Neutral Citation Number: [2025] EWCA Civ 552

Case No: CA-2024-000695

IN THE COURT OF APPEAL (CIVIL DIVISION)
ON APPEAL FROM THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
INTELLECTUAL PROPERTY LIST (ChD)
PATENTS COURT
MR JUSTICE MARCUS SMITH
[2023] EWHC 1095 (Ch)

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 01/05/2025

Before :

LORD JUSTICE NEWEY
LORD JUSTICE ARNOLD
and
LORD JUSTICE BIRSS

- -

Between :

(1) OPTIS CELLULAR TECHNOLOGY LLC **(2) OPTIS WIRELESS TECHNOLOGY LLC** **(3) UNWIRED PLANET INTERNATIONAL LTD**	**Claimants/ Appellants**
- and -	
(1) APPLE RETAIL UK LTD **(2) APPLE DISTRIBUTION INTERNATIONAL LTD** **(3) APPLE INC.**	**Defendants/ Respondents**

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Adrian Speck KC, James Abrahams KC, Josephine Davies KC, Isabel Jamal and **Thomas Jones** (instructed by **EIP Europe LLP** and **Osborne Clarke LLP**) for the **Appellants**
Jon Turner KC, Hugh Mercer KC, Michael Bloch KC, Brian Nicholson KC, Sarah Love and **Ligia Osepciu** (instructed by **Wilmer Cutler Pickering Hale & Dorr LLP**) for the **Respondents**

Hearing dates : 25 February - 3 March 2025

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Approved Judgment (Public)

This judgment was handed down remotely at 10.30am on [date] by circulation to the parties or their representatives by e-mail and by release to the National Archives.

This is the public version of the judgment handed down on 1st May 2025. The unredacted version of the judgment is [2025] EWCA Civ 553. In this public version a number of details have been redacted on grounds of confidentiality. These redactions will be reviewed after the appeals from the confidentiality order made by High Court on 17 June 2024. These appeals are listed for 8/9 July 2025.

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Lord Justice Birss :

1. This appeal is about what terms of a mobile telecommunications technology standards essential patent licence are fair, reasonable and non-discriminatory (FRAND). It arises from the order of Mr Justice Marcus Smith dated 16 February 2024 which declared that a licence in the terms annexed to the order were FRAND. The case arises because the respondents (Apple) sell products such as the iPhone which implement various mobile telecommunication standards, and the appellants (Optis) have a portfolio of patents which have been declared to the relevant standard setting organisation (the European Technology Standards Institute, ETSI) to be essential to these standards. These are called standards essential patents or SEPs. In this litigation at least some of the UK patents in the Optis portfolio have been held to be valid and essential at trial (including appeals). Thus, today, both sides wish to enter into such a licence but cannot agree on its terms. The terms have been settled by the court. The court's jurisdiction to undertake this task in these cases is now well established. It is based on the contractual effect of the undertaking given by the patentee to ETSI as part of the declaration process under the ETSI IPR policy, see *Unwired Planet v Huawei* [2020] UKSC 37 (and see also *InterDigital v Lenovo* [2024] EWCA Civ 743).

2. From now for convenience I will refer to the implementer Apple and the SEP holder Optis in the singular. As an implementer Apple is entitled to insist that the terms of a licence on offer from the holder of a SEP portfolio (Optis) are FRAND. If the SEP holder offers a FRAND licence but the implementer declines to sign up, then the SEP holder is entitled to insist on a so-called FRAND injunction from the national court restraining infringement within this territory of patents found to be valid and essential (i.e. infringed). A FRAND licence may well be one which is in global terms (see the Supreme Court's *Unwired Planet* judgment (above) which I will call *UPSC*). In the present case it is not in dispute that the FRAND licence here would be global in nature. A FRAND injunction is an injunction which contains a proviso that it ceases to have effect if the defendant enters into a FRAND licence. As the authorities make clear, the purpose of this scheme is to mitigate so-called "hold up" by the SEP Holder or "hold out" by the implementer. I will come back to hold up and hold out.

3. As ever the major dispute is about how much money is due from the implementer to the SEP holder, but there are other disputes about the terms too. In this judgment I will address the money. My lord Arnold LJ will address the other licence terms, including an issue about a parallel judgment of the US Court in the Eastern District of Texas (EDTX).

4. The judge decided that, leaving aside interest, the licence fee to be paid by Apple should be a lump sum derived from an annual lump sum of $5.13 million per year added up for eleven years making a total of $56.43 million. The eleven years consist of the licence being treated as running for five years from the date it was to be entered into (although the term is more complicated than that), plus six years past sales. Apple supports this conclusion.

5. By comparison Optis argues that this amount is much too low. Optis contends that what ought to be done is to use a SEP licence between Optis and Google as the best comparable licence, and if that is done, as explained in more detail below, one could take a figure provided by its expert Mr Bezant using what he called "simple" unpacking to derive a dollar per unit (DPU) rate of $[*XA*]. When that is scaled appropriately this

would imply a fee of $[*XB*] per unit for Apple. The actual licence fee would be a lump sum derived from that per unit fee based on time and sales volumes. The details of that calculation do not matter at this stage. To give an indication of what sort of annual sum that per unit fee would imply, I will use a rough estimate of 220 million annual sales of units by Apple. The real annual figures vary over time and are confidential, but for comparison's sake 220 million is a useful figure. That would produce an annual fee of $[*XC*] per year (220m x $[*XB*]), plainly a far larger sum than the judge's $5.13 million. Using the judge's approach, (although these aspects of the judge's approach are also disputed) for eleven years the $[XC] indicative figure would give an indicative total, absent interest, of $[*XD*]. At trial Optis had contended for a figure as large as $7.4 billion, but either way these figures put into context the potential financial significance of this appeal. Another way of illustrating the difference between the parties using the rough annual sales number of 220 million is to divide the judge's $5.13 million figure by that number. This works out at about $0.02 DPU, as compared to the $[*XB*] DPU Optis now contends for.

The proceedings up to trial

6. In 2012 Apple launched a 4G (LTE) enabled iPhone. In 2017 negotiations between Apple and Optis began but never reached a conclusion. In February 2019 Optis filed a claim form against Apple in the Patents Court. The claim was for patent infringement relying on 8 UK patents and sought a declaration about the terms of a FRAND licence. On almost the same day Optis filed a complaint against Apple in the EDTX, alleging infringement of certain US patents. All the patents are in the Optis SEP portfolio.

7. The UK proceedings were case managed as a series of technical trials addressing the patents (trials A to D) listed to be heard between October 2020 and January 2022, to be followed by this case, as trial E, in June/July 2022 to settle the terms of a FRAND licence. In summer 2020 the need for a further trial, trial F, crystallised.

8. In the meantime the EDTX proceedings had advanced such that by September 2021, following a retrial before a second jury, the EDTX court issued a verdict finding that the five US patents in issue were valid and infringed, and awarding Optis a lump sum of $300 million for past and future sales.

9. Turning to trial E, following directions from the docketed judge Marcus Smith J, the parties exchanged position statements and evidence setting out their positive cases in January 2022. Trial E began on 13 June 2022 and ran for 5 weeks.

10. Both sides called factual witnesses about their respective approaches to licensing negotiations both in general and in the particular cases in issue, and they called economics experts and expert accountants. The accountants were Ms Gutteridge, called by Apple, and Mr Bezant, called by Optis.

11. Although the parties were far apart on what the answer to the financial question was it is relevant to see that there was substantial common ground about aspects of the approach to answering that question. The parties had disclosed various relevant licences they each had entered into. Included within other aspects of their cases, each side sought to use selected licences as the best comparable licence(s) from which to derive information to allow the court to answer the financial question. Although which licences were the best comparables was highly contested, each side advanced a case

which included an approach of selecting the best comparable(s) from the available licences.

12. Another aspect of common ground was about something called unpacking. In some of the disclosed licences the licence fee was expressed as a per unit royalty. Two common ways of expressing a per unit royalty are as a percentage of the selling price of the unit or as a fixed sum per unit. In this case these two kinds are called *ad valorem* and DPU respectively. In other licences the agreement consisted of or included a lump sum payment. Both sides advanced cases which involved working out what useful information could be derived from the licences. For the licences in which the licensee had paid a lump sum that lump sum was "unpacked" into an estimate of the per unit royalty which that lump sum had, in effect, capitalised. This is an estimate and involves taking various factors into account, but as I say both sides took this approach. Three obvious factors which have to be taken into account when moving from lump sums to per unit royalties are some estimate of the number of units the parties had in mind, whether the agreement is a cross-licence and whether the per unit royalties are in *ad valorem* or DPU terms. Other factors include discounts for early receipt, discounts on rates e.g. bulk discounts, rates applicable to specific regions, discounts for the past (see next paragraph) and interest.

13. Another aspect of unpacking is the need to take into account the fact that some contracts not only operate to license future activity, they also operate as a release relating to unlicensed past acts. One approach was to unpack on a "free release" basis assuming the release was free (i.e. zero value) and attributing all the value to the future. Another method was the so-called "simple" basis mentioned already. This assumes the same rate applies in the past but may need to make an assumption about how far into the past the release applies. There are variants on these methods too, e.g. assuming the rate for the past is at a 50% discount. The evidence about unpacking and what it produced was given by the accountancy experts Mr Bezant for Optis and Ms Gutteridge for Apple. Initially Ms Gutteridge's evidence provided DPUs and used free release unpacking while Mr Bezant provided *ad valorem* rates and used multiple approaches: free release, "simple" and the 50% discount method.

14. Having worked out what an appropriate per unit royalty would be, each then "packed up" that royalty into a lump sum to be paid for the licence. A packing up exercise of this kind is conceptually just the reverse of unpacking. This common ground that the end result would be a lump sum reflected the fact that a lump sum is commercially convenient for both parties since it gives certainty. It does not mean that only a lump sum is FRAND but it is obvious that an appropriate lump sum payment can be FRAND.

15. A major issue at trial in this case was about the difference between *ad valorem* and DPU royalties. At the time trial E started in June 2022, the only previous judgment in a FRAND trial in this jurisdiction had been from the trial before me in *Unwired Planet* (judgment at [2017] EWHC 2988 (Pat), I will call this *UPHC*), which led ultimately to the UKSC decision. The royalties fixed in *UPHC* were *ad valorem* royalties. The main case advanced by Optis at trial E was for an *ad valorem* royalty to be fixed and for it to be fixed by reference to the rate I set in *UPHC*. Optis's alternative case was that an *ad valorem* royalty could be derived from the comparable licences it had granted as licensor to other licensees. A vital aspect of Apple's case was that an *ad valorem* royalty applied to it would be quite wrong because Apple's products are sold at a much higher price than other mobile devices and that this high price was not attributable to

the technology being licensed. Therefore Apple contended for a royalty based on a DPU approach. Apple denied that the rate arrived at in *Unwired Planet* was relevant. Its primary case was that the right approach was to derive an appropriate DPU rate from looking at the comparable licences it selected from the ones Apple itself had entered into as licensee from other SEP holders.

16. The fact that Mr Bezant had unpacked to *ad valorem* rates while Ms Gutteridge for Apple unpacked to DPUs reflected each party's case. Nevertheless by the end of the trial, as one might expect, both experts had expressed their unpacked conclusions in their rival's "currency" in the sense that Ms Gutteridge had expressed some of her rates in *ad valorem* terms to facilitate comparison with Mr Bezant's *ad valorem* rates and Mr Bezant had expressed some of his rates in DPU terms to facilitate comparison with Ms Gutteridge's rates. There were differences between the details of the unpacking exercises undertaken by the two experts, which sometimes made a major difference, nevertheless the results were not always all that far apart when like was compared with like.

17. It is also worth reflecting that while Apple's rejection of *ad valorem* rates was a general one, the most important place where it bites is when one compares rates between implementers. The point is obvious but worth spelling out. When one has worked out that an implementer whose average selling price (ASP) is $200 per unit is paying a royalty which amounts to $10 per unit i.e. 5%, and one is looking to decide how much an implementer whose ASP is $400 should pay (all other things being equal), is the fair conversion to be done in DPU or *ad valorem*? For the $400 ASP converting in DPU gives $10 per unit which makes the royalty 2.5% *ad valorem*, while converting in *ad valorem* gives 5% which makes the royalty $20 per unit.

18. Each side also criticised their opponent's cases on comparable licences. Apple contended that most of the Optis comparables were small licensees who had agreed exorbitant rates as a result of hold up pressure from Optis; the rates agreed by those small entities did not reflect FRAND. One of Optis's comparables was the licence to Google, which is obviously not a small entity, but the Google licence was argued also not to be FRAND because the lump sum paid was comparable to the cost of litigation with Optis and so Google were in effect paying Optis off based on the nuisance value of the dispute. Unpacking the lump sum paid using the number of units sold or to be sold by Google produced a per unit royalty (*ad valorem* or DPU) which, Apple contended, was much too high and not FRAND. Correspondingly Optis criticised Apple's approach. Optis argued that all the Apple licences represented rates well below FRAND, as a result of hold out pressure from Apple. Optis also made the point that a difficulty about all the Apple licences as comparables is that the portfolios licensed in them is not the portfolio in issue but a different one in each case. That was said to make them much less relevant as compared to a licence from the same portfolio such as the Optis licences, and it necessitates a conversion of some kind to move from one portfolio to another.

19. So far what I have described of the arguments represents an approach which has been called "bottom-up" in other cases. The expression is used to contrast with another approach known as "top-down". The top-down approach starts from a figure representing the amount to be paid for licensing all the patents essential to the standard, known as the patent stack. That figure can be called the royalty stack. Then a figure is taken for the patent stack share representing the proportion of the stack of SEPs

attributable to a given licensor. The amount due to that licensor is derived simply by assigning the relevant share of that royalty stack to that licensor. Estimating the stack share is not easy but can be done to some extent, and it is sensitive to errors especially for small stacks. However a much more serious difficulty with this approach is how to find the starting point for the royalty stack itself. In *UPHC* I looked at public statements made by various technology companies at [263] – [269] and identified the difficulties with that as an approach ([269]). I also observed that if one tries to identify a total royalty stack based on comparable licences, the top-down approach is not independent of a bottom-up approach and would still depend on factors such as unpacking ([270]).

20. However in *UPHC* I did use this kind of thinking as a cross-check. If one has a figure for a licensor's stack share and a figure for the royalty to be paid to that licensor, you can combine the two to derive the total for the royalty stack which is implied. I believe that approach can be useful provided it is kept in its place. To take an obvious example, if the implied total royalty stack was 50%, that would show the proposed royalty was plainly untenable (assuming one is content with the stack share). In *UPHC* I noted that the IP High Court in Japan had adopted 5% as an aggregate royalty stack ([472]) and on the facts in *UPHC* the aggregate royalty burden was 8.8%. In the USA in *TCL v Ericsson* (2018 US Dist LEXIS 234535 (Selna, J) the figures were 6%-10%. In the more recent *InterDigital v Lenovo* Mellor J at first instance found that the per unit royalty he had arrived at implied an aggregate royalty of 1% and rejected a top-down cross-check analysis as inconsistent with the result based on comparables. On appeal the Court of Appeal increased the royalty by about 30% (from $0.175 to $0.225). At [286] Arnold LJ referred to the top-down cross-check, in a passage the other judges (Nugee LJ and I) agreed with. The point being made was that a comparables analysis is a much more reliable basis for estimating FRAND than the top-down cross-check in that case. Nevertheless, as Arnold LJ also observed, the increased rate arrived at on appeal was less inconsistent with the top-down analysis.

21. In the present case both sides used top-down cross-check type reasoning before the judge. Of course it can be expressed in DPU terms as well as *ad valorem*.

The conclusion of the trial and handing down judgment

22. Trial E concluded on 8 July 2022. On 8 March 2023 the judge wrote to the parties indicating that the draft trial E judgment would be handed down to a confidentiality ring including Mr Bezant and Ms Gutteridge for the parties and their teams to review, to check the figures and anticipating that the process may result in non-typographical changes to the draft. In the judgment the evidence of both Mr Bezant and Ms Gutteridge had been rejected entirely and the judge had taken his own approach to coming to a conclusion on the financial question. The approach was to reject unpacking entirely and instead to manipulate the data in terms of lump sums and also, rather than identifying the best comparables, to use an averaging approach. This approach and the reasons for it are at the heart of this appeal.

23. There were some numerical mistakes in the draft which, when corrected, indicated that more substantive changes were needed. In March and April the parties sent in their corrections including submissions and new sets of tables produced by their accountancy experts. There was a further round of corrections and the final form of the judgment was handed down confidentially on 17 May 2023. The public handing down of the non-confidential redacted judgment was on 7 June 2023.

Review of the judgment

24. The judgment is lengthy, necessarily so in some respects. Given the nature of this appeal it will be necessary to address some aspects in detail. The judgment is in six parts with annexes. Each part is divided into sub-sections labelled A, B and so on. In this judgment I will refer to the sub-sections using the Part and sub-section label together.

25. Introductory Part I deals with FRAND and the relevant legal principles. Part II identifies the parties and the issues. Part III deals with the proceedings and the evidence. It begins to describe problems the judge identifies with the accountancy expert evidence including unpacking and comparables. This part also addresses evidential difficulties relating to patent portfolios. A major part of the judgment is Part IV, in which findings on specific issues are made. Then at crucial Part V the FRAND question is answered, using the judge's own approach and then finally Part VI is a short section on disposition.

26. I turn to address Parts IV and V in more detail.

Part IV – findings on specific issues

The patent stack and the Optis portfolio (IV-A to IV-F)

27. This passage deals with the patent stack and the Optis portfolio. The conclusion ([181]-[184]) is to proceed on the basis that the Optis patent portfolio has average strength. At times on this appeal it seemed that each side sought to suggest otherwise but this was a conclusion open to the judge, he gave sensible reasons for it and I would uphold it.

The parties' approaches to licence negotiation (IV-G and IV-H)

28. Here the judgment addresses each side's approach to negotiating licences. In sub-section IV-G Optis's use of a methodology based on *UPHC* is identified along with Optis's "unwavering commitment" to *ad valorem* per unit royalties and the fact that in negotiations Optis argued its portfolio was a strong one. The judge held ([200](iv)) that Optis's approach to negotiation might well have effect on smaller counterparties but would have a very limited impact on more sophisticated counterparties.

29. Sub-section IV-H addressed Apple's Framework for licence negotiation. Although Apple itself holds some SEPs and licenses them, the judge found that Apple is best characterised as an implementer rather than a SEP owner. One detail worth mentioning at this stage is that the judge quotes some evidence in cross-examination from Ms Mewes, one of Apple's witnesses, which showed that just as Optis insisted on *ad valorem* rates in its negotiations so, the witness explained, Apple's approach was exclusively based on DPU (see the quoted passage at [211]). However the judgment at [211] describes this evidence as showing that Apple insisted on a lump sum payment. That is a *non sequitur*. The witness's evidence quoted was about DPU not an overall lump sum. It was true that Apple's licences were all essentially lump sum agreements, but that was not the point Ms Mewes was making in the passage quoted.

30. Finally here the judge correctly identified that Apple's Framework was a method based on attributing a price for the overall stack and then attributing the right portion of it to

the given licensor. In other words it is a kind of top-down method (my words not the judge's).

Two conceptual FRAND issues (IV-I and IV-J)

31. This passage addresses two conceptual points arising in relation to FRAND valuations. The first sub-section rejects Apple's case that an approach based on the so-called SSPPU (smallest saleable patent practising unit) was appropriate. The SSPPU Apple contended for was the baseband chipset but the judge held at [220] that a focus on the SSPPU in no way assists in deriving a price for the technology licence here in issue. Part of this was to reject a kind of profits available argument familiar from licence of right cases, to the effect that $5 per unit was an absolute upper limit on the profit sum from which any royalty could be paid by anyone. The sub-section ends with an observation by the judge about the dangers of anchoring in the context of judgments about numeric values.

32. Sub-section IV-J rejects an argument from Apple, supported by the economist expert Professor Shapiro, that a SEP's value should be based on the importance of that SEP rather than the importance of the standard itself. The judge could see no justification for that even if it was a feasible approach.

33. There is no appeal from either subsection.

Comparable licences and rejection of the accountancy evidence (IV-K)

34. Here the comparable licences are addressed. There are two sets of findings here. One set is a necessarily extensive passage which focusses in turn on each of the licences in evidence (from [229] to [287]). Given what follows below I will mention three points. In relation to the Ericsson 2015 licence with Apple ([245]) the judge notes that this licence was between "two 'big beasts' of the telecommunications world" and who, as he later put it in the same paragraph could "look after themselves". Optis cross-examined heavily on this licence with a view to diminishing its significance and submitting it was tainted with hold out by Apple. The judge did not accept that. In relation to the Qualcomm Apple licence ([263]-[265]) the judge noted Apple's position that Qualcomm was not a good comparable, and returned to this later in the judgment. In relation to the Google-Optis licence ([268] – [270]) the judge had in mind Apple's case (revived on appeal) that transaction costs were the driver for the value of the lump sum, but did not accept it on the basis that Google would scrutinise the sum in question with some care.

35. The other set of findings has an introductory part at [229] and then an important section from [288] to [319]. Starting at [229] the use of comparable licences is identified as a tool. A passage from *UPHC* on comparables is set out (*UPHC* [172] to [176]) which includes a well known quotation about identifying the closest comparable. That quotation was from a patent licence of right case in the Court of Appeal: *Smith Kline & French Laboratories Ltd's (Cimetidine) Patents* [1990] RPC 203 (Lloyd LJ) as follows:

> "The object of the comparability exercise, in this as in any other branch of the law, is to find the closest possible parallel. If there is an exact parallel, there is no point in looking any further. If there are slight differences, an allowance may be made. But once

> you have found your comparables, whether one or more, which enable you to arrive at the appropriate figure, it would surely be erroneous to modify that figure by reference to other cases which are not truly comparable at all, so as to bring the case into line with a predetermined range. This was, with great respect, the mistake which the hearing officer made."

36. To this I will add two short extracts from the longer passage in *UPHC* referred to:

> [173] … In my judgment, if a group of comparables are at least potentially as relevant as each other and are not the same, it is not right to elevate a small subset above the others. That is also not what Lloyd LJ in ***Cimetidine*** said one must do; instead, he said that, assuming there is no exact parallel, once true comparables have been determined one should be careful not to dilute them by reference to other cases which are not truly comparable at all. Mr Bezant's general approach does not do this.
>
> [174] If a group of good comparables corroborate one another then no doubt that is a factor to take into account but equally if apparently good comparables, when properly understood, contain different rates that is also relevant too.

37. I will come back to this issue.

38. Starting at [288] the judge comes to two crucial conclusions. The first is that both parties were wrongly adopting what the judgment called an "exclusionary" approach to comparable licences ([288]-[291]). What this refers to is the approach familiar from previous cases (and referred to by Lloyd LJ in *Cimetidine* and by me in the cited passage from *UPHC*) of picking out the best comparable licences from the pool of available evidence. Picking out the best necessarily leads to what the judge called exclusion of the others.

39. The second conclusion is to reject the evidence of both accountancy experts as a whole – which includes all the unpacking evidence ([295] to [317]). At [297] unpacking is described as a process that is intended to try to make incomparable licences comparable and the process required, as the judgment puts it, a high degree of subjective input from the experts. [298]-[299] state that both experts unpacked the licences in accordance with their respective clients' instructions and failed to agree common workings of their unpacking. The passage also refers back to what the judge had called the parties' unhelpful approach and the failure of his efforts to rectify the situation.

40. At [301] the judgment identifies three "subjectivities", all three of which, as the judgment put it at [302] "make the objective unpacking of licences difficult, if not impossible, without importing simplifying assumptions which render the outcomes not comparable." The three subjectivities are different rate types, cross-licences and future royalties/past releases. The different rate types referred to are lump sums, *ad valorem* and a per unit rate (i.e. a DPU). As the judge correctly identifies here ([303]) unpacking a lump sum into *ad valorem* or DPU rates requires assumptions to be made such as assumptions about units sold and average selling price (ASP). The point on cross-

licences is if each party has a SEP portfolio then this has to be accounted for because in general the payment in the licence is a net payment. The Apple licences are often cross-licences. The point on future and past releases has been mentioned above.

41. The reasons for rejecting the two accountancy experts are at [311] – [314]. Paragraph [312] identifies the "fundamental reason" for this rejection as being that "the nature of the comparables in this case has taken both experts far outside the zone of their proper expertise." [313] states that the Optis and Apple comparables are categorically different but that was something which was "surmountable" by either expert, to understand the differences underlying the different categories, but neither expert did so. By contrast and finally [314] states that "What was, in my judgment, an insurmountable difficulty was how what I have termed the three subjectivities (at [301]ff) were to be resolved." The important thing at this stage is to see that what the judgment characterised as "insurmountable" were the three subjectivities. Then at [315] the two experts are accused of providing "no independent judgment – or at least insufficient independent judgment for me to be able to rely upon it" as to the merits or demerits of the cases their respective clients were contending for. [316] states that although this sounds critical of the experts it is not intended to be because both experts were instructed by the court to set out their positions on the FRAND question and did so. Nevertheless the paragraph ends by stating that these are not experts' reports in the form traditionally understood. Finally [317] records the judge's puzzlement that "neither Optis nor Apple sought particularly to justify their preference for *ad valorem* (in the case of Optis) or lump sum (in the case of Apple) royalties in any principled way". Among other things this appears to be another example of the judge's confusion between a DPU, which was Apple's royalty case, and the mode of overall payment as a lump sum.

42. These two conclusions are fundamental to the appeal and I will return to them below.

The negotiations between Apple and Optis (IV-L)

43. This passage covers the negotiations between Apple and Optis themselves – which were necessarily unconcluded. The judge concluded that the approach of Optis was inept ([354]) and that they were badly organised verging on incoherent ([356]). Optis's criticism of Apple's stance in the negotiation as lacking good faith was overblown and wrong ([357]). On the other hand Apple were a process driven company ([359]) and aspects of their Framework, which they insisted upon, were indefensible ([360]). These included an insistence during negotiations on patent by patent licensing and on the SSPPU approach.

UPHC and *Hollington v Hewthorn* (IV-M)

44. This part relates to the relevance of the *UPHC* judgment and the rule in *Hollington v Hewthorn* [1943] KB 587 that factual findings in one civil case are not admissible as evidence in a subsequent case. Neither side challenged this proposition about admissibility, and in any case I agree with it.

45. Nevertheless a different consideration is that when the court is exercising this jurisdiction, which involves setting rates in a global context, questions of comity mean that the court might very well take judicial notice of conclusions other courts around the world have come to (such as the aggregate rates in Japan and in the USA in *TCL v*

Ericsson). This is not to use other cases as a source of admissible evidence, far from it, but it is nonetheless helpful to see what is happening.

Hold up, hold out or abuse of dominance? (IV-N)

46. The final sub-section of Part IV addresses whether there has been hold up, hold out or abuse of dominance. Taking abuse of dominance first, the conclusion rejects Apple's case that Optis did this. The abuse itself is doubted ([383] – [385]) but in any case the conclusion is that having given a FRAND undertaking Optis is not in a dominant position ([386] - [388]). Neither side challenged this conclusion.

47. In relation to hold out, this sub-section draws a novel distinction between legitimate and illegitimate hold up or hold out, includes a startling heading just before [369] that "*Hold up and hold out are prima facie legitimate*" and concludes by rejecting Optis's contention that Apple engaged in hold out in its negotiations relating to the Apple comparables. The sub-section forms another significant aspect of the appeal.

Part V The FRAND question

48. This part has four substantive sub-sections following an introduction piece at sub-section V-A.

The parties' approaches are rejected (V-B and V-C)

49. Subsection V-B summarises Optis's case and explains it has three methods of arriving at a FRAND rate: scaling from *UPHC*, "Optis Comparables" and a Top-Down Cross Check. The case based on scaling from *UPHC* ([395]) was ultimately that the FRAND rate produced would be an *ad valorem* rate of 0.30%. The judgment at [395] rejects the approach based on *UPHC* and there is no appeal from that.

50. Optis's comparables approach is addressed at [397] – [398]. As [397] explains, Optis had identified 19 licences which covered all or a sub-set of the relevant patent portfolio and from that pool Optis had identified 9 (the Optis Comparables) as constituting suitably reliable and useful data points. Many of these licences were based on *ad valorem* rates but for those which were not, such as the Google licence, the lump sum features were unpacked. The rates were scaled to reach a figure for the Optis portfolio in issue based on the relative number of relevant patents concerned. This scaling used patent data produced by the firm PA Consulting. At [398] the Optis comparables approach is rejected as entirely unreliable. The reasons given include the fact that the approach is all based on the Optis portfolio and does not refer to the value that might be attributed to other portfolios essential to the same standard, the fact that for the most part these Optis Comparables use *ad valorem* rates and the fact that one cannot presume the Optis Comparables are reliable.

51. The Optis top-down cross-check is addressed and rejected at [399] –[401] as unreliable. Part of this approach articulated in the Optis Position Statement (at paragraph 46A), quoted at [399], is to advance an argument that 15% was a reasonable aggregate royalty for the whole stack and that based on Optis's share of the relevant patents using the PA Consulting data, that produced a royalty rate range of 0.16% to 0.23%. At [401] the judge holds that this pleaded case is untenable and gives sensible reasons, which neither

side challenged on appeal. In my judgment this rejection necessarily included a rejection of 15% as a reasonable aggregate royalty stack.

52. Sub-section V-C focussed on Apple's approaches. Again there were three ([402]): an approach based on unpacking Apple comparables, an approach using the Apple Framework and a profits available approach using a "basic handset" which did not incorporate numerous extra features found in Apple devices. These three approaches are addressed together from [404] onwards. Apple had identified 19 licences in which it was a licensee and excluded 5 altogether making 14 comparables. Various aspects of the Apple approaches are criticised (e.g. the patent by patent and SSPPU features) but the judgment identifies a further aspect as "basically sound" – which involves calculating a stack price and prorating it using the share of the patent stack. One important finding in this section was in [417](iii) in which the judge does not consider Apple's negotiating to have been improper or in bad faith. The conclusion is that the judge has "not seen any evidence of the rates that Apple achieve being unduly low through the exercise of Hold Out".

The meaning of FRAND (V-D)

53. This lengthy sub-section contains discussions about the meaning of FRAND, some economic concepts and references to case law. Some of the material has been stated in other cases and is uncontroversial but there are a number of statements here which I do not agree with, such as the suggestion at [439] that there is "very close alignment" between a price that exceeds FRAND and a price that infringes a Chapter II prohibition. However save for two points this section no longer matters and there is no need to address it further. The first point is the suggestion that the FRAND question concerns value "to the implementer" (see the emphasis in [452](vi) and (vii)). The question primarily concerns value to implementers in general, and it is also relevant to take the particular implementer's circumstances into account in some respects. So, in this case, it is appropriate (and no longer contested) that for Apple with a high selling price which is not derived from the standards, a FRAND rate is not derived in *ad valorem* terms but is an amount of money, as the judge identifies at [452](vii). However in the end the valuation exercise is not concerned with a particular implementer, it is concerned with the value of the licensed property itself.

54. The second is a passage where the judge rejects the evidence of the economics expert called by Optis (Dr Niels) that in effect fair value was only possible with an *ad valorem* rate. The judge rejected that and, as things have turned out in this appeal, it no longer matters. For what it is worth I would entirely agree that it cannot be right that only *ad valorem* rates are capable of being FRAND, for example a rate expressed in DPU might also be FRAND and so too could be a licence with a lump sum based on capitalising, but in any event as Optis no longer seeks an *ad valorem* rate, there is no need to address this further.

The judge's approach – to obtain a price for the stack

55. At sub-section V-E the approach the judge created to determining the FRAND price begins to be described. The method is based on attempting to price the whole stack ([456] and [457]) and the judgment notes that in this respect it bears a similarity to the Apple Framework and the Optis Top Down Cross Check. However the approach is not based on *ad valorem* rates (as Optis) nor on DPU rates (as Apple), it is based on lump

sums. This is a new method, devised by the judge and not heralded at trial, although with hindsight it is possible to see some statements made at the time which might indicate he was thinking along these lines. Optis's case on appeal is that this approach is wrong in principle in a number of ways. Apple does not support the approach in its entirety either, but does support a modified version of it.

Stack shares (V-E)

56. The starting point in sub-section V-E is that the judgment uses data from a firm called Innography for the number of SEPs and a given SEP holder's share of the stack, rather than the PA Consulting data. There is no appeal from that decision albeit at some points Optis contends the significance of the choice was misunderstood. A figure of 26,600 for the denominator in the calculation of patent shares is referred to ([459]) and a revised figure of 22,000 is used ([460](iv)(b)). The proportion of the stack held by various parties is identified. The figure for Optis depends on whether certain Ericsson patents are taken into account. With Ericsson (and see [460](iv)(c)) the figure is 0.61%, without Ericsson it is 0.38%. Thus the figure of 0.61% needs to be used when examining other Optis licences in the past but due to the recent Ericsson licence 0.38% applies to a final Optis licence with Apple.

57. Based on this data Apple's stack share is 1.07% and at [460] (iii) a table of the licensors of the Apple licences is set out with their stack shares, making the point that the aggregate of these licensors amounts to about 50% of the stack.

An ad valorem *approach to valuing the stack is rejected (V-F)*

58. At Table 9 the judgment sets out *ad valorem* rates derived by Mr Bezant for 28 identified licences 19 from Apple and 9 from Optis. For each licence *ad valorem* rates are given and then the stack share is set out. Two *ad valorem* rates are given which, for the unpacked lump sums, arise from different ways of unpacking the lump sums. At this stage the difference does not matter.

59. Then at Table 10 ([466]) the *ad valorem* rates are normalised based on the licensor's stack share to show what each rate individually implied 1% of the stack share would be worth. So if a royalty for licensor X in Table 9 was at a 3% rate and the stack share for that licensor was 8%, one could say that these two facts imply a total stack royalty of 37.5% (37.5% = 3% x (100/8)) and so a rate for a 1% stack share of 0.375%.

60. At [467] to [471] the judgment identifies a "stark contrast" between the *ad valorem* rates derived from the Apple Comparables and those in or derived from the Optis Comparables. Unpacked on the same basis the ratio of the rate derived from the Apple Comparables to the rate derived from the Optis Comparables is identified. The rates derived from Optis Comparables are a number of times higher than rates derived from Apple. The judgment also concludes that the implied total stack *ad valorem* price based on the Optis rates was one which no implementer could stay in business paying ([467](iv)). The fact those implied figures are well above 30% does not seem to me to be confidential. They are in fact [*XE*] % and [*XF*]% depending on the unpacking method using free release or "simple". Notably however the corresponding values implied by the Apple Comparables are much lower. They are at levels in a range lower than 8% but more than 3% - which range does not seem to me to be confidential. The precise figures which may be confidential are [*XG*]% and [*XH*]% for free release and

"simple" respectively. The judge said of these rates derived from the Apple Comparables that they "are at least consistent with a sensible business model, although I have no idea if they are actually sustainable. I have no general information about the costs of Handset Implementers." I note in passing that since these data come from the Apple comparable licences it is hard to see how they could not be sustainable at least for Apple.

61. This sub-section decides that with the exception of Google, the other Optis Comparables while they may be commercial and defensible in their own terms, produce outcomes which cannot be used to draw conclusions as regards FRAND rates ([470](ii)(after (c))). On the other hand the Google licence cannot be dismissed as unrepresentative without more ([470](iii)). The Google licence is a lump sum licence and, ([470](iii)(b)), is held to be a "poster-child for why unpacking is a dangerous course to take". The conclusion at [471] is that it is not possible to derive an *ad valorem* rate for the stack. This is because amongst other things, the Optis Comparables are "worse than useless" for deriving a rate Apple should pay and because the process of unpacking renders comparables with lump sums unreliable.

The judge's lump sum approach to the stack price (V-G – V-H)

62. Sub-section V-G is entitled "A preference for lump sum rates" and starts at [472]. The judge's view of the unreliability of an *ad valorem* approach is repeated and the judgment here explains the judge's preference for a lump sum approach. Part of Optis's criticism of this section ([473]-[479]) is that it mistakenly treats a lump sum as a "rate", blurring the distinction between a DPU rate and a lump sum.

63. Sub-section V-H is the place in which a lump sum price for the stack is derived. The starting point is to attempt to value the overall stack using lump sum comparables ([480]). These comparables are the Google licence from Optis and all 19 of the licences with Apple as licensee (including licences Apple itself did not rely on). The judgment notes at [481] that licences should only be used if they are sufficiently reliable and then goes on, based in part on the distinction between legitimate and illegitimate hold out, to hold that Apple "negotiated properly" in all 19 of the Apple licences. The result is Table 11, in which the 19 Apple licences and the Google licence appear.

64. For each licence the table provides the following data. I have made up some numbers to show how it works:

Date	Name	Party adducing	Metrics	
xxx	yyy	Apple	(a) Royalty Payment	$ 2m
			(b) Length of Term	4 years
			(c) Annualised Payment ((a)/(b))	$ 500K
			(d) % of Stack	5%
			(e) % of Cross-Licensed Stack	1.07%
			(f) Net Stack ((d)-(e))	3.93%
			(g) 100% Stack Value/year - Gross (based on (d)) - Net (based on (f))	 $ 10m $ 12.7m

65. So taking Apple licensor yyy, the lump sum and length of term are identified from the contract. In the example I have invented a figure of $2m for the lump sum payment and a figure for the licence term of 4 years. In the table the judge then calculates an annualised payment (here of $500K, being $2m/4 and ignoring the time value of money). The next step involves stack shares. For this example I have given licensor yyy a 5% share of the patent stack and assumed the licence is a cross-licence with Apple. The judge found that Apple's stack share was 1.07%. The "net stack" (figure (f)) is the simple difference between the two shares. Doing things this way ignores cross-licence factors such as a difference in each parties' sales volumes or selling prices. Row (g) calculates the annual total implied for the whole patent stack based on the stack share alone ($500K x (100/5)) or the net share ($500K x (100/3.93%). The implied price for the stack is $10 million or $12.7 million on those bases.

66. The judgment observes at [483] that in actual Table 11 (which is confidential) the range of values for the implied total stack value is considerable and the fact there is no convergence on a single price undermines confidence in the figures. This leads to the next step in which various adjustments are made, taking out one licence (Grand Mesa). There is also an attempt to substitute a 1% stack share for licensors with stack shares below 1% (which includes Optis) but in the end it is abandoned. The adjustment for shares less than 1% is also applied to Blackberry (with a share slightly more than 1%) and that adjustment is kept.

67. Putting things together, Table 13 at [483](ii) lists the 19 licences being used as comparables, omitting Grand Mesa. They are arranged in descending order according to the stack price implied using the methodology up to now. Table 13 has 5 columns of numbers, referred to as Av1, Av2 etc. Column Av1, called the "net unadjusted rate", is the implied lump sum stack price taken from Table 11 (i.e. the net figure (g))

68. Notably at the bottom of the table is a row of totals for each column and a row of averages. The averages are simply the total divided by the number of numbers (i.e. mean values for each column). This approach to averaging is heavily criticised by Optis and I will come back to it. This averaging approach is the reason the column headings are called "Av" ([483](ii)(a)). It is not that the entries in the column are themselves averages, it is that the column is used to produce an average at the bottom.

69. Then at Av2 the column entry is either the number in Av1 for licensors with larger net stack shares or, is the number produced by the 1% stack adjustment for those licensors. However as mentioned already the 1% approach is abandoned save for Blackberry (see [483](ii)(b) and (c)). Thus in a third column at Av3 the judge's preferred rate is set out. Even ignoring Qualcomm and Blackberry which create special difficulties as the judge identified, there is a very large, [*XI*] fold, difference in the range of values for the implied total stack price in column Av3. (The Ericsson 2015 value is $[*XJ*], the Pantech 2017 value is $[*XK*], [*XJ*]/[*XK*] = [*XI*].) That ratio of the top of the range to the bottom is larger than the [*XL*] fold ratio of *ad valorem* rates the judgment had earlier identified as a stark contrast.

70. In the final two columns the averaging excludes the highest and lowest entries (five each in column Av4 and 3 each in column Av5). However this approach is not taken further.

71. Note that the Optis-Google licence was included in Table 11 alongside all the other licences which were Apple licences, and it is still here in Table 13. It is relatively low in the table because treating the lump sum in this licence in the manner the judge has done produces a figure for the implied total annual stack price at the lower end of that table. This will be a point to come back to.

72. Focussing on the Av3 average, Qualcomm is identified as a cause of "significant distortion" (without it the Av3 average reduces to a level between half and two thirds of the value with it). However instead of excluding it the entry for Qualcomm in column Av3 is replaced with the Av1 average figure ([483](vi)-(viii)) which is characterised as an approach which might "make a statistician blush". Then the average of the Av3 column with that replacement for Qualcomm is taken and rounded at [483](vi)-(vii)(d) to $2,700m.

73. At [484] this $2,700m value for the stack for a year's licence is characterised as being on a free release basis (explained above). The next paragraphs up to [486] make an adjustment to take this into account and accommodate the releases for past sales in the agreements. The conclusion, reached "with no hesitation" is to reduce the number in half to $1,350m by treating the total value of the release for the past as the same as the value for the future, referred to as a 50%:50% split. [485] notes that the time value of money will be ignored and also notes evidence from Table 10 of *ad valorem* values which might suggest a very different ratio, with much more attributed to the future than the past. The latter is rejected as unprincipled and evidentially dubious. The 50%:50% split is chosen because, in the judge's words, it best disincentivises hold out.

74. That reason, to choose a 50%-50% split because it "disincentivises" some behaviour, is a mistake, although for reasons explained below it no longer matters. The error is that at this stage the court's task is to evaluate and draw conclusions about what happened in the past. Once that has been done there will be a second stage to set a rate, based on the past evidence. At the second stage I suppose one might make a choice based on trying to disincentivise behaviour of one sort or another (although I have some doubt about that and the issue does not need to be resolved) but it certainly has no part to play at the first stage.

75. At [487] the point arising from the recent Ericsson licence is taken into account. This is done by using the 0.38% figure for Optis's share of the patent stack. The calculation is actually done in the next sub-section at [494] in which the figure of $5.13 million is arrived at (which is 0.38% of $1,350 million). Then at [497] to [498] the licence is to run until the expiry of all the patents in the portfolio (save Ericsson) but the annual fee is to be calculated as being for five years. That is applied for five years giving a total of $25.65m. Then at [501] the six year release calculation is done to give the further $30.78m. Interest is addressed in [502].

The terms of the FRAND licence

76. At sub-section V-I the terms of the FRAND licence are addressed. Paragraphs [491]-[494] deal with the Ericsson licence and reach the conclusion mentioned already that the correct approach is to reduce the Optis patent share figure accordingly. Optis did object to this but they did not appeal that decision. Save for [494], [498] and [501]/[502] mentioned in the previous paragraph above, the remainder of this passage relates to non-financial terms which Arnold LJ will address.

The grounds of appeal

77. Permission to appeal having been refused below, Optis filed an Appellant's Notice raising 25 grounds of appeal, the first 10 of which, and also ground 25, relate to valuation and the remaining 14 (grounds 11 to 24) relate to the other licence terms. On 2 May 2024 Arnold LJ gave Optis permission to appeal on all those grounds albeit, as he indicated, they would benefit from some reconsideration. That subsequently happened and amended grounds were approved by an order dated 3 July 2024. Apple also filed a Respondent's Notice raising 6 grounds.

78. Optis's appeal on valuation is that the judge made fundamental mistakes by rejecting the evidence before him and then by adopting his own approach, which was itself fatally flawed. Optis's primary case is that the judge's own approach should be rejected and the correct way forward is to apply what Optis would call a conventional comparables approach, by using the unpacking data, selecting either the Optis-Google licence alone as the best comparable or adopting it with the Apple-Qualcomm licence as best comparables, and either way deriving a DPU rate from there. Essentially ground 1 (wrong approach overall), ground 2 (wrongly rejected conventional comparables approach), ground 3 (erred on hold out and the Apple Comparables) and ground 4 (judge's approach procedurally unfair, unsupported and inconsistent with common ground) all relate to this primary case.

79. As a fall back Optis submits that if this court thought that the judge was entitled to adopt his own approach albeit there are flaws in it, then this court could correct those flaws and produce a result that way. These are ground 5 (including non-relied on licences), ground 6 (treatment of the Qualcomm licence), ground 7 (wrong average), ground 8 (failure to take into account sales volumes), and ground 9 (apportionment of past and future).

80. Ground 10 does not arise in this court. By this ground Optis contended that value for past sales should not stop at 6 years but include all past sales. That point was recently decided in this court in *InterDigital v Lenovo* (supra), in favour of the Optis position. Apple reserves its position if this matter goes on appeal but accepts the point at this level.

81. Ground 25 is a different kind of attack on the judge's own methodology. The allegation is based on the judgment handed down in draft on 9 March 2023 and is one of cognitive bias or anchoring. The submission is once the judge was notified of various errors in his calculations in the draft, he went on to make further unrelated, un-asked for amendments to his methodology and reasoning so that the final figure licence was similar to the figure in the draft judgment, even though the latter was based on acknowledged errors. That is alleged to have amounted to procedural unfairness that results in injustice and Optis submits that the unrelated amendments were flawed, contrary to principle and driven by cognitive bias which the judgment had itself described as anchoring.

82. Apple's primary oral submission on this appeal is that with one important change, the judge's approach can be supported and in fact was generous to Optis. This is essentially ground 1 of the Respondent's Notice. The important change is to take the Optis-Google licence out of the analysis.

83. Respondent's Notice ground 2 provides further reasons to support the judge's approach to past sales but does not arise given the position on appeal ground 10.

84. Respondent's Notice grounds 2A, 3, 4, 5, 6, and 7 relate to the non-financial licence terms. Respondent's Notice ground 5 related to the Ericsson patent families issue (raised by Optis ground 18) which has been dropped.

How to decide this appeal

85. It seems to me that the first issue to address is the decision to reject both accountancy experts. If the judge was entitled to do that then he clearly had to adopt some kind of approach to deciding the case and so this first question provides important context for the debate about the judge's approach. Addressing the judge's approach therefore is the second issue. The outcome of that issue will again provide a context for the remaining issues.

The judge's reasons for rejecting the accountancy experts (ground 4)

86. There was a suggestion that at least part of the reason the judge rejected the evidence of the accountancy experts was because they had failed to help the court and had not grappled with each other's methods to allow them to be compared. However while it is clear that the judge did feel he had not been assisted as much as he ought to have been, that was not the reason for rejecting their evidence wholesale as he did (nor in my judgment could it have been). The reasons, as [314] makes clear, were in two sets. First the "insurmountable" problem of the three "subjectivities" that unpacking was said ([301]) to expose, i.e. different rate types, cross-licences and past releases. Second the fact that the experts had unpacked in accordance with their clients' instructions and had not used their independent judgment ([314]-[315]), referring here to the details in [314](i) and (ii). These were that Mr Bezant, first had been instructed to consider a comparables approach only, second had been instructed which licences to consider and third had unpacked lump sums into *ad valorem* rates but had not done the reverse; while Ms Gutteridge was instructed similarly.

87. As part of its submission that it was open to the judge to reject the expert evidence, counsel for Apple optimistically submitted that "insurmountable" was not what the judge really meant and a better word would be "unavoidable" but it is clear from the passage as a whole that insurmountable was what the judge meant.

88. It was not put to either expert, either in cross-examination nor by the judge, that they had strayed outside their zone of expertise ([312]) or had provided no independent judgment ([315]). For that reason alone the judge's conclusions to that effect were unfair and unjustified. If nothing else these allegations ought to have been put. Nor does it help to say in the next breath (at [316]) that the judge did not intend this to be critical of either expert. These are serious criticisms and for that reason alone I do not accept Apple's submission that this course was open to the court.

89. I believe the judge may have been distracted by the way the expertise of both was characterised when they were described below as "valuation" experts. That could be taken to imply that the whole matter of valuation was within the scope of their expertise. That never was so and I have referred to them as accountancy experts for that reason. The two experts approached matters in essentially the same way no doubt based on their

own experience in other cases – both trials and in arbitrations. Their skill is in grappling with the financial details of the kinds of licences in issue in order to extract what in their expert opinion will be useful information for the court. This is the task of unpacking. Neither expressed a view on whether *ad valorem* or DPU was the appropriate FRAND royalty rate and since they were not asked why not, we do not know. However I suspect a simple explanation is that neither expert thought that the choice was a matter for them or within their expertise. In my judgment either approach to a rate is manifestly capable of being FRAND, particularly when, as here, it is common ground that the FRAND licence will in fact involve a lump sum payment so that either *ad valorem* or DPU is just a tool on the way to producing that lump sum. The experts sought to use their skill to give the judge the tools necessary to decide the case.

90. The other dimension to this issue is a distinction between the comparability of a licence and the reliability of the evidence arising from it. On a number of occasions the judge referred to the task of unpacking, which the experts undertook, as being to render licences comparable. Of course in a very general sense that is true, but this case has drawn attention to a useful distinction which as far as I am aware has not been identified with clarity before. Comparability in the sense of a licence being a good parallel, as referred to by Lloyd LJ in *Cimetidine*, is primarily concerned with the situation of the parties and the subject matter being licensed. So in a case like this about a FRAND licence for Apple handsets, a licence by the SEP holder of the same portfolio albeit to a different handset manufacturer is likely to be the place to start to identify the best comparable. The extent to which licences are affected by hold up or hold out will also have an impact on their comparability. However this kind of comparability has nothing to do with whether the licence terms involve lump sums or *ad valorem* or DPU royalties. Thus it can be seen that the accountancy experts are not best placed to express a view about this kind of comparability. Comparability itself will be a matter for the judge to decide based on evaluation of all the evidence, which may well include fact evidence about the situations of the various parties and so on. Unpacking does not alter that sort of comparability at all.

91. On the other hand reliability is concerned with the quality of the information derived from a given licence, perhaps involving unpacking in various respects. With this distinction in mind, unpacking is not concerned with making a licence more or less comparable in the sense I have described it, it is about improving the reliability of the comparison.

92. As an approach, the “comparables approach” is the one described in *Cimetidine*. Therefore the fact either expert adopted a comparables approach on instructions is no criticism. It is an appropriate approach in law. As accountancy experts they might well need to be instructed as to which licences they should consider. They were unlikely to be able to comment on comparability of individual licences as I have defined it, but they could and did comment on the quality of the data which can be gleaned from the licences – in other words they commented on reliability and were entitled to do so. An example to which we had our attention drawn was paragraph 6.51 of Ms Gutteridge’s report of 14 January 2022 in which she explained that given the uncertainty in the evidence about certain factors, one of which was past releases, she was unable to adjust for such a factor but could only observe its directional impact.

93. The criticism that Mr Bezant unpacked lump sums to *ad valorem* rates but did not do the reverse is no criticism either. It misunderstands the purpose of unpacking and the distinction between a lump sum and per unit rate. I do not think the expression "lump sum" here ([314](i)) was meant to include a DPU but if it was, then the criticism is completely unfounded because Mr Bezant did provide data expressing his unpacked *ad valorem* rates in DPU, just as Ms Gutteridge provided the converse.

94. The criticism of Ms Gutteridge at [314](ii) also included an extract from cross-examination which the judgment characterises as relevant to Ms Gutteridge having exercised no independent judgment. However that was not the point being put. The cross-examination made the point that by focussing only on Apple licences as Ms Gutteridge did, this cannot take the non-discrimination aspect of FRAND into account whereby all licensees are offered the same rate, because these all involve the same licensee (Apple). That may or may not be a good point and it does arise as a consequence of having only looked at the Apple licences, but it is not putting the criticism made in [314] and [315]. Her answer in the end was that she observed in the evidence that no single price was available and that there was "quite a range".

95. Before leaving this topic I will say a bit more about starting from the SEP holder's own licences. I maintain that this is the place to start but that is all it is. Factors like hold out and hold up may well render licences of the same portfolio less good as comparables. In this case there are also licences to the putative licensee (Apple). Such licences are capable of being useful comparables, again subject to hold up and hold out, but using them also involves a further dimension which is why, although they may well be useful in the end, they are not the best place to start. Their comparability (not reliability) also depends on the relationship between the patent portfolio being licensed and the SEP holder's portfolio. Not only does one need a view about stack shares, the issue of portfolio quality arises. It is not enough to render them comparable to say that the SEP holder's portfolio is average. The other licensed portfolios also have to examined.

96. Finally it has to be pointed out, as is plain to anyone reading the judgment as a whole, that having called the three "subjectivities" of unpacking insurmountable when rejecting the evidence, in fact handling them somehow always was unavoidable and so when the judge came to work through his own method he had to grapple with all three one way or another. Cross-licensing was dealt with in the gross and net values in Table 11, past releases are addressed at [484]-[486] and, as explained below, including Google meant making a choice about the relevance or not of sales volumes, which is a key aspect of the first "subjectivity" concerning different rate types. As Mr Speck put it in argument, even choosing not to do something about one of those issues is itself a choice about how to grapple with it.

97. I would allow the appeal on ground 4.

The judge's lump sum approach to assessing FRAND

98. The next step is to evaluate what, in the end, the judge's approach actually amounted to. The answer to that will illuminate many of the other questions which need to be addressed such as whether it was open to the judge to adopt the approach even if he ought not to have rejected the expert evidence and whether a modified version could be upheld.

99. It would help first to clarify a number of points which were very much in issue below but are no longer. There are five. First each side has now abandoned parts of its valuation cases below. Apple does not seek to advance its case based on SSPPU or profits available and Optis has dropped what was its primary case below based on scaling from the rates in *UPHC*. Furthermore and second, Optis no longer advances any case that Apple should pay a royalty based on an *ad valorem* approach. Third (and related to some extent to the second point) Optis no longer argues that any Optis licence except the Google licence is relevant. Fourth Optis also concedes that the Innography patent data is the way to determine the share of the patent stack held by any particular party – Optis themselves or anyone else. Optis preferred to use the PA Consulting data but that has been abandoned on appeal. Indeed the stack share data in the judgment is now not in issue (subject to a point on denominators which in the end does not matter either). Fifth Optis accepts the judge's approach to the recent Ericsson licence. In other words, as the judge did, one can use a figure (0.61%) for the Optis share of the relevant stack while assessing the significance of existing licences but when it comes to a final determination of the fee due to Optis from Apple, account is taken for the recent Ericsson licence by treating Optis's share as applied to a licence with Apple as based on a lower number (0.38%).

100. For what it is worth I believe these five points, which are all concessions by one side or the other, are realistic concessions. They mean that the valuation task has been greatly simplified. One result is that the only licences under consideration at all now are the ones the judge addressed in his method, and another result is that the focus is on DPUs and lump sums.

Evaluation of the judge's approach

101. The essence of it can be summarised fairly shortly. The core is Table 13 of the judgment. In that table, 19 licences are placed on a common scale normalised by patent stack share. The scale used is the implied total lump sum stack price. The method then takes a simple average of these values to produce a single figure and that figure is then adjusted to try to take into account the past releases in the licences. The stack share of Optis is then applied to the adjusted figure to render an annual sum applicable to Optis.

102. In my judgment putting available licences on a common scale for the purpose of evaluating them is entirely logical. Whether the particular common scale the judge used (implied lump sum value) was sensible as opposed to (say) an unpacked DPU is a matter I will return to.

103. What is also apparent is that the common scale led the judge to identify licences as standing out and requiring adjustments to be made. The method brought together all the 20 licences which had lump sums ([475]). From that 20, Grand Mesa was then taken out as not comparable, for good reason ([483](i)(a)) making 19. Although the judge most certainly did not put it this way, indeed he said the opposite, nevertheless in my judgment what was really happening here was that decisions were made that neither Blackberry nor Qualcomm were useful as they stood. In other words the judge was in fact adopting the exclusionary approach previously deprecated.

104. In fact at least part of the problem with the Blackberry figures arose from their reliability because of the judge's over-simplistic approach to [*XM*], but since neither

side sought to bring Blackberry back into consideration, there is no need to grapple with it now.

105. The judge's approach to Qualcomm was essentially to conclude that it was not a good comparable owing to hold up. Optis sought to challenge this decision but in my judgment the evidence of Ms Mewes identified at [263]-[265], that Apple really needed Qualcomm chipsets and the deal was only done two days away from a crucial deadline for Apple's product launch, means it was open to the judge to reject Qualcomm as a comparable. What cannot be justified is the adjustment the judge decided to make for Qualcomm (inserting the figure which was the average of the Av1 column) having decided that the Qualcomm figure had to be replaced. His own comment that it would make a statistician blush makes the point. Since the method involved taking an average of the entries the logical thing to do was either remove the entry altogether or use his judgment – if he felt able to do so – to adopt a figure he thought actually represented the value of the Qualcomm licence. However his reasoning is clear that he was doing neither of those things.

106. However the approach to Qualcomm does not matter now because neither party sought to include it in the analysis. The real problem with the judge's method is the next step, which was to take a simple average of the entries in the table. That had no precedent or basis in the evidence before him nor can it be justified in principle. In terms of the evidence, neither accountancy expert took this approach. Ms Gutteridge had used averages in other contexts but there was nothing akin to what happened here and Apple did not suggest otherwise. Although the judge had rejected the accountancy evidence, in fact some of the steps he did take might, at least at a conceptual level, be supported to some extent by that evidence (such as handling past releases), but this is not one of them.

107. Optis suggested that if averaging was to be carried out then it ought to have been done using a weighting for the stack share. The following example demonstrates the difference. Imagine that a licensee has two licences, one for 50% of the stack at a price of $100 and the other for 1% of the stack at a price of $1. Taking each separately, the two licences individually imply total stack prices of $200 and $100 dollars respectively, giving a total stack average price of $150 on the judge's basis (($200+$100)/2). However is it obvious that the total price to the licensee for the two together is $101 dollars for 51% of the stack. That implies a total stack price of about $198 ($101x(100/51)). This latter figure is the weighted average contended for by Optis. Moreover as Optis pointed out both sides used this kind of reasoning below. So Apple in its opening before the judge made the point that the 14 licences it relied on (which excluded Qualcomm) covered some 42% of the stack at a collective DPU cost to Apple of $[*XN*] implying an aggregate royalty burden for the whole stack of $[*XO*] per unit. That figure was later corrected to just under $[*XP*] (references in Optis appeal skeleton paragraph 45(a)) but the point is the same. With Qualcomm taken into account as well, Optis contended the total implied aggregate DPU for the stack would be $[*XQ*]. Assuming 220m annual sales volumes, that implies an annual lump sum total stack price of $[*XR*].

108. On the given figures the weighted average happens to favour Optis because in this data the licences with larger stack shares have relatively higher implied stack prices but that is no reason to adopt it. If the data happened to be the other way round then the result would work the opposite way, and I am not satisfied a weighted average is any more

justifiable than the simple average. Both forms of averaging share the same weakness in giving weight to all licences in the table as comparables, albeit that weight is different. The problem is apparent on the face of Table 13 itself. Bear in mind Table 13 puts all the licences on a common scale. The most striking thing about the table is that the range of values is very wide even when Blackberry and Qualcomm are excluded. Assuming each licensee has obtained a share of the overall "pie" in proportion to their stack share, it follows that the pie from which the licensees at the top of the list have obtained a slice is far larger than the pie used for the licensee at the bottom. The obvious conclusion is that either this approach does not work or that these licences cannot all be useful comparables. The approach puts them too far apart from each other. The judge recognised the problem at [483](i) ("There is no convergence on a single price. That does undermine confidence in the figures…"). It led the judge to make the exclusions mentioned already but in my judgment he ought to have realised that the spread in the table after he had made these adjustments was still too large to take forward. The problem identified has not been solved.

109. In truth there is a simple explanation for the spread, which is not solved by taking any kind of average. Either these licences are not all equally good comparables for various reasons or, putting it another way, not all these rates are FRAND.

110. Finally I will address the inclusion of Google in the table. On the judge's lump sum approach Google appears to be relatively insignificant in the table with an entry in the Av3 column in the bottom half of the table. However that way of including Google is plainly illogical and neither side sought to defend it. The most obvious reason why it is illogical is because the number of units the lump sum price of the Google licence relates to is entirely different from all the other licences. Unpacked on Mr Bezant's "simple" basis (i.e. all past and future sales valued at the same price) the DPU rate from the Google licence is $[*XA*]. Some simple maths shows that if that was applied to Apple's sales volumes (assume 220m) to make an annual lump sum ($[*XS*]), and that lump sum was scaled up to 100% of the stack as in Table 13 by using 0.61% as the Optis stack share, it produces a large value (about $[*XT*] pa ($[*XS*] x(100/0.61))). That might have led the judge to wonder if Blackberry and Qualcomm were as much outliers in his own method as he thought, but in my judgment it is too late to try to adjust the judge's approach that way by putting Blackberry and/or Qualcomm back in at full value. Neither side suggests that.

111. This exposes a major flaw in the judge's approach. Having decided to take into account the Google licence and the Apple licences, the lump sum method disguises the true relationship between them.

112. Apple submitted that the way to fix this problem was simply to take Google out. Apple also contended that when that is done, the remaining Apple licences do not raise such a stark problem of the absence of any account for sale volumes because all the licences relate to the same licensee (Apple) and cover a period with broadly similar volumes. So the judge's approach – at least when focused only on Apple licences - could be seen as a broad simplifying assumption. However I do not accept this chain of reasoning. In fact the Apple sales volumes do vary to a significant extent as the table in Appendix 6.2a to the First Expert's Report of Ms Gutteridge shows, and this needs to be taken into account. The judge did not approach this problem by treating it as something which could be dealt with as a broad simplifying assumption on the basis that the variation was small enough not to matter. The problem is with the logic. The approach taken

was quite deliberately based on lump sums and abjured any kind of unit-based consideration. That is why Google was included.

113. Moreover I am not persuaded by Apple's submission in this court that weight should not be put on the Google licence on the basis that its value was really just what I have called a nuisance value. The judge did not accept that submission from Apple below and gave sensible reasons for that conclusion (see paragraph 34 of this judgment above, referring to [268]-[270]). It is not a conclusion which was affected by the legitimate/illegitimate hold up distinction. I reject that aspect of Apple's case on this appeal.

114. Whether adjusted as Apple submits or not, the judge's approach is an example of exactly the technique which Lloyd LJ warned against in *Cimetidine* because it involves using less good comparables to modify a result from better ones. In my judgment it is flawed. I would therefore allow the appeal on ground 1 and reject respondent's notice ground 1.

115. The right approach was to adopt a comparables based approach (ground 2) in the sense of being one based on identifying the best comparable or comparables, excluding others and working from there. Moreover there was no justification for setting aside the common ground of the experts to adopt some kind of unpacking to evaluate licences in per unit terms. I have also rejected the use of lump sums and averaging which means ground 7 (averaging) and ground 8 (failure to take into account sales volumes) succeed. Ground 9 (apportioning the lump sum for past and future) does not arise nor does ground 5 about the inclusion of licences not relied on.

Hold out and the Apple Comparables (ground 3)

116. Since the correct way forward is to identify the best comparable(s) the next question to address is Optis's appeal against the judge's rejection of its case that the Apple licences were tainted with hold out and not FRAND. Optis contends that the distinction drawn between legitimate and illegitimate hold out and hold up was wrong, that having rightly criticised aspects of Apple's practice (such as the patent by patent approach) the judge wrongly failed to address whether Apple's licensing practice involved hold out and ultimately came to the wrong conclusion by rejecting Optis's case that hold out by Apple exerted downward pressure on the royalties paid in the Apple Comparables.

117. Apple submitted that while the judge's terminology ("legitimate" hold up and "legitimate" hold out) was unfortunate, what the judge was really getting at was the idea of legitimate bargaining and fair and robust negotiation, therefore ultimately his finding that the Apple Comparables were reliable was one which was open to him.

118. In my judgment the distinction drawn is unhelpful and led the judge into error. When one is explaining the reasons why the FRAND system has been introduced, part of that explanation involves the identification of the twin concepts of hold up and hold out. In the language of the Supreme Court in *UPSC* hold out is a "mischief" ([10]). Furthermore at [12] the Supreme Court describes the purpose of the FRAND undertaking given by a SEP holder as being to *protect* (my emphasis) implementers and ETSI from hold up, while [59] also explains there is a balance: to protect implementers from hold up and SEP holders from hold out. In other words both hold up and hold out are behaviours by one party, mischiefs, which the other party is to be protected from;

and this underpins the FRAND system itself. However each is plainly a matter of degree and this use of negative language is different from the question whether either mischief is intrinsically unlawful or illegitimate. In this context that is an irrelevant question. In a claim for breach of competition law such as abuse of dominance, it may well be that an act of hold up could itself be unlawful but although an allegation of that kind was made in this case, it is not the context in which this debate arises.

119. The relevant context is the court's task of identifying a rate which is FRAND. As a matter of principle that is a rate which a willing licensee and willing licensor would agree. This is an idealised legal standard. Willing licensees do not engage in hold out to any degree and willing licensors do not engage in hold up to any degree either. Neither party needs to be protected from the behaviour of the other. By contrast real parties negotiate as hard as they can. The purpose of the willing licensee/willing licensor standard is not to measure the legitimacy or illegitimacy of a party's conduct in negotiations. A finding that a degree of hold up or hold out was involved in a given real negotiation is not a finding that either party has acted in an unlawful manner. It is simply a finding that that outcome cannot be taken as the FRAND rate. It may be close to it or far away, and if a view can be taken about the degree of hold up or hold out involved that might shed some light, but these are different issues.

120. Therefore, focussing on the Apple Comparables in particular, drawing the distinction between legitimate and illegitimate hold out led the judge to simply place all of Apple's behaviour on the "legitimate" side of the line (e.g. [417](iii)) and in turn led him to his erroneous approach of including (almost) all the licences and taking an average.

121. In argument Apple made the point that part of its case involved a submission that a number of the Apple licences included other terms, such as licences of patents which are not SEPs, for which some value would be attributable. That was indeed part of Apple's case below but the judge's method necessarily rejected it by taking the lump sums at face value. That conclusion is not affected by the legitimate/illegitimate FRAND error and in my judgment it was a conclusion open to him.

122. Having got this far, when one puts together the judge's clear finding that Apple's Framework included indefensible elements such as an insistence on patent by patent licensing (which manifestly would involve a degree of hold out) with the spread of values implied by the Apple Comparables when they are placed on a common scale (either using the judge's Table 13 or DPU rates), there is only one, hardly surprising conclusion. When it can do so, Apple's significant negotiating strength leads some parties to agree lower rates than would be agreed between a willing licensor/willing licensee. There is a degree of hold out involved. Using the judge's Table 13 and ignoring Qualcomm and Blackberry, by simple inspection it is apparent that although there are exceptions (e.g. Huawei and LGE), by and large it is the organisations with larger stack shares like Ericsson, InterDigital and Nokia who have agreed licences with Apple which imply the total stack is more valuable than the stack implied by the licensees with smaller stacks. Moreover broadly the same pattern appears whether one looks at Table 13 or tables of DPU figures derived either by Ms Gutteridge or Mr Bezant (see below).

123. Therefore on this ground, and expressed in deliberately qualitative terms, in my judgment the judge was wrong to place weight on the values derived from the Apple licences as a whole. There is hold out involved, particularly as an explanation for the

spread of values of these licences whenever they are put on a common scale by stack share. The difference is not explicable by the disproportionate effect of errors in the stack share when they are grossed up.

A retrial?

124. Given the nature of Optis's appeal and the attack on the judge's approach, the question arises whether the right course to adopt is to order a retrial if significant parts of Optis's submissions are accepted. In its Appellant's Notice at Section 9 Optis asked the Court of Appeal to make such alternative declaration of FRAND terms as the court decides or deems necessary. The box to indicate an order for a new trial is not ticked. In oral submissions Optis made clear its submission was that no retrial was necessary and this court would be able to come to a conclusion on the FRAND rate either by adopting the comparables approach Optis primarily contended for or modifying the judge's approach.

125. Apple's position in oral submissions was that if the appeal succeeds at least to some extent then, if the court decided to adopt the approach of correcting perceived errors in the judge's own approach, that was something which could be done by this court and no retrial was required. On the other hand the case now advanced by Optis as its primary case, which is based on Google as a single comparable and which leads, so Apple contends Optis submits, to a payment of several billion dollars, then that should be returned for a trial. Apple submitted its Counsel's cross-examination would have been different if that had been the case put forward and the way Apple focussed its case would have been too.

126. Neither party referred to any authority on the circumstances in which an appellate court would order a retrial. The power to do so is identified in CPR Part 52 at r52.20(2)(c). Nothing further is stated in the rule. In *Simetra v Ikon Finance* [2019] EWCA Civ 1413, the appellants argued that justice required a retrial. In his judgment, Males LJ (with whom McCombe LJ and Peter Jackson LJ agreed) concluded at [8] that: "however unpalatable the prospect, a retrial is the only just course" and at [187] described a retrial as a "serious step which must be regarded as a last resort". I agree with this. No doubt the exercise of this power is conditioned by the overriding objective, but bearing in mind the impact of an order for a retrial, the interests of justice will be the paramount consideration, the order is one of last resort and so a retrial will only be ordered if it is the only just course.

127. Turning to the circumstances in this case, Apple's submission about cross-examination is unconvincing. It is true that Optis's case below was essentially an *ad valorem* case and was based on scaling from *UPHC* or selecting 9 from the Optis licences. Optis's case was not based on DPUs and was not advanced on Google alone. However Apple cannot and does not contend it is not open to Optis to advance a case based on DPUs in this court, the *ad valorem* case having failed. In relation to the Google licence, it was one of the main comparables advanced by Optis and so a foreseeable possibility at trial was for the judge to decide to rely on that licence either alone and use it as the basis for further analysis, as Optis now seeks to do, or along side other licences. Either way Apple's trial strategy will or ought to have taken that into account.

128. In my judgment given the various concessions identified above and the conclusions reached so far, it is not necessary to remit this case for a retrial. Against the background

I have described this court is in a position to reach a just conclusion on the FRAND rate starting from the position of identifying the potential comparables in issue and analysing them by putting them on a common scale of some kind by reference to the stack share under licence in each case, as determined by the Innography data. Expressed in this way, this is the core of the judge's approach below and to that extent it is not now criticised by either party (although Optis contends there is only one comparable – Google). The difference now is to adopt this approach using the DPU data produced by the experts, which the judge wrongly rejected. A convenient common scale to use for analysis is the rate in DPU which a given licence would imply *pro rata* for a licence of a 0.38% stack share. That 0.38% is the stack share applicable to a licence from Optis to Apple bearing in mind the recent Ericsson licence. The exercise is not as complicated as it might seem. It will involve a broad axe – as it always would have done if the judgment had approached this matter the right way – but that arises in any event.

Examine the DPU data

129. One of the key things the judge was trying to do was to reach a result which took into account licences both from Optis and to Apple. I believe the judge's instincts here were correct. However the flawed methodology led him to be misled into the impression that they imply similar FRAND prices. They do not.

130. Starting with Google and based on Mr Bezant's data, Optis submits that this licence when unpacked on a "simple" basis produces a DPU of $[*XA*]. Optis then submits that since this licence related to the whole Optis portfolio which for present purposes we can take had 0.61% of the stack, the DPU needs to be scaled to address the lower stack share taking into account the recent Ericsson licence. That share is 0.38%. Therefore, submits Optis, the Google licence implies a DPU rate for Apple of $[*XB*] (=$[*XA*] x (0.38/0.61)).

131. Turning to the Apple licences, I will ignore Blackberry, Qualcomm, Grand Mesa (which was not in Table 13). I will also ignore the other three the subject of ground 5 (ETRI 2017, Orange 2017 and KPN 2019) because as will be seen they make no difference. Using the same "simple" approach Mr Bezant applied to the Google licence he also derived unscaled DPU rates for these Apple licences. These are set out in Annex A. For example the simple unpacked DPU paid by Apple for the Ericsson licence is $[*XU*]. Using the same simple arithmetic as in the previous paragraph this can be scaled to Optis by the ratio of stack shares. So in this example Ericsson's Innography stack share is 4.15% and so a conversion factor of (0.38/4.15) applied to the Ericsson DPU produces a DPU applicable to Optis. The result is a rate of $[*XV*] (rounded). This conversion puts the DPU rates on a common scale normalised by stack share just as the judge attempted to do in Table 13. That is what has been done in Annex A. In argument Optis submitted a more complicated set of spreadsheets (Supp4/26) which I think included taking a similar approach, but it was not entirely clear to me how that data was derived and so I created the third and fourth columns of Annex A myself. These data are in italics. The third column is expressed to six decimal places and the fourth column is rounded to two.

132. Looking at Annex A, it can be seen that the highest four implied Optis rates are those derived from Ericsson, InterDigital, Nokia and Sisvel. The rounded numbers are [*XW*].

Although these figures are from the higher end of the range of remaining Apple licences, they do not match the $[*XB*] figure derived from the Google Optis licence.

133. Before going further I will bring in the analysis from Ms Gutteridge. She did not unpack on a "simple" basis in her evidence and so there are not figures from Ms Gutteridge which can be compared directly with the ones I have just described. However both experts did unpack the same set of Apple licences on the same - free release - basis. The table at Annex B shows unscaled DPU rates, unpacked on a free release basis, derived by Ms Gutteridge and Mr Bezant for the remaining Apple licences. The additional columns in italics show the implied DPU applicable to Optis by using a ratio of 0.38 (for Optis) to the licensor's stack share. Again the spreadsheets produced by Optis seem to have included data of this kind but I created the scaled implied Optis rates in Annex B myself in the same way as Annex A.

134. The free release unpacking data from Ms Gutteridge produces DPU rates scaled to Optis and derived from Ericsson, InterDigital, Nokia and Sisvel of [*XX*]. Fairly similar Optis rates are produced from Mr Bezant free release values, which for these four licensors are [*XY*]. There is a difference between Ms Gutteridge and Mr Bezant in the rate implied by Ericsson, but the others are close. What is also clear is that whether one looks at Ms Gutteridge or Mr Bezant's figures for the whole set of Apple licences, the same pattern emerges which has been seen above, that the rates for these licensors are the highest in the set.

135. As one might expect when one can compare free release rates and simple unpacked rates from the same witness (Mr Bezant), the free release rates are generally a bit higher, but the differences are not that large.

136. In my judgment examining this data allows conclusions to be drawn about the FRAND rate in this case, as follows.

Draw conclusions

137. The first conclusion I draw from this data relates purely to the Apple licence information. Putting these four Apple licences together shows that a DPU rate for Optis lower than rates implied by the Ericsson/InterDigital/Nokia/Sisvel licences would be too low. The judge's conclusion expressed as a DPU is of the order of $0.02 or $0.01. There is no justification I can see for a DPU rate that low when those four companies are able to license Apple at an appreciably higher rate.

138. The second conclusion I draw involves taking the Google licence into account. The simple conclusion is that the Google licence as a comparable shows that deriving a rate from Apple licences on their own – either as a whole or just focussing on the four I have identified - would produce a rate which was too low. Moreover this remains true whether one looks at rates derived on a free release basis or a "simple" basis. It shows that in the end the distinction between those bases does not matter. It also shows that the debate about the impact of other terms in particular Apple licences, such as licences of non-essential patents (NEPs), does not matter.

139. The third conclusion is the converse of the second. Putting rates from the four higher Apple licences beside Google strongly suggests that simply using the Google rate

unmodified would be too high. In other words the FRAND answer is between the two, but where?

140. Before going further, another indication that the Google rate relied on by Optis is too high comes from a top-down cross-check. As mentioned above, the judge rejected a 15% *ad valorem* stack price as too high (see [400] – [401]) whereas (see [467] – [471]) *ad valorem* stack totals of [*XG*]% (S) or [*XH*]% (FR) from Apple's comparables were "at least consistent with a sensible business model" and as I observed above, since those data come from the Apple comparable licences it is hard to see how they could not be sustainable at least for Apple.

141. Using Google's ASP of $470 (stated at [6(d)] of Optis Position Statement Core 3 p6) one can express a 15% stack price total in DPU and then use that to gauge the impact of a rate based on the Optis stack share. Using the Google ASP a 15% total stack price in DPU would be $70.5. A 0.61% share of that would be $0.43. This is less than [*XZ*] Mr Bezant's simple unpacked DPU of $[*XA*] from the Google licence. A 0.38% share of $70.5 would be $0.27 (not $[*XB*]). Conversely starting with a rate of $[*XB*] DPU, based on a 0.38% stack share, that implies a total stack price in DPU of $[*XAA*] (=$[*XB*]x(100/0.38)), which is obviously too much for a device with that $470 ASP.

142. This is clear evidence that the $[*XB*] rate derived directly from Mr Bezant's unpacking of Google is far too high and even dropping the rate to $0.27 per unit would still be much too high because that would imply an *ad valorem* overall stack price for a Google priced phone was 15% (the level the judge rejected). This approach also demonstrates that in a case like the present one this sort of top-down reasoning has utility.

143. The question therefore is where to go down from $0.27 DPU. There are two considerations. The first is that if and to the extent there could be a range of FRAND rates, then the patentee is entitled to the top of that range. The second is that the nature of the evidence here does not justify fine distinctions. The realistic options are a DPU of $0.20, $0.15 or $0.10. The last one ($0.10) is clearly too low because it is too far from the Google licence and [*XAB*].

144. I wondered about a DPU of $0.20 per unit for Optis. The grossed up stack price this would imply would be just over $50 ($0.20x(100/0.38)=$52.63). To gauge its significance I will compare that implied total stack price not only with the Google ASP of $470 per unit but also a figure of $625, which I take as representative of Apple's ASP in the earlier part of the relevant period (see Ms Gutteridge's table at Appendix 6.2a (Bundle X/1)). A total stack price of $50 would be 8% of the price of this earlier relevant representative Apple ASP and 10.6% of the price of a $470 phone. That shows that $0.20 per unit is still too much.

145. In my judgment $0.15 per Apple unit for Optis is FRAND. I reach that conclusion based on using Google and also Ericsson/InterDigital/Nokia/Sisvel as the best comparables, recognising that they are not similarly situated and that there would appear to be degrees of hold up and hold out involved. As a cross-check, grossed up it would imply a total DPU stack of just under $40 ($0.15x(100/0.38)=$39.47) which would make the total stack 6.3% of the earlier relevant representative Apple ASP of $625 (and 3.9% of a more current Apple ASP of $1000). It would be 8.4% of a $470 Google ASP phone.

146. Comparing like with like based on Mr Bezant's simple unpacking, the rate of $0.15 per unit is in between the Google derived DPU of $[*XB*] and the Ericsson derived DPU of $[*XV*], and it is much closer to the Ericsson rate than the Google rate for the reasons I have explained. The FR data for Ericsson (Gutteridge FR $[*XAC*] and Bezant FR $[*XAD*]) do not alter the analysis.

Convert DPU into a lump sum

147. As an indication of the sort of lump sum one reaches from this DPU for the purpose of comparison with the judgment below, at sales of 220m pa that would be an annual capital sum of $33m. For eleven years on the judge's basis that would be $363m.

148. In its submissions Optis provided a spreadsheet of DPU data which, amongst other things, will convert a DPU into a lump sum on one of two bases. The total sales volume for the period is produced by adding together past sales and projected future sales from the perspective of 2021 up to 2027 (albeit the licence was settled on the footing it would come into force in January 2023). The total is multiplied by the DPU to produce a lump sum. Thus in the spreadsheet a DPU of $0.15 produces a lump sum of either $516m on one basis or $502m on the other basis. The difference between the two bases is that the first uses a total sales volume of 3,440m units and the second uses 3,347m units. I take it the figure for the first basis is derived by taking all relevant actual sales from 2021 back into the past on the basis appeal ground 10 is decided in favour of Optis – as Apple has conceded at this level. For the sales for 2021 to 2027 inclusive I believe this total simply takes the 2020 figure and multiplies by 7. The second basis works in the same way save that it employs a 10% discount on the projected future sales for the 2021-2027 period. I would use the 10% discounted approach which, assuming I have understood the spreadsheet correctly and assuming the approach based on working from 2021 is common ground, means the lump sum (without interest) for a DPU of $0.15 should be $502m.

Remaining issue – ground 25

149. Having reached this conclusion, there is no need to consider ground 25, which relates to the draft judgment.

Conclusion

150. The FRAND licence should contain a term in which a lump sum is to be paid which has been derived by capitalising the income stream from a FRAND rate of $0.15 DPU. Assuming I have understood the Optis spreadsheet provided at the hearing correctly, the lump sum to cover a period from 2013 to 2027 would be $502m.

151. I have also had the advantage of reading Arnold LJ's judgment below in draft. I agree with it.

Lord Justice Arnold:

152. I agree with the judgment of Birss LJ. In this judgment I will address Optis' grounds of appeal concerning (i) the non-royalty terms of the licence save those relating to foreign proceedings and (ii) the terms of the licence and of the final order concerning foreign proceedings. Originally, Optis advanced 10 grounds concerning the non-royalty terms

of the licence (grounds 11-20), two grounds concerning the terms of the final order generally (grounds 21 and 22) and two grounds specifically concerning the terms of the licence and of the final order relating to foreign proceedings (grounds 23 and 24). When granting Optis permission to appeal on all grounds, I encouraged Optis to re-consider whether to pursue them all. In response, Optis abandoned grounds 15, 16, 19, 20 and 21. Shortly before the hearing of the appeal Optis abandoned ground 18.

Non-royalty terms of the licence except for foreign proceedings (grounds 11, 12, 13, 14, 17)

153. As explained in more detail in paragraphs 188-191 below, in the run-up to the FRAND trial the parties exchanged marked up drafts of proposed licences. Some licence terms were agreed, while others were not.

154. At trial the parties concentrated on the valuation issues. There was little argument about most non-royalty terms, it being anticipated that these would mostly be addressed in a hearing on consequential matters. One issue was debated not only in closing submissions, but also in post-trial correspondence. This was the subject of ground 18, and so it is not necessary to say anything about it.

155. The judge said in his main judgment at [490] (quoted more fully in paragraph 213 below) that he would set out a "binding guide as to how the licence is to be drawn". The judge went on to set out his "binding guide" under six sub-headings at [491]-[505] (the last of which is quoted in paragraph 215 below).

156. What happened after that was, on any view, both extraordinary and undesirable. In preparation for the hearing on consequential matters, the parties served four sets of written submissions ("Position Statements" running to 165 paragraphs (Apple, 10 July 2023), 210 paragraphs (Optis, 17 July 2023), 105 paragraphs (Apple reply, 21 July 2023) and 46 paragraphs (Optis rejoinder, 24 July 2023)) and worked on the draft licence. There were three days of argument on consequential matters on 25-27 July 2023. On 7 August 2023 the judge sent the parties a draft judgment on consequential matters. This draft was never finalised or handed down.

157. On 13 August 2023 the judge raised an issue with the parties which was the subject of further written submissions on 25 August 2023 and 6 October 2023. On 24 October 2023 the judge directed a further hearing in December 2023. On 18-19 December 2023 there was a further day and a half of argument during which the draft judgment was debated in open court even though it had never been handed down.

158. By the end of this process the parties had prepared a composite draft licence in which many of the terms were agreed. In relation to the terms which remained in dispute, the composite draft set out the rival texts.

159. On 2 February 2024 the judge sent the parties a revised draft judgment on consequential matters together with a draft final order and a draft short-form licence of his own devising (referred to as the "Court-Determined Licence") which bore little resemblance to the composite draft, did not include most of the terms agreed between the parties and did include certain terms which neither party had requested and had not been the subject of argument in either July or December 2023.

160. Following correspondence between the parties and the judge, the judge sent the parties a revised draft of his short-form licence on 11 February 2024. The parties were permitted to make brief submissions on the judge's draft licence at a further hearing on 13 February 2024. The judgment on consequential matters was finally handed down on 14 February 2024, when the judge made his final order to which was annexed the final version of his short-form licence.

161. Optis contends that the judge's approach to determining the non-royalty terms of the licence involved a misunderstanding of the court's role in declaring FRAND licence terms (ground 11), resulted in licence terms that did not constitute a commercial licence (ground 12), involved procedural unfairness (ground 13), wrongly gave Apple benefits for free (ground 14) and erred in principle with respect to the interest stop date (ground 17).

162. So far as grounds 11, 12 and 13 are concerned, Apple disputes that the judge made any appealable error. Nevertheless, at the hearing of the appeal, Apple adopted the pragmatic stance that it would not resist this Court setting aside the judge's short-form licence and reverting to the parties' composite draft. As indicated above, much of this is agreed. With the exception of the interest stop date, which is the subject of ground 17, the remaining disputes are points of detail which involve no issue of principle and can be satisfactorily determined by the Court on paper following any further necessary brief written submissions.

163. Ground 14 has three limbs. The first concerns the scope of Apple products which should be licensed. Apple has conceded this aspect. The second limb concerns past sales before 1 January 2017, and overlaps with ground 10. As Birss LJ has explained, Apple does not resist ground 10 in this Court. The third limb concerns parallel US proceedings between the parties. This is conveniently dealt with, as it was in argument, together with grounds 22-24.

164. That leaves ground 17 concerning the interest stop date. In a letter sent to the parties ahead of the FRAND trial on 6 June 2022, the judge indicated that he was minded to adopt an effective date of the licence of 1 January 2023. He did not say anything about interest at that stage. As the judge recorded in the main judgment at [502], he heard limited submissions on interest at the trial. The judge held in the main judgment at [501] that the licence should begin on 1 January 2023 and include a release for six years' past infringements by Apple in consideration of the payment of the annual lump sum determined by the judge for each year. In [502] he set out a "firm but provisional view" that Apple should pay interest at 5% compounded with half-yearly rests from 1 January in each year. It was implicit in this that no interest would be payable after 1 January 2023, and this was subsequently made explicit in clause 4(3) of the judge's short-form licence. In the consequentials judgment the judge held at [64](vii) that the rate of interest should be 6% rather than 5%. Otherwise he adhered to the view expressed in the main judgment.

165. Optis contends that the date on which interest should cease to be payable stipulated by the judge is (i) arbitrary, (ii) unsupported by any reasoning in either the main judgment or the consequentials judgment and (iii) contrary to the principle that the purpose of an award of interest is to compensate the recipient for being kept out of money to which it is entitled. As Optis points out, this Court has (since the judge's judgments) held that, in principle, interest should be paid on royalties for past sales due under a FRAND

licence so that the passage of time between the date when the royalty should have been paid and the date of actual payment is cost-neutral: see *InterDigital Technology Corp v Lenovo Group Ltd* [2024] EWCA Civ 743, [2024] RPC 24 at [213]-[216]. Accordingly, Optis says that Apple should be required to pay interest until the date when Optis receives payment (or, to the extent that the money was paid into court by Apple on 11 March 2024, until that date).

166. Apple has little answer to these contentions. In its respondent's notice Apple contended that Optis was somehow debarred from appealing on this point because Optis had not attempted to persuade the judge to change his view on it from that expressed in the main judgment. This point was rightly not pursued in oral argument. The same is true of a contention that the judge's decision was justified by what Apple characterised as a lack of cooperation on the part of Optis after the main judgment was handed down. The only argument pursued by Apple was that the judge had not erred in law or principle because there was a trade-off between the interest stop date and the rate of interest he selected. I do not accept this argument. The two questions are independent of each other, and there is no trace in the judge's reasoning of any link between the two.

167. In conclusion I would allow Optis' appeal on ground 17. For the reasons explained above, it is not necessary to decide grounds 11, 12, 13 and 14 (except for the point about the US proceedings). I would invite the parties to attempt to reach agreement on the outstanding matters with respect to the composite draft within 7 days after this judgment is handed down. Failing that, the Court will decide them on paper on the basis of brief written submissions which must be filed within 14 days after this judgment is handed down.

<u>Licence terms and terms of the final order concerning foreign proceedings (grounds 22, 23 and 24)</u>

168. Although these grounds extend generally to foreign proceedings, their main focus concerns parallel US proceedings commenced by Optis.

Procedural chronology

169. In order to explain the background to these grounds, it is necessary to set out the procedural chronology of the two sets of proceedings. Birss LJ has already set out some of the chronology of the English proceedings, but for these purposes it is necessary to condescend to more detail.

170. On 25/26 February 2019 Optis filed (i) a complaint against Apple in the United States District Court for the Eastern District of Texas ("EDTX") and (ii) the claim form in these proceedings. Due to the difference in time zones, the EDTX complaint is dated 25 February 2019 while the English claim form is dated 26 February 2019. Optis' objective was to commence both proceedings simultaneously, and it is common ground that we should proceed on the basis that Optis was successful in achieving that.

171. The EDTX complaint alleged infringement by Apple of seven US Patents while the English claim alleged infringement by Apple of seven European Patents (UK). In the EDTX Optis later withdrew the claims for infringement of two US Patents without prejudice.

172. In the EDTX proceedings Optis sought, amongst other relief, a declaration that Optis had complied with its FRAND obligations in its negotiations with Apple. Apple submitted to the jurisdiction of the EDTX, save that it challenged subject matter jurisdiction in respect of Optis' FRAND conduct declaratory claim. This challenge was successful with respect to worldwide licensing, but unsuccessful with respect to US licensing. Apple did not apply to stay the EDTX proceedings pending the determination of the English proceedings.

173. In the English proceedings Optis sought, amongst other relief, a declaration that offers made by Optis were FRAND alternatively a determination of what terms for a global licence of the Optis portfolio were FRAND.

174. On 4 March 2019 Gary Moss of EIP, Optis' solicitors, made his second witness statement in the English proceedings in support of an application by Optis for permission to serve the claim form on some of the Apple Defendants outside the jurisdiction. In that statement he drew attention to paragraphs 140 and 141 of the EDTX complaint. Paragraph 140 referred to the UK (i.e. English) proceedings and asserted that they would determine FRAND terms for the Optis worldwide portfolio. Paragraph 141 stated:

> "To the extent necessary beyond the UK FRAND Proceedings, the Plaintiffs request a declaratory judgment in this Court that negotiations toward a FRAND license with Apple were conducted in good faith, comply with the ETSI IPR Policy, and were consistent with competition law requirements. This request by the Plaintiffs is not duplicative or inconsistent with the UK Proceedings, and, to the extent necessary to avoid any duplication or inconsistency, should be subordinate to the UK FRAND Proceedings."

175. Mr Moss went on to explain that Optis had commenced the EDTX proceedings in case Apple either (i) successfully challenged the jurisdiction of the English courts or (ii) refused to take a licence on the terms determined by the English courts to be FRAND.

176. On 28 March 2019 Apple filed an application in the English proceedings challenging the jurisdiction of the English courts, alternatively seeking a stay, on the basis that the EDTX complaint sought overlapping relief. This application was dismissed by Nugee J (as he then was) on 17 December 2019 ([2019] EWHC 3538 (Pat)). There was no appeal by Apple against that decision.

177. On 19 March 2020 Apple filed its FRAND Defence in the English proceedings contending that any FRAND licence should be confined to those SEPs which had been held by the English courts to be valid, essential and enforceable, and that in any event the FRAND licence should not cover the USA in the light of the EDTX proceedings.

178. On 11 August 2020 a jury in EDTX awarded Optis $506.2 million in damages for infringement of the five US Patents by past sales. On 8 September 2020 Apple sought a conclusion of law ordering Optis to dismiss the EDTX complaint in favour of proceeding with the English claim alone or at minimum to show cause as to why it should be permitted to pursue overlapping actions. In the event, the jury award was set aside and a new jury trial ordered.

179. Trial A in these proceedings was heard by Birss J (as he then was) in October 2020. It was a technical trial concerning European Patent (UK) No. 1 230 818 ("EP818"). On 16 October 2020 Birss J handed down judgment ([2020] EWHC 2746 (Pat)), finding that EP818 was valid, essential to the relevant standards and had been infringed by Apple. EP818 expired on 20 October 2020, and hence Optis was unable to obtain an injunction to restrain further infringement by Apple. (On 10 November 2021 the findings of essentiality and infringement, but not the finding of validity, were reversed by this Court ([2021] EWCA Civ 1619).)

180. On 29 April 2021 Apple asked the EDTX to order Optis "to show cause how their simultaneous pursuit of royalties for the same patents in the United States and the United Kingdom is proper and does not pose a risk of an improper double recovery against Apple". On 13 May 2021 Optis responded that it was "seeking relief in the U.K proceedings, the outcome of which would be the setting of a worldwide royalty rate that Apple could accept in lieu of a U.K. injunction". On 2 June 2021 the EDTX made an order concluding that the English proceedings did not at that time present a basis for staying or delaying the retrial, but noting that, if and when Apple believed that Optis had obtained double recovery, Apple could raise the issue at the appropriate time and seek relief in the appropriate jurisdiction.

181. Trial B was heard by Meade J in April 2021. It was a technical trial concerning European Patent (UK) No. 2 229 744 ("EP744"). On 25 June 2021 Meade J handed down judgment ([2021] EWHC 1739 (Pat)), finding that EP744 was valid, essential to the relevant standards and had been infringed by Apple.

182. At that time, Apple's position was that Optis was not entitled to an injunction to restrain further infringement of EP744 until such time as the English courts had determined what terms were FRAND and Apple had had the opportunity to decide whether or not to take a licence on those terms. Optis' position was that it was entitled to an immediate and unqualified injunction due to the absence of any undertaking by Apple to take a licence on the terms to be determined by the English courts as being FRAND.

183. On 13 August 2021 a second jury in the EDTX awarded Optis $300 million in damages assessed as a lump sum reasonable royalty in respect of infringements during the period from 25 February 2019 until the expiry of the five asserted patents. On 8 September 2021 the EDTX issued a judgment in those terms. On 21 September 2021 Apple gave an undertaking to the EDTX to pay the judgment within 30 days after it becomes final and unappealable. It is common ground that, subject to the outcome of the appeals discussed below, Optis' claims for infringement of the patents in question merged in the judgment.

184. Trial F in these proceedings was heard by Meade J in July 2021. It concerned the issue referred to in paragraph 182 above. On 27 September 2021 Meade J handed down judgment ([2021] EWHC 2564 (Pat)) holding that neither side was correct, and that the right answer was that Optis was entitled to an injunction unless and until Apple undertook to take a licence on the terms determined by the English courts to be FRAND (a "FRAND injunction"). On 25 October 2021 Meade J accepted an undertaking by Apple in those terms without prejudice to Apple's right to appeal.

185. Trial C, a technical trial concerning European Patents (UK) Nos. 2 093 953, 2 464 065 and 2 592 779, was heard by Meade J in October 2021. On 25 November 2021 Meade

J handed down judgment ([2021] EWHC 3121 (Pat)), finding that the patents were invalid.

186. Trial D, a technical trial concerning European Patents EP (UK) Nos. 2 187 549 and 2 690 810, was heard by Meade J in January 2022. On 15 March 2022 Meade J handed down judgment ([2022] EWHC 561 (Pat)), finding that the patents were valid, essential and had been infringed.

187. On 17 January 2022 the parties exchanged Position Statements and evidence, in accordance with an order made by Marcus Smith J on 1 July 2021, setting out their positive cases as to what licence terms were FRAND. Optis' Position Statement said nothing about the US proceedings. Apple's Position Statement referred in paragraph 39(3) to the US proceedings, recited the second jury verdict for $300 million, and recorded that Apple had filed post-trial motions contesting the verdict, before concluding:

> "Any Court-determined global portfolio licence in the present proceedings should provide for any final damages award in the EDTX case to be taken into account when determining such royalties as may be due under the licence."

188. On 6 April 2022 Optis served a mark-up of a draft licence which had been proposed by Apple in April 2018. Section 3 was as follows (struck-through text Apple's, underlined text Optis'):

> "~~**Release**~~
>
> ~~PANOPTIS hereby releases, acquits and forever discharges APPLE, from any and all claims of infringement of the Licensed Patents with respect to acts performed by or for APPLE before the Effective Date.~~
>
> 3.1 **Release**. In consideration of the payment set forth in Section 5, and subject to full receipt of such payments and to Section 3.2, PANOPTIS hereby releases, to the extent of its right to do so, APPLE and its Affiliates in respect of any Patent infringement arising prior to the Effective Date of this agreement for which the rights and licenses expressly granted under this agreement to APPLE and its Affiliates would be a complete defence had this agreement been in effect at the time such Patent infringement arose.
>
> 3.2 **Release Limitations**.
>
> (a) The release in Section 3.1 does not apply to any persons or businesses which APPLE or any of its Affiliates acquire after the Effective Date. In particular, without prejudice [to] the generality of the foregoing, if APPLE or any of its Affiliates, individually or collectively, acquire one or more Entities, or the business or assets or

> any portion thereof of one or more Entities or other persons, but such Entities or persons were not part of APPLE or its Affiliates as of the Effective Date, then such Entities will not be covered by the releases granted in Section 3.1.
>
> (b) The release in Section 3.1 shall not apply to any cause of action based on a breach of or a misrepresentation of fact in connection with ~~such Licensed Products, and to have any of the forgoing activities performed for APPLE, during the Term~~ this Agreement (whether fraudulent, negligent or innocent)."

189. On 29 April 2022 Optis served a Responsive Position Statement in paragraph 58 of which Optis responded to paragraph 39(3) of Apple's Position Statement as follows:

> "… Optis agrees that there should not be double counting with respect to its compensation for the use of certain of its US SEPs, however the precise way in which the outcome of the EDTX case may need to be taken into account in respect of the global licence to the PO Portfolio will depend on the terms set by the Court for the global licence, and the timing of, and the final outcome of Apple's EDTX appeal and Apple's actual and prospective position in respect of the same."

190. On 15 May 2022 Apple served a mark-up of the draft licence served by Optis on 6 April 2022 as an exhibit to the second witness statement of Apple's witness Brian Ankenbrandt. This included certain amendments to section 3, including the insertion of the following new clause 3.3:

> "Licensor shall, at its own cost, take all steps necessary to secure the dismissal of all claims brought against Apple alleging infringement of any of the Licensed Patents in any litigation in any jurisdiction, including [the EDTX proceedings] (all of the foregoing litigation, collectively, the 'Lawsuits') with prejudice, and Apple shall, at its own cost, take all steps necessary to secure the dismissal of all counterclaims brought in the Lawsuits without prejudice … Licensor agrees (a) to take no action to enforce against Apple any order or judgment obtained in any Lawsuit prior to the Effective Date and (b) to take no additional action to prosecute any Lawsuit against Apple … after such requests for dismissal are made. …"

The new clause was accompanied by the following comments:

> "Any proposal for peace must include a dismissal of all claims between the parties.
>
> This clause to be updated as appropriate to reflect the status of the Lawsuits as at the Effective Date."

191. On 2 June 2022 Optis served a seventh witness statement from its factual witness Brian Blasius in response to Mr Ankenbrandt's second witness statement and a third report from its licensing expert Erik Stasik commenting on the mark-up Mr Ankenbrandt had exhibited. Mr Blasius did not comment on the EDTX proceedings. Mr Stasik did not comment specifically on Apple's proposed clause 3.3, but he did comment generally in paragraph 8 of his report that the amendments made by Apple sought to broaden the licence in a number of significant ways, for which a licensor would generally expect to receive something in return. Contrary to a suggestion made by counsel for Apple during argument in this Court, the service of this evidence plainly did not constitute an admission by Optis of the appropriateness of clause 3.3.

192. Trial E was heard by the judge from 13 June to 8 July 2022. Written closing submissions were filed by the parties on 15 July 2022, 23 July 2022 and 3 October 2022.

193. Apple's written closing submissions dated 23 July 2022 briefly summarised the position in the EDTX proceedings, and went on in paragraph 721:

> "The parties agree that the licence settled by this Court must avoid double-counting as between the EDTX and England: see Optis' Reply Position Statement §58 …. Apple submits that it is reasonable for the EDTX SEPs to be included in the licence settled by this Court – for whatever consideration is determined by this Court to be fair – and for that licence to require the EDTX litigation to be dismissed by consent: see cl. 3 of Apple's mark-up …."

194. Optis' reply submissions dated 3 October 2022 confirmed that Optis agreed that there should be no double recovery. Optis noted that Apple proposed that the licence should contain a term requiring that the US damages award be vacated by consent. Optis suggested that this was because there was a difference of an order of magnitude between the sum which Apple contended to be FRAND for all past and future uses of the entire Optis portfolio and the $300 million Apple had been ordered to pay for use of just five US Patents. Optis went on:

> "292. Optis's position is that the way in which to deal with the relationship between the damages award and the royalty determined under the licence settled by the Court will need to be resolved after this Court has made its determination on the FRAND licence. For example, depending on the Court's overall determination the fair approach may be that the valuation of [the] 5 patents in question [is] carved out of the licence settled to allow the US action to take its course.
>
> 293. The key point is that Optis was entitled to (and required) to sue in the USA because of Apple's hold out. … However the interaction between this licence and the US damages award is to be resolved, Optis' position is that it should not be left short of whatever legitimate recompense it is entitled to due to Apple's conduct …, including … its refusal to commit to the outcome of this FRAND claim until forced to do so by the Court."

195. On 13 June 2022 Apple's appeal against Meade J's judgment in Trial B was dismissed by this Court ([2022] EWCA Civ 792).

196. On 13 and 15 June 2022 Apple filed a Notice of Appeal, and Optis filed a Notice of Cross-Appeal, against the EDTX judgment in the Court of Appeals for the Federal Circuit ("the CAFC"). Apple filed its Opening Brief on 14 October 2022. Optis filed its Opening and Response Brief on 13 February 2023. Apple filed its Response and Reply brief on 20 June 2023.

197. On 27 October 2022 Apple's appeal against Meade J's judgment in Trial F was dismissed by this Court ([2022] EWCA Civ 1411). On 28 November 2022 Apple applied to the UK Supreme Court for permission to appeal. On 6 April 2023 the Supreme Court granted Apple permission to appeal.

198. On 11 November 2022 Apple's solicitors WilmerHale wrote to the judge on a number of topics, one of which was what Optis had said in paragraph 292 of its reply closing submissions. WilmerHale said:

> "This is new, controversial and potentially important. Apple will resist this, including on the basis that Optis has not pleaded this previously, and that Optis is seeking to have its cake and eat it by simultaneously invoking the jurisdiction of the English court to set global FRAND rates and bringing separate national claims. Apple agrees that it may well require submissions from the parties at a later stage, depending on the Court's judgment."

199. Optis' solicitors EIP responded to this on 17 November 2022:

> "… Optis has explicitly stated that there should not be double recovery in respect of the patents the subject of the EDTX award. As such Optis is not seeking to 'have its cake and eat it'. Further, Optis' suggestion of the EDTX patents being carved out of this Court's settled licence made at §292 of its Reply Submissions was only an example of what might be appropriate depending on the Court's determination of the FRAND licence. In any event, the parties are agreed that this is a matter which should be addressed after the Court's judgment."

200. WilmerHale replied on 1 December 2022 saying:

> "… Optis … proposed in its written Reply Submissions that the issue of avoiding 'double recovery' as a result of the separate EDTX damages award … be dealt with after judgment (and Apple has agreed)."

201. On 8 March 2023 the judge sent his main judgment to the parties in draft and under embargo. On 20 April 2023 the parties sent the judge both agreed corrections to the draft judgment and further written submissions and calculations. On 10 May 2023 the judge handed down the judgment in confidential form subject to correction of typographical errors. A corrected confidential version was handed down on 17 May 2023. A redacted public version was handed down on 7 June 2023.

202. On 25 April 2023 this Court allowed Optis' appeal against Meade J's judgment in Trial C ([2023] EWCA Civ 438), holding that the patents in question were valid, essential and infringed.

203. On 4 July 2023 this Court dismissed Apple's appeal against Meade J's judgment in Trial D ([2023] EWCA Civ 549).

204. I explained the process which led to the consequentials judgment and the final order in paragraphs 155-159 above. In its Position Statement Apple adopted what the judge had said in the main judgment at [503], while in its Position Statement Optis opposed it on the grounds that it would be contrary to comity and *res judicata* for the English courts to require Optis to surrender the EDTX judgment and that Apple should be left to make any application it deemed appropriate to the US courts. Optis accepted that there should be no double recovery, but submitted that either no adjustment to the English courts' award was required to avoid this because it was within the margin of error of the judge's calculations or any adjustment should be minor.

205. On 26 July 2023 Optis filed an unopposed motion at the CAFC for an extension of time in which to file its Reply Brief. On 2 August 2023 the CAFC stayed the briefing schedule. The stay was eventually lifted on 15 March 2024. Optis filed its Reply Brief on 17 April 2024 following an application to the judge for permission to do so.

206. Although Optis had pleaded in paragraph 17 of its Particulars of Claim served at the outset of the English proceedings that it was "willing to offer [Apple] a licence to the Asserted Patents that is held by this Court to be FRAND" and that "such a licence is one of worldwide scope to the [Optis] Portfolio as a whole", Optis did not give an undertaking to this effect down to the conclusion of Trial E (perhaps because Apple did not request this). During the course of the consequentials hearing in July 2023 it appeared to the judge (whether rightly or wrongly does not matter for present purposes) that Optis was backsliding from its commitment. This led to Optis undertaking to the Court to enter into a licence in the form determined to be FRAND in the English proceedings. This undertaking was incorporated into an order made by the judge on 3 August 2023.

207. On 21 July 2023 Apple served a thirty-ninth witness statement of Anthony Trenton of WilmerHale. In paragraph 6 of that statement Apple offered to withdraw its Trial F appeal to the UK Supreme Court, but that offer was conditional upon Optis not only entering into a licence on the terms determined by the judge (subject to appeal), but also ending the US proceedings. In paragraph 7 of that statement Apple withdrew a reservation which it had made when challenging the jurisdiction of the English courts, and maintained in paragraph 91(2) of its FRAND Defence and paragraph 39(5) of its Position Statement, of the right to appeal to the Supreme Court on the question of whether the English courts have jurisdiction to determine a global FRAND licence (i.e. to try to persuade the Supreme Court to depart from *Unwired Planet International Ltd v Huawei Technologies Co Ltd* [2020] UKSC 37, [2020] Bus LR 2422 ("*UPSC*")). On 31 July 2023 WilmerHale wrote to EIP proposing that Apple's Trial F appeal be withdrawn unconditionally with no order as to costs. Following correspondence between the parties in which Apple confirmed that it unequivocally undertook to take a licence on the terms determined by the English courts to be FRAND, and agreed to pay Optis' costs of the Supreme Court appeal, Apple applied to the Supreme Court for

permission to withdraw the Trial F appeal on 15 September 2023. This was granted by the Supreme Court on 16 October 2023.

208. On 26 April 2024 Apple filed a motion asking the CAFC to stay the US appeal pending resolution of Optis' appeal in these proceedings. On 6 May 2024 Optis opposed the motion. On 14 June 2024 the CAFC ordered that Apple's motion be considered by the merits panel assigned to the appeals.

209. During the hearing of this appeal, we were informed that the US appeals were ready for oral argument and could be heard soon. Optis expressed concern that paragraph 6(2) of the judge's order (as to which, see below) would prevent them from arguing the US appeals without the permission of the judge or Meade J, while Apple's position was that it would not. Since the hearing, (i) the oral argument before the CAFC has been fixed for 9 May 2025, (ii) the CAFC has denied Apple's motion for a stay on 26 March 2025 and (iii) the parties have agreed a consent order permitting Optis to argue the US appeals if permission is needed.

210. Apple's position on the US appeals is that the second jury verdict should be set aside and Optis should be awarded nothing. Optis's position is that the first jury verdict should be reinstated. Thus there are, broadly speaking, three possible outcomes: (i) Optis get nothing; (ii) Optis get $300 million for the past and future; and (iii) Optis get $506.2 million for the past.

211. Optis' costs of the US proceedings are about $36 million. Presumably Apple have spent a similar amount.

The judge's main judgment

212. The judge answered "the FRAND Question", as he put it, in Section I of Part V of his main judgment. In subsection (1), headed "Doing only the necessary", the judge explained at [488]:

> "The purpose of this Judgment is to resolve the FRAND Question: no more and no less. The terms I settle will therefore be confined to the minimum needed to resolve this question, but with the intention of ensuring that this particular question – the value of the Portfolio on a FRAND basis – does not trouble the courts again."

213. The judge went on in [489] that this informed his approach on a number of issues, including at (iv):

> "*Other proceedings and other licences by Apple*. Throughout the course of these proceedings, reference was made to proceedings in other jurisdictions concerning the Portfolio. All other proceedings involving the Portfolio will have to be compromised as one of the terms of the licence, and Apple may take and Optis will have to give credit for any payments made. To the extent there has been over-payment, this should be recoverable by Apple. If necessary, I will consider (subject to argument)

> granting an injunction to ensure that any proceedings undermining the licence I am drawing stop."

214. The judge then said at [490]:

> "Precisely how the licence is to be drawn is a matter that will have to be debated in light of this Judgment and in the light of a draft licence that I am going to invite the parties to draw up for my attention. What follows should be taken as a binding guide as to how the licence is to be drawn. But, I accept, that there will be details that will need to be fleshed out and further articulated."

215. In subsection (2), headed "Broadbrush articulation of the terms of the FRAND licence", the judge addressed the present issue as follows:

> "***(f) Other proceedings***
>
> 503. This is a worldwide licence, covering the entirety of the Portfolio, and is closing out any claims against Apple, whether for past or future infringement. It follows that any proceedings anywhere in the world by Optis against Apple in respect of the Portfolio should cease, and (to the extent necessary) injunctive relief can be applied for by Apple.
>
> 504. Equally, any payments due by Apple, and not made, should be abrogated. That can, as necessary, be a term of the licence.
>
> 505. Insofar as any payments have been made, these should be credited against the sums due from Apple under this licence, and any overpayments repaid. Again, provision should be made for this in the licence."

The judge's consequentials judgment

216. In Section F of his consequentials judgment the judge addressed himself to the question he articulated at [8](v) as follows: "The scope of the FRAND licence: whether certain patents in the Optis Portfolio can be excluded from scope".

217. The judge began his consideration of this question by stating at [72]:

> "Although I was aware of the existence of parallel – or, to be more accurate, partially duplicative – proceedings in the United States, namely the EDTX Proceedings, neither party addressed me as to the implications of this partial duplication during the course of Trial E. As will become apparent, this is a matter that ought to have been drawn to the court's attention, and the relationship clarified, well before Trial E; and not after it. Be that as it may, the problem which has now arisen is that Optis wishes to take inconsistent positions in the two sets of proceedings. That question must now be resolved."

218. Having outlined the course of the EDTX proceedings in subsection (1), the judge set out his analysis in subsection (2). He summarised the nature of the FRAND jurisdiction in subsubsection (a). In subsubsection (b) he stated (footnotes omitted):

> "**(b) This is not a case of competing jurisdictions**
>
> 75. Optis contended that it would be wrong for this court to interfere with the EDTX proceedings. Optis stressed that the judgments obtained by them in the United States were *res judicata*, and that questions of comity between courts precluded this court from interfering with a court (such as the [EDTX]) with territorial jurisdiction over patents infringed or alleged to have been infringed in that jurisdiction.
>
> 76. In general terms, I accept the point made by Optis as regards *res judicata* and the importance of comity between jurisdictions. But I regard these points as irrelevant to the question at hand. There is no doubt that Optis and Apple, acting in concert, can dispose of the EDTX Proceedings in any way they wish. Indeed, even if those proceedings had concluded, with Apple actually paying US$300 million to Optis in damages, there would be nothing to prevent Optis (solvency allowing) from repaying that amount to Apple, if it chose to do so. The point is that the EDTX proceedings – as is the case with civil proceedings generally – can be disposed of by the parties according to their will, and courts across this jurisdiction and in the United States will give effect to the will of the parties. Questions of comity, *res judicata*, competing judgments and rival jurisdictions treading on each other's toes in violation of international comity between courts and jurisdictions simply do not arise."

219. In subsubsection (c) the judge noted that more than one set of terms could be FRAND. In subsection (d) he reasoned as follows (footnotes omitted):

> "**(d) Trial E has determined the rate for a worldwide licence to the Optis Portfolio**
>
> 80. The problem that Optis face is that they wish, post-Judgment, to resile from their pleaded case, and to contend that a FRAND licence is one that is worldwide except for the patents which are subject to the EDTX Proceedings.
>
> 81. In my judgment, that is a course that is not open to Optis:
>
> i) The nature of the licence contended for by Optis has been unequivocal since the commencement of these proceedings. The licence sought has been <u>worldwide</u>, and there has been no 'carve-out' on the basis of <u>geography</u> at all. There has been no suggestion that the patents the subject matter of the EDTX Proceedings should, in some way, be treated differently. The

unequivocal manner in which Optis has pleaded its case is illustrated by the quotation in paragraph [73](ii)(a) above, but it is important to bear in mind (i) that this is but one of many such statements and (ii) that those statements were never qualified during the course of these proceedings, until now.

ii) It cannot be said that this is a matter of which Optis was unaware. Optis initiated both these proceedings and the EDTX Proceedings as claimant. Optis had control of how they chose to assert their rights in both sets of proceedings. That is something that Apple had no control over. There was nothing to stop Optis from pleading in these proceedings that a licence that was worldwide but for the patents asserted in the EDTX Proceedings was FRAND. The fact is, no such plea has ever been made. Indeed, at the time of writing, the pleadings remain as I have described.

iii) Because Apple have not disputed in Trial E that a FRAND licence is a worldwide licence, the court has not considered whether a geographically more narrowly framed licence might or might not be FRAND. The point simply did not arise for determination. Even if Optis were now to seek to amend its case, I doubt very much whether such an amendment could properly be permitted: [for three reasons given by the judge].

82. I therefore conclude that the terms of the FRAND licence that I will declare as the outcome of these proceedings will be a worldwide licence including in particular the patents being asserted in the EDTX Proceedings.

83. I should briefly deal with the contention advanced by Optis that Apple should have done more to resist Optis' claims in the EDTX Proceedings by – for instance – seeking a stay in favour of these proceedings. That is a fundamentally bad point, because it assumes that which is not the case, namely that this is a question of competing proceedings. For the reasons I have given, it is not. This is a case where the outcome is not a judgment that competes with or is inconsistent with the EDTX Proceedings, but rather a Court-Determined Licence that will oblige Optis, as a matter of contract, to behave in a certain manner in relation to the EDTX Proceedings and any fruits of those proceedings (should any be paid by Apple to Optis). I have little doubt that if – prior to this point in time – Apple had applied to the US courts for a stay on forum grounds, the response would have been a negative one (and rightly so). The effects on the EDTX Proceedings arise as a matter of contract, not competing jurisdictions, and the contract in question is the Court-Determined Licence."

220. In subsection (3), headed "An alternative case", the judge went on:

> "84. From this, it would appear to follow that the consequences outlined in Judgment/[489(iv)] and [503] to [505] hold good: they simply reflect the consequences of the claim that has consistently been asserted by Optis throughout these proceedings.
>
> 85. However, Optis contended that even if the conclusion expressed in paragraph 82 above was right – and that the outcome of these proceedings was the declaration of a worldwide licence, with no 'carve out' for the patents being asserted in the EDTX Proceedings – the suggestion that this Court should go any further than simply making the declaration was wrong. Rather, this Court should declare a licence in FRAND terms, and leave it to the courts of the United States to work out the implications. This court should be very slow to tell the courts of another jurisdiction how to conduct their business whether directly or indirectly (i.e. by exercising a personal jurisdiction over the parties as to how they conducted themselves abroad).
>
> 86. The essence of Optis' point was that this court should exercise a self-denying ordinance in terms of how it intruded itself in the affairs of other (foreign) jurisdictions. Let me say at once that I accept the general force of Optis' point, but that I do not consider that point to have any force in the present case. That is substantially for the reasons given above, but (without repetition) the following additional points can be made:
>
> i) It is a mistake to regard the Court-Determined Licence as anything other than a remedy arising out of an established or admitted infringement of the United Kingdom intellectual property right, justiciable before the courts of England and Wales.
>
> ii) True it is that the parties and court will strive to render the Court-Determined Licence as self-standing as possible, so that the parties do not have to trouble the court again with regard to the terms of the licence. That objective is usually achieved, but it is <u>not</u> the paramount objective. At the end of the day, the Court-Determined Licence is just that: a set of obligations imposed on the parties pursuant to the jurisdiction I have described. There is nothing inimical to that jurisdiction in the court reserving an ability to police the Court-Determined Licence, and sometimes it will be the court's positive duty to assume that role.
>
> iii) This is such a case. It is quite clear to me that there a level of commercial mistrust between Optis and Apple so as to render a self-standing

agreement that will not be referred back to some court or other an impossibility. The Court-Determined Licence in this case effectively involves a price for a portfolio of rights, where both the price and portfolio are known. A short agreement ought to be possible. Yet the draft agreements that the parties have presented have grown in length and complexity, and the number of drafting disagreements has increased accordingly. The risks of one party or other alleging breach of the agreement, possibly even repudiation, are high. It has therefore seemed to me appropriate to revert to an agreement that sets out the essentials, but leaves scope for disagreements in regard to the carrying of the agreement into effect to return to <u>this</u> court.

iv) That is the Court-Determined Licence that I have drafted. That approach not only seems to me the most workable – the greater the opportunities the parties have to bring matters back to court, the <u>less</u> I anticipate those opportunities will be used – but also it serves to underline the essentially remedial purpose of the Court-Determined Licence and the fact that this licence is, in a quite fundamental way, a matter for the courts of <u>this</u> jurisdiction."

The relevant terms of the judge's order

221. Paragraph 6(2) of the order provides:

> "Pending the entry into force of the Court-Determined Licence pursuant to the Optis Undertaking:
>
> (i) Each of Optis and Apple are obliged to do nothing inconsistent with or prejudicial to the future operation of the Court-Determined Licence.
>
> (ii) Each of Optis and Apple may apply to this Court (reserved to Marcus Smith J or, if unavailable the Judge in Charge of the Patents Court …) on seven days' notice for direction as to whether a proposed course of conduct is permitted under paragraph 6(2)(i) above.
>
> (iii) Each of Optis and Apple may apply to this Court (reserved to Marcus Smith J or, if unavailable the Judge in Charge of the Patents Court …) for any order appropriate to maintaining and/or preserving the effective future operation of the Court-Determined Licence."

The relevant terms of the short-form licence settled by the judge

222. The Court-Determined Licence provides:

> “5. Optis:
>
> (1) Grants to Apple and its customers, service providers, manufacturers, distributors, retailers, resellers, and suppliers (collectively, ‘Apple Covered Parties’) a licence revocable only by order of this Court, on a world-wide basis, to the Portfolio until the expiry of the longest-living of all patents within the Portfolio in respect of all products, services and components manufactured or supplied, or to be manufactured or supplied, by or for Apple.
>
> (2) Subject always to paragraph 6 of the Order, agrees, in relation to the Portfolio, not to sue Apple Covered Parties and/or not to proceed with or take any steps in relation to litigation and/or not to enforce any order (save as regards any order as to costs made against Apple by a competent court in any jurisdiction) in relation to the Portfolio in any jurisdiction in respect of all products, services and components manufactured or supplied, or to be manufactured or supplied, by or for Apple.
>
> 7. For the avoidance of doubt, this Court-Determined Licence is intended (amongst other things) to carry into effect the approach set out in paragraphs 503 to 505 of the Trial E Judgment. It is recognised that unforeseen circumstances may require litigation in relation to the Portfolio, in which case:
>
> (i) The parties should seek to reach agree as to the prosecution of this litigation, failing which
>
> (ii) The parties should apply to the Court under the Order.
>
> 8. Optis releases, acquits and forever discharges Apple Covered Parties from any and all claims of infringement of the patents in the Portfolio or any Portfolio related claims brought by Optis against Apple Covered Parties in any litigation between the parties.”

Why are there two sets of proceedings?

223. It is convenient before turning to Optis’ grounds of appeal to ask why there are two sets of proceedings between the parties which have progressed in the way that they have.

224. I did not understand Apple during the course of argument before this Court to criticise Optis for bringing proceedings simultaneously in two jurisdictions, but if any criticism was intended I would reject it. Apple’s formal position at that time was that it did not need a licence under the Optis portfolio because Optis had not proved in court or demonstrated to Apple’s satisfaction that any of the patents in the Optis portfolio anywhere in the world was both valid and essential (and therefore infringed by Apple

in the absence of a licence). Optis' commencement of proceedings in two significant markets was an appropriate response to this.

225. More specifically, as Mr Moss explained in his second witness statement (see paragraph 175 above), Optis was concerned that Apple would challenge the jurisdiction of the English courts and/or refuse to take a licence on the terms determined by the English courts to be FRAND. Both concerns were fully justified, as Apple's subsequent conduct demonstrates.

226. First, Apple did challenge the jurisdiction of the English courts, albeit unsuccessfully and albeit that no appeal was pursued (see paragraph 176 above).

227. Secondly, and more importantly for present purposes, Apple refused to commit to take a licence on the terms determined by the English courts to be FRAND even after having been found to have infringed EP744 (see paragraph 184 above). Apple maintained that stance even after Meade J ruled against it in Trial F (see paragraph 184 above) and after this Court had dismissed Apple's appeal against that ruling (see paragraph 197 above).

228. At that stage, therefore, Apple was attempting to reserve the right to submit to an injunction restraining them from infringing EP744 (and the other European Patents (UK) which were subsequently held to be valid, essential and infringed) rather than accept the English courts' determination of what terms for a licence of the Optis portfolio were FRAND. If Apple had taken that course, Optis would not have obtained payment of royalties by Apple pursuant to a worldwide licence of the portfolio, but would only have been entitled to damages (or an account of profits) for infringement of the European Patents (UK) which had been found to be valid, essential and infringed. In that event, there would have been no inconsistency between the EDTX proceedings and the English proceedings, and no question of any double recovery by Optis.

229. It was only on 15 September 2023 that Apple finally abandoned the stance I have described in the two preceding paragraphs (see paragraph 207 above). Importantly, that occurred after (i) the judge had handed down his main judgment (see paragraph 201 above), (ii) the judge had heard three days of argument on consequential issues (see paragraph 156 above) and (iii) the judge had sent the parties the first version of his consequentials judgment (see paragraph 156 above).

230. Accordingly, it was only on 15 September 2023 that the potential for inconsistency between the EDTX proceedings and the English proceedings crystallised.

231. By 15 September 2023, Optis had obtained the judgment for $300 million in the EDTX proceedings (see paragraph 183 above) and it was under appeal to the CAFC (see paragraph 196 above).

232. If Apple had undertaken to take a licence to the global Optis portfolio on the terms determined to be FRAND by the English courts at the outset of the English proceedings, the EDTX proceedings would have been unnecessary. I see no reason to think that, if Apple had given such an undertaking, Optis would nevertheless have pursued the EDTX proceedings. Moreover, if Optis had nevertheless attempted to do so, Apple would have had potential remedies at its disposal both in the English proceedings and in the EDTX proceedings.

233. For the reasons given above, it is clear that the responsibility for the present situation lies at Apple's door so far as the period down to 15 September 2023 is concerned. Once Apple changed its stance on 15 September 2023, however, it was incumbent on both sides properly to address the potential inconsistency that had arisen.

Ground 22

234. Optis' ground 22 is that paragraph 6(2) of the judge's final order (set out in paragraph 220 above) was procedurally unfair because it was not sought by either party, nor was it the subject of argument between the parties. Optis argues that this order is particularly unfair because in substance it is an interim anti-suit injunction ("ASI") which Apple had not applied for and in support of which Apple gave no cross-undertaking in damages.

235. Apple dispute that paragraph 6(2) is properly characterised as an interim ASI (or any sort of ASI), but contends that Apple did seek "the sort of protection provided by paragraph 6(2)" on the basis that, during the hearings on 18 and 19 December 2023 (see paragraph 157 above), Apple "repeatedly expressed concern as to the integrity of the [English] court's judgment if Optis was permitted to collect on the US judgment in addition to the [Court-Determined Licence]". Apple also dispute that the judge did not give the parties the opportunity to be heard with respect to paragraph 6(2) on the basis that it was contained in the draft circulated by the judge on 2 February 2024 (see paragraph 159 above) and the judge invited submissions in writing and orally at the hearing on 13 February 2024 (see paragraph 160 above). Furthermore, Apple points out that the judge aired the suggestion of a clause in the licence agreement to similar effect during the hearing on 18-19 December 2023.

236. Whether or not paragraph 6(2) is properly characterised as an ASI, I consider that Optis' complaint about the procedure adopted by the judge is justified. Paragraph 6(2) has its roots in part (f) of the judge's "binding guide" as to the terms of the licence set out in his main judgment at [503]-[505] (see paragraph 214 above). At that stage the judge had not heard argument about how the licence or order should deal with the EDTX proceedings. On the contrary, the parties had agreed in the correspondence between 11 November 2022 and 1 December 2022 that this question would be addressed in consequential arguments after the main judgment was handed down (see paragraphs 198-200 above). Furthermore, although, following Apple's change of stance on 15 September 2023 (see paragraph 229 above), Apple expressed concern about the integrity of the English proceedings at the hearing on 18-19 December 2023, it did not apply for any relief on this basis, and specifically it did not apply for paragraph 6(2). Although the judge aired his suggestion of a term in the licence agreement, it does not appear to have been adopted by Apple; and in any case the proposal at that stage was not for a term in the order. Paragraph 6(2) was included in the draft circulated by the judge on 2 February 2024. While it is true to say that, technically, Optis had the chance to argue against the inclusion of paragraph 6(2) at the hearing on 13 February 2024, it is plain that the judge's mind was made up by then. Counsel then appearing for Optis stated that her submissions about the precise wording of paragraph 6(2) were "without prejudice to any appeal that Optis would wish to make in respect of the inclusion of 6(2) at all". The judge responded that he took that as read. It is plain from the subsequent exchanges between them that the judge would not have entertained any attempt on the part of Optis to resist the inclusion of paragraph 6(2).

237. Given that Optis have had a full opportunity to argue the merits of paragraph 6(2) on this appeal, however, the procedural unfairness has now been rectified.

Grounds 23 and 24

238. Ground 23 is that the judge should not have imposed licence terms interfering with foreign proceedings, in particular the EDTX proceedings and more particularly the judgment therein, since this was (i) not FRAND and (ii) contrary to comity. Optis specifically objects to clauses 5(2) and 7 of the judge's short-form licence (set out in paragraph 222 above) on this ground, although it seems to me to be relevant to clause 8 as well.

239. Ground 24 is that the judge should not have imposed terms of his order interfering with foreign proceedings, in particular the EDTX proceedings and more particularly the judgment therein, since this was (i) not FRAND and (ii) contrary to comity. Optis specifically objects to paragraph 6(2) of the order. Optis also contends that paragraph 6(2) creates an inappropriate supervisory role for the Patents Court.

240. In substance, both grounds raise the same question: how should the potential inconsistency between the EDTX proceedings and the English proceedings which arose after 15 September 2023 be addressed in these proceedings? Ground 23 is concerned with the direct financial consequences of this potential inconsistency, while ground 24 is concerned with other consequences. Ground 23 is thus the more important of the two, and therefore both sides devoted much more time to it in oral argument than to ground 24.

241. *Ground 23: Financial consequences*. Before proceeding further, I should reiterate that one possible outcome of the appeals which are currently pending before the CAFC is that Optis will get nothing (see paragraph 210 above). I do not understand Apple to contend that, in that event, there would be any inconsistency between the final result in the US proceedings and the worldwide FRAND licence determined by the English courts.

242. Conversely, if Optis is successful in either reinstating the first jury award or maintaining the second jury award, I do not understand Optis to dispute that there would be a potential inconsistency. I shall therefore assume that the CAFC will reach one of those two conclusions.

243. Optis' position is that it accepts (and has always accepted) that it is not entitled to double recovery in respect of the five US Patents asserted in the EDTX proceedings. Optis nevertheless contends that the judge should have made appropriate provision in the FRAND licence to give effect and value to the final US judgment, rather than set it at naught, since that is what a willing licensor in the position of Optis and a willing licensee in the position of Apple would agree.

244. As to how appropriate provision should be made, Optis says that, in theory, the right approach would be for the consideration for the licence determined by the English courts to be adjusted so as to replace the value assessed by the English courts for the US Patents and acts covered by the final US judgment with the US judgment sum. Optis accepts, however, that in practice the valuation methodologies employed by both sides do not permit this to be done. Next, Optis says that a pragmatic solution would be to

subtract from the English assessment a sum reflecting the value of the five patent families worldwide. This would be favourable to Apple, and hence FRAND. I do not see, however, that this is any more practical than the first solution, for the same reason. Finally, Optis says that an alternative pragmatic solution would be to treat the final US judgment sum as a floor i.e. Optis retains whatever sum is awarded in the US and, to the extent that the total global royalty payment held to be FRAND in these proceedings exceeds the final US judgment sum, Apple should pay Optis the balance. This would be even more favourable to Apple, and hence (if possible) even more FRAND, than the second solution.

245. Optis argues that this is consistent with Apple's own position as set out in paragraph 39(3) of its Position Statement (quoted in paragraph 187 above), but the same cannot be said for Apple's subsequent position that the draft licence should include the new clause 3.3 proposed by Apple on 15 May 2022 (see paragraph 190 above).

246. More importantly, Optis argues that its case is supported by the judgment of Henry Carr J on jurisdiction in *Conversant Wireless Licensing SARL v Huawei Technologies Co Ltd* [2018] EWHC 808 (Pat), [2018] RPC 16 in which he held at [65] that the result of Chinese proceedings brought by Huawei and ZTE would be taken into account in any global FRAND licence determined by the English courts. Similarly, in *UPSC* the Supreme Court held at [64]:

> "… If an implementer is concerned about the validity and infringement of particularly significant patents or a group of patents in a particular jurisdiction which might have a significant effect on the royalties which it would have to pay, it might in our view be fair and reasonable for the implementer to reserve the right to challenge those patents or a sample of those patents in the relevant foreign court and to require that the licence provide a mechanism to alter the royalty rates as a result. It might also be fair and reasonable for the implementer to seek to include in the licence an entitlement to recover sums paid as royalties attributable to those patents in the event that the relevant foreign court held them to be invalid or not infringed, although it appears that that has not been usual industry practice. Huawei suggests that it would serve no purpose for a UK court to fix the terms of a global licence but to provide for the alteration of royalties in the event of successful challenges to declared SEPs overseas. This would, it suggests, reduce a licence to an interim licence. Again, we disagree. Under a FRAND process the implementer can identify patents which it wishes to challenge on reasonable grounds. For example, in the Conversant case, it might well be argued by Huawei or ZTE at trial that the obligation of fairness and reasonableness required any global licence granted by Conversant to include provision to allow for Huawei or ZTE to seek to test the validity and infringement of samples of Conversant's Chinese patents, with the possibility of consequential adjustment of royalty rates, given the importance of China as a market and a place of manufacture. In other cases, such challenges may make little sense unless, at a cost

> proportionate to what was likely to be achieved in terms of eliminating relevant uncertainty, they were likely significantly to alter the royalty burden on the implementer."

247. In response, Apple accepts that the task of the English courts is to determine what terms for a licence are FRAND and that FRAND terms are those that would be agreed between a willing licensor and a willing licensee. Apple contends that Optis' appeal should be dismissed for three reasons (a fourth fell away because it was in response to an argument which Optis did not pursue and a fifth was not pursued in oral argument). The first is that Optis' arguments are unsupported by evidence of commercial practice. The second is that any evidence of commercial practice should have been adduced at trial and it is too late to introduce it now. The third is that Optis' arguments are inconsistent with its position at trial, which was that the judge should determine FRAND terms for a worldwide licence of Optis' portfolio.

248. Taking Apple's third reason first, I do not accept this argument. Optis effectively reserved its position in paragraph 58 of its Responsive Position Statement (see paragraph 189 above). Furthermore, Optis submitted in its reply closing submissions that it was entitled to sue in the USA because of Apple's hold out, that the relationship between the EDTX judgment and the FRAND licence should be resolved after the latter had been determined and that one possibility would be a carve out of the five US Patents (see paragraph 194 above). Further still, the parties subsequently agreed that the matter should be addressed in consequential arguments (see paragraphs 198-200 above). Finally, as I have explained, it was not until 15 September 2023 that the potential for inconsistency between the EDTX proceedings and the English proceedings crystallised (see paragraphs 229-233 above)

249. Turning to Apple's first reason, Apple argues that this issue requires evidence of commercial practice to resolve. More specifically, Apple contends that evidence would be required from (i) factual and/or expert witnesses who had been involved in licensing negotiations where there had been damages awards, (ii) economic or valuation expert evidence and (iii) evidence from US law experts as to the prospects of the EDTX judgment being altered on appeal. I disagree with this. While I accept that evidence of commercial practice would be admissible, I do not consider that evidence of commercial practice is required in order for the court to make an assessment of what is FRAND so far as the present issue is concerned. I would add that categories (ii) and (iii) are not evidence of commercial practice anyway (which is not to imply that they would necessarily be inadmissible, although I have my doubts about category (iii)).

250. As for Apple's second reason, I agree with Apple that it is too late for evidence of commercial practice to be adduced now, but Optis does not seek to adduce such evidence on this appeal. For the reasons I have explained above, particularly in paragraph 233, such evidence could have been adduced by the parties at the hearing on 18-19 December 2023, but neither side attempted to do so. Accordingly, both parties must be taken to have accepted that the court should decide what was FRAND without the benefit of such evidence.

251. Although I have not accepted any of the three reasons advanced by Apple for rejecting this ground of appeal, it does not necessarily follow that any of the solutions to the problem proposed by Optis are FRAND. The first two solutions are impractical for the

reasons given in paragraph 244 above. That leaves the third possibility, namely treating the final US judgment as a floor.

252. In my view the judge's starting point in considering this question in his main judgment at [489](iv) (paragraph 213 above) and [503]-[505] (paragraph 215 above) was the correct one, namely that *prima facie* it would be inconsistent with Apple having a worldwide licence to Optis' portfolio beginning on 1 January 2023 with a release covering the preceding six years for Optis to recover damages for infringement of five US Patents in that portfolio. Where I part company with the judge is with respect to his reasoning in the consequentials judgment, in which he adhered to that starting point notwithstanding the procedural history I have set out above.

253. First, I disagree with the judge's suggestion in that judgment at [72] (paragraph 217 above) that the position ought to have been clarified before Trial E. As I have explained, the problem was caused by Apple's stance prior to 15 September 2023 notwithstanding the decisions of Meade J and this Court in Trial F. There is nothing that either Optis or the judge could have done to resolve the issue prior to 15 September 2023.

254. Secondly, I disagree with the judge's view which is apparent from the penultimate sentence of [72] and confirmed by the reasoning at [80]-[83] (paragraph 219 above) and [84]-[86] (paragraph 220 above) that Optis is at fault for the present situation. For the reasons explained in paragraphs 223-233 above, the fault is Apple's. There is no recognition in the judge's reasoning of the significance of Apple's change of position on 15 September 2023.

255. Thirdly, I disagree with the judge's view in [80] that Optis is trying to resile from its pleaded case. On the contrary, Optis' position is consistent with paragraph 58 of Optis' Responsive Position Statement (paragraph 189 above). For good measure, it is also consistent with paragraph 39(3) of Apple's Position Statement (paragraph 187 above) (although not, as I have already acknowledged, with clause 3.3 of the marked-up licence served by Apple on 15 May 2022 (paragraph 190 above)).

256. Fourthly, I disagree with the judge's view in [76] that no question of comity arises. On the contrary, for the English courts to make an order requiring a regularly-obtained US judgment to be vacated seems to me manifestly to give rise to an issue of comity. I shall return to this point below.

257. Although I consider that the judge's starting point was the correct one, the decisive factor in the present case is that Apple was responsible for the EDTX proceedings having proceeded to judgment (and pending appeals) prior to their change of stance on 15 September 2023. In my judgment a willing licensee in the position of Apple would therefore recognise that it would not be fair or reasonable for the licence determined by the English courts to require Optis to consent to the EDTX judgment (or any judgment of the CAFC on appeal) being set aside. Still less would it be fair or reasonable for it to require Optis to do so without even being reimbursed for the costs of the US proceedings down to 15 September 2023, which is Apple's position. In principle, the right answer would be for the English courts' valuation to be adjusted to take account of the EDTX judgment, but as discussed above the valuation methodologies adopted by the parties make that impractical. In those circumstances, the least-worst solution to the problem which Apple has caused is for the US final judgment to be treated as a floor for the royalties payable by Apple under the licence determined by the English courts

in the manner proposed by Optis. In fairness to the judge, it does not appear that this was a solution proposed by Optis before him.

258. Although I have arrived at this conclusion by applying the FRAND criterion to the terms of the licence between Optis and Apple, it is also supported by considerations of comity. As noted above, the EDTX judgment was regularly obtained by Optis from a competent US court applying US law well before the English court's FRAND determination and well before Apple's change of stance on 15 September 2023. It is not *res judicata* in the fullest sense, because the parties' rights of appeal are not yet exhausted. For present purposes, however, I am assuming that it will be maintained by the CAFC to the extent that one of the two jury awards is upheld. Comity dictates that the English courts should not interfere with such a judgment save for compelling reasons, but there is no compelling reason in the circumstances of this case.

259. I should make it clear, however, that I disagree with Optis' argument that this conclusion is supported by the reasoning in *UPSC* at [64] (paragraph 246 above). The problem which the Supreme Court was addressing in that passage is a different one, namely that the English courts' jurisdiction to determine global FRAND terms cannot exclude the jurisdictions of foreign courts to consider the validity of patents granted in their territories.

260. *Ground 24: Other consequences*. For the reasons given in paragraph 250 above, and given my conclusion on ground 23, I shall deal with this ground shortly.

261. Whether or not it is properly characterised as an ASI, I consider that paragraph 6(2) of the order is not justified. First, given my conclusion on ground 23, it is unnecessary. Secondly, it is unclear as to its scope, as the disagreement between the parties as to whether it prevented Optis from orally arguing the appeals before the CAFC without the Patents Court's permission (see paragraph 209 above) illustrates. Thirdly, I agree with Optis that it amounts to an inappropriate regime of ongoing court supervision. The same objections apply to paragraphs 5(2) and 7 of the judge's short-form licence. Fourthly, paragraph 7 of the licence is also objectionable on the ground that it requires reference to the main judgment whereas an order should so far as possible be free-standing. I am also doubtful that paragraph 6(2) of the order is consistent with the jurisdiction being exercised by the judge, which was to determine and declare what licence terms would be FRAND, but it is not necessary to reach a conclusion on that point.

Lord Justice Newey:

262. I agree with both judgments.

Annex A

	licensor's stack share (%)		Bezant simple DPU $	*DPU scaled to Optis by (0.38/licensor's stack share) ($)*	*rounded*
Ericsson 2015	4.15		[...]	[...]	[...]
Interdigital 2016	3.74		[...]	[...]	[...]
Nokia 2017	8.38		[...]	[...]	[...]
Panasonic 2020	2.31		[...]	[...]	[...]
Sisvel 2016	0.13		[...]	[...]	[...]
ZTE 2020	3.7		[...]	[...]	[...]
CCE 2017	0.18		[...]	[...]	[...]
Huawei 2014	8.43		[...]	[...]	[...]
ETRI 2019	2.19		[...]	[...]	[...]
Conversant 2020	0.36		[...]	[...]	[...]
Longhorn 2018	0.06		[...]	[...]	[...]
LGE 2017	6.62		[...]	[...]	[...]
Pantech 2017	0.23		[...]	[...]	[...]
I could not find Bezant simple DPU figures for Longhorn or Pantech - they are [...]					

Annex B

	licensor's stack share (%)		Gutteridge unscaled FR DPU ($)	*scaled to Optis by (0.38/licensor's stack share) ($)*	*rounded ($)*		Bezant unscaled FR DPU (%)	*scaled to Optis ($)*	*rounded ($)*
Ericsson 2015	4.15		[...]	[...]	[...]		[...]	[...]	[...]
Interdigital 2016	3.74		[...]	[...]	[...]		[...]	[...]	[...]
Nokia 2017	8.38		[...]	[...]	[...]		[...]	[...]	[...]
Panasonic 2020	2.31		[...]	[...]	[...]		[...]	[...]	[...]
Sisvel 2016	0.13		[...]	[...]	[...]		[...]	[...]	[...]
ZTE 2020	3.7		[...]	[...]	[...]		[...]	[...]	[...]
CCE 2017	0.18		[...]	[...]	[...]		[...]	[...]	[...]
Huawei 2014	8.43		[...]	[...]	[...]		[...]	[...]	[...]
ETRI 2019	2.19		[...]	[...]	[...]		[...]	[...]	[...]
Conversant 2020	0.36		[...]	[...]	[...]		[...]	[...]	[...]
Longhorn 2018	0.06		[...]	[...]	[...]		[...]	[...]	[...]
LGE 2017	6.62		[...]	[...]	[...]		[...]	[...]	[...]
Pantech 2017	0.23		[...]	[...]	[...]		[...]	[...]	[...]