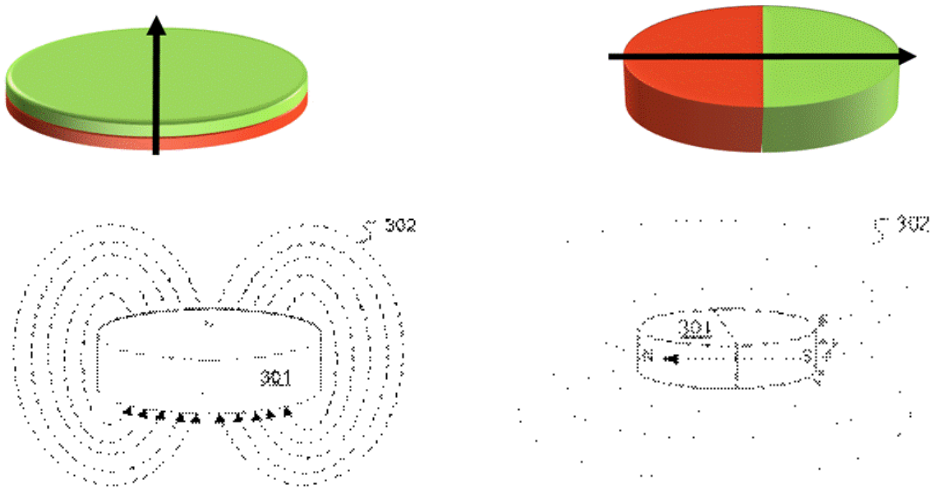
[177] *Conor Medsystems Incorporated v Angiotech Pharmaceuticals Incorporated & Ors* [2008] UKHL 49

[178] *Koninklijke Philips N.V. v Asustek Computer Incorporation & Ors* [2019] EWCA Civ 2230

[179] *Pozzoli SPA v BDMO SA* [2007] EWCA CIv 588

[180] *Advanced Bionics AG & Anr v Med-El Elektromedizinische Geräte GmbH* [2023] EWCA Civ 637 (9 June 2023) Thirlwall, Arnold & Birss LLJ

cochlear implant disk-magnet shape, and then to "flip the dipole" from axial (below left) to "diametic" (below right):



Prior art Zimmerling did not describe the use of a rotatable diametric implant magnet in the plane of the implant coil housing with a magnetic dipole parallel to the plane of the implant coil housing/skin. However, the judge concluded that with the idea of using the prior art disk-magnet shape, flipping the dipole became obvious in order to enable the magnet to rotate.

On the role of an appellate court in an appeal on obviousness, Arnold LJ observed that since obviousness involves a multi-factorial evaluation, the Court of Appeal is not justified in intervening absent an error of law or principle on the part of the judge - an approach consistent with the general approach of the Court of Appeal in appeals against evaluative decisions.

Med-El argued that the judge had erred in principle because he had isolated teaching from Zimmerling at too high a level of abstraction and shorn of important detail. Dismissing this ground, Arnold LJ said the issue was partly one of interpretation of Zimmerling and partly one of what the skilled engineer would take from it. The judge was correct on the former. On the latter, his finding reflected common ground between the experts that Zimmerling's main teaching went to permitting the implant magnet to rotate to align, at least partially, with an external magnetic field (for example of an MRI scanner). It was possible for a document to "teach" the reader something that was conventional.

Arnold LJ also dismissed an argument from Med-El that boiled down to the judge having reached the wrong conclusion in his assessment of obviousness, rather than that he had made any error of principle. Med-El's criticism of the judge identifying differences between Zimmerling and the claimed invention was "baffling" ([90]):

> "It is usually the case that a patent's key contribution lies in the difference between the claims and the prior art. That does not alter the fact that the court's task is to ask whether the step from the prior art to the claims was an obvious one."

The judge had not erred in concluding that the skilled person would proceed with Zimmerling but decide to use a disk-shaped magnet. Zimmerling was clear that a variety of magnet shapes could be utilised. The judge's conclusions were supported by the expert evidence. Nor had he erred in concluding that there was no long felt want for a solution to the problem of MRI compatibility. It was not thought to be a pressing issue. Med-El's patent was confirmed as obvious.

Arnold LJ noted that in September 2022, the EPO's Board of Appeal had maintained the patent in amended form. The amendments made no difference to the obviousness issue. Different evidence had been before the High Court and the Board of Appeal.

Charlotte May KC's first judgment addressing obviousness, in ***Ensygnia v Shell* (26 June 2023)**[181], said that she kept well in mind the following general principles ([236]):

> "i) If a route is obvious to try, that is not undermined by the fact that there may be one or more other obvious routes as well (*Brugger v Medicaid Ltd (No 2)* [1996 RPC] 635, 661).
>
> ii) However, motive in taking any particular step is a key consideration (*Actavis* at [70]).
>
> iii) Hindsight must be avoided (*Technograph Printed Circuits Ltd v Mills & Rockley (Electronics) Ltd* [1972] RPC 346 at 362).
>
> iv) The simplicity of an invention is not an objection to it being inventive (*Haberman v Jackel International Ltd* [1999] RSR 683 at [29]).
>
> v) The reasons given by the experts for their views are paramount (*Schlumberger v EMGS* [2010] EWCA Civ 819 at [86], *SmithKline Beecham plc v Apotex Europe* [2005] FSR 23 at [52]-[53]."

Concluding that Ensignia's claim to an information security method was invalid over prior art Schmidt's "LPT ticket machine embodiment", she said ([241]):

> "In my judgment, it would have been obvious to the skilled reader at the priority date to implement the LPT ticket machine embodiment using barcodes that were the same for different passengers (and hence different transactions) in respect of travel on the same route or line. In this regard, I accept the unchallenged evidence of Dr Berisso that this would be a simple design choice. It follows that it would have been obvious to implement that embodiment using a barcode that is static in the sense that it does not change between transactions. Since this was the only integer in dispute, it follows that claims 1 and 7 are obvious over Schmidt on the Claimant's construction."

Another Court of Appeal judgment addressing obviousness in 2023 was ***Teva v Astellas* (25 July 2023)**[182]. The dispute concerned Astellas' patent to mirabegron for the treatment of overactive bladder, which Meade J had concluded was not obvious in the light of prior art Australian patent application '288.

Arnold LJ explained that the implicit requirement of the claim was efficacy. Teva/Sandoz accepted that the patent made it plausible that mirabegron was effective to treat OAB. That being so, the question of obviousness did not depend on the amount of evidence presented in the patent to justify that conclusion. (A finding apparently consistent with the take-home noted above from the Court of Appeal's judgment in *InterDigital v Lenovo* (19 January 2023)[183]). The question was simply whether prior art '288 read

---

[181] *Ensygnia IP Limited v Shell Oil Products Limited & Ors* [2023] EWHC 1495 (Pat) (26 June 2023) Charlotte May KC

[182] *Teva Pharmaceutical Industries Limited & Anr v Astellas Pharma Inc* [2023] EWCA Civ 880 (25 July 2023) Arnold, Stuart-Smith & Falk LLJ

[183] *InterDigital Technology Corporation & Ors v Lenovo Group Ltd & Ors* [2023] EWCA Civ 34 (19 January 2023) Birss, Warby & Falk LLJ

together with the CGK made it obvious to try mirabegron as a treatment for OAB with a reasonable expectation of success. The judge's answer to that question, based on findings as to the CGK, the disclosure of '288 and upon a careful assessment of the expert evidence (none of which were (or could be) challenged) was "no". There was no basis to interfere with the judge's conclusion. (And the judge had also been entitled to conclude on the evidence that the patent had made a technical contribution).

The only patent infringement/validity judgment from the Intellectual Property Enterprise Court (IPEC) in 2023 was ***EnOcean v Far Eastern Manufacturing*** **(24 October 2023)[184],** given by Nicholas Caddick KC. It concerned EnOcean's EP(UK) patent to an electromagnetic energy converter. General principles on obviousness drawn upon included:

- the skilled person is assumed to be interested in the field of technology covered by the patent in suit, but is not assumed to know or suspect in advance of reading it that any particular piece of prior art has the answer to a problem that he faces or is relevant to it; the more distant a prior art document is from the field of technology covered by the patent, the greater the chance that the skilled person will fail to make the jump to the solution found by the patentee, unless the remote document discusses a design consideration which is also a design consideration for the skilled person's own field (*Inhale v Quadrant[185], E. Mishan & Sons v Hozelock[186]*); and

- the skilled person's motivation to implement the disclosure from the prior art so as to take the steps needed to arrive at the invention is important, but in some cases it can be dangerous to make too much of the issue; applying a prior art disclosure so as to make a product can be obvious even though the skilled person would have no motivation to take that step because the question is whether the step involved is technically obvious or not, and the court should not become side tracked by commercial or regulatory reasons (*Meter-Tech v British Gas[187]*).

Prior art "Harding" was ancient in patent terms – almost 50 years old, and the only use of the generator suggested was in a dosimeter. The skilled person had reason to be interested in alternative sources of power, such as that disclosed in Harding, and the skilled person would not have concluded that Harding was only concerned with a power source for a dosimeter and then put it to one side. To the contrary, it was a piece of prior art that the skilled person would have seized upon. Although the skilled person might think that the size of the device described might not work well with portable applications, this did not mean that the device to power an autonomous-power switch must be inventive over Harding. It simply meant the skilled person would not see a commercial reason for carrying it forward. The inventive concept of claim 1 was obvious over Harding.

HHJ Hacon's judgment in the Patents Court, in ***Safestand v Weston*** **(19 December 2023)[188]** formed the final infringement/validity judgment of the year. It concerned three Safestand patents – two to builders' trestles, and one to a bracket for a builders' trestle. On the fourth *Pozzoli* stage, Judge Hacon noted that quite often (and indeed in this case) arguments are made based on the notion that the skilled

[184] *EnOcean GmbH v Far Eastern Manufacturing Limited & Anr* [2023] EWHC 2615 (IPEC) (24 October 2023) Nicholas Caddick KC

[185] *Inhale Therapeutic Systems Inc v Quadrant Healthcare plc* [2002] RPC 21

[186] *E. Mishan & Sons, Inc v Hozelock* [2020] EWCA Civ 871

[187] *Meter-Tech LLC & Anr v British Gas Trading Limited* [2016] EWHC 2278 (Pat)

[188] *Safestand Limited v Weston Homes plc & Ors* [2023] EWHC 3250 (Pat) (19 December 2023) HHJ Hacon

person is able to tell whether the prior art is a good or hopeless place to start. He warned against this ([127]-[129]):

> "…That could only be meaningful if the destination were known. Smuggled in is the illegitimate assumption that the skilled person does know the destination - the invention in suit. Of course, the skilled person is deemed to know no such thing.
>
> Certainly, the skilled person has a background in a particular technical field. It may, for instance, be the case that having carefully considered the prior art the skilled person finds its subject-matter so removed from their own field that the scope for adapting it to be of use in their own field seems very limited. Or, conceivably, that the prior art is so old and out-dated that there is little possibility of any adaptation at all which the skilled person would contemplate. But this must be bound up with everything that the skilled person would consider in relation to stage four. The fourth stage of *Pozzoli* is a single undivided stage. Having read the prior art, would the skilled person contemplate a variation which falls within a claim in suit? If yes, the claimed invention is obvious. No preliminary sub-stage is needed and cutting to the chase saves time.
>
> In *Eli Lilly & Co v Human Genome Sciences Inc* [2008] EWHC 1903 (Pat), Kitchen J (at [295]) said that having considered cited prior art, the skilled person may conclude that it is simply not a worthwhile starting point and so put it to one side. It seems to me that "starting point" is quite often interpreted in a manner which Kitchen J did not intend. I put it this way in *Autostore Technology AS v Ocado Group plc* [2023] EWHC 716 (Pat):
>
> > "[403] Giving particular attention to the words 'starting point', as AutoStore has done, can lead away from what, in my view, Kitchin J had in mind. As Kitchin J said, the skilled person must be deemed to consider every cited item of prior art with interest, in the sense of giving it diligent consideration. It is not part of the hypothesis in law that the skilled person begins their consideration by assessing the merits of the prior art as a starting point. The skilled person may often be aware of a technical problem in the art, but he or she knows nothing about the invention and therefore cannot know how interesting the prior art may be as a starting point on the road to that invention. It is just a piece of prior art. In reviewing what the skilled person would make of it, I think that it is better to focus solely on what the prior art discloses and what it does not disclose, rather than gauging its interest to the skilled person. Having diligently considered a piece of cited prior art in its entirety at the relevant date, as must be done in every case, the skilled person either contemplates a variation on it which is the invention, or they do not. In the latter case, they put it to one side." "

Judge Hacon added ([130]-[131]):

> "In relation to two items of prior art Weston argued that the difference between the patent and the prior art was a feature that did not form any part of the inventive concept of the patent. On Weston's preferred way of taking stage (3) of *Pozzoli*, i.e. looking at the difference between the prior art and the inventive concept rather than the invention as a whole, that feature was not a difference relevant to assessing inventive step.
>
> If a feature of a claim forms no part of the inventive concept it may often be the case that it represents an obvious alternative embodiment of the inventive concept, so the outcome of the *Pozzoli* analysis is the same either way. No doubt in principle there could be unusual facts

where Weston's approach to stage (3) would matter, but the facts of this case are not an example."

None of Weston's obviousness challenges (four prior art challenges in total against two patents) succeeded. Basically, Weston's evidence did not support the arguments made. The case provides an interesting example of a low-tech patent in an age-old industry being found valid. (Three re-registered designs asserted by Safestand were, however, found invalid).

In the meantime, another part of the mirabegron dispute had reached trial, and in ***Astellas v Teva*** **(17 October 2023)**[189] Mellor J concluded that Astellas' EP(UK) '410, to a modified release formulation of mirabegron was valid. (However, infringement by Sandoz had not been established; and the question of infringement by Teva had been put off to a later date). Mellor J's careful, thorough approach to the assessment of the conventional obviousness challenge in the case is a part of the reason the judgment clocked in with the longest word count on infringement/validity in 2023.

On the principles governing the assessment of obviousness, Mellor J noted the Supreme Court's judgment in *Actavis v ICOS*[190]. In particular, that Lord Hodge noted that the question of obviousness must be considered on the facts of each case as per Kitchin J's reasoning in *Generics v Lundbeck*[191]; and Lord Hodge went on to identify a non-exhaustive list of factors which may be relevant in the assessment, of which the defendants seemed in particular to rely on "obvious to try".

On this, Mellor J noted *MedImmune v Novartis*[192], in which Kitchin LJ said that when considering whether it was obvious to try an improved product or process, there might be no certainty of success but the skilled person/team might nevertheless assess the prospects of success as sufficient to warrant a trial. In some circumstances, this might be enough to render an invention obvious. On the other hand, in research-heavy areas of technology workers might pursue possible avenues with little idea if any of them will work but in the hope that they will find new and useful products – but denial of patent protection in all cases would act as a significant deterrent to research. For these reasons, the courts often reveal enquiry into whether it was obvious to pursue a particular approach with a reasonable or fair degree of success, as opposed to hope, to succeed.

In *Ominipharm v Merial*[193], Floyd J noted the one statutory question (was the invention obvious?), that "obvious to try" was not an independent ground for invalidity but one of a number of factors to be considered in the overall assessment of obviousness, and that where an invention is claimed plausibly in terms that it would achieve a technical effect, it was correct to ask whether it was obvious that the invention would achieve that effect, and wrong to ask whether the invention might achieve that effect.

Further, the Court of Appeal in *Teva v Leo*[194] emphasised the importance of assessing obviousness by reference to what real-life skilled people would think and do. There can be multiple obvious avenues or routes and an obvious route is not rendered less obvious for this reason (*Brugger v Medic-Aid*[195]). If a skilled team engages in familiar and routine testing and it is obvious to undertake that testing as part of

---

[189] *Astellas Pharma Industries Limited v Teva Pharmaceutical Industries Limited & Ors* [2023] EWHC 2571 (Pat) (17 October 2023) Mellor J

[190] *Actavis Group PTC EHF & Ors v ICOS Corporation & Anr* [2019] UKSC 15.

[191] *Generics (UK) Limited & Ors v H. Lundbeck A/S* [2007] EWHC 1040 (Pat)

[192] *MedImmune Limited v Novartis Pharmaceuticals UK Limited* [2012] EWCA Civ 1234

[193] *Ominipharm Limited v Merial* [2011] EWHC 3393 (Pat)

[194] *Teva UK Ltd & Anr v Leo Pharma A/A* [2015] EWCA Civ 779

[195] *Brugger & Ors v Medic-Aid Ltd* [1996] RPC 635

routine development, that is sufficient for obviousness (*Actavis v ICOS*[196]). That which is not inventive is not made so by the inclusion of arbitrary parameters (*Actavis v Novartis*[197], *Optis v Apple*[198], *Philip Morris v Nicoventures*[199]). A patentee cannot rely upon a perceived problem in taking a particular course of action in support of inventive step, unless the patent itself overcomes that problem (*Philips v Asustek*[200], *Pozzoli v BDMO*[201]).

Teva and Sandoz challenged the validity of Astellas' EP(UK) '410 for obviousness over prior art Fix. Published in the ACS Symposium Series of the American Chemical Society, Washington DC, 2000, as chapter 2 in the text "Controlled Drug Delivery", "Fix" was titled "Controlled-Release Oral Delivery Systems".

There was an issue as to **what Fix taught the skilled team** at the priority date, which Mellor J addressed by meticulously crawling through the chapter and discussing the parties' rival contentions. The debate was over whether Fix taught that the way to reduce food effects was through effective drug release in the colon, or whether the reduction in food effect was attributable to the effects of the Oral Controlled Absorption System (OCAS) before the drug reached the colon. On the evidence, Mellor J held that Fix disclosed that a significant amount of drug release occurred from the OCAS formulation in the small intestine, before the preparation reached the colon. Contrary to the evidence of **Astellas' formulation expert, Prof Shakesheff**, Fix was not all about drug release in the colon – this was one aspect of its teaching. Mellor J agreed with **the defendants' formulation expert, Prof Craig**, that Fix taught two key things: that OCAS was a controlled absorption gel matrix system exhibiting pH-independent, pseudo-zero order drug release with minimal food effects; and that the rapid hydration and formation of a rigid gel led to effective drug release in the colon. It was not suggested in Fix that these two aspects of its teaching were necessarily related, and the skilled formulator, reading Fix with interest, would not so conclude. An important part of Fix was drug release in the small intestine. Mellor J's view was that Astellas and Professor Shakesheff "did not treat the disclosure of Fix fairly", that their focus on the teaching of Fix being directed towards drug release and absorption in the colon was an attempt to increase unfairly the distance between it and the patent.

Mellor J then addressed **what the skilled team would do, having considered Fix**. He rejected Prof Shakesheff's evidence that the skilled team would have no interest in Fix and would set it aside, because that evidence was founded on Prof Shakesheff's erroneous understanding of its disclosure.

The context in which the skilled team would read Fix was that the skilled team would, as a matter of routine, look for and identify the food effect with the conventional immediate release formulation of mirabegron. The skilled team would be motivated to address the food effect. Professor Craig's evidence, in essence, was that the skilled team would not give up on the prior art so easily. Where the evidence ended up was that the skilled team would pursue finding a formulation whereby the food effect was reduced so that it was no longer clinically significant to the patent – this was well worth investigating but would not be pursued "regardless".

The skilled team would assess key drug characteristics before beginning formulation development. This engaged questions about solubility and permeability, and raised a question of whether the skilled

---

196 *Actavis Group PTC EHF & Ors v ICOS Corporation & Anr* [2019] UKSC 15

197 *Actavis UK Limited v Novartis AG* [2010] EWCA Civ 82

198 *Optis Cellular Technology LLC & Ors v Apple Retail UK Ltd & Ors* [2020] EWHC 2746 (Pat)

199 *Philip Morris Products, SA & Anr v Rai Strategic Holdings Inc & Anr* [2021] EWHC 537 (Pat)

200 *Koninklijke Philips N.V. v Asustek Computer Incorporation & Ors* [2019] EWCA Civ 2230

201 *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588

formulator, having considered Fix, would be agnostic about colonic absorption: would the skilled team concentrate just on the teaching in Fix regarding food effects and effectively dispense with the teaching about extending effective drug release into the colon?

Mellor J then addressed the nature of the project which the skilled team would be prepared to undertake. The experts agreed that the process of reformulation was empirical in nature. The project overall would be familiar and routine work, but Prof Craig agreed in cross examination that it would be "a substantial research project". Prof Crag's evidence was that the skilled formulator would undertake a study applying Fix to mirabegron in the expectation that it would work. Although they would not understand why the nicardipine food effect was being achieved, they would look at the options and make professional judgments, and they would not be put off by the fact that mirabegron was a different drug with different physical properties.

Next, Mellor J addressed whether the project could lead to a formulation which fell within claim 1. Prof Craig's evidence was that the skilled person would start with a gel-forming polymer (PEO) of a particular weight and would try approximately 20 variants with the aim of generating a range of dissolution profiles, using figure 6 of Fix as a starting point. They would not know without testing what the dissolution profile of the new formulations would be. (Prof Craig said an undergraduate could do this part-time over a few weeks). Three routes emerged by which Prof Craig's skilled team **could** get to a formulation with a dissolution profile within the limits of the claim. Several formulations would then be taken forward to *in vivo* testing, to establish *in vivo* pharmacokinetic (PK) parameters. Prof Craig did not explain any criteria by which the formulations to be taken forward would be chosen. It would be a matter of chance whether one of the *in vitro* dissolution profiles taken forward would fall within the claim.

Mellor J's final step was then to apply the *Pozzoli* analysis. Having identified already the skilled team and their CGK, he said it was not sensible in this case to try to identify the inventive concept of claim 1, it was "better and safer" to proceed on the wording of the claim. There were two key differences identified between Fix and claim 1. First, the fact that Fix concerned acetaminophen and nicardipine hydrochloride, and not mirabegron. Mellor J agreed with Prof Craig that this would not be considered an obstacle. Second, the dissolution limits (which themselves were dependent on the combinations of ingredients).

The fourth *Pozzoli* question was: "Viewed without any knowledge of the alleged invention, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require a degree of invention?".

Mellor J said that taking Prof Craig's evidence at its highest, none of the three routes which had emerged by which the skilled team **could** get to a formulation with a dissolution profile within the limits of the claim would in fact be obvious to the skilled team. One was driven purely by hindsight knowledge of the target. One would require considerable imagination involving rejecting key pieces of teaching in Fix. And one would "cross the line into a substantial research project" requiring a positive departure from the teaching in Fix when no reason had been identified as to why they would do so.

Therefore, on the construction of claim 1 that had been reached (which incorporated *in vivo* effects) the patent was not obvious over Fix. But Mellor J then said ([422]):

> "However, on Astellas' construction, claim 1 would be obvious, because Professor Craig's Skilled Team would produce a formulation which fell within claim 1, even though they had not yet tested it *in vivo* as to whether it ameliorated food effects."

The construction of claim 1 that Astellas contended for did not incorporate *in vivo* pharmacokinetic parameters. The *in vitro* dissolution requirements did not differ though, so this aside from Mellor J is somewhat puzzling. We will have to wait and see if it becomes important in any appeal.

One of the more entertaining subjects of dispute in 2023 emerged in HHJ Hacon's judgment in ***Philip Morris v Nicoventures*** **(25 October 2023)**[202], about Nicoventure's/British American Tobacco's e-cigarette patent in which the maximum induction heater temperature was "exclusively determined" by a Curie point of the heating material. (The "Curie point" is the temperature above which a material with permanent magnetic properties becomes paramagnetic, and so no longer continues to heat on the application of an oscillating magnetic field. The Curie point varies between different materials. This was agreed to be within the CGK of the skilled team).

Philip Morris alleged that the patent was invalid (anticipated and obvious) over the prior art "Egzoset" thread of posts on an online forum called "Fuck Combustion". The thread involved a suggestion that cannabis could be vaporised using an induction hob, a metal sheet with its Curie point set between 160°C and 204°C cut into a disc, and a ceramic maze. A user called "MagicFlight" pointed out that induction heaters had an automatic shutoff in the event that no pot was detected on the surface, and reported that an induction system vaporiser had been built as a lab prototype but it was "extremely expensive and hard to make – not at all portable".

As noted in section 3b above, Egzoset was found not to anticipate claim 1. In the context of inventive step, HHJ Hacon noted that the extent to which links in a document on the internet, and possibly further links, can expand the disclosure of a single item of prior art will always be a question of fact and degree and may require evidence. (Additionally the CGK of the skilled person will include material in the relevant field which they know to exist and which would be consulted as a matter of course if it is regarded as sufficiently reliable to help in the understanding of the prior art).

On the evidence before the court, Judge Hacon concluded that the skilled team (which would have been interested in developing "heat not burn" (HNB) e-cigarette products) having read Egzoset would not have taken forward the idea of creating a vaping device based on a home induction hob. However, a similar level of temperature control was required for both cannabis and tobacco vaping, so a team interested in the latter would take inspiration from a credible disclosure regarding the former. They would understand from Egzoset the idea of using a ferromagnetic heater selected according to its Curie point so that the Curie point dictated / exclusively determined the temperature of the heater. So the idea disclosed was that by selecting a particular alloy as the heater material, one could select the maximum temperature which the heater could reach by induction heating – its Curie point – and by extension choose that to be a temperature suitable for an HNB product without the need for any other temperature control. Having been told by Egzoset that the NeoMax website (linked in a post in the Egzoset thread) could provide suitable alloys, the skilled person would as a matter of course look up the NeoMax product guide, which listed materials and their Curie points.

Neither the experts nor counsel in argument suggested that there was anything new or inventive about any integers of claim 13 except for the characterising portion (i.e. "the varying magnetic field in use is exclusively determined by a Curie point temperature of the heating material"). Nor was there anything in the way of an obstacle to the Egzoset idea (Curie point, alloys) working in an HNB product. Therefore, starting with a prior art HNB tobacco product, a product within claim 13 would have been obvious.

---

[202] *Philip Morris Products S.A. & Anr v Nicoventures Trading Limited & Anr* [2023] EWHC 2616 (Pat) (25 October 2023) HHJ Hacon

The need for evidence in support of a challenge of obviousness

For litigants seeking to challenge the validity of a patent for obviousness, the importance of expert evidence explaining what the skilled person (in light of their CGK) would understand from the prior art, what they would do having read it, and how those steps would lead the skilled person to a product/process within the scope of the claimed invention, cannot be over-stated. Not infrequently, the evidence just is not provided, which rather calls into doubt the wisdom of bringing the challenge in the first place.

In ***AIM v Supponor*** **(30 January 2023)**[203], AIM's patent concerned a method of digitally overlaying an image with another image while detecting and not obscuring partial occlusions. For example, the digital overlay enabled the advertising "seen" by the television viewer as appearing on boards at the live event (e.g. to cars) to differ from the advertising actually displayed at the live event (e.g. to beer). This much was CGK though. AIM's invention concerned improvement in such technology to minimise disturbance in the overlay caused by "occluding" objects at the live event, such as a player or ball obstructing part of a board at the event. Instead of detecting infra-red light from the board (as was known), the light from the occluding object was detected. The system determined that it was an occluding object by studying its "image property". A frequency-based filter cut out light from the display board (which was arranged to be of known frequency) but allowed through the more varied radiation reflected by the occluding object. AIM's case, therefore, was that the invention of the patent related to light occluding objects detected against a board which (because of filtering) was dark in the relevant frequency range.

Supponor's invalidity challenge was of obviousness over prior art international patent application "Nevatie". The main focus of Nevatie was about how to replace content in images, with a specific focus on television broadcast images such as sporting events. This was not directly relevant to the patent. Supponor's attack focused on the disclosure of Nevatie Figure 3.

Meade J agreed with AIM that the emphasis of Nevatie was on using radiation from the billboard, and that the skilled person's reaction to the suggestion to use more than one type or wavelength of radiation would be that the suggestion still concerned radiation from the billboard.

It was, accordingly, for Supponor to put forward reasons for the person skilled in the art to think of the use of two infra-red cameras with a light and dark channel, in order to establish obviousness. The evidence that Supponor put forward failed to engage with AIM's point that Nevatie taught at an early stage that if two detectors were used they should (or at the very least, may) both detect radiation from the billboard. Supponor's written expert evidence also did not address an argument run by Supponor at trial that sought to draw an analogy with a (different) known visible light chromakeying problem and solution. Meade J said ([194]):

> "Persuasive reasons for the skilled person to think or act in a particular way are always a key element of an expert's report supporting an obviousness attack. I accept Counsel for AIM's submission that the central reason put forward by Supponor at trial was not supported by Prof Steed's written evidence and shows every sign of having been put together in the immediate run up to trial. I also find that it is, objectively speaking, only the product of hindsight and would not have occurred to the skilled person without knowledge of the invention of the Patent."

In defence to the obviousness challenge based on Nevatie, AIM had argued long felt want as a secondary indication of non-obviousness. In view of Meade J's conclusion on the primary evidence, the

[203] *AIM Sport Vision AG v Supponor Limited & Anr* [2023] EWHC 164 (Pat) (30 January 2023) Meade J

point was not needed, but the judge said that in any case he found it unpersuasive. There was no evidence that the concept in the 2007 Nevatie patent application was at all well known. Further, the point was not flagged in advance to give Supponor the ability to address it.

Mellor J's judgment in ***InterDigital v Lenovo*** **(31 January 2023)**[204] followed technical trial C in the case. It concerned a claimed method for use in wireless communication. Mellor J concluded that InterDigital's patent was a rare example of one in which the invention lay in identifying the problem. Additionally, when rejecting Lenovo's invalidity challenges, Mellor J considered post-priority date material in his obviousness analysis, both in the context of the secondary evidence and on the primary evidence as Lenovo's challenge raised the question "if it was obvious, why was it not done before".

The Court of Appeal's judgment in ***Optis v Apple*** **(25 April 2023)**[205] on points of evidence is quite notable, not least for the three separately reasoned judgments. Apple's obviousness case was that the person skilled in the art, from prior art "Ericsson", would turn to the standard reference text in the field ("NRC") and then disapply, or read with a significant caveat on, the teaching in NRC about not using a type of random number generator called a "linear congruential generator" (LCG). (The third edition of NRC was referred to as "NRC3").

The judge, Meade J, had concluded that Optis' expert witness, Ms Dwyer, was "materially outside her area of expertise" and as a result her evidence was of "extremely limited help on the key issues in this case"[206]. Meade J preferred the evidence of Apple's expert, Professor Lozano, and Apple's case of obviousness over prior art Ericsson succeeded.

As noted in section 2c above, Arnold LJ saw an error of principle in Meade J's conclusion on the teaching in NRC3. This, as with any other technical document, was a question for the court once educated as to the identity and attributes of the skilled person ([134]-[136]):

> "The judge did not identify anything in the attributes or common general knowledge of the skilled person which would cause them to read NRC3 in any special way. On the contrary, he found that LCGs were not common general knowledge, and so the skilled person reading NRC3 would be learning about them for the first time. The relevant passages are expressed in ordinary English, and are perfectly clear. The primary message is that one should never use an LCG on its own. The secondary message is that an LCG may nevertheless be used as part of a combined generator if sufficient care is taken. NRC3 does not say that these warnings only apply to demanding applications such as cryptography or that LCGs are useful for less demanding applications. It does say that one should avoid generators that are overengineered, and therefore wasteful of resources, such as generators designed for serious cryptographic use; but that is a distinct recommendation from the recommendation not to use an LCG…
>
> The judge stated in [252] that he accepted Prof Lozano's evidence that "what is under consideration in NRC[3] is demanding situations where very long sequences of very random numbers are needed". No doubt Prof Lozano was both sincere and persuasive in his evidence,

[204] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 172 (Pat) (31 January 2023) Mellor J

[205] *Optis Cellular Technology LLC & Ors v Apple Retail U.K. Limited & Ors* [2023] EWCA Civ 438 (25 April 2023) Arnold, Nugee & Birss LLJ

[206] *Optis Cellular Technology LLC & Ors v Apple Retail UK Limited & Ors* [2021] EWHC 3121 (Pat)

but it does not follow that his interpretation of NRC3 was correct, or even admissible. There is nothing in the text of NRC3 to support that interpretation.

Once NRC3 has been correctly interpreted, the next question is what the skilled person would think and do in the light of NRC3. The fact that NRC3 warns against using LCGs is not determinative of that question. In principle, it could still be the case that an obvious course for the skilled person would be to ignore those warnings and to decide that LCGs were nevertheless worth pursuing. But the skilled person would have to have reasons for ignoring the warnings based on their common general knowledge."

Arnold LJ said that it was clear from NRC3 that LCGs were very well-known, had a long history, were fast and were easy to understand and implement, but NRC3 was equally clear that they nevertheless should never be used because they produced poor results.

"Thus what matters is whether the skilled person would think that LCGs were of good enough randomness for undemanding applications despite that warning. In so far as the judge's finding to that effect was expressed to be based upon NRC3, NRC3 simply does not support it for the reasons explained above."

Birss LJ disagreed. He did not think that the judge had fallen into the trap of eliding the construction of the document with what the skilled person would think in light of it. What reason was there, absent hindsight and on the premise that LCGs were not part of the CGK before reading NRC3, for the opinion that the skilled person would think LCGs could be used in undemanding applications whereas NRC3's prohibition was about more demanding cases? Birss LJ said ([181]-[183]):

"… There was a generalised point put in cross-examination that the Professor's evidence was tainted with hindsight but he did not accept that. As a result, on appeal, there is some difficulty. If one could be satisfied that the only possible reason for this view was hindsight then an appeal court would be right and entitled to overturn the finding that that evidence should be accepted. However if there is another reason, untainted with hindsight, then the position is different.

The professor's evidence might have been based on hindsight but in my judgment that is not necessarily so. Imagine a modern recipe book by a famous celebrity chef. It contains a recipe for spaghetti carbonara and states that the only ingredients should be spaghetti, bacon, egg and parmesan. The recipe book might observe that in the 1970s many British home cooks made carbonara sauce for spaghetti by mixing bacon and supermarket cream cheese, but this was very poor, and today it should never be used in any circumstances.

An expert might well give evidence that the thinking of a skilled person reading the book, for whom the cream cheese method was not part of their common general knowledge, was that although the text is clear that cream cheese should not be used, they would think that the author was really focussed on high end restaurant dishes and cooking to impress. Therefore, they might think, for someone looking to make themselves a simple meal at the end of a busy day using cream cheese would suffice. I am not trying to make a perfect analogy. My point is simply that it does not require hindsight to explain that a reader of a book might, in context, take a softer view of what is an unequivocal prohibition in the text."

Which left the balance of the Court of Appeal's judgment with Nugee LJ. He said that the critical finding of the judge on the point was that the skilled person's attitude to LCGs would be that they were well

known, widely used for a long time, easy to implement and suitable for low power devices, but not of good enough randomness for demanding applications. This was in the context of a finding that LCGs were not CGK. It meant that whatever the skilled person would have discovered about LCGs would have come from reading about them in their literature search. The question was whether the skilled person would have been able to derive from NRC3 the knowledge or belief that as long as your application was not demanding, LCGs would do a good enough job.

Nugee LJ agreed with Arnold LJ that there was nothing approaching this in NRC3. The judge's conclusion that LCGs were very well known, had a long history, and were fast and easy to understand and implement, was supported by the evidence and was open to him. (That Optis' expert Ms Dwyer was technically out of her depth did not prevent her evidence on the point being evidence that the judge could accept). But Nugee LJ continued ([157])

> "…fast and easy to understand and implement are not the same as suitable for undemanding applications, and I do not think we were shown anything to suggest that Ms Dwyer gave evidence that they were. The only evidence to that effect was from Professor Lozano whose evidence was (or was thought by the Judge to be) that NRC3 was dealing with very demanding applications. The question is whether there was (or, as Birss LJ puts it, there could have been) any basis for this view."

The point was not dealt with in the expert reports at all because the third edition of NRC was only discovered shortly before trial, so the only potential evidence in support of this conclusion was that given by Professor Lozano in cross-examination. After considering it, Nugee LJ concluded ([159]):

> "I quite understand Birss LJ's "carbonara" point that it is possible for a text to say something in apparently absolute terms ("never use LCGs" or "never use LCGs except as part of a combined generator"), and yet for the skilled person reading the text to understand that "never" did not actually mean "never" but only "hardly ever", and that the text was really dealing with a more high-end situation than he himself was faced with. But I do not think that Professor Lozano ever quite said that the skilled person would read the strictures in NRC3 about not using LCGs as not really intended for less demanding situations."

Therefore the majority agreed that NRC3 taught away from using an LCG, and so Apple's obviousness challenge failed and the judge's obviousness finding was overturned.

Non-IP specialist judges becoming patent judges

Heraeus Noblelight v First Light Lamps **(31 July 2023)**[207] was one of the patent validity/infringement judgments delivered by a competition specialist in 2023 - by Mr Justice Zacaroli.

Heraeus' EP(UK) was to a method for securing a tungsten "pin" electrode into the end of a quartz glass tube – of use in the manufacture of quartz glass plasma lamps. Addressing First Light's three obviousness challenges over prior art US patent Mathijssen, Zacaroli J noted the *Pozzoli* approach. Unusually though, he did not compare the disclosures of the prior art with the claimed invention, as is usually understood to be required. For patent specialists, I am afraid the judgment does not make easy reading, but we summarise here as best we can what was decided.

[207] *Heraeus Noblelight Limited v First Light Lamps Limited* [2023] EWHC 1950 (Pat) (31 July 2023) Zacaroli J

First Light's first obviousness challenge appears to have been that following Mathijssen's primary teaching together with the CGK would lead the skilled person to the method described in paragraph [0018] of the specification of the patent. The challenge was not pleaded by First Light and the judge agreed with Heraeus that it was one that should have been squarely raised prior to trial. Nor was there anything in First Light's expert's report which supported the contention that the skilled person would, in light of the CGK, have understood [0018] in the way necessary for the defendant's argument on the point to work. Zacaroli dismissed the challenge with brief reasoning addressing the description in [0018] and aspects of claim 1. However, it is not apparent from the judgment whether the example described in [0018] corresponded to any claim in issue.

First Light's second obviousness challenge was that there was "no technical benefit" to the bead size integer of the patent. The judge described First Light's argument as that the only difference between the teaching of Mathijssen and "the four key events happening in the Patent" was the selection of bead size from the CGK, and this selection was arbitrary and could not be justified by some useful technical property. Rejecting it, Zacaroli J said that the technical purpose of the lower limit was to ensure that the bead sealed both to the inside and to the end of the tube. Therefore the lower limit did serve a technical purpose. It was also a significant distinction from Mathijssen. (This challenge would seem to have been one of lack of technical contribution over the prior art, which involves different key principles to those at play in a conventional obviousness challenge). Further, the "requirement taught in the patent" for there to be fusion of the sealing glass both on the inside and the end of the tube was significantly different from the possibility, in Mathijssen, that in those variations of the method where an identifiable end of the tube remained, there was some incidental wetting of that end; it was not an obvious step in light of Mathijssen.

First Light's third challenge was that it would be obvious in light of Mathijssen for the skilled person to use a bigger bead. First Light's submissions involved the skilled person recognising the same four events in Mathijssen and the patent, thinking the patent would be insufficient because it did not solve a number of problems, and so thinking it was obvious use a bigger bead. Zacaroli J did not accept the premise that the skilled person would think it obvious to discard the geometry of Mathijssen altogether by using a larger bead, but also did not call out the circular nature of the challenge in conflating aspects of the teaching of the patent with what the skilled person would do in view of the prior art.

The third patent validity/infringement judgment of the year from a non-IP specialist was ***Abbott v Dexcom*** **(18 October 2023)**[208]. This judgment is unique. As noted above, Abbott's patent was to an apparatus for inserting a medical device into the skin of a subject. In reasoning conflating issues of construction and infringement, Richards J concluded that the patent was not infringed by Dexcom's D7 Applicator device.

Richards J then recorded that Dexcom did not rely on their prior art challenges if the G7 Applicator did not infringe. So the judge addressed the challenges on the assumption that he was wrong on the construction he had reached of "biased retention feature" (the outcome of which meant the integer was not met by the D7 Applicator and so there was no infringement). This approach meant that when Zacaroli concluded that (if wrong on construction) claim 1 would be anticipated and claim 7 would be obvious, he made no finding of invalidity in respect of the patent. Dexcom's added matter and insufficiency challenges failed, therefore the patent was valid.

[208] *Abbott Diabetes Care Incorporated & Ors v Dexcom Incorporated & Ors* [2023] EWHC 2591 (Ch) (18 October 2023) Richards J

The outcome in *Abbott v Dexcom* was that, because Dexcom succeeded in resisting infringement, Abbott's patent remains to be relied upon another day against competitors and the substantive invalidity questions – which were argued at trial – were put off to another case. This being so, we will not expand the wording of this section further by describing the approach taken by the judge in *Abbott v Dexom* to the principles governing the assessment of obviousness. Suffice to say, the approach is less reflective of the capture of key authorities by experienced patent specialists, and more reflective of a dive into *Terrell*'s chapter on obviousness.

The *Heraeus* and *Sycurio* judgments display departures from long-established principles. Patent law is not for the faint-hearted, even ignoring the understanding of relevant technology that needs to be developed by the lawyers and judge involved in the case in order for the law to be applied to the facts. It is not clear why the trials of these patent cases were heard by competition or tax specialists. There are two full time judges in the Patents Court and a number of deputies with decades of patent experience behind them. It is also clear that competition specialists can bring real value to the determination of some aspects of patent disputes. For example, the perspective brought to the assessment of the FRAND dispute in *Optis v Apple* (10 May 2023) [209] by Marcus Smith J forms a valuable component of the development of the law in this area, as does that of Zacaroli J in the *Dr Reddy's v Warner-Lambert*[210] (pregabalin) quantum proceedings. Indeed, respectable first judgments on patent validity/infringement by competition specialists may be found in *Insulet v Roche*[211] and *Sycurio v PCI-PAL* (25 September 2023)[212].

There is a reason though why the jurisdiction of England and Wales is renowned for the quality of its patent judgments. It lies in the common law tradition of the jurisdiction, which includes both the rigorous examination of evidence and the career-long experience in patent law of specialist judges (including deputies) determining patent disputes. When non-specialists are drafted into the meat of a patent validity/infringement dispute, there is an enormous body of legal principle to be absorbed from the case law in order for the dispute before the court to be determined. The lower technological complexity that tends to be found in cases heard by non-patent specialists also tends to expand the pool of lawyers involved in running the litigation. This combination, unfortunately, risks analysis emerging in judgments determining matters of validity/infringement which falls short of that which underpins the rationale for stakeholders to litigate in the UK. It is a recent trend and it can be re-steered. We would encourage this.

The state of the art

Before wrapping up on obviousness this year, one judgment gave us an opportunity to look again at what is meant by the state of the art in s.2(2) of the Patents Act, which states:

> "The **state of the art** in the case of an invention shall be taken to comprise **all matter** (whether a product, a process, information about either, or anything else) **which has at any time before the priority date of that invention been made available to the public** (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way."

[209] *Optis Cellular Technology LLC & Ors v Apple Retail UK Limited & Ors* [2023] EWHC 1095 (Ch) (10 May 2023) Marcus Smith J

[210] *Dr Reddy's Laboratories (UK) Limited & Ors v Warner-Lambert LLC* [2022] EWHC 189 (Pat); *Dr Reddy's Laboratories (UK) Limited & Ors v Warner-Lambert Company LLC* [2022] EWHC 1856 (Ch)

[211] *Insulet Corporation v Roche Diabetes Care Limited* [2021] EWHC 1933 (Pat)

[212] *Sycurio Limited v PCI-PAL Plc & Anr* [2023] EWHC 2361 (Pat) (25 September 2023) Bacon J

What the "state of the art" means matters because inventive step/obviousness is assessed by reference to it, as provided for in s.3 of the Patents Act, which states:

> "An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the **state of the art** by virtue only of section 2(2) above (and disregarding section 2(3) above)."

If the state of the art relied upon is a published written document, like a patent or an article in a journal, there is usually no dispute that it has been "made available to the public". Judgments addressing such a question tend to emerge when facts become interesting, and judges resolving them have a tendency to steer off into hypothetical scenarios, which make for great anecdotes in a patent review but can lead to tension in the expressions of principle.

So was the case in 2023. ***AutoStore v Ocado* (30 March 2023)**[213] concerned two AutoStore patents, to a storage system and to robots for picking up storage bins from a storage system. Ocado ran two distinct challenges: invalidity over prior art; and invalidity over disclosures made by AutoStore in Russia before the priority date of the patents.

Ocado's prior art challenge relied on the skilled person reading German patent application "ten Hompel", and then thinking of selections and changes to proceed with which would compromise ten Hompel's promise of flexibility and accessibility. It also involved a combination of changes that might individually be obvious but which were not connected to each other, so to say that it would be obvious to the skilled person to progress from one selection to the next would be to fall in to the trap warned about in *Technograph v Mills & Rockley*[214]. The challenge failed.

Ocado had more success with its prior disclosure case. The priority date of AutoStore's patents was 10 December 2012. In June 2010, representatives of an entity (EVS) instructed by the Bank of Russia visited AutoStore's headquarters in Norway to inspect AutoStore's technology. AutoStore followed up with an email explaining that the Bank's wish to continue use of its existing bins would mean that AutoStore would need to develop a new system, and sharing proposed designs. Following a further meeting between the parties, a distribution agreement was entered into.

AutoStore accepted that the disclosures that Ocado relied upon had been made. AutoStore also accepted that if the disclosures were made in law without an obligation of confidence on the part of the recipients of the relevant information, then AutoStore's patents lacked novelty/inventive step. The issue was whether, in law, there had been an obligation of confidence.

Judge Hacon captured a number of points of principle. They included that "matter" in this context means information; making matter available to the public within the meaning of s.2(2) therefore requires the communication of information (*Merrell Dow v Norton*[215]). Information is made available to the public if it is communicated to any member of the public who was free in law and equity to use it as he pleased (*Humpherson v Syer*[216]), and for this purpose it need only be made available to one member of the public who is free in law or equity to use it (*R v Patents Appeal Tribunal*[217], *Green Lane v PMS*[218]).

---

[213] *Autostore Technology AS v Ocado Group plc & Ors* [2023] EWHC 716 (Pat) (30 March 2023) HHJ Hacon

[214] *Technograph Printed Circuits Limited v Mills & Rockley (Electreonics) Ltd* [1972] RPC 346

[215] *Merrell Dow Pharmaceuticals Inc. v H.N. Norton & Co Ltd* [1996] RPC 76

[216] *Humpherson v Syer* (1887) 4 R.P.C. 407 (CA)

[217] *R v Patents Appeal Tribunal* [1968] 1 WLR 1727

[218] *Green Lane Product Limited v PMS International Group Limited* [2008] EWCA Civ 358

Where a patentable invention is imparted in confidence, it does not amount to publication because the recipient of the information is not free in law and equity to use it as he pleased (*Yeda v Rhone-Poulenc Rorer*[219]). The question of whether information has been made available to the public within the meaning of s.2(2) is to be assessed at the alleged moment of its being made available, and even if public access to it is subsequently withdrawn (*Generics v Daiichi*[220]). The burden of proving that information has been made available to the public rests on the party asserting it (*Qualcomm v Nokia*[221]), the standard being the usual balance of probabilities (*Kavanagh Balloons v Cameron Balloons*[222]).

Judge Hacon added ([236]):

> "…the test is whether the information was made available, not whether it was accessed by anyone, see *Lux Traffic Controls Ltd v Pike Signals Ltd* [1993] RPC 107, at 133. It is not even relevant whether any person would have realised that the information was available. In *Unilin Beheer BV v Berry Floor NV* [2007] EWCA Civ 364, at [26] Jacob LJ gave his "favourite pretend example" of an invention lacking in novelty solely because of information contained in a document:
>
> > "… written in Sanskrit wrongly placed in the children's section of Alice Springs public library …""

Pretend examples are the sort of thing that can send reasoning processes off at a tangent. Libraries are catalogued, so it is to be expected that something placed in a library in the usual way is considered to have been made available to the public. The issue in *Lux v Pike* was not, in fact, whether the use concerned (of a prototype traffic light) was in public, but what information was made available to the public by that use – did it enable the invention? The judgment is therefore not good authority for the principle ("not whether it was accessed") ascribed to it. As the judge noted, in *Merrell Dow v Norton* the House of Lords stated that "making available to the public" within the meaning of s.2(2) requires the communication of information. Updating of a library catalogue involves the communication of information. Standing on the hill on Streatham Common and shouting something into the wind, when nobody is near enough to hear what is being said – can that sensibly be taken to amount to "making available to the public"? But this is still a side track…

The issue between the AutoStore and Ocado was which law should be applied in respect of AutoStore's disclosures to EVS and the Bank: which law governed whether an obligation of confidence arose?

AutoStore argued that "Rome II" (Regulation (EC) 864/2007 on the law applicable to non-contractual obligations) was engaged, pursuant to which (said AutoStore) the law applicable to non-contractual obligations meant that the relevant law was Norwegian law.

Ocado argued that the issue under s.2(2) was solely one of English statutory law and fact, and that did not change just because the alleged disclosure happened abroad. Therefore (said Ocado) the court must decide on the facts whether EVS and the Bank (or either of them) were free in law and equity to use the Bank Bot Design, assessed as of the time the Bank Bot Design was received. This turned on

---

[219] *Yeda Research and Development Co Ltd v Rhone-Poulenc Rorer International Holdings Inc* [2007] UKHL 43

[220] *Generics (UK) Ltd v Daiichi Pharmaceutical Co Ltd* [2008] EWHC 2413 (Pat)

[221] *Qualcomm Incorporated v Nokia Corporation* [2008] EWHC 329 (Pat)

[222] *Kavanagh Balloons Pty Ltd v Cameron Balloons Ltd* [2004] RPC 5

the facts, and those facts were resolved in part by reference to the law of the place of receipt of the information at the time of receipt – and that meant Russia, for both EVS and the Bank.

Ocado also argued that the non-contractual obligations relied upon by Autostore were putative; the breaches of them and damages flowing from them were hypothetical; so under Rome II the applicable law would depend on arbitrarily chosen facts for the hypothetical breach and thereby where, in particular, damage would occur.

Judge Hacon noted that Rome II is retained EU law, and noted a number of its provisions. He held that by article 6(1), the law to be applied to the putative obligation of confidence on the **Bank** was that of the country or countries in which AutoStore had a market that would be damaged by the hypothetical breach, and that of the countries in which AutoStore's ability to patent its technology would have been restricted. This potentially presented "a wide range of laws", but for preventative relief, only the courts of Russia would have been an option. Therefore of the laws made applicable, the one that would have mattered on the hypothesis raised would have been **Russian law**.

For EVS it was article 12 that was relevant, because EVS and AutoStore had reached a point where both believed there was a real prospect of a contract. The analysis was a little different, but in the circumstances of the case the outcome reached was the same: the applicable law was **Russian law**.

So AutoStore succeeded in its case that Rome II applied, but not that the answer was Norwegian law. Ocado succeeded in its case that the question of whether AutoStore's disclosures to EVS and the Bank was a matter of Russian law, but for different reasons to its case.

On the expert evidence of Russian law, Judge Hacon concluded that the relevant disclosures in both the July 2010 email and at the September 2011 meeting were without any obligation of confidence on either EVS or the Bank. Therefore, AutoStore's patents lacked novelty or inventive step.

Lack of technical contribution obviousness and *Agrevo* obviousness

Obviousness for lack of technical contribution over cited prior art is a challenge based on article 56 EPC aligned with the EPO's problem-solution approach to determining art. 56 challenges. In the problem-solution approach, the objective technical problem to be solved by the invention is formulated by reference to the cited prior art and the contents of the application for the patent, before it is then asked whether the claimed invention, starting from the closest prior art and the objective technical problem, would have been obvious to the skilled person. In 2023, the EPO's Enlarged Board of Appeal decision G2/21 addressed, in the context of an art.56 challenge, whether in the formulation of the objective problem to be solved the patentee could rely on "post-published" data not contained in the specification. In the UK, the principles adopted by the courts when addressing a challenge of obviousness for lack of technical contribution over prior art have drawn upon the concept of plausibility and largely been aligned with those at play in a challenge of insufficiency for excessive claim breadth and "*Agrevo*" obviousness. We discuss the EBA's decision in G 2/21 and the TBA's subsequent decision interpreting and applying it in the T 0116/18 case, in section 3.d below, along with the case law in the UK on insufficiency for excessive claim breadth which considered it.

Agrevo obviousness is another type of invalidity challenge based upon EPC art. 56. In T 939/92 *Agrevo*/Triazoles (the EPO case from which the type of challenge takes its name in the UK), the Board of Appeal observed that, as for articles 83 and 84, the general legal principle to be applied was that the extent of the patent monopoly should correspond to and be justified by the technical contribution to the

art. A technical effect which justified the selection of the claimed compounds must be one which could be fairly assumed to be produced by substantially all the selected compounds – it had to be credible that all the claimed compounds possessed the activity asserted. The principles governing the assessment of an *Agrevo* obviousness challenge in the UK have very much been aligned with those governing a challenge of insufficiency for excessive claim breadth.

d) Insufficiency

In recent years, our reviews have focused in some detail on the state of play with respect to sufficiency. Last year we reported that the case law indicated that the governing principles had largely settled, subject to outstanding point(s) on the date on which (and documents upon which) sufficiency is to be assessed.

The English case law in 2023 remains similarly settled. Yet that is in fact noteworthy, for three reasons. First, because the outstanding points remain; second, because it denies any movement in the principles applied in the UK in view of the Enlarged Board of Appeal's judgment in case G 2/21; and third, because of the number of patents in the life sciences and pharmaceutical fields that fall to an insufficiency challenge in the UK having granted in the EPO – do we need a change in drafting practice to address and reflect the principles applied in the UK irrespective of what the EPO will permit to grant?

I will explain the basic principles governing a challenge of insufficiency in the UK, and then for each "type" of insufficiency challenge, how it has been developed in the case law in 2023. In the context of the first type of insufficiency considered (excessive claim breadth insufficiency), I will also consider the rulings of the EPO's Enlarged Board of Appeal in case G 2/21, and the extent of alignment of the principles in the UK and the EPO.

The Patents Act of 1977 states, in section 72:

> "Subject to the following provisions of this Act, the court or the comptroller may…by order revoke a patent for an invention on the application of any person (including the proprietor of the patent) on (but only on) any of the following grounds, that is to say –…
>
> > (c) the specification of the patent does not disclose the invention clearly enough and completely enough for it to be performed by a person skilled in the art;…"

The overwhelming majority of the case law on insufficiency emerging from the courts in the UK concerns a challenge to validity made pursuant to s.72(1)(c) of the Act. Different provisions of the Act are considered and applied by the IPO, and if necessary the courts, at the pre-grant stage: section 14(3) requires the specification of the patent to disclose the invention in a manner which is "clear enough and complete enough" for the invention to be performed by a person skilled in the art; and section 14(5) requires the claim or claims to be "clear and concise" and "supported by the description".

Sections 14(3) and 14(5) track fairly closely (although not exactly), the language of articles 83 and 84 of the European Patents Convention. Sections 14(3), 14(5) and 72(1)(c) are each stated, in s. 130(7) of the Patents Act, to have, as nearly as practicable, the same effects in the UK as the corresponding provisions of the EPC. The language of s.72(1) is closer to that of s.14(3) PA and art.83 EPC than that

of s.14(5) PA and art.84 EPC. Nevertheless, in *Biogen v Medeva*[223], Lord Hoffmann stated that the substantive effect of s.14(5), namely that the description should, together with the rest of the specification constitute an enabling disclosure, is given effect by s.72(1)(c). There is accordingly no gap or illogicality in the scheme of the Patents Act.

Lord Hoffmann continued to explain that s.72(1)(c) is not only intended to ensure that the public can work the invention after expiration of the monopoly; it is also intended to give the court in revocation proceedings a jurisdiction which mirrors that of the IPO under s.14(3) or the EPO under art.83 EPC, namely to hold a patent invalid on the substantive ground that (as the EPO said in Exxon/Fuel Oils (T 409/91), "the extent of the monopoly claimed exceeds the technical contribution to the art made by the invention as described in the specification".

Lord Hoffmann's reasoning might suggest that when considering whether the extent of a claimed monopoly exceeds the technical contribution to the art made by the invention as described in the specification, the principles to be applied by the English courts should mirror those of the EPO. We will come back to this.

The case law in the UK since *Biogen v Medeva* has established that the single ground of invalidity provided for in s.72(1)(c) embraces three distinct types of objection: excessive claim breadth / *Biogen* / lack of plausibility insufficiency; classical / undue burden / existence in fact insufficiency; and uncertainty (previously called "ambiguity") insufficiency. Underpinning all types is the concept of the "patent bargain", this being that the inventor obtains a monopoly in return for disclosing the invention and dedicating it to the public for use after the monopoly has expired. [224]

Excessive claim breadth / *Biogen* / lack of plausibility insufficiency

We consider the excessive claim breadth type of insufficiency first this year, as it remains the most problematic. It is this type of insufficiency which descends from the House of Lords' judgment in *Biogen v Medeva*. The ground for invalidity is met where the extent of the monopoly claimed exceeds the plausible technical contribution to the art made by the invention as described in the specification.

In *Regeneron v Genentech*[225], Kitchin LJ set out six principles governing insufficiency, which (inter alia) built upon the principles expressed by the House of Lords in *Biogen v Medeva*:

- First, a patent may be revoked if the specification does not disclose the invention in a manner which is clear enough and complete enough for it to be performed by a person skilled in the art.

- Second, the scope of the monopoly, as defined in the claims, must correspond to the technical contribution the patentee has made to the art – an aspect of this being that the specification must enable the invention to be performed to the full extent of the monopoly claimed.

- Third, the question whether the specification adequately discloses the invention is one of degree.

[223] *Biogen Inc. v Medeva Plc* [1996] UKHL 18

[224] *Regeneron Pharmaceuticals Inc & Anr v Genentech Inc* [2013] EWCA CIv 93

[225] *Regeneron Pharmaceuticals Inc & Anr v Genentech Inc* [2013] EWCA Civ 93

- Fourth, it is permissible to define an invention using general terms provided the patent discloses a principle of general application in the sense that it can reasonably be expected the invention will work with anything falling within the scope of these terms.

- Fifth, including in the claim a functional limitation (to avoid it covering products or methods which do not work) may be allowed by the EPO (if the invention can only be defined in such terms or cannot otherwise be defined more precisely) but it must still be possible to perform the invention across the scope of the claim without undue effort.

- Sixth, in the case of a claim to the use of a product to make a medicine for a particular therapeutic use, the specification must show, for example by appropriate experiments, that the product has an effect on a disease process so as to make the claimed therapeutic effect plausible.

Expanding in respect of the fourth principle, Kitchin LJ drew upon the House of Lords' judgment in *Kirin-Amgen v Hoechst*[226], explaining that it must be possible to make a reasonable prediction that the invention will work with substantially everything falling within the scope of the claim. Or put another way, the assertion that the invention will work across the scope of the claim must be "plausible or credible".

What was meant and required by "plausible" then became the subject of much argument and debate. The question reached the Supreme Court in *Warner-Lambert v Generics*[227]. In a split decision the majority disagreed with the Court of Appeal's statement, that the EPO and domestic authorities indicated that the requirement of plausibility was a "low, threshold test". What the test *should* be was rather less clear from the Supreme Court's reasoning. Lord Sumption said that plausibility "is not a term of art, and its content is inevitably influenced by the legal context". (The legal context of the *Warner-Lambert* case was of a Swiss-form second medical use claim). In that context, Lord Sumption explained that the proposition that a product is efficacious for the treatment of a given condition must be plausible; it is not made plausible by a bare assertion to that effect, and the disclosure of a mere possibility that it will work is no better than a bare assertion. There must be a reasonable prospect that the assertion will prove to be true based on a direct effect on a metabolic mechanism specifically involved in the disease. This can be demonstrated by *a priori* reasoning – effect on the disease process need not necessarily be demonstrated by experimental data. However, later data cannot be relied upon to support efficacy because sufficiency is a characteristic of the disclosure. Further, where a condition identified embraces a number of different pathologies, a claim asserting efficacy for each of them must be plausible in relation to each of them.

The Supreme Court did, however, approve of Kitchin LJ's view expressed in *Regeneron v Genentech* that “it must be possible to make a reasonable prediction that the invention will work with substantially everything falling within the scope of the claim or, put another way, the assertion that the invention will work across the scope of the claim must be plausible or credible”. So the lower courts then went back to that reasoning, and in *Fibrogen v Akebia*[228], Birss LJ explained that:

> The question of whether the specification adequately discloses the invention is one of degree.
>
> It is permissible to define an invention using general terms provided the patent discloses a principle of general application in the sense that it can reasonably be expected the invention

[226] *Kirin-Amgen Inc & Ors v Hoechst Marion Roussel Limited & Ors* [2004] UKHL 46

[227] *Warner-Lambert Companyt LLC v Generics (UK) Ltd & Anr* [2018] UKSC 56

[228] *Fibrogen Inc. v Akebia Therapeutics Inc & Anr* [2021] EWCA Civ 1279

will work with anything falling within the scope of these terms. This "**reasonable prediction**" test is approached by adopting a three-step test

- First, identify what it is which falls within the scope of the claimed class
- Second, determine what it means to say that the invention works – what is it for?
- Third, is it possible to make a reasonable prediction the invention will work with substantially everything falling within the scope of the claim?

It must be possible to perform the invention across the scope of the claim without undue effort (i.e. undue burden). For example, for claims of a broad structural class with functional features, it must be possible for the skilled person, without undue burden, to identify some compounds beyond those named in the patent, which are within the claimed class and therefore likely to have therapeutic efficacy. Separately, it must also be possible for the skilled person to work substantially anywhere within the whole claim – there must not be a specific region of the claimed scope for which performing the invention would be an undue burden (for example testing the functional features). However, it is not the law that the skilled person must be able to identify substantially all compounds covered by the claim without undue burden.

In the case of a claim to the use of a product to make a medicine for a particular therapeutic purpose, it is not always necessary to report the results of clinical trials or even animal testing, but the patentee must show, for example by appropriate experiments, that the product has an effect on a disease process so as to make the claimed therapeutic effect plausible.

In 2023, in ***Gilead v NuCana* (21 March 2023)**[229], Meade J determined invalidity challenges brought against two NuCana patents. The challenges were expressed as of lack of plausibility (leading to insufficiency and lack of industrial application), and insufficiency for undue burden and "existence in fact". The latter (classical) types of insufficiency are considered below. Lack of plausibility is not a free-standing ground of invalidity but one would be forgiven for concluding otherwise given the foundational position given to the argument within and across Meade J's judgment as a whole.

NuCana's claims were all product claims. Gilead accepted that they were to be construed as being to the products *per se*.

Meade J noted the three-step test explained in *Fibrogen v Akebia*; and that where claims are to compounds as such, defined by structure e.g. by means of a Markush formula, the court has to interpret the specification to identify what utility they are said to have. Although Birss LJ preferred to phrase question (iii) as asking whether it was possible to make a "reasonable prediction" that the claimed invention works, he said the standard to be met had been set by the Supreme Court's judgment in *Warner-Lambert v Generics* (in which the terminology employed was plausible/plausibility).

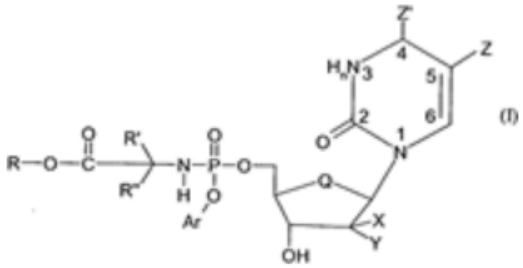
Nevertheless, Meade J referred to the standard for plausibility as being "low" ([28]). He added that plausibility must be shown by the specification of the patent in issue, along with the CGK. A patentee is not necessarily limited to relying on the most demanding teaching of the specification; they can rely on a technical contribution of a different but closely related nature to that disclosed in the specification. But a technical contribution must be of some, even if low, real significance – disclosing a uselessly low degree of activity as a comparator or "what not to do" is not good enough. It is not the law that a patentee

[229] *Gilead Sciences Inc & Anr v NuCana Plc* [2023] EWHC 611 (Pat) (21 March 2023) Meade J

can only rely on a useful characteristic disclosed in the specification where not only its general nature (e.g. cytotoxicity) but also its specific level (e.g. 100µM) is identified. Ultimately, Meade J said ([168]):

> "… the legal question I will have to answer is whether or not there is plausibility across the scope of the claims of the Patents …"

NuCana's claims were defined by the following Markush formula, as explained in the table below ([211]-[212]):



(I)

	PCT	EP'190		EP'365	
	Formula (I)	Claim 1 (uncond.)	Claim 1 (cond.)	Claim 1	Claim 2
R	*alkyl, aryl or alkylaryl*			*methyl ($-CH_3$), ethyl ($-C_2H_5$), n- or i-propyl ($-C_3H_7$), n- or i-butyl ($-C_4H_9$), or benzyl ($-CH_2C_6H_5$)* 7_{20-21}	
R' R''	*H, alkyl or alkylaryl, or together form an alkylene chain*			*one is H and one is methyl (i.e. D- or L-alanine)* 8_{16-17}	
Q	*O (i.e. furanose) or CH_2 (i.e. cyclopentyl)*			*O (i.e. furanose)* 9_{14}	
X	*H, F, Cl, Br, I, OH or methyl ($-CH_3$)*	*F, Cl, Br, or methyl ($-CH_3$)* 3_{22-23}	*F, Br or methyl ($-CH_3$)* 3_{22-23}		*F or methyl ($-CH_3$)* 3_{22-23}
Y		*F* 3_{22-23}			
Ar	*a monocyclic aromatic ring moiety or a fused bicyclic aromatic ring moiety, either of which said ring moieties is carbocyclic or heterocyclic and is optionally substituted;*			*$-C_6H_5$, $pCF_3C_6H_4-$, pFC_6H_4-, $pNO_2C_6H_4-$, $pClC_6H_4-$ or $oClC_6H_4-$;* 11_{1-3}	
Z	*H, alkyl or halogen*	*H, alkyl or halogen*		*H, acyclic C_{1-6} alkyl or halogen* 11_{5-7}	
Z'	*The base can either be cytosine ($Z'=NH_2$) or uracil ($Z'=O$)*				

Meade J said that the *in vitro* data in NuCana's EP 190 specification made it plausible that the three exemplified compounds within the claims had some degree of cytotoxicity in the breast and prostate cell lines. Therefore certain effects were rendered plausible, albeit on a weak evidence base and across a narrow scope. The issue of drawing inferences across the much broader scope of the claims of the patents was one for the medicinal chemist member of the skilled team, and had to take account of the narrow scope of the data in the patent. As a matter of CGK, isosterism was not regarded as predictive. The claims covered large numbers of compounds in which multiple changes were made that were known to be prone to removing activity, including combinations at the 2' position that were liable to remove activity. Therefore the skilled person would not think that it was plausible that meaningful cytotoxic activity would be preserved across the range of possibilities encompassed by the claims. The claims were therefore invalid. The differences in the specification of NuCana's EP 365 mostly did not matter and made no difference to the judge's conclusion of lack of plausibility.

Meade J noted that this analysis applied the law in the UK including the Supreme Court's (binding) decision in *Warner-Lambert v Generics*. EPO authorities had observed that the standard in *Warner-Lambert* aligned with the ***"ab initio* plausibility"** test in EPO case law. *'Ab initio* plausibility' required

the specification to render the relevant effect plausible, whereas **"*ab initio* implausibility"** meant there was only insufficiency if there were positive reasons to doubt that the effect in question would exist across the scope of the claims. In his capture of the principles Meade J drew upon his April 2022 judgment in *Sandoz & Teva v BMS*[230], which was soon to reach the Court of Appeal. In the meantime, the Enlarged Board of Appeal of the EPO had held its oral proceedings in case G2/21 and a decision would be given in due course. Meade J said ([342]):

> "Since it is possible that the Enlarged Board will adopt an *ab initio* implausibility test, and since that could at least possibly lead to a change in the case law in this jurisdiction in due course, it seemed to me that it might be sensible to make findings of fact to that standard as well as to the standard from *Warner-Lambert* that binds me. Gilead and NuCana both agreed that I should do so. It presents a minor practical problem since there is no definitive standard set out in an EPO decision for *ab initio* implausibility, but in my view it is workable for me to make a decision with regard to the statement of that test as summarised in T 0016/18 at paragraph 13.5. In any event I can narrate my findings and given their content as set out below I do not think nuance will matter, since I conclude there is clear, positive reason to think that the effect(s) asserted will not exist across the scope of the claims."

The EPO's decision in **G2/21 *Sumitomo* (Reliance on a purported technical effect for inventive step (plausibility)[231]** was delivered two days later, on 23 March 2023.

Sumitomo's EP 209 concerned insecticide compositions. It claimed priority from a 2004 Japanese filing, its filing date was in 2005, and its publication date was in 2012 (the application being a divisional).

Syngentia opposed the patent on multiple grounds, including obviousness (art 56 EPC). In this context, Syngentia relied upon, and the Technical Board of Appeal exercised its discretion to admit, evidence (D23) going to the question of the technical effect (synergy) of the invention. That evidence post-dated the publication of Sumitomo's application.

Sumitomo also sought to rely on data going to the same point (D21). D21 was 6 pages of test data that Sumitomo filed with the EPO in October 2016. In view of the body of TBA case law, the TBA did not think that it had discretion to admit/take into account Sumitomo's data. It referred a number of questions to the EBA. The EBA, in its decision, referred to the additional data relied upon by Sumitomo as "post-published" data.

Important background legal context, for the arguments in the G 2/21 case, included the civil-law origin "principle of free evaluation of the evidence". This requires judicial bodies to take account of the entire content of the parties' submissions and all the relevant evidence available in the proceedings. The TBA referred the following questions to the Enlarged Board:

> “If for acknowledgement of inventive step the patent proprietor relies on a technical effect and has submitted evidence, such as experimental data, to prove such an effect, this evidence not having been public before the filing date of the patent in suit and having been filed after that date (post-published evidence):

---

[230] *Sandoz Limited & Anr v Bristol-Myers Squibb Holdings Ireland Unlimited Company* [2022] EWHC 822 (Pat)

[231] G2/21 *Sumitomo* (Reliance on a purported technical effect for inventive step (plausibility), 23 March 2023, ECLI:EP:BA:2023:G000221.20230323

1. Should an exception to the principle of free evaluation of evidence (see e.g. G 3/97, Reasons 5, and G 1/12, Reasons 31) be accepted in that post-published evidence must be disregarded on the ground that the proof of the effect rests exclusively on the post-published evidence?

2. If the answer is yes (the post-published evidence must be disregarded if the proof of the effect rests exclusively on this evidence), can the post-published evidence be taken into consideration if, based on the information in the patent application in suit or the common general knowledge, the skilled person at the filing date of the patent application in suit would have considered the effect plausible (*ab initio* plausibility)?

3. If the answer to the first question is yes (the post-published evidence must be disregarded if the proof of the effect rests exclusively on this evidence), can the post-published evidence be taken into consideration if, based on the information in the patent application in suit or the common general knowledge, the skilled person at the filing date of the patent application in suit would have seen no reason to consider the effect implausible (*ab initio* implausibility)?"

Sumitomo argued (among other things) that while the threshold for sufficiency of disclosure should normally be addressed by the applicant for the patent, when it comes to inventive step and the EPO's problem-solution approach, the discussion of the technical effect depends on the choice of the closest prior art, which is introduced after the filing date. Hence the patent applicant can often be forced to argue for a technical effect of a distinguishing feature not focused upon when filing the application, and so it should be permissible for the applicant to rely on post-published evidence. (There is a parallel to be seen here with the point made by Birss LJ in *InterDigital v Lenovo* (19 January 2023)[232], discussed in section 3.c above, about why there is no general requirement that a patent needs to state what advantages an invention provides over the prior art).

The EBA explained the "problem and solution approach" to the assessment of inventive step as consisting of the following steps:

"(a) identifying the "closest prior art";

(b) comparing the subject-matter of the claim at issue with the disclosure of the closest prior art and identifying the difference(s) between both;

(c) determining the technical effect(s) or result(s) achieved by and linked to these difference(s);

(d) defining the technical problem to be solved as the object of the invention to achieve these effect(s) or result(s); and

(e) examining whether or not a skilled person, having regard to the state of the art within the meaning of Article 54(2) EPC, would have suggested the claimed technical features in - 29 - G 0002/21 order to obtain the results achieved by the claimed invention."

[232] *InterDigital Technology Corporation & Ors v Lenovo Group Ltd & Ors* [2023] EWCA Civ 34 (19 January 2023) Birss, Warby & Falk LLJ

The EBA continued:

> “The technical problem must be derived from effects directly and causally related to the technical features of the claimed invention. An effect could not be validly used in the formulation of the technical problem if the effect required additional information not at the disposal of the skilled person even after taking into account the content of the application in question (see CLB, 10th edition, I.D.4.1, and the decisions therein).
>
> Step (c), which is the most relevant in the context of the present referral, requires that, in order to determine the objective technical problem, the technical results and effects achieved by the claimed invention as compared with the closest prior art must be assessed. According to the established case law of the boards of appeal (see CLB, 10th edition, I.D.4.2, and the decisions therein) it rests with the patent applicant or proprietor to properly demonstrate that the purported advantages of the claimed invention have successfully been achieved.”

Having discussed the arguments and evidence in the case, the EBA concluded that proceedings under the EPC are governed by the principle of free evaluation of evidence. The EBA described this as a "universally applicable" principle (present in the legal systems of Switzerland, Germany, France and the Netherlands) of both procedural and substantive law in assessing any means of evidence submitted by a party in proceedings under the EPC.

Consequently, **evidence submitted by a patentee to prove a purported technical effect relied upon for acknowledgement of inventive step may not be disregarded solely on the ground that such evidence, on which the effect rests, had not been public before the filing date of the patent in suit and was filed after that date**.

Addressing the term "plausibility" more generally, the EBA said ([92]):

> "The term **“plausibility”** that is found in the case law of the boards of appeal and relied upon by the referring board in questions 2 and 3 of the referral and the reasons for it, **does not amount to a distinctive legal concept or a specific patent law requirement under the EPC, in particular under Article 56 and 83 EPC**. It rather describes a generic catchword seized in the jurisprudence of the boards of appeal, by some national courts and by users of the European patent system."

The relevant standard for the reliance on a purported technical effect when assessing whether or not the claimed subject-matter involves an inventive step concerns the question of what the skilled person, with the common general knowledge in mind, would understand at the filing date from the application as originally filed as the technical teaching of the claimed invention. The technical effect relied upon, even at a later stage, needs to be encompassed by that technical teaching and to embody the same invention, because such an effect does not change the nature of the claimed invention.

Hence, a patent applicant or proprietor may rely upon a technical effect for inventive step if the skilled person having the common general knowledge in mind, and based on the application as originally filed, would consider said effect as being "encompassed by the technical teaching and embodied by the same originally disclosed invention".

The EBA discussed the approaches taken in the two lines of EPO case law that were said to diverge, but apparently considered them reconcilable. The Board explained that the core issue in each case lay

with what the skilled person, with the common general knowledge in mind, would understand, at the filing date, from the application as originally filed, as being the technical teaching of the claimed invention ([72]):

> "… Irrespective of the use of the terminological notion of plausibility, the cited decisions appear to show that the particular board of appeal focussed on the question whether or not the technical effect relied upon by the patent applicant or proprietor was derivable for the person skilled in the art from the technical teaching of the application documents."

The EBA said that these principles should allow the competent board of appeal or other deciding body to take a decision on whether or not post-published evidence may or may not be relied upon in support of an asserted technical effect when assessing whether or not the claimed subject-matter involves an inventive step. It then proceeded to make two formal rulings:

> **1. Evidence submitted by a patent applicant or proprietor to prove a technical effect relied upon for acknowledgement of inventive step of the claimed subject-matter may not be disregarded solely on the ground that such evidence, on which the effect rests, had not been public before the filing date of the patent in suit and was filed after that date.**
>
> **2. A patent applicant or proprietor may rely upon a technical effect for inventive step if the skilled person, having the common general knowledge in mind, and based on the application as originally filed, would derive said effect as being encompassed by the technical teaching and embodied by the same originally disclosed invention.**

The EBA remitted the case in G 2/21 back to the TBA (T 0116/18) for the application of the decided principles in the determination of the case. (The TBA's decision was delivered on 28 July 2023. We discuss it a little later in this section).

It is important to note that G 2/21 concerned a challenge to the validity of the patent based on article 56 (obviousness), albeit a flavour of obviousness described as lack of technical contribution / *Agrevo* obviousness in the UK. The questions referred in G 2/21 were not about sufficiency of disclosure for the purposes of article 83. However, in view of the overlap in the concepts with the issues in the G 2/21 case, the EBA accepted the appropriateness of a "comparative analysis and comparative considerations".

In particular, the EBA noted that in the case law concerning second medical use claims where the notion of "plausibility" has been used, the issue of reliance on post-published evidence for a purported technical effect arises in the context of sufficiency of disclosure. The subject-matter of second medical use claims is commonly limited to a known therapeutic agent for use in a new therapeutic application, hence it is necessary that the patent at the date of its filing renders it credible that the known therapeutic agent, i.e. the product, is suitable for the claimed therapeutic application.

With reference to a number of board of appeal decisions (in T 609/02, T 1599/06, T 754/11, T 760/12, T 895/13, T 1045/13, T 2059/13, T 887/14, T 321/15, and T 1680/17), the Enlarged Board said ([77]):

> "The reasoned findings of the boards of appeal in the decisions referred to above make clear that **the scope of reliance on post published evidence is much narrower under sufficiency of disclosure (Article 83 EPC) compared to the situation under inventive step**

(Article 56 EPC). In order to meet the requirement that the disclosure of the invention be sufficiently clear and complete for it to be carried out by the person skilled in the art, **the proof of a claimed therapeutic effect has to be provided in the application as filed**, in particular **if, in the absence of experimental data in the application as filed, it would not be credible to the skilled person that the therapeutic effect is achieved**. A lack in **this** respect **cannot be remedied by post-published evidence**."

Four weeks after the EBA's decision in G 2/21, the Court of Appeal heard Bristol-Myers Squibb's appeal against Meade J's conclusion that its EP(UK) 415 to apixaban was invalid. At first instance, Meade J had concluded that due to lack of plausibility, BMS' patent was invalid for lack of technical contribution over prior art patent application '131. BMS' appeal was unanimously dismissed by the Court of Appeal in ***Sandoz v BMS*** **(4 May 2023)**[233].

Arnold LJ noted the relevant provisions of the EPC (including article 56 and article 83) and the provisions of the Patents Act of 1977 putting them into effect. He noted that none of those provisions mentioned the criterion of plausibility but explained that the concept had been developed through the case law of the Boards of Appeal and the courts of EPC states including the UK. He noted and discussed key Technical Board of Appeal decisions prior to the Enlarged Board's recent decision in G 2/21 (T 939/92 *Agrevo/Triazoles,* T 609/02 *Salk Institute/AP-1 complex*[234]*,* T 1329/04 *Johns Hopkins/Growth differentiation factor-9*[235]*,* T 578/06 *Ipsen/Pancreatic cells*[236], T 488/16 *BMS/Dasatinib*[237]) and a number of UK authorities (*Conor v Angiotech*[238], *Generics v Yeda*[239], *Idenix v Gilead*[240], *Warner-Lambert v Generics*[241]).

Arnold LJ discussed in some depth the Supreme Court's reasoning in *Warner-Lambert v Generics*. As well as noting the principles at play in the context of that case (captured briefly above near the start of this section), Arnold LJ noted that Lord Sumption had agreed with the lower courts' rejection of later published data as relevant in the assessment of plausibility. Lord Sumption had said: “the question is not whether it works but whether the contribution to the art consisting in the discovery that it can be expected to work has been sufficiently disclosed in the patent”. Lord Sumption had also said that while in classical insufficiency cases (where the question is whether the disclosure in the patent enables the skilled addressee to perform the invention) the skilled addressee may be assumed to supplement the disclosure by carrying out simple tests, where the objection of insufficiency is that the claim exceeds the disclosed contribution to the art, the role of hypothetical "simple tests" is “necessarily more limited”. The specification only contributes to the art if it solves a problem, not if it merely poses one. The notion that something is worth trying cannot be enough, without more, to justify a monopoly. (Hence the lower courts' conclusion that claims 10-12 of Warner-Lambert's patent were plausible, because the skilled addressee would be encouraged by the data in the patent to carry out simple tests identified in the patent in order to confirm the suitability of pregabalin for that purpose, was overturned).

---

[233] *Sandoz Limited v Bristol-Myers Squibb Holdings Ireland Unlimited Company* [2023] EWCA Civ 472 (4 May 2023) Arnold, Nugee & Warby LLJ

[234] T 609/02 *Salk Institute/AP-1 complex* (unreported, 27 October 2004)

[235] T 1329/04 *Johns Hopkins/Growth differentiation factor-9* [2006] EPOR 8

[236] T 578/06 *Ipsen/Pancreatic cells* (unreported, 29 June 2011)

[237] T 488/16 *Bristol-Myers Squibb/Dasatinib* [2019] EPOR 24

[238] *Conor Medsystems Inc v Angiotech Pharmaceuticals Inc & Ors* [2008] UKHL 49

[239] *Generics (UK) Ltd t/a Mylan v Yeda Research & Development Co Ltd* [2013] EWCA Civ 925

[240] *Idenix Pharmaceuticals Inc v Gilead Sciences Inc & Ors* [2016] EWCA Civ 1089

[241] *Warner-Lambert Co LLC v Generics (UK) Ltd t/a Mylan* [2018] UKSC 56

Arnold LJ then discussed the Enlarged Board of Appeal's decision in G 2/21. He noted the Board's observation that plausibility is not a distinct condition of patentability, but a criterion for the reliance on a purported technical effect. He noted that the EBA considered reconcilable the two lines of EPO decisions labelled "*ab initio* plausibility" (such as *Johns Hopkins*[242] and *BMS/Dasatinib*[243]) and "*ab initio* implausibility" (such as *Ipsen*[244]): for each, the core issue rested with "the question of what the skilled person, with the common general knowledge in mind, understands at the filing date from the application as originally filed as the technical teaching of the claimed invention". Arnold LJ noted that the EBA interpreted the decisions of national courts that it considered (including the Supreme Court's judgment in *Warner-Lambert v Generics*) as approaching matters in a similar manner. Hence Arnold LJ said, in a passage going to the heart of the Court of Appeal's reasoning in *Sandoz v BMS* ([47]):

> "…the core question being addressed was what the technical teaching of the application was to the skilled person with the common general knowledge in mind at the filing date, and whether the technical effect relied upon by the patent applicant or proprietor was derivable from the application."

Arnold LJ noted from the EBA's reasoning that the scope for reliance on post-published evidence was narrower under article 83 than under article 56. For the purposes of article 83 (sufficiency of disclosure) the EBA stated that "proof of a claimed therapeutic effect has to be provided in the application as filed, in particular if, in the absence of experimental data in the application as filed, it would not be credible to the skilled person that the therapeutic effect is achieved".

Arnold LJ noted the EBA's caution as to the abstractness of some of the criteria it had discussed, and that "the guiding principles set out above should allow the competent board of appeal or other deciding body to take a decision on whether or not post-published evidence may or may not be relied upon in support of an asserted technical effect when assessing whether or not the claimed subject-matter involves an inventive step".

Arnold LJ made no mention at all of the background context of the EBA's decision in G 2/21 being the interplay of the principle of free evaluation of the evidence with the requirements of the EPC, even when describing the first of the referred questions (which was framed by reference to that principle). Nor did Arnold LJ refer to the possibility that post-published evidence could yet be permitted by the Technical Board of Appeal when considering the article 56 challenge in the case leading to G 2/21. Arnold LJ noted the distinction in approach between article 56 and article 83 circumstances observed by the EBA, yet in practice the reasoning that he drew upon as laying down the principles leaves little room for distinction.

Arnold LJ observed that in view of the EBA's reasoning, BMS and Sandoz had been correct to agree that the issues of inventive step and sufficiency in this case be assessed by reference to the application for the patent rather than the patent as granted. (Certainly, this approach is derivable from language used by the EBA in its judgment).

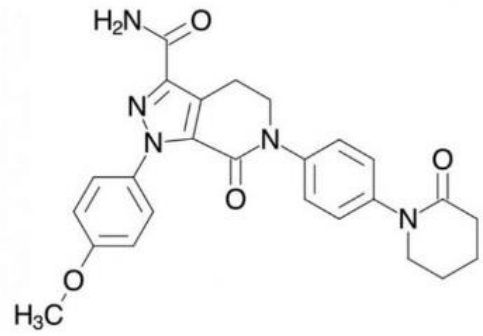
---

[242] T 1329/04 *Johns Hopkins/Growth differentiation factor-9*

[243] T 488/16 *Bristol-Myers Squibb/Dasatinib*

[244] T 578/06 *Ipsen/Pancreatic cells*

BMS' patent claimed a compound represented by the following formula (I) or a pharmaceutically acceptable salt thereof ([77]):



The compound depicted is apixaban (a single compound). However, in the application for the patent, the narrowest claim covered 74 compounds. In the specification, no embodiment was directed specifically to apixaban. Fifteen numbered embodiments and a further twenty unnumbered embodiments were described. A couple of the embodiments described novel compounds selected from lists (not apixaban). Under the heading "utility", the specification stated that the compounds of the invention were "inhibitors of factor Xa and are useful as anticoagulants for the treatment or prevention of thromboembolic disorders in mammals (i.e., factor Xa-associated disorders)". The effectiveness of the compounds as factor Xa inhibitors "was determined" by means of a chromogenic assay (the same one as in cited prior art "WO 131", which was discussed in the background section of the specification). Compounds were considered active if they exhibited a Ki of <10μM, preferably <1μM, more preferably <0.1μM, even more preferably <0.01μM, still more preferred <0.001μM; and a number of compounds of the invention were found to exhibit a Ki of <10μM "thereby confirming the utility of the compounds of the present invention as effective Xa inhibitors".

At first instance, Meade J concluded that the disclosure of the specification was that some unidentified compounds had been tested with activities at the level indicated, and that utility for some broader class (i.e. broader than just the ones tested) could, in the patentee's opinion, be inferred. What that broader class might be could not be worked out, both because of the lack of detail and because of the inherent ambiguity in the expression "compounds of the present invention" in this sort of specification where many different Markush formulae were given. There was no way to draw any sort of inference about any individual compound, be it apixaban or any other. In the absence of making some showing of plausibility, the fact that it would not have been difficult or burdensome to test apixaban for its factor Xa activity, and that if such tests had been done a very good level of activity would have been found, did not get BMS any further than the patentee in *Warner-Lambert.* At most, it provided the sort of encouragement-plus-ability-to-test that the Supreme Court had rejected in *Warner-Lambert.*

Further, since BMS' patent lacked plausibility within its own terms, it was bound to lack any technical contribution over prior art WO 131, a patent application later acquired by BMS. (WO 131's stated object included the provision of novel factor Xa inhibitors. The disclosed compounds were said to be useful as anticoagulants for the treatment or prevention of thromboembolic disorders in mammals. A number of them were said to have been found to exhibit a Ki of <10μM. Apixaban was embraced within a number of the embodiments but there was no individualised disclosure of apixaban, and it was common ground that WO 131 did not make it obvious that apixaban would be likely to be efficacious as a factor Xa inhibitor).

In the Court of Appeal, lack of plausibility was focused upon (rather than lack of technical contribution over WO 131). Arnold LJ dismissed BMS' argument that the factual differences in the case were such that the Supreme Court's judgment in *Warner-Lambert v Generics* was legally distinguishable. He explained that while it was true that the concept of plausibility originated as a response to over-broad claims (*Idenix v Gilead* being such an example), the requirement was applied to a single compound claim in *BMS/Dasatinib* (a case relied upon by Lord Sumption in *Warner-Lambert*) and in *Generics v Yeda*[245]. The concept of plausibility had also been found to have utility in addressing one of the problems with second medical use claims. The underlying principles were applicable as much to single compound claims as to classes of compounds and second medical use claims, because the fundamental principle was that the scope of the patent monopoly must be justified by the patentee's technical contribution to the art. Arnold LJ continued ([92]-[93]):

> "Thus when considering inventive step it is necessary to consider what technical problem the claimed invention solves. If it is not plausible that the invention solves any technical problem then the patentee has made no technical contribution and the invention does not involve an inventive step. Equally, when considering insufficiency it is necessary to consider whether the specification sufficiently discloses the claimed invention. If it is not plausible that the invention solves any technical problem then the patentee has made no technical contribution and the specification does not disclose any invention. It follows that, **in order for a claim to a single chemical compound to be patentable, the application must make it plausible, when read in the light of the skilled person's common general knowledge, that the compound has the utility asserted for it**. Moreover, it makes no difference whether the claim incorporates the use of the compound as a technical feature or whether the claim is simply to the compound per se and the assertion of utility is only to be found in the specification. This is because, as explained above, there is no invention in merely identifying a new chemical compound; invention can only lie in identifying its utility.
>
> …I would add that I do not understand how it is possible to determine whether a claimed invention is speculative other than by assessing whether it is plausible. They are two sides of the same coin."

Arnold LJ said that the standard of plausibility to be applied was therefore the standard adopted by the majority in *Warner-Lambert*. This corresponded to the "*ab initio* plausibility" test, while the standard espoused by the minority corresponded to the "*ab initio* implausibility" test. Although the EBA's view was that the two approaches could be reconciled, Arnold LJ said ([94]):

> "I am bound to say that it seems to me that the divergence of opinion in the Supreme Court shows that the two approaches do not necessarily produce the same outcome. It also appears to me, however, that the harmonised approach adopted by the Enlarged Board, while eschewing the language of "*ab initio* plausibility" and "*ab initio* implausibility", is as a matter of substance much closer to the former than to the latter. Be that as it may, as I have already noted, it is not suggested by BMS that G 2/21 justifies this Court in departing from *Warner-Lambert*."

Arnold LJ said that given the standard of plausibility to be applied was that explained by Lord Sumption, it was not sufficient for BMS' patent application to encourage the skilled addressee to carry out simple tests identified in the specification to confirm the efficacy of the claimed product. This was the case even if carrying out such tests would indeed show that the claimed product was likely to be efficacious.

[245] *Generics (UK) Ltd v Yeda Research & Development Co Ltd* [2013] EWCA Civ 925

Subsequent data could not be a substitute for sufficient disclosure in the specification. Lord Sumption's analysis was confirmed by the EBA's insistence in G2/21 on focusing on the technical teaching of the specification read with the common general knowledge.

Further, Arnold LJ said there was nothing in Lord Sumption's speech to support BMS' contention that the judge should have stood back at the end of his evaluation and considered whether the claimed invention fulfilled the patent bargain, nor any reason to think that if the judge had done so, he would have come to a different conclusion.

We revert now to the **EPO proceedings in case T 0116/18 Sumitomo/Insecticide compositions, in which the EBA's G 2/21 decision had been delivered**. The case had been remitted back to the TBA.

The TBA observed that in formulating the test in the way that it had, the EBA had used new legal terminology that had not previously been applied in the context of inventive step. The EBA had chosen not to adopt terminology employed in the previous case law, in particular on plausibility. Therefore it was the new requirement(s) defined by the EBA that must now be applied. The TBA interpreted the EBA's ruling as being that, for a patent applicant or proprietor to be able to rely on a purported technical effect for inventive step, the skilled person would derive said effect as being (i) encompassed by the technical teaching of the application as filed, and (ii) embodied by the same originally disclosed invention.

For requirement (i) to be met, the purported technical effect together with the claimed subject-matter need only be conceptually comprised by the broadest technical teaching of the application as filed. The effect need not be literally disclosed by way of positive verbal statement. For example, it might be sufficient that the skilled person, having the CGK in mind and based on the application as filed, recognised that the said effect was necessarily relevant to the claimed subject-matter.

For requirement (ii), the question to be considered was whether the skilled person, having the CGK on the filing date in mind and based on the application as filed, would have legitimate reason to doubt that the purported technical effect could be achieved with the claimed subject matter. Requirement (ii) was met unless that question was answered "yes". It was not necessarily a precondition for requirement (ii) to be satisfied that the application as filed contained experimental proof that the purported technical effect was actually achieved with the claimed subject-matter at issue.

The TBA was satisfied that, in respect of Sumitomo's patent, requirement (i) was satisfied. Turning to requirement (ii) the opponent/appellant (Syngentia) had not provided any concrete evidence derived from the CGK as to why the skilled person would have legitimate reason to doubt that the specific purported technical effect of the claim could be achieved. It was not irreconcilable with the CGK. The patent proprietor could not be expected to have provided proof in the application as filed of the synergistic insecticidal effect for every conceivable combination of insecticides against every conceivable insect species.

After the EBA's decision in G 2/21 was issued, Syngentia filed evidence, an experimental evaluation, in support of its argument that the claimed synergy was not achieved across the entire breadth of claim 1 as granted. The TBA said that since the purported technical effect relied upon by Sumitomo could, in light of the EBA's decision, be relied upon, the TBA's earlier conclusion in light of Sumitomo's post-published evidence, that the claimed synergistic effect of the particular combination of insecticides against Chilo suppressalis was acknowledged across the breadth of claim 1, was binding.

The TBA noted the Court of Appeal's judgment in *Sandoz v BMS* (4 May 2023)[246] (discussed above). It observed that according to the Court of Appeal's reasoning the "*ab initio* plausibility" standard had to be applied when examining effects in relation to inventive step of product claims. It said that its own interpretation of G 2/21 was different from this in that instead of the "ab initio plausibility standard", the standard that it (the TBA) had defined in its interpretation of G 2/21 was what needed to be applied.

Following all this consideration of the principles, a challenge of insufficiency for excessive claim breadth fell again to be considered at first instance, by Mellor J, in ***Astellas v Teva* (17 October 2023)[247].** The trial had taken place in July 2022. Apologising for the delay, Mellor J identified its "root cause" as being the time taken to produce his FRAND judgment in *InterDigital v Lenovo* (16 March 2023)[248].

Astellas' patent was to a modified release (MR) formulation of mirabegron. The technical problem addressed was described as being to provide a pharmaceutical composition for MR for mirabegron in which the efficacy was the same or higher than those of conventional formulations, and which had no limitations on food intake. The point was made that because the elimination half-life of mirabegron was long (18-24 hours), one did not necessarily need a MR formulation to sustain effective level of the drug in the blood, and that the focus of the invention was not on release control, but on paying attention to the control of a release rate of the drug from a formulation so that the release was not affected by food intake. Prof Shakeheff, for Astellas, explained the difference as being that the focus for the inventors was to provide a formulation whereby release was less affected by food but without unduly extending the release beyond a point where food effects would no longer be problematic.

The specification explained (in [0010]) that continuous absorption for about 4 hours from a conventional formulation in the fed state gave rise to a food effect. The central theory of the patent was that to reduce the food effect, a formulation was needed that was capable of continuous drug *release* for 4 hours or more because then the drug release from the formulation was the rate-limiting step for absorption. In other words, it was necessary to slow the drug release from the formulation so that absorption continued beyond 4 hours. In terms of reducing the food effect, the important measure seemed to be absorption; the way to measure a reduction in food effect was by reference to concentration of the drug in blood (after absorption).

The next paragraph of the specification ([0011]) then referred to a clinical trial in humans in which three formulations were administered and the release rate of the drug controlled by reference to $T_{80\%}$ (the time when 80% of the drug had been released from the formulation) of 4 hours, 6 hours and 10 hours. $T_{80\%}$ would have been measured *in vitro (*this was common ground). It was said that all three formulations could reduce the food effect.

The advantages of the invention were said to include that the formulations of the invention had no limitations on food intake, were stable, and "reduction of C_{max} caused by food intake could be significantly alleviated" by the MR formulation of the invention.

---

[246] *Sandoz Limited v Bristol-Myers Squibb Holdings Ireland Unlimited Company* [2023] EWCA Civ 472 (4 May 2023) Arnold, Nugee & Warby LLJ

[247] *Astellas Pharma Industries Limited v Teva Pharmaceutical Industries Limited & Ors* [2023] EWHC 2571 (Pat) (17 October 2023) Mellor J

[248] *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 539 (Pat) (16 March 2023) Mellor J

Astellas' claimed invention was construed, as Teva argued, as encompassing both *in vitro* and *in vivo* parameters. Mellor J's reasoning included that in giving measures for reduction of food effect he did not think that the patentee was just being helpful.

On the principles governing the assessment of Teva's challenge of insufficiency for excessive claim breadth, Mellor J noted the Court of Appeal's judgment in *Regeneron v Genentech*[249], quoting Kitchin LJ's fourth principle – that it is permissible to define an invention using general terms provided the patent discloses a principle of general application. Kitchin LJ's reasoning drew in a passage from the House of Lord's judgment in *Kirin-Amgen v Hoechst* and then said ([225]):

> "100. **It must therefore be possible to make a reasonable prediction the invention will work with substantially everything falling within the scope of the claim or, put another way, the assertion that the invention will work across the scope of the claim must be plausible or credible. The products and methods within the claim are then tied together by a unifying characteristic or a common principle**. If it is possible to make such a prediction then it cannot be said the claim is insufficient simply because the patentee has not demonstrated the invention works in every case.
>
> 101. **On the other hand, if it is not possible to make such a prediction or if it is shown the prediction is wrong and the invention does not work with substantially all the products or methods falling within the scope of the claim then the scope of the monopoly will exceed the technical contribution the patentee has made to the art and the claim will be insufficient**. It may also be invalid for obviousness, there being no invention in simply providing a class of products or methods which have no technically useful properties or purpose."

Mellor J noted that the criterion for plausibility "is that stated by Lord Sumption" in *Warner-Lambert v Generics*[250], in particular that ([226]):

> “the specification must disclose some reason for supposing that the implied assertion of efficacy in the claim is true”.

He then noted Birss LJ's reasoning in *Fibrogen v Akebia*[251] explaining the approach to the assessment of insufficiency for excessive claim breadth as being: first, identify what it is which falls within the scope of the claim; second, determine what it means to say the invention works; and third, ask whether it is possible to make a reasonable prediction the invention will work with substantially everything falling within the scope of the claim. Birss LJ said that it would be a matter of construction to work out what sort of functional features one was dealing with. In some cases, the "step 2" functional features are implied rather than express.

Mellor J then turned to apply the principles. There was common ground on which compositions fell within the scope of the claim – those that satisfied the structural requirements of integers B, C, D and E (and the latter part of integer A, i.e. 10-200mg of mirabegron), and the functional requirement of integer F (the *in vitro* dissolution profile).

On step 2, it was clear what "working" meant – that the formulation reduced a food effect. The problem to be solved was the achievement of that effect. On the defendants' construction (which Mellor J had

[249] *Regeneron Pharmaceuticals Inc & Anr v Genentech Inc* [2013] EWCA CIv 93

[250] *Warner-Lambert Company LLC v Generics (UK) Ltd & Anr* [2018] UKSC 56

[251] *Fibrogen Inc. v Akebia Therapeutics Inc & Anr* [2021] EWCA Civ 1279

accepted), this was expressly incorporated into the claim. On Astellas construction, it was not an express feature of the claim (and therefore not relevant to infringement) but it was nevertheless a step 2 functional feature for the purposes of inventive step and reasonable prediction/plausibility.

Therefore, on either side's construction, the question at step 3 of the *Fibrogen v Akebia* test was the same: is it possible to make a reasonable prediction that compositions which satisfy the structural features of claim 1 and which also satisfy the functional feature of integer F (the *in vitro* dissolution profile), will be capable of reducing the food effect that is seen in conventional tablets of mirabegron?

Concluding that the answer was "yes", and therefore Astellas' patent was not insufficient for excessive claim breadth, Mellor J's reasoning included the CGK on the time taken to pass through the various parts of the digestive system, the CGK that *in vivo* dissolution is slower than *in vitro* dissolution, and that the real measure of significance that the skilled formulator took away from the teaching of [0010] (discussed above) was about absorption - to ensure continuous drug absorption over 4 hours or more. The defendants' arguments suffered from two principal flaws: a misunderstanding of the teaching in [0010], and what Prof Shakesheff (Astellas' expert formulator) indicated was the normal shape of release curves of matrix systems.

Perhaps the most important practical point to take from Mellor J's reasoning is his confirmation that the approach to the assessment of insufficiency for excessive claim breadth explained by Birss LJ in *Fibrogen v Akebia* side-steps the issue of whether some sort of therapeutic efficacy should be construed as forming a functional technical feature of a claim or not. In the case of a second medical use claim, this would usually be express. In the case of a product claim, this has sometimes been implied, or accepted as implied, into the language of the claim, and sometimes not. The *Fibrogen v Akebia* approach, by focusing on what it means to say the invention works – the promise of the claimed invention – therefore limits the impact of the claim structure used in the assessment of whether the technical contribution made by the patent justifies the monopoly claimed.

Classical / undue burden / Regeneron v Kymab / existence in fact insufficiency

The type of insufficiency originally described as "classical" insufficiency arises when the directions in the patent are inadequate to enable the person skilled in the art, using their common general knowledge, to perform the invention without undue burden across the scope of all relevant ranges of the claimed invention.

The leading authority on this type of insufficiency is the Supreme Court's judgment in *Regeneron v Kymab*[252], but when seeking to understand the general principles applicable to all claim types, the reasoning of Birss J in *Illumina v Latvia MGI*[253] is in practice a more useful place to start. So -

For all claim types, patentees need to ensure that they make no broader claim than is **enabled** by their disclosure. The disclosure required of the patentee is such as will, coupled with the common general knowledge existing as at the priority date, be sufficient to enable the skilled person to perform substantially all the types or embodiments within the scope of the claim: a claim which seeks to protect products or processes which cannot be performed by the skilled person using the disclosure in the patent will, subject to *de minimis* or wholly irrelevant exceptions, be bound to exceed the contribution to the art made by the patent. This does not mean that the patentee has to demonstrate in the disclosure that every embodiment within the scope of the claim has been tried, tested and proved to have been

[252] *Regeneron Pharmaceuticals Inc v Kymab Ltd* [2020] UKSC 27

[253] *Illumina Cambridge Limited v Latvia MGI Tech SIA & Ots* [2021] EWHC 57 (Pat)

enabled. Patentees may rely, if they can, upon a principle of general application if it would appear reasonably likely to enable the whole range within the scope of the claim to be performed. But they take the risk, if challenged, that the supposed general principle will be proved at trial not in fact to enable a significant, relevant, part of the claimed range to be performed, as at the relevant date.

The requirement to show enablement across the whole scope of the claim applies only across *relevant* ranges. A range will be relevant if it is denominated by reference to a variable which significantly affects the value or utility of the product or process in achieving the purpose for which it is to be performed. When applying this test one may need to examine the essence of the invention as well as the claim language itself. For example, in *Regeneron,* the claim was to a transgenic mouse. The relevant range (the number of gene segments replaced) was not expressly called for in the claim in the sense of there being words like "from 1 to 125 segments"; the range was identified by an exercise of construction of the language used. The claim also covered mice with different lengths of tail, but tail length was not a relevant range and so did not require enablement.

The standard required for enablement is of no undue burden. The patentee is entitled to expect that the skilled person, in seeking to make the invention work, will exercise what they are able to do without undue burden. If need be that exercise will involve testing and experiments. From *Mentor v Hollister*[254] a patent will not necessarily be insufficient just because the person skilled in the art cannot work the invention immediately upon reading it. It is permissible for there to be a reasonable period of trial and error to get it to work, but not for the skilled person to have to carry out a prolonged programme of research, enquiry or experiment to make a workable prototype. Where exactly this boundary lies is a question of fact and degree depending on the nature of the invention.

In practice, the classical type of insufficiency may invalidate a patent where, at the relevant date, it was not possible to make the claimed product, or not possible to make the claimed product across the claimed range. So in *Regeneron v Kymab*[255] the patent in issue was found invalid for insufficiency because the claimed product (a transgenic mouse) could not, as a matter of fact, be made at the relevant date across the claimed range of replaced gene segments.

The classical type of insufficiency may also operate where the promised utility/activity for the claimed product is not fulfilled (at all or without undue burden) across the range of products claimed. So in *Idenix v Gilead*[256], one ground on which Idenix' patent (product claims) was invalidated was undue burden insufficiency. Claim 1 covered at least 50 billion compounds. If it was assumed that the patent with the CGK (i) made it plausible that the claimed compounds had anti-*Flaviviridae* activity and (ii) enabled the medicinal chemist to synthesise substantially all of them without undue burden, the patent did not suggest that all of the claimed compounds would *actually have* an anti-*Flaviviridae* activity. It was clear from the evidence that such compounds could turn out not to do so when tested, and all the patent said was that they could be screened for such activity. This did not enable the skilled team to perform the invention across the breadth of the claim without undue burden; it merely set the skilled team a research project and claimed the results. The judge's consequent conclusion of insufficiency for undue burden was not disturbed on appeal.[257]

---

[254] *Mentor Corporation & Anr v Hollister Incorporated* [1993] RPC 7

[255] *Regeneron Pharmaceuticals Inc v Kymab Ltd* [2020] UKSC 27

[256] *Idenix Pharmaceuticals, Inc v Gilead Sciences, Inc & Ors* [2014] EWHC 3916 (Pat)

[257] *Idenix Pharmaceuticals Inc v Gilead Sciences Inc & Ors* [2016] EWCA Civ 1089

In ***Gilead v Nucana***[258], the parties diverged as to the appropriate name for the challenge of insufficiency brought under this head. Meade J settled on "undue burden", and said that it turned on "what the position actually is based on evidence available at trial and not a question of what the skilled person would have said was plausible based on the Patents and the CGK at the priority date".

The evidence in the case showed that there were many compounds within "formula I" that did not achieve a measurable cytotoxicity, even at the highest concentration tested. Other compounds gave results that differed in different cell lines (e.g. Gilead's sofosbuvir). The results for the compounds within the narrower claims did not present a materially different overall picture from those within the broader claims. Neither side suggested there was a pattern to the results based on different substitutions. (Meade J observed that the actual results corresponded closely to what Gilead argued on plausibility).

Meade J concluded that the patents were "insufficient because they cover compounds which do not in fact have the relevant characteristics".

Uncertainty insufficiency

When the boundary of a claim is impossible to ascertain i.e. because it is unclear what the correct test is for determining whether or not a product or process infringes a claim, the claim will be invalid for the "uncertainty" type of insufficiency. This type of insufficiency is not only available where it is impossible to tell in any case whether a product infringes; it applies too if there is "a large territory (more than a fuzzy boundary) where the claim is uncertain". There is a need to distinguish though between claims that are truly uncertain on the one hand, and those which are merely difficult to construe or have a "fuzzy" boundary on the other – it is the former that are invalid for this type of insufficiency.

The most detailed recent discussion of the principles governing this type of insufficiency, beginning with case law dating to before the grounds of invalidity were codified in legislation, is contained in the judgment of Birss J in *Unwired Planet v Huawei*[259]. At that point it was called insufficiency for "ambiguity". In 2019, in *Anan Kasei (Rhodia) v Neo*[260], the Court of Appeal changed the name used to describe this type of insufficiency from "ambiguity" to "uncertainty".

In 2023, a challenge of uncertainty insufficiency was dismissed in ***Ensygnia v Shell***[261]. Ensygnia's patent concerned the handling of encoded information. Shell argued that, on the (largely accepted) construction of the claim language advanced by Ensygnia, the patent did not teach the skilled reader (i) how they could ascertain whether a sign was sufficiently unchanging to fall within the scope of the claims; or (ii) how to determine whether the "geographically proximate" requirement had been met.

The first point was rejected succinctly. The boundary was clear: the sign must be one which did not change once it had been created. The second point was a defensive one, to counter Ensygnia's argument regarding prior art Kiliccote. The judge had rejected the Kiliccote challenge, but she said that if she had been wrong to do so she would have rejected the uncertainty insufficiency challenge ([283]):

[258] *Gilead Sciences Inc & Anr v NuCana Plc* [2023] EWHC 611 (Pat) (21 March 2023) Meade J

[259] *Unwired Planet v Huawei* [2016] EWHC 576 (Pat)

[260] *Anan Kasei (Rhodia) v Neo* [2019] EWCA Civ 1646

[261] *Ensygnia IP Limited v Shell Oil Products Limited & Ors* [2023] EWHC 1495 (Pat) (26 June 2023) Charlotte May KC

> "…if the sign of the claim was required to be geographically proximate to the electronic apparatus, that would create a “fuzzy boundary” but would not make the claim uncertain."

Some thoughts on insufficiency

In the EPO, the Enlarged Board of Appeal's G 1/03 decision is treated as identifying whether a question of validity should be considered through the lens of article 56 or article 83 EPC. When a patentee relies upon a technical effect that is expressed in a claim, the EPO will consider whether article 83 is complied with. If a technical effect relied upon by the patentee is not expressed in the claim, then the EPO considers validity under article 56.

In the EPO, as the EBA in G 2/21 stated, when a question of validity arises under article 56 EPC, a technical effect relied upon by the patentee must be encompassed by the technical teaching of the application as originally filed and embodied by the same originally disclosed invention. Nevertheless, it is clear from the G 2/21 decision itself, and the TBA's later application of it, that later data may, at least sometimes, permissibly be relied upon by the patentee when seeking to establish the necessary standard of technical effect.

In contrast, in the UK, at least when a question arises as to invalidity for lack of "plausibility" (*Agrevo* obviousness or insufficiency for excessive claim breadth), the court confines the patentee seeking to rely upon a technical effect to the contents of the application for the patent and the common general knowledge. Later published data may not be relied upon.

Further, the courts in the UK consider the requirements of article 83, as enacted for the purposes of invalidity challenges by section 72(1)(c) of the Patents Act, to be applicable to **all** claim types, irrespective of whether the claimed technical effect is expressed in the language of the challenged claim(s). So, in 2023, we saw the requirement that the technical effect relied upon by the patentee be plausible/credible/have reasonable basis was applied to inventions claimed in product form in both *Gilead v NuCana* and *Sandoz v BMS.* In the former, Meade J applied the test explained by Birss LJ in *Fibrogen v Akebia*, asking what it meant to say that the invention worked, and then asking if it was possible to make a reasonable prediction that it did so with substantially everything falling within the scope of the claimed class. In the latter, Arnold LJ expressed the standard as being that in order for BMS' claim to the single chemical compound to be patentable, the application had to make it plausible that the compound had the utility asserted for it.

Additionally, in the UK's common law legal system, expert evidence plays a more central role in patent litigation than in proceedings in the EPO. The duties and obligations imposed on expert witnesses by the English courts and the rigorous testing of evidence before the court by cross-examination, mean that the evidence the English court ultimately receives in the course of proceedings may differ from that in the EPO. This can lead to the English court reaching a different conclusion on validity to that reached by the EPO, even before the differences in approach identified above with respect of articles 56 and 83 EPC are factored in.

Hence we see patents granted and upheld by the EPO that do not survive invalidity challenges brought before the courts in the UK.

As a broad patent profession, what can we do to enable inventors to obtain enforceable monopolies in the UK?

We can ensure that when seeking a patent for the UK through the European patent system, the requirements of English case law are factored in at the drafting stage: when working with inventors to prepare necessary support; and when explaining how that support is commensurate with the invention.

As a profession, we may need to improve how we communicate the requirements of the English courts to colleagues overseas, before priority documents are prepared and international applications filed.

There may be circumstances where it is advisable to seek patent protection for the UK outside the European system, to enable more tailored focus on the requirements of UK case law.

The reality is that the principles being applied in the case law in the UK today are largely expressions of long-standing principles. In *Biogen v Medeva*[262] Lord Hoffmann said that the Board in *Genentech I/Polypeptide expression*[263] was doing no more than applying a principle of patent law which had long been established in the UK, namely that the specification must enable the invention to be performed to the full extent of the monopoly claimed. Lord Hoffman explained that s.72(1)(c) of the Patents Act was therefore intended to give the court in revocation proceedings a jurisdiction to hold a patent invalid on the substantive ground that the monopoly claimed exceeded the technical contribution to the art made by the invention as described in the specification. In *American Home Products v Novartis*[264], Aldous LJ observed that ([37]):

> "…as Lord Hoffmann pointed out in *Biogen*, the patent, to be sufficient, must provide an enabling disclosure across the breadth of the claim."

The long-standing principle referred to by Lord Hoffmann is the "patent bargain". The Supreme Court in *Actavis v ICOS*[265] (Lord Hodge) explained (53):

> "Since the enactment of the 1623 Statute of Monopolies, which prohibited the grant of a monopoly by the Crown but in section VI created an exception for a patent for “the sole working or making of any manner of new Manufactures … to the true and first Inventor and Inventors of such Manufactures …”, the purpose of a grant of a patent has been to encourage innovation. The monopoly granted by the patent rewards the inventor by enabling him or her to charge a higher price than would have been possible if there had been competition. The “patent bargain” is this: the inventor obtains a monopoly in return for disclosing the invention and dedicating it to the public for use after the monopoly has expired.

The Supreme Court in *Warner-Lambert v Generics*[266] (Lord Sumption) noted the patent bargain as being the juridical basis on which patents are granted and similarly said that the "inventor obtains a monopoly in return for disclosing the invention and dedicating it to the public for use after the monopoly has expired". He continued ([17]):

> "The principle remains the foundation of modern patent law, and is recognised in the case law of both the United Kingdom and the European Patent Office. In *EXXON/Fuel Oils* (T 409/91)

---

[262] *Biogen Inc. v Medeva Plc* [1996] UKHL 18

[263] T 292/85 *Genentech I/Polypeptide expression*

[264] *American Home Products Corporation & Anr v Novartis Pharmaceuticals UK Limited & Anr* [2000] EWCA Civ 231

[265] *Actavis Group PTC EHF & Ors v ICOS Corporation & Anr* [2019] UKSC 15

[266] *Warner-Lambert Company LLC v Generics (UK) Ltd & Anr* [2018] UKSC 56

[1994] OJ EPO 653, at paras 3.3 and 3.4, the EPO Technical Board of Appeal observed that it was

> "the general legal principle that the extent of the patent monopoly, as defined by the claims should correspond to the technical contribution to the article in order for it to be supported, or justified. … This means that **the definitions in the claims should essentially correspond to the scope of the invention as disclosed in the description**. … Although the requirements of articles 83 and 84 are directed to different parts of the patent application, since article 83 relates to the disclosure of the invention, whilst article 84 deals with the definition of the invention by the claims, the underlying purpose of the requirement of support by the description, insofar as its substantive aspect is concerned, and of the requirement of sufficient disclosure is the same, namely to ensure that the patent monopoly should be justified by the actual technical contribution to the art."

The principal conditions of validity, novelty, inventive step, industrial application and sufficiency are all, in one way or another, directed to satisfying the principle thus expressed."

Section VI of the Statute of Monopolies remains on the statute books in the UK – available to view these days at legislation.gov.uk/aep/Ja1/21/3/section/VI. The overarching principle of the patent bargain has survived the UK's accession to the EPC. Perhaps, as a profession, we can best enable our clients to obtain enforceable patent protection for the UK by keeping in mind this holistic principle, and remembering that the requirements for enforceable patent protection in the UK are not confined to the provisions of the EPC or the case law of the Boards of Appeal.

e) Added matter

In 2023, Meade J began the year by again providing a succinct summary of the principles governing the assessment of added matter: in ***Nokia v OnePlus*** **(16 January 2023)**[267] he said that ([253]):

> "The law on added matter is well known and was not in dispute. A strict comparison must be made and if the amended patent discloses new matter relevant to the invention that was not clearly and unambiguously disclosed before, the amendment is not allowable; see *European Central Bank v Document Security Systems* [2007] EWHC 600 at [97]ff, cited with approval in *Vector v Glatt* [2007] EWCA Civ 805. A species of this general rule arises when there is intermediate generalisation by taking a feature from a specific embodiment and introducing it into a claim when there is no indication that it was generally applicable. See *Nokia v IPCom* [2012] EWCA Civ 567.
>
> The legally relevant comparison is with the application as filed but for present purposes one can look at the granted Patent and that is what both parties did."

Nokia's standards essential patent concerned a searching unit configured to search a set of specific sequences in a particular way. In the assessment of added matter, mindful that the standard to be

[267] *Nokia Technologies OY & Anr v OnePlus Limited Technology (Shenzhen) Co., Ltd & Ors* [2023] EWHC 23 (Pat) (16 January 2023) Meade J

applied is "clear and unambiguous disclosure, not obviousness" and that he was drawing on the evidence of the experts not in order to apply an obviousness standard but for "basic technical appreciation", Meade J dismissed OnePlus'/Oppo's challenge, for the same reason as reached by the District Court of the Hague and the EPO's Opposition Division. He said that Oppo's arguments to the contrary were "artificial and depended on divorcing the text of the document from the skilled person's technical understanding".

A couple of months later, in ***Gilead v NuCana* (21 March 2023)**[268], Meade J took a fuller look at the principles. He began with a long quote from the Court of Appeal's judgment in *Nokia v IPCom*[269], which drew upon *Bonzel v Intervention*[270], G 2/10[271], *Vector v Glatt*[272], G 1/93[273] and *ECB v DSS*[274]. This noted art.123(2) EPC, that whether there is added matter is to be determined by comparing the disclosure of the application read through the eyes of the person skilled in the art (with the benefit of their CGK) with that of the patent read through the eyes of the person skilled in the art (with the benefit of their CGK). The claims form part of the disclosure, but not everything which falls within the scope of the claims is necessarily disclosed. Subject matter will be added unless it is clearly and unambiguously disclosed in the application, either explicitly or implicitly. The question is, would the person skilled in the art, looking at the patent/amended specification, learn anything which they could not learn from the unamended specification? It is important to avoid hindsight in the analysis.

In *ECB v DSS*, Kitchin J explained that the idea underlying art 123(2) is that an applicant is not allowed to improve their position by adding subject matter not disclosed in the application as filed. This could give the applicant an unwarranted advantage, enabling them to circumvent the first to file rule, gaining a different monopoly to that justified by the originally filed subject matter, and could be damaging to the legal security of third parties.

Further, whether an added feature which *limits* the scope of protection is contrary to art 123(2) must be determined from all the circumstances. If it provides a technical contribution to the subject matter of the claimed invention then it would give an unwarranted advantage to the patentee. On the other hand, if the feature merely excludes protection for part of the subject matter of the application, it will not give unwarranted advantage to the patentee or adversely affect the interests of third parties.

As Pumfrey J explained in *Palmaz's European Patents*[275] if the specification discloses distinct sub-classes of the overall inventive concept, then it should be possible to amend down to one or other of those sub-classes. However, taking features which are only disclosed in a particular context and not as having an inventive significance, and introducing them into the claim deprived of that context, amounts to a type of added matter called "intermediate generalisation".

Meade J said that the legal security of third parties matters because, although patent claims can change (and indeed be broadened in prosecution), **third parties ought to be able to read a patent application and form a view as to the maximum extent of valid protection that will be achievable**.

---

[268] *Gilead Sciences Inc & Anr v NuCana Plc* [2023] EWHC 611 (Pat) (21 March 2023) Meade J

[269] *Nokia OYJ v IPCom GmbH & Co KG* [2012] EWCA Civ 562

[270] *Bonzel & Anr v Intervention Limited & Anr* [1991] RPC 553

[271] G 2/10 SCRIPPS/Enzymatic DNA molecules

[272] *Vector Corporation v Glatt Air Techniques Inc* [2007] EWCA Civ 805

[273] G 1/93 Limiting feature

[274] *European Central Bank v Document Security Systems Incorporated* [2007] EWHC 600 (Pat)

[275] *Palmaz's European Patents* [1999] RPC 47

Meade J agreed with NuCana that selecting **down** from multiple lists did not cut across this kind of legal security because all the possibilities to be covered in the claims were covered in the original disclosure (i.e. Formula 1). However, he said that this was an incomplete answer, because:

- making a selection from multiple lists for which there was no basis would cut across the expectation of third parties who had concluded both that a broad class disclosed in an earlier application was invalid and that there was no narrower class disclosed to which the applicant for the patent could fall back (or perhaps that any narrower class would not be infringed); and

- if an applicant filed an application for a very broad Markush formula without any idea of which compounds covered actually worked, and was later permitted to reduce options in multiple lists to claim compounds with later knowledge of what did work, it could keep the application's filing date and thereby circumvent the first to file rule.

Meade J also noted the following UK authorities addressing whether and when selection from multiple lists can be added matter: *Merck v Shionogi*[276]; *GSK v Wyeth*[277]; and *Idenix v Gilead*[278]. In *Idenix* the Court of Appeal confirmed that some proposed amended claims that deleted options from the possibilities of structural groups R1 and R2 disclosed a new sub-class of compounds, not previously disclosed; and this was made worse by the fact it was done to remove from the granted claims compounds which the patentee's own expert had said were not plausibly effective. The provision of a technical contribution across the scope of the claim for the first time was relevant to added matter.

Meade J said that he agreed with Arnold J's view expressed in *Merck v Shionogi* that there will be a particularly severe problem if the patentee tries to narrow down to just one previously undisclosed compound – but that would not be the only time there would be added matter. It was a question of degree.

Meade J then addressed the current state of play in the EPO case law, drawing on the EPO Case Law book (10th edition, 2022). This stated the guiding principle as that deleting meanings of residues from a generic chemical formula must not lead to the selection, in the respective lists, of a particular combination of single, specific, but originally undisclosed, meanings of residues. Meade J quoted the summaries of particular decisions drawn upon in the formulation of this principle, and then considered in more depth a few of them. From this, he identified the following principles ([253]):

> "i) Do the deletions single out a particular combination of specific meanings, i.e. a hitherto not specifically mentioned individual compound or group of compounds?
>
> ii) Or, do the deletions merely maintain the subject matter as a generic group of compounds differing only from the original group by its smaller size?
>
> iii) It is relevant to consider whether the deletions “generate another invention”. Another invention will be generated if the smaller group provides a technical contribution."

[276] *Merck Sharp and Dohme Limited v Shionogi & Co Limited* [2016] EWHC 2989 (Pat)

[277] *GlaxoSmithKline UK Limited v Wyeth Holdings LLC* [2016] EWHC 1045 (Pat)

[278] *Idenix Pharmaceuticals Inc v Gilead Sciences Inc & Ors* [2014] EWHC 3916 (Pat); [2016] EWCA Civ 1089

Meade J saw nothing inconsistent in the EPO case law with the notion that, when asking whether an amendment added matter, it was relevant to ask whether it presented a different invention, and that part of that inquiry might be whether it provided a new technical contribution. He explained ([274]):

> "One is not inquiring whether there is a new technical contribution instead of asking whether there is added matter, but simply recognising it as a likely symptom of there being added matter."

Meade J also noted that the TBA decision in T 1150/15 *Shionogi*[279] considered the same patent as that previously considered by Arnold J in *Merck v Shionogi*. Arnold J concluded there was no added matter. The TBA reached the opposite conclusion, but the difference was not due to divergent legal standards but to the assessment of the facts.

On the relevance of motive in the assessment of added matter, Meade J said that he agreed with NuCana that the fact that the patentee amends in order to cut claims back to embodiments that are enabled, or to give a better argument for inventive step over a prior art citation, does not mean there is added matter. Those were normal and common reasons for amendment. Further, if there is basis for an amendment, it will not be refused because the patentee wants to solve an insufficiency problem; however if there is no basis for the amendment then it will not be allowed whatever the motive. Hence in the present case the issue was about permissibility, not motive.

Finally on the law, Meade J noted Gilead's reliance on the preliminary opinion of the Technical Board of Appeal in the opposition to NuCana's EP 190, which stated ([279]):

> "… In order to comply with Article 123(2) the deletion must not result in a particular combination of specific meanings which was not originally disclosed and which thereby generates another invention. In other words the amendment may not lead to a combination that is suitable to provide a technical contribution to the originally disclosed subject-matter as opposed to a mere restriction of the required protection.
>
> In the patent as granted the definition of the compounds of formula I had already been limited with respect to the originally disclosed group of compounds by restriction of Y to a single meaning. Whilst such limitation is not objectionable as sole amendment, the combination of this limitation of Y with the further deletion of H in the meaning of X seems to single out those compounds in which Y represents F and in which X does not represent H. The original disclosure does not seem to provide any pointer to such combined limitation. The combined limitation effectively results in a group of compounds which is distinguished from the originally defined group of compounds by not comprising those compounds which are also covered by the teaching of document D36 [Shepard] and seems thereby suitable to provide a technical contribution to the originally disclosed subject-matter."

Meade J made clear that the TBA's opinion was not binding on him, and nor would be the final decision. However, as a considered expression of the TBA's current views, it was right that he gave careful thought to it, and it fully accorded with his own views ([281]):

> "Restricting Y to a single meaning would not, on its own, add matter according to the EPO's approach. But combining that restriction with a more limited set of options for X amounts to "singling out" a smaller class of compounds. And it is relevant that the effect of doing so is to

[279] T1150/15 *Shionogi*

provide a technical contribution over Shepard (although my decision would have been the same without that factor)."

Turning to the facts – whether the proposed amendments to NuCana's EP 190 added matter - Meade J explained the relevant disclosure in NuCana's PCT application, and then the relevant disclosure of EP 190 as proposed to be amended. He concluded that there was added matter ([303]-[308]):

> "Compared with the PCT, the class of compounds of Formula I is much narrower. Y has to be F and X has to be F, Cl, Br or Me (except Cl is excised in the conditional amendment). By contrast the PCT allowed X and Y each to be any of H, F, Cl, Br, I, OH and Me.
>
> The new class is significantly different and the skilled person would not think that there had been a mere reduction still leaving the same generic class differing only in size.
>
> The problem is significantly exacerbated by the fact that the narrowing does not correspond to the statements of which possibilities are preferred: Y's having to be F was one of the preferences expressed, but at the same time it was said that X ought also preferably to be F, H or OH, and the proposed amended claim keeps F but discards H and OH and replaces them with F, Cl, Br and Me, a mixture of those preferred and those not said to be preferred. There are also more detailed preferences for X and Y in the PCT depending on the base, but the amended claims do not correspond to them, either.
>
> When EP190 says that there are benefits to the compounds disclosed it is talking about a different class of compounds from those the PCT identified. There was no such claim for the class in the PCT.
>
> NuCana's only real answer to these points (it particularly struggled with the point about the statements of preference) was that a patentee is always allowed to cut down multiple lists without adding matter because all the possibilities in all the lists are disclosed, the only exception being that it is not permissible to cut all the way down to a single compound or a very small number. I think the difficulties in its position drove it to such an extreme contention, but it plainly is not the law. None of the domestic or EPO cases says that.
>
> … I think it is relevant that the effect of the amendments is to define a new class that does not cover inactive compounds or compounds that cannot be made, and that avoids an obviousness attack from Shepard. These are all symptoms of there being a different invention put forward in the amended patent. This point reinforces my conclusion but is not essential to it; the primary reason for my conclusion is that there simply is added matter in the new class of compounds put forward."

In this conclusion Meade J differed from the opinion expressed by the UK IPO examiner. He observed that the examiner's views were set out very briefly and lacked reasons.

Gilead also challenged an amendment to EP 190 by which the unconventional definition of "alkyl" contained in the PCT application would be deleted and the word left to take its conventional meaning. The challenge was for added matter and lack of clarity. Meade J rejected both attacks. On the former basis, the usual sense of the word was clearly meant to be comprehended within the artificial one; and the conventional meaning was a sufficiently clearly understood concept in chemistry of this kind.

***Ensygnia v Shell* (26 June 2023)**[280] concerned Ensygnia's patent to an information security method/system, which Ensygnia claimed was infringed by three iterations of the Shell Mobile Payment System. Shell challenged the validity of the patent on a number of grounds, including added matter.

On the principles concerning added matter, Charlotte May KC noted *Vector v Glatt*[281] and *Nokia v IPCom*[282] (as Meade J had done in *Gilead v NuCana*). She said ([161]):

> "I particularly bear in mind that subject matter will be added unless it is clearly and unambiguously disclosed in the application as filed, and that it is important to avoid hindsight in the sense that the skilled person reading the application has not seen the amended specification and so does not know what they are looking for."

The judge added that it is "trite law" that the claims of the application are part of the disclosure, although there can be a difference between what is disclosed by a claim and what falls within its scope.

Charlotte May KC's conclusions on the construction of claim 1 are discussed in section 2.a above. Having considered the natural reading of the language of the claim, the context provided by a key passage on page 22 of the specification and arguments made in respect of the wider specification, she concluded that "sign" within the meaning of claim 1 meant something that was not electronic and would not change between transactions. This assisted Ensygnia on infringement: the QR code displayed on a static placard was a "sign" within the meaning of claim 1.

However, Ensygnia's patent had been amended post-grant. It was granted (the B specification) in May 2013; amendments were published in August 2018 (the C specification). The first iteration of the Shell system had been introduced in July 2015, and Ensygnia had notified Shell of the existence of the patent in the second half of 2017.

The amendment to Ensygnia's patent to reach the C specification did not alter the language of claim 1 as granted. It did, however, alter a key passage on page 22 of the specification – the same passage that the judge took into consideration when concluding that "sign" meant a static sign in the context of claim 1 of the C specification. In the application as filed and in the patent as granted the passage read ([170]):

> "In such embodiment, the computing apparatus 10 may comprise an electronic door lock. **The encoded information item** 112, 312, **such as a GO** as described above**, may be displayed on a sign** geographically proximate to the electronic door lock. **Alternatively, the GO** 112, **312 may be provided on an electronic display** geographically proximate to the electronic door lock. **In such embodiments, the encoded information item may be periodically updated** following receipt of signals from the first server apparatus 14 (or from the second server apparatus 16 if the system is as shown in Figure 2)."

In the C specification the passage read ([107]):

> "In such an embodiment, the computing apparatus 10 may comprise an electronic door lock. **The encoded information item** 112, 312, such as a GO as described above, **may be**

[280] *Ensygnia IP Limited v Shell Oil Products Limited & Ors* [2023] EWHC 1495 (Pat) (26 June 2023) Charlotte May KC

[281] *Vector Corporation v Glatt Air Techniques Inc* [2007] EWCA Civ 805

[282] *Nokia OYJ (Nokia Corporation) v IPCom GmbH & Co KG* [2012] EWCA Civ 567

displayed on a sign geographically proximate to the electronic door lock. **In embodiments outside the scope of the claims, the GO** 112, 312 **may be provided on an electronic display** geographically proximate to the electronic door lock. **In such embodiments, the encoded information item may be periodically updated** following receipt of signals from the first server apparatus 14."

Shell alleged that Ensygnia's C specification added matter because there was no clear and unambiguous disclosure in the application as filed that the display could be a static (i.e. unchanging, non-electronic) sign.

Charlotte May KC explained that in the C specification, the teaching was that only the electronic display could be periodically updated but that it fell outside the scope of the claim. This was the addition of the phrase “In embodiments outside the scope of the claims” changed the sense of the next sentence and meant that it was only understood to apply to the electronic display.

By contrast, in the application as filed, the teaching that the electronic display fell outside the scope of the claim was not present. Instead, the skilled reader was taught that the display could be an electronic display or a sign, and both were within the scope of the claims. The last sentence of the passage said "[i]n such embodiments, the encoded information item may be periodically updated following receipt of signals from the first server apparatus". This must be referring to both the embodiment where the GO was provided on an electronic display and the embodiment where the GO was provided on a sign. Therefore it must follow that the "sign" was digital or electronic, albeit that it was different from an electronic display in some way. Without hindsight, it would not occur to the skilled reader that the passage, in the context of the application as a whole, meant that the invention could be implemented using a sign that was not electronic or which could not be changed.

So Ensygnia's argument that the application taught two alternative forms of display – one being electronic and one not – was rejected. The argument was supported by neither the p.22 passage nor the wider application. Accordingly, if the claims of the patent in the C specification were limited to a static sign (as the judge had found), they disclosed matter which was central to the invention but was not part of the application as filed. The claims were "bad for added matter" and must be revoked.

Abbott v Dexcom **(18 October 2023)**[283] is one of the patent infringement/validity judgments delivered by a non-IP specialist. Abbott's patent was to an apparatus for inserting a medical device into the skin of a subject. Dexcom challenged validity for added matter (intermediate generalisation). Dexcom's case was that the invention disclosed in the application involved the use of a "biased retention feature" (although it was not described in that way in the application) that interacted with a detent in the housing, but subsequently claim 1 of the patent was extended so as to include integers involving biased retention features that did not interact with a detent. Dexcom said that therefore elements of the invention that were taught in the application as essential were no longer required in the claims of the patent as granted.

On the principles, Richards J began, not with *Vector v Glatt* and *Nokia v IPCom*, but with the older expression of principle to be found in *Bonzel v Intervention*[284]. Aldous LJ described the task for the court as three-fold: i) ascertain through the eyes of the skilled person what is disclosed (explicitly and implicitly) in the application; ii) do the same in respect of the patent as granted; and iii) compare the two disclosures and decide whether any subject matter relevant to the invention has been added (by

[283] *Abbott Diabetes Care Incorporated & Ors v Dexcom Incorporated & Ors* [2023] EWHC 2591 (Ch) (18 October 2023) Richards J

[284] *Bonzel & Anr v Intervention Limited & Anr* (No 3) [1991] RPC 553

deletion or addition); the comparison is strict in the sense that subject matter will be added unless such matter is clearly and unambiguously disclosed in the application (explicitly or implicitly).

Richards J added that the claims of the patent, whose function is to delimit the area of the patentee's monopoly, may use phrases that generalise the claims beyond the description of the invention set out in particular embodiments. Provided that the generalised wording does not teach anything new about the invention, there is no added matter and instead the situation is one of "the kind of broadening of coverage without any new teaching which is lawful…as Birss J (as he then was) put it at [330] of" *Varian v Elektra*[285]. (In fact, in that paragraph Birss LJ simply noted an assertion of principle made by Varian. He went on to say:

> "I do not believe Varian meant this but at times their submissions could be understood as suggesting that if an amendment increased the scope covered then it was necessarily lawful and did not add matter. This would be wrong. The line of cases from *AC Edwards* onwards above shows that the fact that an amendment increases the scope of what is covered does not make that amendment add matter. But it does not mean that increases in coverage get a free pass. If an amendment which increases coverage also has the effect of the patent disclosing new matter then that amendment is unlawful. Putting it another way - if all the amendment achieves is an increase in scope relative to what went before then it does not add matter (*AC Edwards*) but the fact it increases scope does not mean it cannot also add matter. That latter question just depends on the particular circumstances.")

Richards J said that the sort of situation contemplated by his reference to *Varian v Elektra* should be distinguished from the sort described in *Nokia v IPCom*[286], in which "a feature is taken from a specific embodiment, stripped of its context and then introduced into the claim in circumstances where it would not be apparent to the skilled person that it has any general applicability to the invention". This sort of situation results in the claim being invalid. The key difference is that in the second situation the effect of the generalisation is to teach the skilled person to whom the patent is addressed something new about the invention, whereas in the first situation the skilled person is taught nothing new.

Richards J said that in view of the conclusion he had reached on the construction of "biased retention feature", the present case fell into the first category, of permitted generalisation. The "biasing" element was disclosed in the application at [00255] as "Sheath 3708 can include retention members 3726, e.g. detent snaps, which are biased into detent 3724 of housing 3702 to create a minimum force that must be overcome in order to advance sharp 324 into the subject's skin". What ultimately became claim 1 in the patent was simply a generalisation of this concept beyond the snaps and detents referred to in particular embodiments. The amendment taught nothing new, so the added matter challenge failed.

f) Patentable subject matter

In ***Gilead v NuCana*** **(21 March 2023)**[287], Gilead argued that lack of plausibility meant that NuCana's patent, claiming products defined by Markush formula, was invalid for lack of industrial application as well as insufficiency.

---

[285] *Varian Medical Systems International AG v Elektra Limited* [2017] EWHC 712 (Pat)

[286] *Nokia v IPCom* [2012] EWCA Civ 567

[287] *Gilead Sciences Inc & Anr v NuCana Plc* [2023] EWHC 611 (Pat) (21 March 2023) Meade J

On the principles governing the assessment of industrial application, Meade J noted Lord Neuberger's judgment in the Supreme Court *HGS v Eli Lilly*[288] and in particular the following, derived from the approach of the Boards of Appeal of the EPO ([327]):

> "(i) **The patent must disclose "a practical application"** and "some profitable use" for the claimed substance, so that the ensuing monopoly "can be expected [to lead to] some ... commercial benefit" (T 0870/04, para 4, T 0898/05, paras 2 and 4);
>
> (ii) A "concrete benefit", namely the invention's "use ... in industrial practice" must be "derivable directly from the description", coupled with common general knowledge (T 0898/05, para 6, T 0604/04, para 15);
>
> (iii) A merely "speculative" use will not suffice, so "a vague and speculative indication of possible objectives that might or might not be achievable" will not do (T 0870/04, para 21 and T 0898/05, paras 6 and 21);
>
> (iv) The patent and common general knowledge must enable the skilled person "to reproduce" or "exploit" the claimed invention without "undue burden", or having to carry out "a research programme" (T 0604/04, para 22, T 0898/05, para 6)"

There was a dispute about what would amount to "practical application". NuCana submitted that the claimed compounds had practical application as research tools, "to probe and further understand those mechanisms" and/or "for potential use in therapy". **Meade J** disagreed. He **held that while *HGS* indicated that the test for plausibility was an undemanding one, it did not endorse the "doubly remote" approach (just plausibly having potential) contended for by NuCana.**

Further, Meade J said that **the Supreme Court's reasoning in *HGS* did not support use as a research tool, to better understand mechanisms of action and structure-activity relationships and the like, as being enough. On the contrary, *HGS* was explicit that there had to be some practical utility of the invention** [333]. He continued ([389]):

> "This whole argument assumes the provision of information (resistance, mechanisms of action) that is not provided by the Patents or even pleaded by NuCana as being part of its contribution. What it boils down to, even assuming the provision of that information, is that the Patents provide compounds which could be used to generate information, both as to their success and failure in terms of cytotoxicity, to feed into a research project to explore mechanisms and SARs and thus, much later, to find out which ones work and why."

The judgment of Sir Anthony Mann in ***Emotional Perception v Comptroller* (21 November 2023)**[289] addressed a question about the "program for a computer…as such" exclusion from patentability contained in section 1(2)(c) of the Patents Act.

Emotional Perception's claim was to a method (and product of that method) of providing relevant file recommendations in an Artificial Neural Network (ANN) (i.e. AI). The claimed invention was said to provide an improved system for providing media file recommendations to an end user, by offering

---

[288] *Human Genome Sciences Inc v Eli Lilly and Company* [2011] UKSC 51

[289] *Emotional Perception AI Ltd v Comptroller-General of Patents, Designs and Trade Marks* [2023] EWHC 2948 (Ch) (21 November 2023) Sir Anthony Mann

suggestions (for example of similar music) in terms of human perception and emotion irrespective of the genre of music and apparently similar tastes of other humans.

The Hearing Officer's conclusion was that the computer program exclusion was engaged. His reasoning drew upon the four-stage approach in *Aerotel v Telco*[290] and the five signposts for assessing technical contribution proposed in AT&T v Comptroller[291].

In the court, a preliminary question was addressed: how, if at all, was the exclusion engaged – where was the computer and where was the program? Both hardware ANNs and software/emulated ANNs were within the scope of the claim. Sir Antony Mann concluded in both cases that there was a "computer", but that there was no "program". Therefore the exclusion did not apply.

The judge's reasoning for concluding that a hardware ANN was a "computer" for the purposes of s.1(2)(c) PA was that in everyday parlance the ANN would be regarded as a computer and so it ought to be treated as one within the exclusion. For example, an ANN falls within the opening part of the definition of "computer" in the Oxford English Dictionary ("An electronic device (or system of devices) which is used to store, manipulate, and communicate information, perform complex calculations, or control or regulate other devices or machines, and is capable of receiving information (data) and of processing it in accordance with variable procedural instructions (programs or software)…". Sir Antony Mann explained ([41]):

> "A traditional computer is a computer because of its functions and activities. It is not defined by the fact that it runs things called programs. That puts things the wrong way round. So if the ANN is new thing which does not run a program in the normal sense that does not prevent it from being a computer if its functions and activities justify that description. I consider that they do justify it."

In the case of software ANN, a computer was involved, and the computer was a relevant computer for the purposes of PA s.1(2)(c).

On whether there existed a "program" for the purposes of s.1(2)(c) PA, the judge noted that the Comptroller had conceded that in the case of a hardware ANN there was no program to which the exclusion applied. Therefore if Emotional Perception's patent application had been confined to a hardware ANN it would not have been excluded. The issue was whether there was a program in the case of the emulated ANN.

Emotional Perception's position was that in operation, the trained emulated ANN existed at a layer above the software platform that enabled the computer to carry out the emulation – there was no program at that point because no person had given a set of instructions to the computer to do what it did as the ANN had trained itself. So what was operating was not a set of program instructions but the application of the ANN's own weights, biases and so on to produce relevant vectors or coordinates. It was emulating a piece of hardware which had physical nodes and layers, and was no more operating or applying a program than a hardware system was.

The Comptroller's position was that the emulated ANN was "supported by a computer" and the manner in which it operated was "code" (to use a word used in the application) which permitted the process of taking in a queried file, assessing its vectors, comparing them to vectors in the reference database and

---

[290] *Aerotel Ltd v Telco Holdings Ltd* [2006] EWCA Civ 1371

[291] *AT&T Knowledge Ventures LP v Comptroller General of Patents* [2009] EWHC 343 (Pat)

spitting out a file recommendation. The HO was not persuaded that the emulated ANN could be decoupled from the software platform that supported it, without giving reasons.

Sir Anthony Mann looked at the emulated ANN as, in substance, operating at a different level (albeit metaphorically) from the underlying software on the computer: it was operating in the same way as the hardware ANN. If the latter was not operating a program then neither was the emulation. So the emulated ANN, in operation, was not a program for a computer for the purposes of s.1(2)(c).

The only remaining candidate computer program was therefore the program which achieved, or initiated, the training. Emotional Perception conceded that the training stage involved programming activity. But the judge said that it was not correct to view the whole thing as some sort of overall programming activity for the purposes of the exclusion. One needed to be "a bit more analytical than that". If the HO were right to take the view that overall the "programme for a computer" exclusion was engaged, then the conclusion "ought to apply to the situation of a hardware ANN" (although the Comptroller conceded that it did not). The programming involved at the training stage involved setting the training objectives in terms of the structure of the ANN (if in software) and the training objectives – it was not possible to define the programming any further than that. The judge continued ([61]):

> "…it does not seem to me that the claim claims that program. What is said to be special is the idea of using pairs of files for training, and setting the training objective and parameters accordingly. If that is right, and I consider it is, then the actual program is a subsidiary part of the claim and is not what is claimed. The claims go beyond that. The idea of the parameters itself is not necessarily part of the program. On this footing as a matter of construction the claim is not to a computer program at all. The exclusion is not invoked."

In case he was wrong on whether the "program for a computer…as such" exclusion was engaged, the judge then considered and applied the principles developed in the authorities going to the s.1(2)(c) exclusion, in particular the four-step *Aerotel* test. The parties agreed that if there was a technical effect (contribution) which lay outside the excluded subject matter, then the invention was unlikely to fall foul of the computer program exclusion because it would not be a claim to a program "as such". A number of judgments provided helpful reference on whether a claim was to a program "as such" (*Halliburton's Patent Application*[292], *Vicom*[293]*, Gemstar v Virgin*[294], *Protecting Kids The World Over's Application*[295]).

The task performed by the claimed invention was the provision of improved file recommendations via a sophisticated learning process and operation of the ANN. As the HO had found, the sending of the file to the end user was a matter external to the computer, with a beneficial effect on the end user in being provided with a better recommendation. But the HO was wrong to conclude that the output was subjective and in the user and therefore not a technical effect. That was not the correct analysis. The identification of a file as being semantically similar by the application of technical criteria which the system had worked out for itself was a technical effect outside the computer and it fulfilled the requirement of technical effect in order to escape the exclusion. A possible subjective effect within a user's own neural network was not a reason to change this analysis.

Further, if one approached the analysis by assuming that the computer program was either the training program or the overall training activity, the resulting ANN could nevertheless be regarded as a technical

---

[292] *Re Halliburton Energy Services Inc's Application* [2011] EWHC 2508 (Pat)

[293] T208/84 *Vicom*

[294] *Gemstar-TV Guide International Inc & Ors v Virgin Media Limited & Anr* [2009] EWHC 3068 (Ch)

[295] *Re Protecting Kids The World Over Limited's Application* [2011] EWHC 2720 (Pat)

effect which prevented the exclusion applying; and there should be no difference whether it was the hardware ANN or an emulated ANN for these purposes.

The judge declined to address a question as to whether the mathematical method exclusion (s.1(2)(a)) applied, for procedural reasons.

g) Amendment

In ***Ensygnia v Shell* (26 June 2023)**[296], Shell asserted that Ensygnia's patent was invalid for extension of protection, arguing that the protection conferred by the patent had been extended by the amendments made, which should not have been allowed.

This sort of challenge, founded upon section 72(1)(e) of the Patents Act, in respect of an amendment to a patent that has already been made, arises infrequently in the case law. Before an amendment is made post-grant, s.73(3)(b) of the Act similarly prohibits any amendment which would extend the protection conferred by the patent. The principles are the same. Charlotte May KC noted that in *Hospira v Genentech*[297], Birss J said ([106]-[108]):

> "106. This rarely comes up at trial in the UK, no doubt because the law is clear and usually easy to apply. The correct approach is to compare the scope of the claims as granted with the scope of the claims as proposed to be amended. In both cases the scope is that of the claims properly construed in accordance with the Protocol. If the proposed amended claim covers something that would not have been covered by the granted claims then the prohibition is engaged.
>
> 107. Usually to make the argument good the person challenging the amendment needs to identify a concrete thing which did not fall within the scope as granted but which would fall within the scope after amendment if the amendment was allowed. If such a thing cannot be identified in concrete terms, that is usually an indication that there is no extension. Because the prohibition is absolute, the thing need not be commercially realistic.
>
> 108. The purpose of the prohibition is the protection of the public. Once a patent has been granted, the public can rely on its scope and know that it will not get any wider by amendment. There is no corresponding prohibition pre-grant. The law of added matter is different. It applies both pre- and post-grant."

In the present case, the exercise involved a comparison of the claims in the B specification (the patent as granted) with the claims in the C specification (the patent as amended post grant).

The claims did not change between the B and C specifications. But in the B specification, the key passage on p.22 of the specification, in the context of the building security embodiment, was the same as in the application, and had been amended in the C specification. This impacted how the claim language was construed ([196]):

---

[296] *Ensygnia IP Limited v Shell Oil Products Limited & Ors* [2023] EWHC 1495 (Pat) (26 June 2023) Charlotte May KC

[297] *Hospira UK Limited v Genentech Inc* [2014] EWHC 3857 (Pat)

> "…unlike the C Specification, in the B Specification the embodiment where the GO is provided on an electronic display is not outside the scope of the claims. In my judgment, this has several consequences. First, in the context of this passage, there cannot be any doubt that the last sentence refers to both embodiments of the building security system that are described in the preceding two sentences (i.e. where the GO is displayed on a sign or on an electronic display). Second, this means that the embodiment where the GO is displayed on a sign is one where the GO can be updated periodically following receipt of signals from the first server. Third, it must follow that the sign is digital or electronic, albeit that it is different from an electronic display. Just as with the application as filed, I do not think it would even occur to the skilled reader reading the B Specification that the invention could be implemented using a static sign."

Therefore Ensygnia's argument that the passage on p.22 in specification B taught two alternative forms of display, one that was electronic (the display) and one that was not (the sign), was rejected. The claim required "*obtaining a graphical encoded information item which is displayed on a display of a computing apparatus*" and so was clearly limited to encoded information displayed on the display. The skilled person would construe this claim in the context of the B Specification as a whole to be limited to an electronic display. That was the natural reading of the integer and (unlike in the C specification) was consistent with the teaching of the document. The claim as granted did not cover a display or sign that was not electronic.

In contrast, as discussed in section 2.b above, a non-electronic sign or display did fall within the scope of claim 1 in the C specification, because the context provided by the amended passage on page 22 of the specification meant that claim 1 was construed as not covering an electronic display.

As a result, the protection of the patent had been extended by an amendment which should not have been allowed, and so the patent was invalid for this reason too.

4 TECHNICAL MATTERS AND PROCEDURE

The relevance of earlier judgments between the parties

Nokia v OnePlus **(16 January 2023)**[298] concerned Nokia's EP(UK), which was found valid. Essentiality was conceded and infringement followed. Meade J noted that he had been referred to decisions in a number of proceedings outside the UK concerning other designations of the same European patent or related divisionals. He observed that obviousness "is always heavily evidence-dependent" and he did not think he could derive any useful assistance from those decisions, although he noted consistency with the result (not obvious) that he had reached.

On the other hand, the issues of novelty, added matter and excluded subject matter were largely or entirely ones of law and interpretation of documents, so the court in the UK might in principle have regard to them – Meade J noted consistency with the conclusions reached in those contexts too.

[298] *Nokia Technologies OY & Anr v OnePlus Limited Technology (Shenzhen) Co., Ltd & Ors* [2023] EWHC 23 (Pat) (16 January 2023) Meade J

***Nicoventures v Philip Morris* (18 April 2023)**[299] concerned two Philip Morris patents to e-cigarette heating systems. Nicoventures' obviousness and added matter challenges were unsuccessful.

Noting previous judgments in the context of the wider dispute between the parties[300], Michael Tappin KC rejected a suggestion that he have regard to certain findings made by a judge in an earlier decision. He had to make findings on the evidence and submissions which he had heard. To have regard to findings made by another judge in a different case was either unnecessary or dangerous.

Michael Tappin KC also had comments on the relevance of two instances of judgments in parallel proceedings from the Landgericht and Oberlandesgericht Düsseldorf courts. He rejected a suggestion that he should treat the two decisions as of equal stature: the decision of the Oberlandesgericht must be taken as the (current) definitive view of the German courts, while recognising that the Bundesgerichtshof might grant permission to appeal and allow PMI's appeal. Having explained briefly the reasoning in each judgment on a key point of construction, Michael Tappin KC said that he was comforted by the fact that the Oberlandesgericht had come to the same ultimate conclusion that he had done, but he would have reached the same conclusion without having seen its decision.

***R2 v Intel* (26 June 2023)**[301] concerned an application made by R2 for an order to the effect that the defendants (broadly) either accept an experimental model employed in litigation in Germany as accurate or provide a statement of case explaining why it was inaccurate. Granting the application, Richards J explained that although aspects of R2's notice of experiments were "non-standard" for the purposes of the practice direction to Part 63 of the CPR (i.e. because they went beyond admissions as to facts), that was not a bar to the claimant's application. It was relevant that the trial had been expedited upon the request of the defendants, who had given assurances that they would cooperate to ensure that the tight deadline was met. It was a non-standard case, the PPD something of a blend between a conventional PPD and early experiments, and in all the circumstances Richards J decided to grant the application sought.

What to do in case of breach of an embargo on a draft judgment

A couple of years ago we reported some judgments handed down following breaches of embargos on draft judgments. Embargo breach issues have emerged in patent cases, trade mark cases and wider commercial disputes. There is plenty of guidance available on what lawyers should do with a view to avoiding a breach, the importance of everyone complying with an embargo, and what should be done should a breach be suspected.

In ***InterDigital v Lenovo* (30 January 2023)**[302], it was reported that following a breach of the court's embargo on a draft judgment by an individual at InterDigital, on advice from Gowling (InterDigital's solicitors) InterDigital informed the court about the breach, including by the provision of witness statements explaining what had happened. In all the circumstances, the Court of Appeal concluded that the illegitimate disclosures made were relatively limited in content and in terms of the number and identity of recipients (US lawyers); there was no public disclosure; and the facts of the disclosure were "investigated and disclosed to the court by the wrongdoer itself without prompting". The explanation

[299] *Nicoventures Trading Limited v Philip Morris Products SA* [2023] EWHC 854 (Pat) (18 April 2023) Michael Tappin KC

[300] [2021] EWHC 537 (Pat), [2021] EWHC 1977 (Pat), [2022] EWCA Civ 1638

[301] *R2 Semiconductor Inc v Intel Corporation (UK) Ltd & Anr* [2023] EWHC 1550 (Ch) (26 June 2023) Richards J

[302] *InterDigital Technology Corporation & Ors v Lenovo Group Ltd & Ors* [2023] EWCA Civ 57 (30 January 2023) Birss, Warby & Falk LLJ

and apology were accepted. Further proceedings in respect of the breach would therefore be disproportionate to any need to uphold the court's authority.

Confidentiality

Oxford University Innovation v Oxford NanoImaging **(26 January 2023)**[303] was a form of order judgment following the determination in late 2022[304] of Oxford University's claim for royalties under a patent licensing agreement. Underlying the dispute was a fundamental challenge by the inventor / an individual behind Oxford NanoImaging (ONI) to the University's entitlement to the patents licensed under the licence. Daniel Alexander KC concluded that the University was entitled to claim (and was entitled to) all of the patent rights concerned. The University then sought a final order under CPR Part 31.22 preserving confidentiality in certain documents.

Oxford NanoImaging did not oppose the order, but Daniel Alexander KC said that orders of such kind should not simply be rubber-stamped. He agreed with the University that there was a risk that the material covered by the order sought contained information which remained genuinely commercially confidential and the disclosure of which could prejudice Oxford or a third party. He noted in particular historical information about how IP rights should be allocated or benefits shared between potentially interested parties, which he had considered. There could be legitimate claims by those interested in knowing the basis for the court's decisions and more broadly. Therefore the fairest way to balance the interests of open justice with commercial confidentiality was to make the order sought but with a proviso that the parties and any other person should have permission to apply to vary this part of the order upon adequate notice.

Another final order under CPR Part 31.22 was made in ***JCB v Manitou*** **(17 July 2023)**[305]. The confidentiality dispute followed Judge Hacon's finding that three of JCB's four asserted patents were obvious and a fourth was valid and infringed by three of four Manitou machine configurations complained of[306]. Most of the judge's reasoning on infringement was confined to a Confidential Annex to his judgment.

Manitou contended that the confidential information regarding "Configuration C" comprised four heads. One head JCB agreed should remain the subject of a (final) r.31.22(2) order. One head the judge concluded could be addressed by changing the acronyms used to anodyne labels. For the remaining heads, which concerned the way Configuration C worked and its subsystems, what mattered was a key criterion called "criterion X". Configuration C was found not to infringe on the normal interpretation. On the doctrine of equivalents infringement was not found because the relevant threshold in Configuration C was criterion X not another criterion, and criterion X was not varied by reference to the angle of the telehandler arm.

Judge Hacon concluded that the information about criterion X was confidential to Manitou but refused a final r.31.22(2) order in respect of documents read or referred to at a public hearing, or material

[303] *Oxford University Innovation Limited v Oxford NanoImaging Limited* [2023] EWHC 138 (Pat) (26 January 2023) Daniel Alexander KC

[304] Oxford University Innovation Limited v Oxford NanoImaging Limited [2022] EWHC 3200 (Pat)

[305] *J.C. Bamford Excavators Limited v Manitou UK Limited & Anr* [2023] EWCA Civ 840 (17 July 2023) The President of the Family Division, Arnold LJ, Elisabeth Laing LJ

[306] *J.C. Bamford Excavators Limited v Manitou UK Limited & Anr* [2022] EWHC 1724 (Pat)

contained in his judgment on the merits, in respect of criterion X. Manitou appealed the refusal of the final r.31.22(2) order; JCB cross-appealed the underlying finding of confidentiality.

Arnold LJ's judgment contains a comprehensive review of English law on the legal protection for confidential information and trade secrets prior to the Trade Secrets Directive (2016/943). It was common ground that the Directive and the UK's implementing regulations were not directly applicable in the present case, nevertheless Arnold LJ addressed them too on the basis they informed the approach the court should adopt to the issues arising on the parties' appeals. Consequently, the judgment provides a valuable review of the principles at play in English law governing confidentiality and trade secrets. Arnold LJ explained that the Directive provided both a floor and a ceiling for protection and English law must be interpreted and applied, so far as possible, consistently with the Directive. Applying these principles, Arnold LJ agreed with Judge Hacon's finding of confidentiality.

As to whether a final Part 31.22 order should be made to preserve the confidentiality, Arnold LJ then addressed the relevant principles, with reference in particular to *Scott v Scott*[307], *Guardian News v City of Westminster Magistrates Court*[308] and *Dring v Cape*[309]. The fundamental principle of open justice is subject to a number of exceptions, which are themselves the outcome of a yet more fundamental principle – that the chief object of the courts of justice is to ensure that justice is done. The court is not engaged in an exercise of trying to balance incommensurables. This may make it impossible for the public to understand the details of the court's reasoning, but that is the price that must be paid for proper protection of trade secrets. The approach is well established in English law but receives support from recitals (24) and (25) and Article 9 of the Trade Secrets Directive, and in particular the requirement in Article 9(2)(c) for the court to have the power to publish non-confidential versions of judicial decisions from which the passages containing trade secrets have been removed or redacted (implemented by regulation 10(5)(c)). Allowing Manitou's appeal, the Court of Appeal concluded that the final Part 31.22 order sought should be ordered. However (contrary to Manitou's arguments) it was irrelevant that the that Configuration C had been found not to infringe, or that Manitou were the defendants in the litigation.

The need for any application for a final order under Part 31.22 to be made in a timely fashion is apparent from Michael Tappin KC's judgment in ***Saint-Gobain v 3M* (8 November 2023)**[310].

In May 2022, Michael Tappin KC concluded that 3M's patent was invalid for insufficiency because it did not enable the skilled person to perform the invention across the breadth of the claim[311]. In the course of the proceedings leading to trial, 3M had disclosed to Saint-Gobain samples of particles that were said to have been produced by 3M in accordance with the teaching of the "Rowenhorst" prior art. Saint-Gobain agreed to treat the "Rowenhorst particles" as disclosure documents. Therefore the particles and data and images deriving from them were agreed as confidential on a *pro tem* basis, but 3M reserved the right to argue that they were not in fact confidential. Saint-Gobain arranged for a third party to produce computed tomography (CT) scans of the particles. The product of that process was the CT Scan Files, which Saint-Gobain shared with 3M and provided a copy of to the court shortly before trial.

Prior to trial, information contained in certain exhibits to expert witness statements and Saint-Gobain's notice of experiments were protected by a confidentiality order until the first day of trial. This information

[307] *Scott v Scott* [1913] AC 417 (HL)

[308] *Guardian News v City of Westminster Magistrates Court* [2012] EWCA Civ 420

[309] *Dring v Cape* [2019] UKSC 38

[310] *Saint-Gobain Adfors S.A.S. v 3M Innovative Properties Company* [2023] EWHC 2769 (Pat) (8 November 2023) Michael Tappin KC

[311] *Saint-Gobain Adfors S.A.S. v 3M Innovative Properties Company* [2022] EWHC 1666 (Pat)

included 2D images derived from the CT Scan Files. At the start of the trial, 3M asked for and obtained continuing confidentiality protection for 3M's disclosed technical notebook extracts. A permanent order protecting the same material was included in the final order.

No order was sought or made at or after trial in respect of the CT Scan Files or any of the documents which included images or measurements derived from the CT Scan Files. Following the trial, 3M took the view that it was under no restriction on the use of the CT Scan Files. It therefore provided them to its external US lawyers and to its European patent attorneys, the latter of which used them in opposition submissions at the EPO, beginning in January 2023.

In August 2023, 3M's solicitors wrote to Saint-Gobain's solicitors to complain about use of the CT Scan Files in EPO proceedings. In September 2023, Saint-Gobain's solicitors applied to the court seeking a declaration that the CT Scan Files were read by the court or referred to by the court within the meaning of CPR 31.22(1)(a) at trial, that Saint-Gobain's use of the files in opposition proceedings did not contravene CPR 31.22(1) and that Saint-Gobain was free to use the files in any other proceedings. 3M changed its solicitors and sought an order under CPR 31.22(2) prohibiting Saint-Gobain from using the CT Scan Files for purposes other than the (English) proceedings.

3M were unsuccessful. Michael Tappin KC concluded that the relevant documents had been "referred to" at a hearing which had been held in public for the purposes of Part 31.22(1). He thought that the language of r.31.22(2) encompassed an order being made after the hearing at which the document was referred to in open court. But whether to make such an order was a matter for the court's discretion. Very good reasons were required to depart from the normal rule of publicity, for overriding the principles of open justice and transparency. While the starting assumption is that all documents in the case are necessary and relevant to the process of scrutiny, the centrality of the document to the trial is a factor to be placed in the balance, and in *JCB v Manitou* (17 July 2023) the Court of Appeal emphasised the importance of protecting material properly characterised as technical trade secrets.

Michael Tappin KC said that the CT Scan Files themselves were not central to the trial, but they were also not "marginal and gratuitous". He was "very sceptical" that they would be of value to a competitor. If the information contained in those files had been regarded as valuable, the seeking of a r.31.22(2) order would not have been overlooked at trial; nor was the delay since January 2023 consistent with that of a party fearing its valuable commercial information was being used and disclosed. What 3M was really seeking was to prevent Saint-Gobain from making further use of the information contained in the files in proceedings in the EPO or elsewhere, thereby causing 3M to incur costs in making submissions in response. This was not a weighty factor when considering whether to make an order under r.31.22(2) 19 months after trial, particularly where 3M had not acted promptly in seeking an order or even raising its concerns once Saint-Gobain started to make use of the information.

Therefore 3M's interest in avoiding the expense of dealing with submissions based on the material did not justify imposing the restriction sought. However, Michael Tappin KC accepted an offer from Saint-Gobain, made by way of fallback, to provide 3M with 21 days' notice of any intention to use the CT Scan Files for any purpose other than legal proceedings, in order to address any concerns about competitors getting insight into 3M's confidential research. 3M would have liberty to apply in the event that Saint-Gobain gave notice pursuant to its undertaking.

The Court of Appeal's judgment in ***InterDigital v OnePlus*** **(17 February 2023)**[312] concerned the confidentiality regime to be put in place (in the FRAND part of the case) at a much earlier stage of proceedings, well before trial.

Confidentiality "clubs" are used to maintain the confidentiality of sensitive information and trade secrets that are shared during litigation. Access to confidential information is restricted to members of the "club" and subject to strict conditions. The confidentiality regime put in place between InterDigital and OnePlus involved two tiers, enabling a staged approach to disclosure to take place. OnePlus' external lawyers and experts could review the licences disclosed and take a view on whether particular documents needed to be disclosed to individuals within OnePlus in order to advise and take instructions.

The dispute resulting in the Court of Appeal's judgment was about the terms of the undertaking to be given by a OnePlus employee as part of the arrangements for the higher confidentiality tier. The narrow form of undertaking, sought by OnePlus, intended to mitigate the risk that OnePlus would obtain an unfair advantage in licensing negotiations with the same counterparty as that of the relevant InterDigital licence. The wide form of undertaking, sought by InterDigital, was intended to mitigate the risk of unfairness arising from OnePlus having more data about what other parties were paying in another licence as such data could help to indicate how big the overall "cake" was – potentially of use when considering a top-down approach to royalty levels.

Birss LJ observed that therefore both forms of undertaking were attempts to mitigate genuine concerns, and risks of similar sorts of unfairness, in subsequent licensing negotiations. The degree of risk, and the degree of unfairness, addressed by the narrow form of undertaking was more direct than the one addressed by the wider form, but the differences were of degree, not in kind. Dismissing OnePlus' appeal, he said that in the particular circumstances of the case, the form of undertaking settled upon by the judge had been open to him, in view of the stage of the proceedings and the evidence before the court as to the structure and organisation of the receiving party. In general it is more straightforward to relax confidentiality restrictions over the course of proceedings than to start with a more liberal regime and then try to impose tighter restrictions, and OnePlus' evidence was "even thinner" than InterDigital's. OnePlus' appeal was therefore dismissed.

Preliminary issues and disclosure

The judgment of HHJ Hodge in ***Eli Lilly & Co v Teva*** **(17 January 2023)**[313] arose in a claim for damages under an agreement that settled a dispute about the German designation of the European Patent that resulted in the Supreme Court's 2017 judgment in *Actavis v Eli Lilly*[314]*.* Eli Lilly sought a trial of preliminary issues: as to whether the damages under clause 3.4 were to be measured by reference to the losses incurred by the Lilly group/affiliates (as Lilly contended) or the claimant/signatory entity of the 2018 settlement agreement (as Teva contended); and as to whether such damages should be assessed by reference to the damages that would have been awarded in an action for patent infringement by a German court under German law.

The judge refused Lilly's application. His reasoning included that the determination of the preliminary issues would not dispose of the whole case, nor increase prospects of settlement. Irrespective of the

[312] *InterDigital Technology Corporation & Ors v OnePlus Technology (Shenzen) Co & Ors* [2023] EWCA Civ 166 (17 February 2023) Bean, Jackson & Birss LLJ

[313] *Eli Lilly & Co v Teva Pharmaceutical Industries Limited* [2023] EWHC 68 (Ch) (17 January 2023) HHJ Hodge KC

[314] *Actavis UK Limited & Ors v Eli Lilly and Company* [2017] UKSC 48

relevant entity/entities settled upon for assessment of damages, there would need to be detailed disclosure and expert evidence addressing it. Some factual evidence might in any case be needed in respect of the preliminary issues, and if preliminary issues were heard, the trial would likely be delayed by six months or so. The judgment provides a helpful capture of the principles according to which a question of whether preliminary issues should be ordered will be decided. It also included some useful points of principle on the operation of the disclosure regime applicable in most High Court litigation, governed by the Practice Direction 57AD.

Amendment to case sought on first day of trial

Judge Hacon's judgment in ***Safestand v Weston*** **(19 December 2023)**[315] concerned Safestand's patents to builders trestles. On the first day of the trial, Weston made an application to introduce a new challenge of prior use, in view of an article found during preparation for trial.

The application was refused. According to the principles captured in respect of very late amendments in *Quah Su-Ling v Goldman Sachs*[316] and *Nesbit v Acasta*[317], save in exceptional circumstances the parties should not be put to the expense inevitably caused by the late adjournment of a trial. The court must, taking account of the overriding objective, balance the injustice to the party seeking to amend if it is refused permission, against the need for finality in litigation and the injustice to the other parties and other litigants if the amendment is permitted. There is a heavy burden on the party seeking a late amendment to justify the lateness of the application and to show the strength of the new case and why justice requires him to be able to pursue it.

Weston gave very little explanation for the lateness of its application. Weston's suggestion that the new challenge be dealt with as a second trial stage, with directions set at the form of order hearing following the judgment after the main trial, did not neutralise the principle that parties and the court have a legitimate expectation that trial fixtures will be kept. It mattered a good deal that there was no satisfactory reason why prior use could not have been pleaded in good time.

Time to judgment

Mellor J's FRAND judgment in ***InterDigital v Lenovo*** **(16 March 2023)**[318] followed a trial which took place in January-February 2022 and further evidence and hearing dates in December 2022-January 2023. In the meantime, he handed down ***InterDigital v Lenovo*** **(31 January 2023)**[319] following technical trial "C" in the case, which took place in May 2022. Mellor J's judgment in ***Astellas v Teva*** **(17 October 2023)**[320] followed a trial in July 2022, and ended with the following observation ([452]):

> "I must sincerely apologise to the parties for the length of time it has taken me to produce this judgment, which falls well short of what the parties are entitled to expect from the UK Patents

---

315 *Safestand Limited v Weston Homes plc & Ors* [2023] EWHC 3250 (Pat) (19 December 2023) HHJ Hacon

316 *Quah Su-Ling v Goldman Sachs International* [2015] EWHC 759 (Comm)

317 *Nesbit Law Group LLP v Acasta European Insurance Company Limited* [2018] EWC A Civ 268

318 *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 539 (Pat) (16 March 2023) Mellor J

319 *Interdigital Technology Corporation & Ors v Lenovo Group Limited & Ors* [2023] EWHC 172 (Pat) (31 January 2023) Mellor J

320 *Astellas Pharma Industries Limited v Teva Pharmaceutical Industries Limited & Ors* [2023] EWHC 2571 (Pat) (17 October 2023) Mellor J

Court. The root cause was the time taken to produce my FRAND judgment in *InterDigital v Lenovo* which has caused the subsequent backlog."

Shorter Trial Scheme costs cap

On 1 January 2024, a cap on recoverable costs was introduced for patent (and registered design) disputes heard in the High Court's / Patents Court's Shorter Trial Scheme (STS). The change, following a proposal made by the Intellectual Property Lawyers Association (following a suggestion made by Gordon!), caps the fees that can be recovered from the losing party in STS cases at £500,000. The IPEC has long had a costs cap (now set at £60,000 for the liability stage), but the STS costs cap means that the UK now boasts a specialist forum for resolving patent disputes that delivers a trial within 12 months, has no limits on the relief it can award (financial, injunctive and declaratory) and provides certainty of cost at a price point that is competitive with other jurisdictions for similar cases – like the UPC. Additionally, within the STS, the court will endeavor to hand down judgment within six weeks of the trial or (if later) final written submissions (CPR PD57AB 2.55). This makes for exciting development of the UK's jurisdiction.

5 COMPETITION LAW, SETTLEMENT AND LICENSING

Richards J's judgment in ***AstraZeneca v Tesaro*** **(5 April 2023)**[321] determined a dispute about the interpretation (for the purpose of calculating the royalties due) of two patent sub-licences concerning niraparib/"Mk-2512" in cancer therapy. AstraZeneca was the licensee, Tesaro the sub-licensee.

The dispute lay in how the licence fee was to be calculated: by reference to total sales of the relevant products (as AstraZeneca contended) or on the proportion of the sales that would have infringed a patent (as Tesaro contended). Richards J's answer was that the former basis was the correct one.

As ever with a contractual dispute of this nature, the detailed reasoning is wedded deeply in the wording involved, of both the specific clause(s) relied upon and the wider context of the rest of the agreement.

There was little dispute as to the general principles on the interpretation of contractual documents. The leading authorities were *Rainy Sky v Kookmin Bank*[322], *Wood v Capita*[323] and *Arnold v Britton*[324] but the judge quoted a neat distillation of the principles given by Carr LJ in *ABC v Network Rail*[325] ([13]):

> "When interpreting a written contract, the court is concerned to identify the intention of the parties by reference to what a reasonable person having all the background knowledge which would have been available to the parties would have understood them to be using the language in the contract to mean. It does so by focussing on the meaning of the relevant words in their documentary, factual and commercial context. That meaning has to be assessed in the light of (i) the natural and ordinary meaning of the clause, (ii) any other relevant provisions of the contract, (iii) the overall purpose of the clause and the contract, (iv) the facts and circumstances known or assumed by the parties at the time that the document was executed, and (v)

[321] *AstraZeneca Limited v Tesaro, Inc* [2023] EWHC 803 (Ch) (5 April 2023) Richards J

[322] *Rainy Sky S.A. v Kookmin Bank* [2011] UKSC 50

[323] *Wood v Capita Insurance Services Limited* [2017] AC 1173

[324] *Arnold v Britton* [2015] UKSC 3

[325] *ABC Electrification Limited v Network Rail Infrastructure Limited* [2020] EWCA Civ 1645

commercial common sense, but (vi) disregarding subjective evidence of any party's intentions;…"

There was a dispute as to the extent to which certain inferences should be drawn from relevant factual background. Richards J observed that in the internet age, a large body of information is readily available to almost everyone, and he adopted guidance from *Challinor v Bellis and Egan*[326] refining the approach on the information assumed to be available to the parties: at least where there is no direct evidence as to what the parties knew and did not know, and as a corollary of the objective approach to the interpretation of contracts, the question is what knowledge a reasonable observer would have expected and believed both contracting parties to have had, and each to have assumed the other to have had, at the time of their contract. That may include specialist or unusual knowledge, and knowledge to be inferred, but it does not include information that a reasonable observer would think that the parties merely might have known. The interpretation of a contract is a "unitary" exercise involving an iterative process by which each suggested interpretation is checked against the provisions of the contract and its commercial consequences are investigated. As explained in *Wood v Capita,* textualism and contextualism are tools to ascertain the objective meaning of the language which the parties have chosen to express their agreement and the extent to which each tool will assist in this task will vary according to the circumstances of the particular agreement.

There is no general rule that determines the precise amount of weight to be given to factual and commercial context, on the one hand, and indications from the words of a written contract on the other. As noted in *Minera Las Bambas v Glencore*[327] though, it may be more appropriate to place more emphasis on textual analysis when interpreting a detailed and professionally drafted contract, and to pay more regard to context where the contract is brief, informal and drafted without skilled professional assistance.

At common law, an exclusionary rule operates to restrict the admissibility of evidence of what was said or done during pre-contractual negotiations for the purpose of drawing inference about what the contract meant. The rule does not exclude the use of such evidence for other purposes, for example to establish a fact that may be relevant background was known to the parties, or to support a claim for rectification or estoppel – those purposes operate outside the rule *Chartbrook v Persimmon Homes*[328].

Turning to the analysis, Richards J concluded that the terms of the head licence agreements were "relevant" to the interpretation of the sub-licence agreement, in the sense of being part of the factual matrix. But the head licence agreements and the sub-licence agreements did **not** form part of the "same transaction" as they had been executed several years apart and involved different contracting parties, so they were not to be read together for the purpose of determining their legal effect.

After setting out the key clauses, Richards J concluded that a key section had a number of broad effects: royalties were payable on a country-by-country basis; the obligation to pay royalty on sales in a particular country commenced only when a patent was granted in that country that "covers or claims the Exploitation of the Licensed Product"; and the obligation to pay a royalty in a particular country ceased once there was no longer a valid and enforceable patent that "covers or claims the Exploitation of the Licensed Product" in such country.

Richards J then turned to the inferences to be drawn from the language of the written contracts. The definitional architecture suggested, at a high level, that royalties were to be paid on products sold by virtue of the patent licence and not on products that could be sold without a licence. There was clear

[326] *Challinor and others v Bellis and Egan* [2013] EWHC 347 (Ch)

[327] *Minera Las Bambas SA v Glencore Queensland Ltd* [2019] EWCA Civ 972

[328] *Chartbrook Limited v Persimmon Homes Limited* [2009] UKHL 38

indication of contrary intent though when the definitions were considered in more detail i.e. that an analysis of whether one physical substance was present in another, rather than a consideration of the use to which products were put, was to drive the calculation of royalty. That led to the definition of "Compound", which referred not just to the physical substance but also "the use of which **may be** claimed or covered by, or the Exploitation of which **may be** claimed or covered by, one or more of the Licensed Patents".

Tesaro's case in reliance on this wording, that the royalty should be calculated on a "pay to infringe" basis, ran into difficulties though. First, the definition did not require that the use would infringe, only that it "may be" claimed or covered. Second, on any view the sub-licence agreements provided for royalties to be payable by reference to sales, and this difficulty had real force. Tesaro could not know whether any particular box of niraparib would be used to treat a patient identified as having an HRD cancer (potentially infringing use) or whether it would be used as a combination therapy with a DNA-damaging agent, which formed part of the prior art and so would be non-infringing. If Tesaro's interpretation was correct, some mechanism would be needed to determine the question of "use", but the sub-licences contained none. Analysis of whether, as a matter of impression, "pay to infringe" licences could be described as the norm did not add much to the question of interpretation of these specific licence agreements; and nor did the interpretation of the head licence agreements shed much light.

Since neither of the rival interpretations based purely on the words of the sub-licence agreements was without difficulty, it was appropriate, as part of the "iterative process" referred to in *Wood v Capita*, to test the rival interpretations in light of the findings made on the factual matrix. These included that in 2012, both parties would have been aware that there were uses of niaparib as a cancer treatment that did not fall within the scope of the claims in the licensed patents, freedom to operate was an important issue for Tesaro at the time, and the parties would have had a good understanding of the US law doctrine of patent misuse – albeit not specialist knowledge of the sort held by the experts in the case – so they would have been aware that total sales royalties carried a risk of falling foul of the doctrine. The sub-licence agreements were complex formal documents drawn up with professional assistance following a process of negotiation. In those circumstances, the most reliable guide to the parties' intentions was to be found in the wording of the provisions actually agreed. AstraZeneca succeeded.

If you would like a practical refresher on how to approach the interpretation of a contract, Richards J's judgment in *AstraZeneca v Tesaro* (5 April 2023) is a good place to start.

Nevertheless, in 2024, in ***AstraZeneca v Tesaro* (9 February 2024)**[329], the Court of Appeal (including Arnold LJ and Birss LJ) did not agree with the interpretation of the patent sub-licence agreements reached by Richards J. Without identifying an error of principle in the judge's reasoning, their assessment placed weight on the definitions of the scope of the licence granted and the scope of the royalty obligation both depending upon/being governed by the definition of "Compound". This included the words "the use of which may be claimed or covered by, or the Exploitation of which may be claimed or covered by, one or more of the Licensed Patents". This had to be given meaning, and the apparent purpose of those words was to align the scope of the licence with the scope of the royalty obligation.

Additionally, all members of the Court of Appeal bench placed weight upon the well-established principle of interpretation that, where the words of a contract are capable of two meanings, one of which is lawful and the other unlawful, the former interpretation is to be preferred. On Tesaro's interpretation, the sub-licence agreements did not contravene the US patent misuse doctrine, whereas on AstraZeneca's interpretation there was a serious risk that they would do so given that they did not contain any

[329] *AstraZeneca UK Limited v Tesaro, Inc* [2024] EWCA Civ 78 (9 February 2024) Arnold, Birss & King LLJ

statement to the effect that the scope of the royalty obligation had been framed for the mutual convenience of the parties, nor was there any evidence that mutual convenience was the reason for the adoption of the italicised words. Tesaro's interpretation therefore succeeded after all.

Meanwhile, the Court of Appeal's judgment in ***ASSIA v BT* (26 April 2023)**[330] concerned what, exactly, was permitted/not permitted by settlement agreement documentation that had compromised patent litigation in 2015. The facts underlying the dispute were not in issue.

On the general principles going to the interpretation a contract, Birss LJ drew upon the same key authorities as had been cited in *AstraZeneca v Tesaro* (5 April 2023), and summarised ([18]-[20]):

> "The guiding principle is that **the task of the court is** a unitary exercise involving an iterative process **to ascertain the objective meaning of the language used by the parties to express their agreement** (*Wood v Capita* at [10] per Lord Hodge). Or putting the same thing another way, it is a unitary process **to ascertain what a reasonable person with all the background knowledge reasonably available to the parties at the time would have understood the parties to have meant** (taken from *Britvic Plc v Britvic Pensions* [2021] EWCA Civ 867 at [29] (per Sir Geoffrey Vos MR).
>
> A further aspect is that in this exercise **the court can give weight to the implications of rival constructions by reaching a view as to which construction would be more consistent with commercial common sense** (*Wood v Capita* at [11] per Lord Hodge), nevertheless it is important to see that this applies when there actually are rival constructions to consider (see Britvic, particularly Coulson LJ at [57] and Nugee LJ at [70]). **It is much harder (one might say impossible) to weigh up implications against the meaning of clear language**. That is because, as Lord Hodge also pointed out in [11], there is always the possibility that a party might have accepted something which with hindsight did not serve its interest.
>
> A different issue, and not relevant in this case, is a situation in which clear language might be overridden because something has just gone wrong with the language (see *Chartbrook Ltd v Persimmon Homes Ltd* [2009] UKHL 38 and also *Investors Compensation Scheme Ltd v West Bromwich Building Society* [1998] 1 WLR 896 at 93D-E about not attributing to the parties an intention which they plainly could not have had)."

Birss LJ (and Nugee LJ) explained how the clause in issue could be construed as either BT or ASSIA contended. Either construction being tenable, there was nothing wrong in taking into account the commercial context and business common sense in choosing between them.

Consideration of business common sense included that at least a purpose of the contract was to settle patent disputes and achieve "patent peace". Both parties knew when they entered into the agreement that BT was offering its VULA service to Service Providers, and that in such cases Service Providers were generally providing Customer Modems to end users. Birss LJ thought that nothing turned on the references in clause 10 to "patent laundering", which was (mostly) a US law term, with a meaning that was not fixed. Consequently ([45]):

> "… the commercial purpose of the contract as a settlement of patent litigation, the fact that one of the actions expressly cited in the recitals was a patent dispute about VULA, and what the

[330] *Adaptive Spectrum and Signal Alignment Inc v British Telecommunications Plc* [2023] EWCA Civ 451 (26 April 2023) Arnold, Nugee, Birss LLJ

judge described as business common sense, all strongly favour an interpretation which does not carve the known VULA service outside the scope of the licence."

BT's interpretation of the contractual term, and its defence to ASSIA's claim for royalties, was therefore confirmed.

6 ENTITLEMENT, INVENTORSHIP AND EMPLOYEE INVENTOR COMPENSATION

Employee inventor compensation

Zacaroli J's judgment in ***Parsons v Convatec*** **(26 June 2023)**[331] concerned Convatec's application for strike out or reverse summary judgment. Dr Parson's claims were for employee inventor compensation.

Zacaroli J noted the principles governing the assessment of a strike out or summary judgment application (CPR 32.42(a), CPR 24.2, *Easyair v Opal*[332]) meant that if Dr Parsons had a real, as opposed to fanciful, prospect of success at trial, it would be wrong to strike out or summarily dismiss his claim. The application had to be decided on the basis of the pleaded facts being assumed in Dr Parson's favour where there was any factual dispute. Convatec's application relied upon the court interpreting and applying parts of the Patents Act as Convatec contended they should be interpreted and applied, without much (if any) authority in support of its position. The interesting take homes from Zacaroli J's judgment lie in his rulings on the meaning of (or at least rejecting Convatec's contentions as to the meaning of) section 40 of the Patents Act. In particular:

- it is not a necessary component of a claim for compensation under s.40 that the patent granted in respect of the relevant invention belonged, at the time of its grant, to the employer;

- it is not the case that an employee can only make a claim under s.40 in respect of a patent if they are named as an inventor within the patent;

- the limitation period for a claim under s.40 is prescribed by CPR 63.12 and rule 91 of the Patents Rules 2007;

- the court has an unfettered discretion to extend the time of the limitation period under rule 108(1) of the Patents Rules 2007 and section 99 of the 1977 Act;

- there was no good reason to extend the time of the limitation period by more than 5 or more than 8 years (respectively) in respect of two Convatec patents.

Inventorship

Fittingly for this paper, the final judgment in a patent case in 2023 was from the Supreme Court, in ***Thaler v Comptroller*** **(20 December 2023)**[333]. This was a test case (one of several brought by Dr

---

[331] *Parsons v Convatec Limited* [2023] EWHC 1535 (Pat) (26 June 2023) Zacaroli J

[332] *Easyair Limited v Opal Telecom Limited* [2009] EWHC 339 (Ch)

[333] *Thaler v Comptroller-General of Patents, Designs and Trade Marks* [2023] UKSC 49 (20 December 2023) Lords Hodge, Kitchin, Hamblen, Leggatt, Richards

Thaler around the world) arising following applications made by Dr Thaler to the IPO for patents for inventions said to have been generated autonomously by an AI machine owned by Dr Thaler (named "DABUS").

Dr Thaler's applications did not designate a human "inventor", and no separate document designating a human inventor was ever filed. The statements of inventorship provided reported Dr Thaler's belief that each of the inventions was created by the AI of a machine called DABUS and that Dr Thaler had acquired the right to the grant of the patents because of his ownership of that machine.

The UKIPO issued a decision explaining that DABUS was not a person as envisaged by the Patents Act sections 7 or 13, and so was not an inventor. It followed that DABUS had no rights that could be transferred, nor power to transfer anything that it might have owned. Nor was Dr Thaler entitled to the grant of a patent on the basis that he owned DABUS. The applications were deemed to be withdrawn.

Dr Thaler's earlier appeals, to the Patents Court and then to the Court of Appeal, were unsuccessful. In the latter, the majority (Arnold LJ and Elisabeth Laing LJ) held that DABUS did not qualify as an inventor within the meaning of the 1977 Act because such an inventor was required to be a person; that there was no general rule of law that any intangible property (including an invention) created by a machine was the property of the machine or the owner of the machine; and that the Comptroller had been right to find the applications would be taken to be withdrawn because Dr Thaler had not identified the person or persons whom he believed to be the inventor or inventors; nor had he identified any proper basis for deriving a right to be granted the patents when he simply asserted, wrongly in law, that it was sufficient that he owned DABUS.

However, in the Court of Appeal, Birss LJ, dissented. While he agreed with the majority that an inventor within the meaning of the Act must be the person who devised the invention, and so DABUS could never be an inventor, he did not think the point was determinative of the appeal. Birss LJ explained that the Act required the applicant to identify the person whom they believed to be the inventor and how they claimed to have the right to be granted a patent. Dr Thaler's statement reflected his honest belief and the Comptroller did not need to be satisfied that Dr Thaler's claim was a good and sound one. Birss LJ said that the fact that the creator of the invention was a machine was no impediment to the grant of a patent to Dr Thaler.

The Supreme Court addressed three issues. The first was **the scope and meaning of "inventor" in the 1977 Act**. Giving the sole reasoned judgment, Lord Kitchin explained that the structure and content of sections 7 and 13 of the Act, on their own and in the context of the Act as a whole, permitted only one interpretation: that an inventor within the meaning of the 1977 Act must be a natural person, and DABUS was not a person at all, let alone a natural person. Accordingly, the Comptroller had been right that DABUS was not an "inventor" for the purposes of section 7 or 13 of the 1977 Act.

The second issue was **whether Dr Thaler was nevertheless the owner of any technical advance made by DABUS and entitled to apply for and obtain a patent in respect of it**. Lord Kitchin explained that s.7 of the 1977 Act provides a complete code in respect of the right to apply for and obtain a patent. The starting point, under s.7(2)(a), is that there must be an inventor, and that inventor must be a person. DABUS was not.

Secondly, the applicant, if not the inventor, must fall within one of the limbs of s.7(2)(b), or alternatively be the successor in title to the inventor or any person mentioned in s.7(2)(b). Dr Thaler did not satisfy this. Section 7, as enacted, did not confer on any person a right to obtain a patent for any new product

or process created or generated autonomously by a machine, let alone a person who claimed that right purely on the basis of ownership of the machine. Dr Thaler's reliance on the doctrine of accession (e.g. that the fruits of a tree belong to the owner of the tree) was "misguided" because it assumed that DABUS itself could be an inventor within the meaning of the Act and because the doctrine of accession applies only to tangible property and an invention is not tangible property.

Accordingly, Dr Thaler never had any right to secure the grant to himself of patents made under the 1977 Act in respect of anything described in his applications.

The third issue was **whether the Hearing Officer had been entitled to hold that the applications would be taken to be withdrawn**. Lord Kitchin said that it was no part of the function of the Comptroller to examine the correctness of genuine and plausible statements of inventorship and entitlement under s.13(2) of the Act (and rule 10 of the Patents Rules 2007). Nevertheless, the Comptroller did have power to intervene where the indication provided was obviously defective or insufficient. Dr Thaler had failed to identify any person(s) whom he believed to be the inventor(s) of the inventions described in his applications because DABUS was not a person. Nor did Dr Thaler's ownership of DABUS operate, as a matter of law, to provide sufficient basis for the UK IPO to accept Dr Thaler's application. Accordingly, Dr Thaler did not satisfy either of the requirements in s.13(2) of the Act, and so his applications must be taken to have been withdrawn. This conclusion was the consequence of the existing rules. It did not impose an additional requirement for patentability, nor introduce a new ground for refusing patent applications.

Birss LJ's dissenting approach in the Court of Appeal, which would have recognised Dr Thaler's applications as compliant with sections 7 and 13 of the 1977 Act, was therefore rejected by the UK Supreme Court. That approach would have facilitated patenting of inventions made autonomously by AI machines. It was an approach that the Chartered Institute of Patent Attorneys had intervened to support.

The Supreme Court's judgment forms the final say of the courts in the UK on the question of whether Dr Thaler had the right to apply for patents on the basis of owning an AI (DABUS) said to be the inventor. The 1977 Act in its current form "does not confer on any person a right to obtain a patent for any new product or process created or generated autonomously by a machine, such as DABUS, let alone a person who claims that right purely on the basis of ownership of the machine".

However, what "generated autonomously" means, and whether the technical advances the subject of Dr Thaler's patent applications were in fact "generated autonomously" by DABUS, were not explored – Dr Thaler's appeal was pursued on the basis that that factual assumption was correct. It was not at any point Dr Thaler's case that he was the inventor and had used DABUS as a highly sophisticated tool. Lord Kitchin said ([52]):

> "Had he done so, the outcome of these proceedings might well have been different."

The determination of a question of that sort will have to wait for another case, which means that the practical relevance of the Supreme Court's ruling remains to be seen. In order for a patent to be granted, a human inventor must be identified in the patent application, but the extent of contribution required of that person, where AI has been employed in reaching the technical advance concerned, remains to be determined. Although the Supreme Court stated that it is no part of the function of the Comptroller to examine the correctness of genuine and plausible statements of inventorship and entitlement under s.13(2) of the Act, it also said that the Comptroller has power to intervene where the indication provided

is obviously defective or insufficient. Yet the principles to be met, in order to avoid an obvious deficiency, were not addressed.

For example, should existing caselaw on joint inventors be applied to establish whether the contribution of a human to an AI-assisted invention amounts to inventorship? Can a human be the inventor of a new product/process merely by recognising the importance and utility of a new product/process in the output of a machine (as suggested in research commissioned by the EPO)? Or by training the AI and setting the AI a task to devise a new product/process for a specified purpose? Can a human be designated as an inventor merely by owning the AI that outputs a new product/process?

We expect continuing debate over the patentability of inventions made using AI and potential challenges to pending and granted patents on the basis that the true inventor was an AI.

7 SUMMARY AND CONCLUSIONS

That gaze into the future seems an appropriate place to bring to an end what will be the last in this series of annual patent reviews presented by me. After 26 years I have decided to "hang up my boots" and we will see if anyone wants to don the mantle (to use elderly patent speak) for the future.

Perhaps you will bear with me for a few moments of reflection…….

When David Barron and I sat down to plan our efforts to build a top IP team back in 1996, one of the things that was high on the agenda was to create a market leading, highly informative annual case review to give our friends and contacts a chance to have, in one place and time, all they needed to know about the year's cases and the development of patent law in the UK. David deployed extreme flattery to persuade me to "volunteer" to do the presentation and now, all these years later, I know why he did that!

My family brace themselves every year for the wild mood swings and occasional foul temper as I try to bring the complete works of our long-winded judiciary into some kind to coherent presentation. Latterly the invaluable help of Ailsa Carter has reduced the psychotic panics, but it still has its moments and, remarkably, I was as nervous today as I have been on any of the previous 25 occasions.

Of course, for all that, every year when it comes to the day, I love it, and there is no doubt that I will miss it. For years in my 20s and early 30s I used to have a feeling of anxiety in June before I realised that I did not have any exams to take. I guess early January will be much the same in the years ahead.

I like to think that we have succeeded in our goal of informing the profession. The fact that so many of the same faces keep coming back year after year tells me that we must be doing something right, and the huge on-line audiences we achieved when this was done by Zoom during the lockdown years indicated that a great deal of goodwill had been accumulated over the years.

Our marketing teams have repeatedly asked me if I could quantify our "return on investment" for these events, given the huge amount of time that goes into the preparation. I always gave them the same answer – not a clue! But you can't quantify the friendships and the relationships which have evolved through the years from acquaintances made at these occasions. To me that is the priceless element.

I know that the judges read the full reports sometimes. Sir Robin Jacob once pulled a copy from his pocket at a social event to show me that I had got something wrong when reporting one of his cases. Another judge, who will remain nameless, said that he read the paper every year to see if he was "Judge of the Year"! More of that later….

I like to think that I have drawn attention to some issues and shortcomings and that sometimes a degree of notice has been taken. Last year I said that it was unfair of the judges to be so critical of expert witnesses, as the responsibility really lay with the lawyers who instructed them. This year the lawyers have taken quite a battering! I will never know if I influenced that!

My favourite piece of crystal ball gazing came in my review of the patent cases of 2001. In a paper entitled "Carry On Patents" to reflect some offbeat humour in the Pfizer "Viagra" judgment, I reported on the first instance decision in the Amgen case, where Neuberger J, as he then was, departed from the Catnic/Improver orthodoxy and opened the door to a doctrine of equivalents. We all knew that he would be slapped down by the senior courts, and he was, but I said at the time:

> "Sooner or later the current Patents Court judges will start working their way through the ranks of the appellate courts and when they do, I do not think that we should assume that Improver is sacrosanct beyond review".

Many years later, in 2017, Lord Neuberger proved me completely right!

We have seen the tide go in and out in terms of pro and anti-patent tendencies. In 2007 my talk was entitled "When is a Patent not a Patent?", the answer being "when it has been litigated in the UK courts", but the following year the paper was called "The Waters had Receded from the Earth" to reflect the House of Lords' decision in Conor v Angiotech which reversed the trend that everything was obvious.

Ever since 2015 I have been speculating about when the Unified Patents Court would open its doors. Well now it has, and if I have a parting warning it is this…..under-estimate the UPC and its attractiveness to international litigators at your very great peril. It has started well and it will get better. I am very pleased to have played my part in bestowing on the profession the Shorter Trial Scheme costs cap, which I genuinely believe will help to balance the equation when international companies are considering their options in Europe. The combined IP professions need to get out and sell it, and the judges need to make sure that they deliver on time and quality of judgments.

I have had fun with the judges over the years, but overall my view remains as it was in 1998 when I said:

> "…we are currently served by a very fine contingent of experienced patent judges at all levels".

We still are.

Which brings me to the Judge of the Year for 2023. All through the years I basically ignored this year's winner, hiding behind a blanket rebuttal that he would never win until his judgments got a bit shorter. I am sure he will be with us for many years to come, but as this is my last award, and as I have enormous respect for his intellect and his analysis, this year's award goes to Lord Justice Arnold. He has waited long enough!

In recent years, sadly I have had to acknowledge those who have gone ahead, and I would just like to list some of those names from the IP world to whom this talk has been dedicated over the last few years. Gregor Grant, David Gibbins, Henry Carr, Aidan Robson, Bill Jones, David Keltie and, of course, my IP soul mate and best ever colleague, David Barron. I miss them all

And so this is it…..goodbye from me. It has been a pleasure, really, and I will miss this occasion. The task was indeed one of Herculean proportions, as I said all those years ago, but it was a "Labour of Love", for IP, the law and our profession. I am not leaving the IP world and will still be around at other events and conferences, so I look forward to seeing you all in time to come.

Thank you for all your support and encouragement over the years.

Gordon D Harris (and Ailsa Carter), February 2024

Gowling WLG (UK) LLP
gowlingwlg.com

DESIGN000XXXX

GOWLING WLG