

PATENTS ACT 1977

IN THE MATTER OF a reference by
British Telecommunications plc under
section 37(1)(b) as to entitlement to patent
number EP0683925 in the name of A C Egerton
Limited, and an application for revocation
of that patent under section 72(1)(b)

DECISION

1. This decision is concerned with entitlement to a granted patent, and with its revocation if I find that the current proprietor is not entitled to it.

Introduction

2. A C Egerton Limited (hereafter “Egerton”) are proprietors of patent number EP0683925. The patent relates to electrical connectors for telephone lines, for making connections between the wires leading from the exchange (exchange wires) and the wires leading to the subscriber premises (drop wires). There is a pair of drop wires, and hence a pair of exchange wires, for each subscriber. Assemblies of connector pairs for perhaps 20 subscribers will normally be mounted in a single weather-proof box at the top of a telegraph pole, to form what is known as a “pole top distribution point”.

3. British Telecommunications plc (hereafter “BT”) have referred the question of entitlement to the patent under section 37(1)(b) of the Act. Initially they said that Egerton found out about the invention from BT during a competitive tendering process which BT initiated to find suppliers to help them develop such connectors. Later they qualified that to say that Egerton may alternatively or additionally have found out about it in the subsequent development process. Either way, they say that in consequence the patent was granted to a

person not entitled to it and that it should be revoked under section 72(1)(b).

4. BT have already opposed the patent before the European Patent Office (EPO). A decision on that opposition left the patent standing but with narrower claims. Both sides have appealed that decision, but the appeal is not likely to be heard for some time. BT did ask me to stay the present proceedings pending the outcome of the appeal, but I declined to do so in a Preliminary Decision dated 6 November 1998.

5. Following the usual rounds of evidence, the case came before me initially for two days on 25th and 26th November 1999, and after an adjournment, for a further three days on 23rd to 25th February 2000. Miss Jessica Jones appeared as counsel for BT. Mr Mark Vanhegan, instructed by Fry Heath & Spence, appeared as counsel for Egerton. Of the five days of the hearing, three were taken up entirely with cross examination of various witnesses. This made the hearing relatively long by Patent Office standards. That may in part reflect the commercial importance of the case to the parties, but it was also an inevitable consequence of the nature of BT's case. They relied heavily on drawing inferences to prove their alleged facts rather than direct evidence of those facts themselves, and that in turn required lengthy cross examination of a fair number of witnesses.

Outline history of events

6. Pole top distribution points are in widespread use, both here and abroad. In 1991, when the events with which we are concerned start, Egerton were the sole suppliers to BT of what was then the latest design of connectors for such units, the so-called BT76/86. However, technology and customer service requirements were moving on, and BT decided it needed a new generation of connectors. Traditionally BT had always specified the design of network components like this itself, but on this occasion it decided to handle the procurement process differently. Instead of working with a sole supplier to develop the new distribution points, it produced a statement of requirements (SOR), and invited manufacturers to come up with designs that met the SOR and submit bids. Potentially there was a large order here for the successful manufacturers - BT told at least one of them that their initial requirements were

for one million new pole top distribution points, requiring about 20 million connector pairs.

7. In mid 1991, Mr Springett and Mr Leaver of BT issued the SOR to a dozen likely manufacturers. This was followed up by face-to-face discussions with many, if not all, of them. Egerton, for example, was seen on 18 June 1991. Egerton developed a connector which they called the “TRICON” to meet the specification, and gave a presentation on TRICON to BT on 15 November 1991. They applied for a patent for it on the same day, though this is not the patent which is the subject of the present dispute. Other manufacturers also gave presentations.

8. BT decided to short list four of the manufacturers, namely (i) PSI, (ii) Pouyet, (iii) ADC/Mondragon and (iv) Raychem. I refer to these companies in this abbreviated form since that is how they have been referred to in the proceedings. Pouyet actually went under the names Pouyet, Quante and Sofycom at different stages in the history of events, but I shall stick to the name “Pouyet” in this decision to avoid confusion. ADC/Mondragon is a consortium. Egerton were informed in a letter of 19 December 1991 that they had been unsuccessful.

9. BT now worked with the short-listed companies to develop common standards. Thus BT and the four companies agreed in March 1992 and in June 1992 upon standards for parts of the connector system that would have to interconnect, in order that different manufacturers would be able to supply parts which would fit together. These included the interface for a plug-in unit, and the fitting of the connector on to a so-called “DIN rail” or back rail that provided the backbone and earthing for the assembly of connectors within the pole top distribution point. The companies also entered into agreements in March and again in June relating to the ownership of intellectual property rights and the maintaining of certain information confidential for six months. However, as time went on some of the companies dropped out, and BT ended up with Pouyet being the sole supplier of its new-generation connectors.

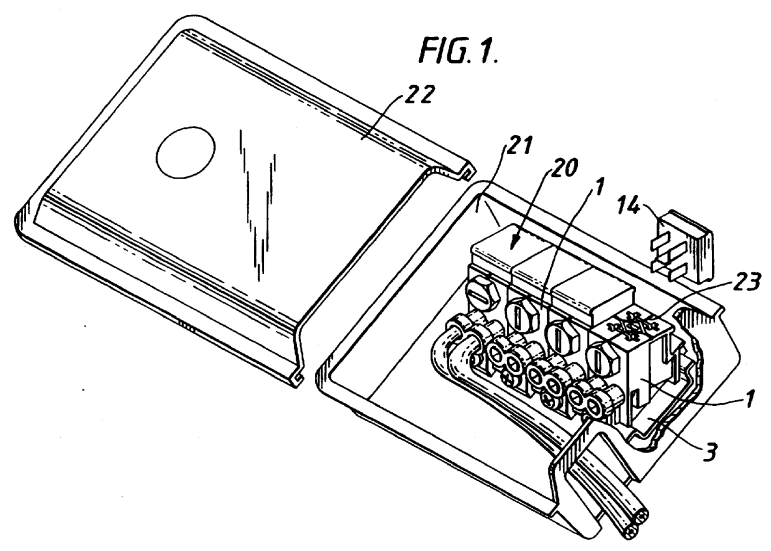
10. In the meantime, Egerton continued designing connectors for pole top distribution

points, in part for the overseas market but also in the hopes that it would be able to win back its BT business. The fact that they had not been short listed did not rule them out for ever because BT had made clear that rejected manufacturers would be able to present new items for type approval to the agreed standard at “a later stage”. The difficulty Egerton say they faced is that they were not being given any information from BT about BT’s developing requirements. BT argue that Egerton did become aware of its requirements, and that is one of the issues in dispute. Be that as it may, Egerton say its chief designer, Andrew Dooley, finalised a design in September 1992. They lodged a patent application for it on 10 February 1993, GB9302586. This application formed the priority application for the patent which is the subject of the present dispute.

11. Whilst I do not want to make any comments that might be construed as a finding on infringement, I can say without risking controversy that the Pouyet design BT are now using has some features in common with the design shown in the present patent. That is why BT are concerned about the patent, but it also contributes to their argument that the invention in the patent actually came from BT.

The technology and the patent claims

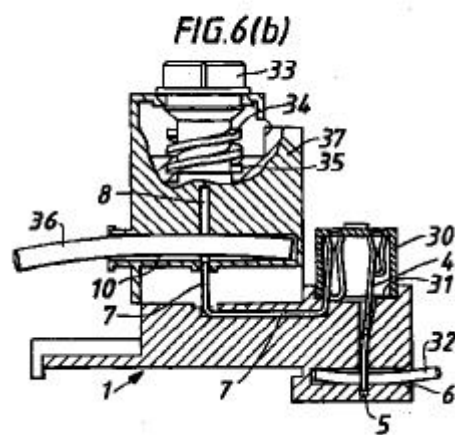
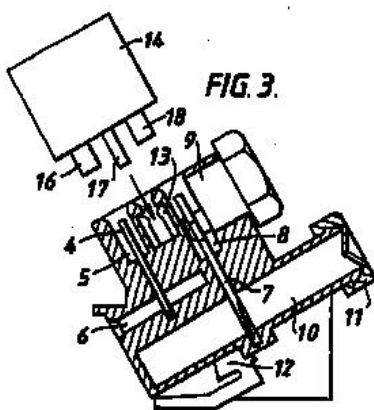
12. I will now look at the technology more closely. Figure 1, taken from the patent



specification, shows a pole top distribution point incorporating the invention. It includes a number of connector units - four in this drawing - each connecting a pair of exchange wires with a pair of drop wires and all mounted on a common rail 3. There is a plug-in unit 14 on top of each connector unit. The whole assembly is enclosed in a weatherproof box 21.

13. Figure 3 shows a cross section through one of the connector units. An exchange wire is inserted into port 6. When the unit 14 is plugged in, it forces sliding contact 4 down on to the exchange wire, piercing its insulation so as to make contact with the conductor inside. A contact which connects with an insulated wire by piercing its insulation is commonly described as an "IDC" (insulation displacement connector), and for convenience I will use this abbreviation in the rest of my decision.

14. The drop wire, which is of rather larger diameter, is inserted into port 10. This too has a sliding IDC 7, but because more force is required to drive this contact downwards, it is moved by a cam 9 operated by rotating a nut. This also allows the contact to be withdrawn from the drop wire at a later stage, enabling the drop wire to be removed. It should be noted that IDCs 4 and 7 are quite separate and electrically isolated from each other. This contrasts with many older designs in which the two are permanently electrically connected, and indeed, often formed from the same piece of metal.



15. The cross-sectional drawing, of course, only shows one exchange wire and drop wire, but the second exchange and drop wires of the

pair are located behind the ones that are visible. The plug-in unit 14 completes the electrical connection between the IDCs 4 and 7, thus connecting each exchange wire with its drop wire. It may also include circuit components to provide other facilities, such as overvoltage (lightning) and overcurrent protection, or switches which can be remotely controlled from the exchange to disconnect the drop wires so that the circuit between the exchange and the distribution point can be tested.

16. Figure 6(b) shows another embodiment. (In this drawing the exchange wire is shown on the right and the drop wire on the left.) Here the drop wire contact 8 is driven by a screw 33. Further, the plug-in unit fits on to a sleeve 30 at the back, rather than on the top, of the connector unit.

17. Claim 1 of the granted patent is the broadest claim. It requires a number of features. In essence (and without quoting the precise wording of the claim) they are:

(i) a connector including a base unit having a first contact member for making contact with an exchange wire, and a second contact member for making contact with a consumer wire, the first and second contact members being isolated from one another;

(ii) the contact members being mounted in bores in the base unit and sliding therein to make contact with their respective wires;

(iii) a separable module unit capable of coupling with the base unit and providing direct or indirect connection between the first and second contacts, there being a plurality of module units providing different functionality.

For convenience I shall refer to these three features by the shorthand expressions “isolated contacts”, “sliding contacts” and “plug-in units”, although it is important to remember that these shorthand expressions do not convey the full requirements of the claim. For example, feature (i) does not just require the contacts to be isolated but also requires them to be associated with a common “base unit”.

18. As a result of the opposition proceedings in the EPO, the scope of the claim has been amended. As it now stands, it is directed to a kit of parts and specifies in addition to features (i) to (iii) that one of the available module units is a “soft dial tone” unit.

19. The term “soft dial tone” needs some comment, because it has been used in the context of these proceedings with two completely different meanings. I am sure most telecommunications engineers would understand the term to mean the provision of a very restricted service to a potential subscriber’s premises. By “potential” subscriber, I mean that a telephone socket has been installed but the subscriber has not yet asked the telephone company to provide a telephone service. If the subscriber picks up the phone they will get a distinctive softer dial tone. They will find that they can use the telephone to contact the telephone company (eg to request full service) and make emergency calls, but nothing else. I will call this “true soft dial tone”. However, there is evidence that the term was used by some to mean an arrangement which allows the circuit between the exchange and the pole top distribution point to be tested from the exchange even though no subscriber is connected. This is achieved by connecting a dummy termination across the exchange wires at the distribution point. Since dial tones do not come into this at all, “soft dial tone” seems an odd choice of expression for this arrangement, but the fact is the expression was indeed used by some in this way.

20. The passage in the patent specification referring to soft dial tone reads:

“It has been proposed to house additional passive, and to introduce active electronic devices to the PTDP (*ie pole top distribution point*). These include, for example, “soft dial tone” components (which enable the wires to be tested even though no subscriber is connected) and “remote interface devices” (which allow the wire to be tested from exchange to the PTDP and, quite separately, from the PTDP to a subscriber and also allows for disconnection of the subscriber by remote control).”

Thus it is clear that in the patent specification the term is being used with the second meaning. To try and minimise confusion, I will refer to this as “dummy termination” rather

than “soft dial tone”, though in doing so it is important not to lose sight of the fact that it is actually called “soft dial tone” in the patent specification. For the avoidance of doubt, I ought to say I am aware that in the evidence the term “dummy” does not always refer to what I have called a “dummy termination”. For example, one of the witnesses (Mr Honey) used the term “dummy unit” to refer to a connector providing straight-through connection between the exchange and drop wires.

21. I should also say something about the term “module”. For a time Miss Jones tried to persuade me that wherever the term was used in the evidence it must have meant what I have called the “plug-in unit”. This is manifestly wrong. “Module” is a general-purpose term for a subassembly, and one has to look at the context in each instance to see what it means. I have found no difficulty in recognising to what the term refers in each instance, and I am quite satisfied that there can be no presumption that the term generally signifies the “plug-in unit”. Again to avoid confusion, I have tried to avoid using the term “module” altogether in this decision.

22. As I explained earlier, the decision in the opposition before the EPO is being appealed by both parties, which may result, among other possible outcomes, in reversion to the original version of the claim 1 as granted, or further limitation. It is therefore not certain what the precise scope of the eventual claim 1 may be. I recognised this uncertainty in my Preliminary Decision of 6 November 1998. In that decision I observed that the comptroller is not restricted to considering only the invention currently claimed in claim 1 but can consider all the matter in the patent. Consequently the present action should result in a clear indication of which party is entitled to which aspects of *all* the matter disclosed, and in particular should make clear who is entitled not only to the invention that is presently claimed in claim 1, but also to any invention which may subsequently be claimed following the completion of the European opposition procedures.

23. I will therefore need to look at all the potentially inventive aspects that are disclosed. However, I will concentrate initially on the three key features of claim 1 as granted plus the dummy termination facility required by the claim as currently amended. I will come back to

everything else that is disclosed at the end of my decision.

The provisions of the law

24. The law in this area is well trodden and for the purposes of this decision I can summarize the relevant parts very briefly. Section 7 of the Act says that a patent for an invention may be granted primarily to the inventor or joint inventors, but that this may be overridden by (amongst other things) any enactment or rule of law. Section 39 is such an enactment, and it prescribes that an invention made by an employed inventor can, in certain circumstances, belong to the employer rather than the inventor. In the absence of arguments to the contrary, as I understand it both sides accept that section 39 applies in this case whoever the inventor was. In other words, both sides accept that if the invention was made by an Egerton employee, the patent belongs to Egerton, whereas if it was made by a BT employee it belongs to BT. Of course, if inventors from both Egerton and BT contributed to what is now in the patent, the two companies might be jointly entitled to it, but neither party argues this is the case. The important point to note, though, is that whilst entitlement may not rest with the inventor or inventors, the right to entitlement stems from the inventor or inventors.

25. The central part of this dispute is a reference brought under section 37 of the Act. This section allows anyone claiming a proprietary interest in or under the patent to refer the question of entitlement to the comptroller. The section gives me wide discretion in the relief I can grant, but in the present case, the relief BT seek is contained in their request for revocation of the patent under section 72(1)(b).

26. Section 72(1)(b) says that I may revoke the patent on the grounds that it was granted to a person who was not entitled to be granted the patent. Section 72(2) makes clear that this provision can only bite if BT succeed in their claim under section 37. For the sake of completeness, I observe that in *Henry Brothers (Magherafelt) Ltd v The Ministry of Defence and the Northern Ireland Office [1997] RPC 693*, Jacob J confirmed at page 711 that launching section 37 and 72(1)(b) claims simultaneously is permissible, but the section 37

claim must be decided first. Again for the sake of completeness, I also observe that the constraints on revocation imposed by section 72(2)(b) do not apply as the present claim was launched just under two years from the grant of the patent.

27. Finally, section 7(4) of the Act states:

“Except insofar as the contrary is established, a person who makes an application for a patent shall be taken to be the person who is entitled under subsection (2) above to be granted a patent . . .”.

This means that the burden of proof rests with the claimant, ie BT.

The appropriate approach to adopt

28. This is an unusual entitlement case. It stems from a dispute about where the inventive idea(s) came from, and that in itself is not uncommon. However, usually in such cases the claimant will come forward with evidence to show (a) that it, or someone from whom it claims title, made the invention before the patentee, and (b) that it then communicated the invention to the patentee, who then used the information to apply for the patent. In the present case, however, BT have not even attempted to identify an inventor or inventors within BT, nor do they even purport to have direct evidence of communication of all the relevant features to Egerton. These two unusual characteristics of BT’s case have implications for the approach I need to adopt. I will consider them in turn.

29. BT have not said who in BT or elsewhere they consider to have been the inventor or inventors. In the opposition proceedings before the EPO they are arguing that there is no invention in the patent specification, so their failure to identify an alleged inventor in the present proceedings is consistent with that. However, this stance causes an obvious problem for their claim to entitlement because, as I have explained above, the right to the patent stems from the inventor. Thus if BT do not identify who they allege to be the inventor, it is arguable that their case falls at the first hurdle. Mr Vanhegan, however, did not invite me to

adopt this line and was prepared to accept that BT's failure to identify an inventor was not necessarily fatal to their case.

30. Whilst BT may not have named an alleged inventor, they have at least identified the individuals in BT who were at the centre of the project and might therefore be supposed to be possible sources of at least some aspects of the invention. They include Mr Springett, the person responsible for the procurement exercise, and Mr Leaver, who gave evidence that he considered himself to have had a particular responsibility for the genesis of the project and was hoping BT would secure patent rights in relation to it. In these circumstances, and given that Mr Vanhegan did not wish to make an issue of it, I am prepared to accept that BT's assertion that whatever invention there might be came from BT and not Egerton is enough to provide a basis for their entitlement claim, although I have to say that I do not feel very comfortable in doing so.

31. There is an additional twist because BT's evidence also shows there was significant input into the design process by the four companies which BT short-listed. Indeed, BT have scant evidence demonstrating a design process of their own leading to a concrete example of any connector falling within the scope of claim 1, and the invention seems to have been treated implicitly by BT as a collaborative development. However, I was not addressed on the question of what rights, if any, the other companies might have in all this.

32. I will now turn to the second unusual aspect of BT's case, the fact that they do not have direct evidence of communication of all the relevant features to Egerton. BT claim to have told Egerton specifically about certain matters. For the rest, though, they invite me to infer that communication took place from circumstantial evidence. They argue that Egerton's invention is so similar to what BT were proposing that one is obliged to draw the conclusion that Egerton must have copied it from BT.

33. Following this approach, Miss Jones invited me to consider how the burden of proof is dealt with in copyright cases. She said the courts have coped with difficulty of the events surrounding copying generally being done out of sight of anyone other than the alleged

infringer by looking at otherwise inexplicable similarities in the works and the possibility of access to the work which has allegedly been copied. Once a claimant has established the existence of such similarities and the possibility of access, the courts have held that the burden of proof shifts on to the defendant to establish his independent creation of his work. She referred me to a number of authorities that support this line, including *L B (Plastics) Ltd v Swish Products Ltd* [1979] RPC 551 and *Ibcos Computers Ltd v Barclays Finance Ltd* [1994] FSR 275. She submitted that this approach was also a legitimate one to use in the present case.

34. Mr Vanhegan disagreed. He said the proper approach was to construe the invention, identify who was the inventor of the inventive concept, consider whether the inventor was subject to any contractual obligations and thereby determine the proper owner of the patent. Only then, he said, should BT's unusual submission be considered, to assess whether it affected any of those findings.

35. I accept Miss Jones' interpretation of copyright case law. However I think there is a difference between copyright and patents which means one has to be careful about applying the same principles to alleged copying in a patent case. It results from the nature of the right in each case. Copyright protects the specific embodiment of the copyright work and nothing more. Consequently, it is very unlikely that an individual will independently produce a work that just happens to be a substantial copy of a prior work protected by copyright. When substantial reproduction is found and there is *prima facie* evidence of access to the prior work, it is reasonable to require the alleged infringer to prove he has not copied.

36. A patent, by contrast, protects a technical concept in a broad sense, and not just a specific embodiment. If, say, the drawings in a patent specification or the articles depicted by them appeared to be close copies of the claimant's drawings or articles, it would be pertinent to inquire how the patentee had arrived at them and this might justify shifting the burden of proof. Miss Jones' argument, though, does not stop at this but appears to go well beyond it, because she was inviting me to find - if I understand her argument correctly - that BT's broad inventive concept was copied.

37. This argument rests on the assumption that the only plausible way for two people to have come up with the same invention is for one to have copied the other. As a general proposition, that assumption is unjustified. However close to the claimant's idea the concept of the patented invention may appear to be, it is quite possible, and in closely worked arts even likely, that two people might arrive at the same idea independently. This will be particularly so when the driving forces for creating the invention are known in the art, and that seems to me to be the case here. The driving forces behind the present invention, such as the demand from subscribers for improved services, were not BT secrets but would have been well known throughout the telecommunications industry. In these circumstances, the impetus that drives one inventor to produce an invention may well drive other inventors to do the same. Consequently, I do not think it would be correct merely on the strength of a broad similarity in the inventive concept to relieve BT of the burden of proof, even if the possibility of access was there.

38. There is a related point here too. Mr Vanhegan submitted that it was not sufficient for BT to rely on the communication of information from them to Egerton. They must also show that the information was conveyed in circumstances of confidentiality. Miss Jones, I think, implicitly accepted this in her initial skeleton argument as she talked about discussions taking place in confidence, but I am not sure she was accepting it by the end of the hearing because she asserted BT did not have to prove any degree of confidentiality. Mr Vanhegan's submission must, in my view, be right. If BT had made a requirement available to the public, they could not subsequently apply for a patent for what they had made available. This follows from the novelty requirement of section 1(1)(a) of the Act. In my view, it cannot therefore be right for them to be entitled to a share in someone else's patent if their sole contribution to that patent was that requirement, as that is something which they would not be allowed to patent themselves.

39. Mr Vanhegan's alternative approach is the more conventional one. I observe, however, that with no named inventor it is rather difficult to follow it rigidly in the present case.

40. There are three other general points that affect the approach I must adopt. Firstly, claim 1 both as granted and as currently amended requires a combination of features. With an invention like this, it is not sufficient to decide where each individual feature came from. Indeed - as both sides accepted to be the case here - all the individual features might be known. I also have to look at how they came to be put together because that is where part, or possibly the whole, of the invention may lie. At the hearing I think Miss Jones accepted this. As she put it in her original skeleton argument:

“It is settled law that entitlement requires the identification of the inventive concept of a claim overall and not to each individual element of the claim.”

She quoted in support *Henry Brothers (Magherafelt Ltd v Ministry of Defence and Northern Ireland Office* [1999] RPC 442 and [1997] RPC 693, where at first instance Jacob J said:

“I do not think it is right to divide up the claim for an invention which consists of a combination [of] elements and then seek to identify who contributed which element. I think the enquiry is more fundamental than that. One must seek to identify who in substance made the combination. Who was responsible for the inventive concept namely the combination: That was solely Mr Z. It was his idea which turned a useless collection of elements into something which would work.”

41. Thus for BT to be successful in their claim for sole entitlement, they must do more than merely show that they provided Egerton with each feature in a disjointed, piecemeal fashion over time. They must show they taught Egerton to incorporate all the features together into a single connector. It is possible, of course, that even if BT did not provide Egerton with the whole combination, they may have provided key elements that led to the combination, and this may justify a claim to joint, rather than sole, entitlement. I will keep that possibility in mind, though an argument based on the provision of something less than the full combination is obviously more difficult to sustain when it is acknowledged that each element individually was already known.

42. Secondly, both sides agreed that the novelty and inventiveness of the invention as claimed is not a matter for this action and that I should consider the invention as perceived by the applicant at the time of the application. This is the principle set out in *Viziball's Application [1988] RPC 213*. I agree that it is not appropriate to investigate the validity of the patent during an entitlement action under section 37. I am not sure, though, that I have to limit myself to considering the invention as originally perceived by the patentees when they applied for the patent, because here we have a granted patent (albeit still going through the EPO's opposition procedure) and a claim under section 37, whereas *Viziball* was only a patent application and a claim under section 8. Sections 8 and 37 are not identically worded, and so the arguments used in *Viziball* may not necessarily apply. Having said that, I do not think anything actually turns on this point in the present case.

43. Thirdly, as I indicated in my discussion of the provisions of the law, the question of revocation is dependent on the outcome of the decision on entitlement. Miss Jones did not address me specifically on BT's application for revocation, presumably taking the view that revocation would follow automatically if BT were successful with their entitlement action. That is probably right, so I will put the question of revocation to one side until the end of my decision.

The oral and written evidence

44. Before looking at the issues in detail, I must consider the reliability of the various witnesses who were cross examined before me and of the written evidence.

45. Nine witnesses gave oral evidence during the hearing. Five of these were witnesses for the referrers: Mr Springett, the BT employee primarily responsible for the procurement exercise; Mr Leaver, who worked at BT with Mr Springett at that time; Mr Honey, Sales Manager for PSI, one of the companies that successfully got through on to BT's short list of four; Mr Lidbetter, the BT patent agent recently connected with the case; and Mr Bradley, another BT patent agent. The remaining four were witnesses for the proprietors: Mr Dooley,

chief designer at Egerton and the inventor named in the patent; Mr May, outgoing Engineering Director at Egerton at the time of BT's procurement exercise; Mr Tomkins, incoming Engineering Director at Egerton at the time of the procurement exercise; and Mr Downing, patent agent for Egerton.

46. The events about which the witnesses were giving evidence happened seven or eight years ago. Some errors in recollection are almost inevitable after such a lapse of time, and I have made allowance for that in assessing the witnesses. Nevertheless, I have to say that some came across as rather more believable than others.

47. In cross examination, Mr Springett and Mr Leaver were not always consistent with BT's own documentary evidence or indeed with each other. For example, Mr Springett stated that he had attended only 4 or 5 of the initial meetings with manufacturers following issue of the statement of requirements and that Mr Leaver may have attended some alone, whereas Mr Leaver recollected Mr Springett attending all of them. On another point, Mr Leaver said he was quite certain from his memory that the only item on the agenda at the initial meeting with Egerton was the new procurement, but Mr Springett's note of the meeting shows it was primarily concerned with another issue, and when this was shown to Mr Leaver he agreed he was mistaken. Thirdly, Mr Springett said that information relevant to the patented invention had been provided to Egerton at a meeting on 7 January 1992, and that his notes would confirm this. In fact his own note of that meeting turned out to refer only to test results on Egerton's existing connectors. Mr Leaver also attended the meeting, but did not mention any information relevant to the invention being discussed with Egerton. Mr Springett attempted to explain by saying Mr Leaver must have forgotten, but I formed the impression that Mr Springett's recollection of events that he purported to remember clearly was unreliable and was, perhaps, influenced by what he knew BT needed to prove.

48. There were other examples of inconsistency and imperfect recollection from Mr Springett and Mr Leaver. For instance, Mr Leaver was adamant that the bidders had been required to sign a non-disclosure agreement when the SOR was issued in 1991, but Mr Springett denied this. I also gained the impression they were not being completely open about

the reason for Egerton being placed at number “infinity” on an internal BT memo discussing the bidders. Further, in cross-examination it emerged that in one instance Mr Springett was unable to confirm facts that he implied in his affidavit were within his personal knowledge because he had in fact obtained the information from a document of Mr Leaver’s. Taking everything into account, I have come to the conclusion that the evidence provided by Mr Springett and, to a lesser extent, Mr Leaver may not be entirely accurate and needs to be treated with caution.

49. Mr Dooley also claimed to have a fairly clear recollection of events, but in contrast to Mr Springett and Mr Leaver, I found him to be more open in what he was saying, and entirely consistent during a long cross examination, giving a convincing and coherent explanation of events. I will give one example. Egerton’s written evidence includes a memo from Mr Dooley dating from 6 January 1992. This could be construed as showing a schematic representation of a connector envisaging the use of replaceable units to provide different facilities, as required by the present claim 1. This was much earlier than Mr Dooley claimed to have arrived at a design with plug-in units. Indeed, Egerton had only just presented the TRICON connector (without plug-in units) to BT, and according to their evidence were yet to develop another connector (the “2G3”), also without plug-in units, before they came up with the connector shown in the patent specification which did have such units. Clearly a document showing that plug-in units were being contemplated by Mr Dooley in January 1992 would suggest there was something very wrong with Mr Dooley’s version of events. When Miss Jones put it to Mr Dooley that the January 1992 memo was contemplating plug-in units, he said was not working on anything like that at the time but did not hide the fact that he could not explain the memo. Eventually after more questions, he was able to realise what he had meant by the words in the January memo. The “modules” were to be inserted irrevocably into the base section during manufacture, but were not going to be “plug-in-able” in the sense that they could later be removed and replaced by different ones at will. He showed how this had actually been implemented in the 2G3 design. Thus he persuaded me that the January 1992 memo was not teaching the use of plug-in units as in the present claim 1, and that the words “module” and “base” were being used in this document in the same sense as in the 2G3 connector. I found Mr Dooley openness in discussing what as first

seemed to run counter to Egerton's case reassuring. Taking not only this one example but the rest of Mr Dooley's performance in the witness box, I have a fair degree of confidence in Mr Dooley as a witness and in his version of events.

50. I will make one other observation about Mr Dooley. He came across as a highly creative individual who could quite easily come up with several quite different and imaginative ideas to solve a problem. Even if the development sequence discussed in the last paragraph had not been explained, I would have been quite prepared to believe that his mind could be developing several totally different ideas in parallel. This was reinforced by a comment Mr Leaver made during cross examination:

“I can look at a design and I can see whether it is a Dooley one, because he has some very good ideas; but at times, they do not fall into the mainstream of conventional thinking.”

He also clearly had an excellent understanding of what would work from both manufacturing and end-user viewpoints and what might cause problems.

51. As for the other witnesses, Mr Honey for BT and Mr Tomkins and Mr Downing for Egerton all came across as honest witnesses who were doing their best to remember events from many years ago, and not pretending to recall what they could not actually remember. Mr May, for Egerton, was an impressive witness, having a very clear memory and able to support his recollections by reference to contemporary anecdotes. The evidence of the remaining two witnesses was in the event less crucial to the dispute, but for the record, whilst I felt Mr Lidbetter was a satisfactory witness, Mr Bradley was almost aggressive in the witness box and I felt what he said was too heavily influenced by the case he knew BT had to make.

52. There was a large quantity of written evidence. I am sure BT would have liked to have produced more, but they readily admitted that the policy (or perhaps, lack of policy) in BT for the destruction of documents meant that many BT documents of the relevant period have been destroyed. This may have contributed to their inability to demonstrate a clear

design process within BT and made their task of discharging the onus that rests upon them that much harder. Whilst equally one may wonder how many other documents actually ever existed, I do not intend to draw any adverse inferences merely from the absence of documents, though in saying that, I am not discharging BT from their onus.

53. BT's written evidence includes a certain amount of hearsay, and as a result of the cross examination, I fear some of that hearsay evidence may be of dubious reliability. To take Mr Springett's evidence first, he put in a number of documents as evidence of the facts contained in them without explaining his own knowledge as to their content. Since, as I have already mentioned, he had to admit that he had no personal knowledge of the relevant facts in one such instance, there is a question mark in my mind as to how much weight I should attach to the other parts of his written evidence that do not relate to events in which he was clearly directly involved. Some of Mr Lidbetter's evidence is also unsatisfactory in that it makes assertions about a number of events in which he was not personally involved. The assertions are in fact no more than Mr Lidbetter's own interpretation of evidence given by others, and so they have no probative value. This illustrates the danger of deponents giving evidence about matters of which they have no personal knowledge. I have had to keep this in mind when assessing the written evidence.

The initial tendering process in 1991

54. I will now look at the alleged facts in detail, starting with the period June to December 1991. This is the period in which BT issued their statement of requirements (SOR) to twelve manufacturers, who responded by coming up with proposals which, they believed, met the SOR. BT then considered the proposals and short listed four of the manufacturers to help them develop the ideas for the new connector further. In their two statements of case, BT say they provided Egerton with the invention by means of the SOR. I am not sure how vigorously Miss Jones was pushing this argument by the end of the hearing, but I will consider it on the assumption that BT have not abandoned it.

55. The SOR seems to have been produced in a number of versions, but the parties all

referred to the version exhibited by Mr Honey at TH1 and I understand it represents what was sent to Egerton. The SOR consisted of 16 or 17 requirements (the 17th is added in manuscript). These requirements were discussed at some length in the evidence, but I think I can deal with them quite quickly. I have looked carefully at the SOR and the representations made in relation to it and am satisfied that it does not go nearly as far as BT tried to argue.

56. Only two of the SOR's requirements are potentially relevant to the four claim 1 features I am looking for. The first is:

“Facility to have lightning protected and unprotected blocks within the same enclosure. The protected block will be plug-innable as a retrofit when required.”

I am quite satisfied this is not requiring, or even hinting at, having units which can be plugged in to the connector pairs, even though Miss Jones argued otherwise. It is helpful to view this statement against the historic background. In previous BT pole top distribution points the whole set of 20 or so connector pairs had been an integral unit, so it was not possible to have some connector pairs of one type and others of another. Against this background, the term “block” in the SOR is clearly referring to a connector pair, requiring these to be made in modular form so that a connector pair without lightning protection can, at a later stage, be taken out and replaced by one that has it. However, even without this historical background, the language of the requirement is not consistent with the concept of having connector pairs into which a “protection block” (ie some unit containing protection components, as distinct from a “protected block”) can be plugged if so desired.

57. The other requirement, to which much attention was directed in cross examination and argument, is:

“ Tee in test facility, with test both ways facility as well. It is not envisaged that break jacks with wiping contacts will be allowed.”

On its own, “tee in test facility” only requires the ability to insert a probe to make connection

to the conductors, but I accept that “test both ways” means it must be possible to electrically isolate the drop wires from the exchange wires. This is because “test both ways” means the ability to test, separately, both the line between the distribution point and the exchange and the line between the distribution point and the subscriber, and one cannot do this unless the two lines can be isolated. Miss Jones argued that, coupled with the ban on “break jacks with wiping contacts”, this required isolated contacts with a removable plug-in link to connect them.

58. Having listened to the evidence and arguments, I disagree, because there are other ways of meeting this requirement. One obvious way, for example, which was envisaged in some of the connectors I saw in evidence, is simply to disconnect the drop wire IDC from the drop wire. In any case, the ban was not on all break jacks but only those with “wiping contacts”, so arrangements which depend on breaking a connection without using “wiping contacts” were apparently permissible. Egerton argued that the reference to “wiping contacts” was ambiguous, and I am inclined to agree with them. Despite hearing evidence from both sides on this, I still do not really know what this was supposed to mean. Whatever it was supposed to mean, though, I do not believe a designer could construe this as a ban on the use of any form of separable contact for the test facility. Indeed, if it did, a plug-in link would be banned as well, because when this is removed a connection must be broken.

59. There is nothing at all in the SOR to even hint at sliding contacts and dummy termination. Thus not one of the three key features of the granted claim 1 - isolated contacts, sliding contacts and plug-in units - nor the fourth feature (dummy termination) added to the amended claim 1 is disclosed in the SOR. Indeed, I remain unconvinced that BT had any of these in mind when it drafted the SOR.

60. The SOR was issued on the 7 June 1991. On 18 June BT met Egerton, and BT say they provided Egerton with features of the invention during this meeting. The meeting is documented by Mr Springett in his diary entry for that day. This entry contains a full A4 page of notes on discussions about existing Egerton products, followed by the single sentence “SOR now discussed as to new project” and nothing further. This does not suggest there was

any extensive discussion of the SOR, and I would need more evidence than this to persuade me that any further relevant ideas, beyond what was in the SOR, were passed to Egerton at this meeting.

61. However, we do have some further evidence from Mr Leaver. In his affidavit he says that examples of single pair IDC modules from Northern Telecom and Pouyet were shown to aid the discussion. Mr Dooley confirmed in examination that he had received the Northern Telecom and Pouyet devices. He said the Northern Telecom device was well known but he was interested in the Pouyet connector because it was new to him. Mr Leaver also said that “soft dial tone” devices were discussed, that an example of a soft dial tone device manufactured by Chesilvale was shown to Egerton. The Chesilvale device is a dummy termination, not a true soft dial tone device.

62. The Northern Telecom connector appears to have been similar to one handed up (as Mr Springett exhibit H) at the hearing and described in Northern Telecom patent EP315345. This has none of the four key features of claim 1 and does not help BT’s case at all. It demonstrates principally the idea of connecting the exchange and drop wires by means of IDC contacts which are urged into engagement with the wires by a screw, but this idea was clearly not new at the time.

63. BT have failed to specify precisely which Pouyet connector was the one in question. This does not assist their case, but in order to pursue it as far as I am able, I will presume for the moment that it was either the connector identified by Mr Springett at the hearing as “exhibit B” or the connector Pouyet presented to BT in November 1991 which appears to have been a commercial product of theirs at that time and therefore presumably in existence before November 1991. The latter is described in a BT memo of 10 February 1992. As far as I can determine, neither of these connectors had a “plug-in unit”, sliding contacts or a dummy termination facility, and it is debatable whether the contacts were isolated, so again it is difficult to see how it supports BT’s argument that it had the invention in mind at this stage. Mr Leaver gave evidence under cross examination that the Pouyet connector incorporated a replaceable module, but I think that must be rejected as it is contradicted by the exhibit and

the BT memo.

64. As I mentioned above, Mr Leaver said that the Chesilvale dummy termination device was shown to Egerton at this meeting. However in cross examination his memory of the meeting was not very clear. He had mis-remembered that the meeting dealt with testing of an existing connector as well as dealing with the SOR, and when Miss Jones asked whether the meeting had been arranged to discuss the one or the other matter, he was unable to recall, but he did believe the connectors and the Chesilvale device were shown to each of the bidders. Mr Dooley says BT did not show them the Chesilvale device at the meeting and that he would have remembered seeing it since it would have been new to him.

65. There is consequently a direct conflict of evidence. Mr Tomkins says in his affidavit that no mention was made of “soft dial tone” at this meeting, though without knowing what meaning he was attaching to this term I cannot be sure whether or not this statement is supporting Mr Dooley’s. However, as I have indicated earlier, I have more confidence in Mr Dooley’s evidence than Mr Leaver’s, and when this is added to Mr Leaver’s unclear recollection of the meeting and the complete absence of any detail in Mr Springett’s diary, I am inclined to the view that BT did not produce the Chesilvale device at this meeting. I am reinforced in this conclusion by Mr Honey’s evidence. Mr Honey, it will be remembered, was the sales manager for one of the other bidders, PSI. Mr Leaver claims the Chesilvale device was shown to all the bidders, but Mr Honey confirmed in cross examination that he had no idea how the Chesilvale device worked, so it seems unlikely BT had discussed that with him. I conclude that so far as the four claim 1 features I am looking for are concerned, nothing was disclosed to Egerton at the meeting that went beyond the SOR.

66. BT assert that they treated all bidders equally. This is what I would expect, and indeed it is confirmed by a document in BT’s evidence entitled “Modular Block Terminal Technical Tender Adjudication: Rules of Engagement” which uses very firm language to instruct BT personnel to ensure absolute equality of treatment between bidders: point 1 of this list states “All tenderers MUST be treated equally”. This document is dated January 1994 and is thus much later than the events in question, but it is reasonable to assume that the ethic

of ensuring equality between bidders would have been applied to this earlier stage of the exercise in the same way. If BT were, as they say, treating all bidders equally, it seems unlikely that the BT process would have allowed Mr Springett to suggest the key requirements to Egerton but not the other bidders. It is pertinent, therefore, to look at the evidence relating to BT's meetings with the other bidders.

67. In July PSI made a presentation to BT of their proposals for a product which would meet the SOR. Mr Honey's affidavit gives a detailed account of that meeting with BT, including a list of 14 items that were discussed over and above the SOR requirements. Not one of those 14 items has anything to do with the four key features of claim 1. If BT had, as they allege, already discussed these key features with Egerton, I find it difficult to believe they would have held a meeting with another bidder and not mentioned one of them. This is BT's own evidence, and it does not support their assertion that they communicated the key features to the bidders in these initial stages.

68. Similarly, notes from Mr Springett's diary about discussions with another bidder, ADC, on 17 June 1991 contain half a page of A4 notes about the SOR discussions but do not include any mention of features relevant to the invention. Also, BT's evidence includes an internal memo written by Mr Springett giving an account of what appears to be a similar meeting with Raychem which says nothing beyond what is in the SOR.

69. Egerton have made a further point. Mr Dooley points out that the TRICON connector which he designed in response to the SOR and after this initial meeting did not have any of the features which characterise the invention. I consider that this is an important pointer as to what BT had told Egerton about what they wanted. If BT had explained to Egerton that they required the connector to incorporate the inventive features now set out in the claim, it is likely that all or at least some of them would have been incorporated into Egerton's design. Since the TRICON did not include any such features, it seems unlikely that BT had discussed such features as requirements or desirables.

70. Miss Jones argued that Egerton had indeed been told by BT that the inventive

features were required, but had misunderstood the requirement. Having seen the evidence and heard the witnesses, I think this is very unlikely. Considering Mr Dooley's obvious expertise, and familiarity with the art, and the fact that the requirement was not particularly complicated, I believe that Egerton understood very well what BT had asked for and that the TRICON connector they developed as a result was an appropriate response to the requirement. Having examined TRICON, it certainly seems to me that Egerton had produced a design which complied with the SOR.

71. It stretches credulity to suggest that BT had clearly explained a further set of requirements over and above the scope of the SOR to Egerton and the other bidders, that all the parties involved including BT had omitted to document these further requirements either as part of the SOR or in their notes of the meetings, and that Egerton had misunderstood or ignored them in devising their connector. I do not believe that is what happened.

72. In relation to this, nine other manufacturers also made presentations to BT. Mr Vanhegan made the point that BT had failed to bring forward evidence as to all the different types of connector which had been designed by the different manufacturers for this presentation. Mr Vanhegan's argument was that, if the presentations all offered connectors including the four features of claim 1, that would have supported BT's argument that the invention had been disclosed to the bidders by BT. On the other hand if there were a range of different connectors not including all those features, this would tend to support Egerton's view that BT had not disclosed the invention to them.

73. This is a legitimate line of inquiry. Whilst we do not have details of the designs produced by all the other bidders, we do have some information about what was offered. In particular, in BT's evidence is an internal BT confidential report by Mr Leaver dated 10 February 1992 on the designs offered by the four successful companies. Presumably these connectors must have been close to what BT wanted, since otherwise it seems unlikely that the companies would have been short-listed. The descriptions are not complete but do provide some information about the details of the designs. I have already discussed the Pouyet connector above and found that it does not suggest BT had the invention in mind at

this stage. ADC/Mondragon offered two different solutions. In the first the exchange and drop wire contacts were not normally isolated (but could be isolated by raising the drop wire to break the connection). The protection device was in a “separate module”, but this clearly was not providing the connection between the exchange and drop wires, as required by claim 1. In their second connector a protection module did provide the link between the two wires, but there is no evidence that it was a plug-in unit as required by claim 1. There is no suggestion that either version had sliding contacts or dummy termination facilities. In his report of 10 February 1992, Mr Leaver commented that the second connector:

“provides greater flexibility in connecting intelligent devices that may be used in the future, such as pair identification modules, etc”

but that comment merely tells us that by 10 February BT were thinking about the need for incorporating intelligent devices. It does not, as Miss Jones tried to imply, tell us ADC/Mondragon thought this was part of BT’s original requirements or that their connector was designed to provide it.

74. The PSI connector is said to have a single contact to engage both the drop wire and the exchange wire at the same time, so the contacts were not isolated, which in turn means there cannot have been a plug-in unit connecting the two. Monitoring of the pair to ensure no call was in progress before carrying out testing was achieved by connecting to an extension of the contact, and it is said this also provided the connection for the “optional protection module”. Miss Jones tried to imply this must have meant there was a plug-in unit, but there is not the slightest basis for that. Again, there is no mention of sliding contacts or dummy termination devices either. Finally the Raychem connector is reported to use separate termination of exchange wires and drop wires, interconnected by a removable module which may contain protection, so it appears to have had two of the features of the invention. However, there is no mention of sliding contacts or dummy termination facilities.

75. In BT’s evidence there is also an outline of a presentation given on 15 November by one of the unsuccessful bidders, Krone. It includes drawings, but without any accompanying

explanation, or evidence from Krone themselves, it is not wholly clear from the drawings how their connector works. I am not therefore prepared to give this evidence much weight. So far as I can see, however, whilst it does not seem to have sliding contacts, it does appear to be the only other connector offered which included plug-in units. If a plug-in unit was so important to BT's requirements, one wonders why they rejected Krone.

76. It consequently appears that the SOR resulted in a fairly wide range of different designs, some having none of the inventive features and none having all of them. There is not the slightest hint in BT's report that any of the designs are deficient because they lacked the features of the present claim 1. The only inference I can draw is that BT had not provided the bidders with the requirement to construct a connector having these features.

77. There is another feature of the procurement exercise that leads me to question BT's argument. It is quite clear that BT eschewed any role for themselves in the design of connectors. BT's design process was one of setting bidders the task of creating designs to fit the SOR, selecting four acceptable bidders, and then working with them to arrive at a standard specification, against which any manufacturer could supply connectors to BT. The letter accompanying the SOR explains the process. A later internal BT memo of May 1993 reviews the events and states "BT were available to advise on the SOR but would not comment on any design specific issues". This is supported by Mr Tomkins' statutory declaration, which states:

"Springett and Leaver explained that they were happy to explain the terms of the SOR but would not assist with the design process ... BT made clear to us that guidance above and beyond the SOR would not be forthcoming."

It seems very unlikely, therefore, that BT would have provided detailed design guidance to the bidders to the extent of specifying the second key feature of claim 1, viz sliding contacts.

78. Having considered all the evidence, therefore, I am quite satisfied that BT did not disclose the key features of the invention to anyone during the initial tendering process of

1991, and almost certainly had not even got these features in mind.

79. There is one final observation I must make. There is no believable evidence that anything BT told the bidders during this initial tendering process was confidential. Egerton witnesses such as Mr May and Mr Tomkins were adamant there had been no confidentiality agreement. Even two of BT's own witnesses concur on this - Mr Honey agreed in cross examination that there was no non-disclosure agreement between BT and PSI at this stage, and Mr Springett agreed that there was no confidentiality agreement before the SOR was sent out. The only witness to give evidence to the contrary was Mr Leaver, and as his evidence was not supported by anyone else in this respect (and we have no record of any such agreement), I am satisfied his memory is at fault. Thus even if BT had persuaded me that they had disclosed some of the key features of invention to Egerton (and hence the other bidders) during the initial tendering process, their claim to entitlement on the basis of such disclosure would have failed anyway because of the lack of confidentiality.

The post-tender meeting

80. Egerton's letter of rejection from BT dated 19 December 1991 was followed by a meeting between BT and Egerton on 7 January 1992. BT allege that they told Egerton about the invention at this meeting too, so I will now look at the what the various participants allege transpired.

81. Mr Springett says of this meeting in his affidavit that "discussions took place mentioning plug-in facility, soft dial tone, remote ident (*ie identification*) and lightning protection". Given the main thrust of BT's case, he seems to be suggesting that BT discussed with Egerton the idea of plug-in units having a variety of different functions. As I mentioned above, Mr Springett said in cross-examination that his diary notes would confirm this, but in fact his note of that meeting refers only to test results on one of Egerton's existing connectors, ie one that had nothing to do with the tender process. The notes say nothing about any other discussions. When pressed, Mr Springett said that while he had no documentary support for his recollection he knew that "we would have gone through that SOR as to why they were not

on the list”. However, as Mr Vanhegan pointed out, going through the SOR would not have involved discussion of any of those features.

82. Mr Dooley said a debriefing did take place at this meeting, but that it only took a few minutes and was to the effect that BT felt the Egerton connector “did not fit with the others”. He says in his statutory declaration that BT did not disclose the various items that Mr Springett alleges were disclosed, and that there were no further meetings to discuss this project. Mr Tomkins and Mr Leaver who were also present according to Mr Springett’s note, do not mention this meeting in their written evidence. Mr Tomkins said in examination that it would have been totally inappropriate for such technical details to be discussed after Egerton’s rejection and he did not recall it occurring. Mr Dooley made the same point in examination, saying that if new features not among the original requirements had been brought up at this meeting, Egerton would have cried “foul” and would not have accepted it without complaint. Mr Tomkins said he tried to find out about this time why TRICON was not liked but only “gained the impression it was simply too unlike anything else BT had seen”. Mr Dooley made the same point.

83. Again there is a conflict of evidence between the two sides, except that I note not even Mr Leaver has confirmed Mr Springett’s version either in his affidavit or in examination. It would not be surprising if some sort of debriefing had taken place at which shortcomings relevant to the SOR were discussed. However, I have already found that the provision of plug-in units with a variety of different functions was not required in the initial tender process, so this would have been a new requirement, and I agree with Mr Tomkins that it would have been out of place and surprising for BT to discuss any new requirements with Egerton at this stage. I also note that one month after this meeting, BT produced a revised SOR which is appended to the technical audit of the four successful bidders. The new SOR included five further features, but very noticeably, does not require interchangeable plug-in units or for that matter, any of the other key features in the present claim 1. This casts further serious doubt on BT’s allegation. If these features had become important to BT since the original version of the SOR, why were they not in the updated SOR?

84. I have come to the firm conclusion that Mr Springett did not in fact have a clear memory of what happened at the meeting and was simply speculating. His version of events is implausible and not supported by any other witness. I do not believe that the details he mentions were discussed at this meeting. I am therefore satisfied that up to 7 January 1992 BT had not disclosed the key features of the invention to Egerton, nor is there the slightest evidence BT had even thought of the invention themselves by this stage.

Developments at BT during 1992

85. I will now move on to the next phase in the events, the period from January 1992 to the date of filing of Egerton's priority application in February 1993, because in their supplementary statement BT assert alternatively that Egerton got the invention from BT in this period. It will be convenient to look first at what BT and the four successful bidders (whom I shall for convenience call BT's "collaborators") were doing during this period. I will then look at what Egerton were doing, before finally going on to assess whether the evidence suggests Egerton did indeed get the invention from BT.

86. Miss Jones drew my attention to a number of documents which, she said, showed that BT were working on replaceable modules with different functionality (and specifically, dummy termination) in early 1992. The first is an extract from Mr Springett's diary for 17 January 1992, reporting a meeting with BT's patent agents. It discusses the need to ensure intellectual property rights (IPRs) did not hinder BT's freedom to buy, and then goes on:

"Box and insert different purchase. Box and backplate + modules. External shape of box might need to be owned? Is there any way that a standard could be found for the insert even if fitted within dummy."

These notes are so cryptic that it is difficult to know what Mr Springett meant at the time by "insert", but it is reading far too much into the text to interpret it confidently as referring to plug-in units. It may mean no more than everything inside the box. Similarly, I can see no basis for averring that the rather obscure reference to "dummy" must have been a requirement

for dummy termination.

87. The next document is an undated, unattributed “list of questions” that BT apparently prepared for sending to the four collaborators. It is clearly a follow up to Mr Springett’s diary entry of 17 January. It talks a lot about the collaborators’ attitude towards the ownership of IPRs in the box, the backplate and “modules” (which I take to mean connector pairs), and then goes on:

“For commercial reasons BT may wish to standardise on the inserts for the modules it procures. (We have in mind a standard dummy which could be an adapter for various inserts.) Would you be prepared to collaborate with other BT suppliers to develop a standard specification for a dummy insert?”

This is rather garbled, but I deduce that the “dummy insert” was to be some sort of socket into which other inserts could be plugged. Certainly at least one of the collaborators (Pouyet) seems to have interpreted it that way in its response. Thus we now have the idea of having a variety of different plug-in “inserts”. Pouyet seem to have understood that the other inserts were for protection devices, because they say in their reply that they wanted to be informed of the exact elements which were likely to be incorporated in “the plug (protection module) to be inserted into the dummy plug”. Certainly the way “dummy” is used in the BT document makes it unlikely that it refers to what I have called a dummy termination.

88. On 9 March BT met the four collaborators, and they apparently signed an intellectual property rights agreement. I say apparently because in evidence we only have an incomplete draft of the agreement, but Mr Leaver asserted it was signed, and a later agreement between the same parties in June refers back to an agreement made at the March meeting. This agreement refers, amongst other things, to “inserts” and “the footprint of modules required for interconnection purposes”. This was followed by two internal BT documents dated 23 March 1992. One is entitled “Project requirements definition for the introduction of IDC block terminals to replace the existing range of block terminals, issue 1” and it states that the objectives of this project are, *inter alia*:

“To provide an improved performance Block Terminal ensuring that they are suitable for use on digital circuits and providing a plug-in facility for fitting of soft dial tone, remote identification and lightning protection devices. ...”

The other, entitled “Proposed way forward on new generation pole top connector”, refers to the difficulty they were anticipating in getting the four collaborators to agree “a standard footprint for the plug-in module”, and suggesting each company should be allowed to go ahead with their own design of “plug-in module and associated interface”.

89. There must be a question mark over the meaning of “soft dial tone” in the first of these documents. However, in the light of the Chesilvale device which functioned both as what I have called a “dummy termination” and as a device enabling remote identification of line pairs, I am prepared to accept that “remote identification” implied a “dummy termination” option was required. In the second document, it is not disputed that “footprint” refers to the dimensions and geometry for the interface between a plug-in unit and a connector block.

90. Taking this series of BT documents between January and March 1992 together, the way the documents get clearer as time goes on gives me the impression that their ideas were developing throughout this time, but I am satisfied that by the end of March BT were considering plug-in functionality of different types. I observe that there is no mention of remote identification in these documents until 23 March, so there is no evidence BT had contemplated this particular option prior to 23 March. As for the collaborators, I am satisfied they were aware BT wanted the ability to plug units in, but I am not satisfied they had a clear idea of what functionality BT wanted. Certainly Pouyet only seemed to be aware of a requirement for protection when they replied on 3 February, and there is no evidence BT told them any more than this, apart from the reference to “interconnection” in the 9 March agreement.

91. A little later we have a BT drawing, allegedly dated 22 April, of the footprint and

external dimensions of the plug-in unit. The footprint requires a socket which will take 5 rectangular pins. (The socket apertures are shown as cross-shaped, not rectangular, but as Mr Dooley helpfully explained, that is simply a consequence of assembly requirements.) We do not know if and when this drawing was shown to anyone else, but a Raychem document dated 23 June 1992 discusses a “5 pin footprint”, which BT are asking them to comply with, so they were clearly aware of the five-pin requirement by then, and possibly earlier as the document refers to discussions of issues such as the footprint “over the past months”. It therefore appears that BT had settled these details of the footprint by the end of April 1992, and had made them clear to Raychem and presumably the other three collaborators by at latest June 1992.

92. There was another meeting of the collaborators at the very end of June, at which a further agreement was signed. This has a lot of similarity with the March agreement, but now refers frequently and consistently to “protector inserts”. It also talks about the parties designing their own forms of “protector insert to plug in to modules”. (“Modules” here must mean connector pairs.) This strongly suggests that the only functionality BT had disclosed to the collaborators by this stage was protection. There is support for this view in the evidence from one of the collaborators, PSI. Mr Honey of PSI says in his affidavit:

“Because of previous verbal discussions with BT, I expressed PSI’s position of not wishing to plug a test probe into the protector/dummy position. This position was reinforced with the information obtained at the meeting of 29 September 1992 indicating that BT would like to develop an interchangeable plug-in unit to perform additional remote network operations as mentioned in exhibit TH3. In particular

- A far end demarcation point
- A measuring facility capable of data transmission evaluation
- The ability to activate a working exchange line
- Provision of soft dial tone
- Lightning protection”

The implication is that this information was new to Mr Honey on 29 September 1992. He was questioned on this at the hearing, and I am satisfied that although BT may have had the intention to provide replaceable modules with a variety of different functions as early as March 1992, Mr Honey did not know this until the end of September. It is, I recognise, possible others in PSI knew before this because Mr Honey had had a gap in his involvement with the project, but I consider it unlikely as Mr Honey had been back on the project since 19 August 1992 and if this requirement was known in PSI Mr Honey would surely have found out about it.

93. Finally, I need to look at the evidence of what the collaborators did in the period following the June 1992 meeting to reduce BT's requirements to practice. There is a record of the design of the Pouyet connector in a set of drawings dated 15 January 1993. There seems to be no evidence at all on the development of detailed designs by Raychem or ADC/Mondragon. There is no written record in BT's evidence of PSI's design, but Mr Honey drew a diagram of it at the hearing. He did not provide any precise date on which the design was arrived at however. In reply to what I think was a question asking when the design had been made, he said "It is going to be early or somewhere in 1992, that would be mid 1992, maybe; certainly by early 1993 we had the prototype to that module". We do have in evidence an internal BT memo dated 28 October 1992 which refers to a PSI connector, but I cannot be sure it was the one Mr Honey drew and so cannot attach much weight to it as supporting evidence.

94. In short, therefore, there is evidence that a Pouyet design existed by 15 January 1993. There is some evidence that PSI came up with a design, but we do not know exactly when.

Developments at Egerton during 1992

95. Egerton's case is that following their exclusion from the BT tendering process, they were still interested in designing a connector that would find favour with BT so that they could re-enter the bidding process in due course. Like some of the companies that had been short-listed, they also wanted a design to satisfy foreign telephone companies. Within

Egerton, responsibility for all the various connector designs seemed to have rested with Mr Dooley. It was he, for example who was responsible for the TRICON design presented to BT in November 1991.

96. Following BT's rejection of the TRICON connector, Mr Dooley wrote an internal memo about further design possibilities on 6 January 1992, ie one day before the meeting with BT. It is entitled "New Generation Terminal, Third time lucky" and includes in its introduction the comment:

"It appears today that BT has backed off look-both-ways and replaceable (un)protected modules. If we want a product to take us into the next century, then we must have those options."

The term "module" here appears to refer to the whole connector assembly for one pair of conductors since the document goes on "The plan area of an individual pair module will be within the 18mm pitch x 50mm direction of wire ports that is required by Bellcore." This comment suggests that, following BT's rejection of TRICON, Mr Dooley felt he no longer knew what they wanted, since "look-both-ways" testing and "replaceable modules" had both been required in BT's SOR.

97. The memo goes on to set out a number of desirable design features to meet BT's and other telephone companies' requirements. There are no detailed drawings of any connector, but the memo shows the concept of having three different "bases", each of which can be associated with any one of three box sizes and four different "module" types - unprotected, 3 pole arrester, 2 pole arrester and dummy termination. There is no explanation in the document of what the expression "dummy termination" means here, and this was not fully resolved in cross examination. Since the term used is "dummy termination" and not simply "dummy" or "dummy unit", I suspect it refers to what I have called "dummy termination", though I cannot be sure.

98. Miss Jones tried to argue that these "modules" must have been plug-in units of the

type required by claim 1, and certainly the description of one of the bases as “single pair-exchange wire connected to its own contact which in turn mates with the module contacts” would not be inconsistent with that. If they were, there is not the slightest evidence the idea for them came from BT, especially as Mr Dooley was no longer even sure BT wanted modular connector assemblies. However, as I have already discussed when considering Mr Dooley’s reliability as a witness, I am satisfied this is not what Mr Dooley had in mind at this stage. The memo also discusses various options for making the IDC. Some of these features could have led to the design shown in the patent specification, but at best only one of the four key features of claim 1 is here - the dummy termination. I am of the view that this document is consistent with an independent design process by Egerton and consistent with Mr Dooley’s evidence about his knowledge - that he had received no further information from BT, and about his motivation - that he was trying to develop a connector that would satisfy not only BT but also foreign telephone companies.

99. The next stage in Egerton’s design process for which we have evidence is a memo from Mr Dooley dated 25 June 1992 covering his latest thoughts on the “New Generation Terminal”. It is what he terms the “2G3” connector and includes fairly detailed drawings. Again it is clear on the face of the document that Mr Dooley was not just designing this for BT, because it acknowledges that only two of the eight options it can provide are BT requirements. In this design the drop wire contact does slide, but it does so to make or break an electrical connection to the exchange wire (to allow look both ways testing), not to engage the drop wire as required by claim 1. In that the contacts can be disconnected in this way they could be regarded as “isolated”, but they are not interconnected by a plug-in unit. Optional protection is there, carried in a part of the assembly which also carries the exchange wire contact, but it is not removably plugged in: once this part is coupled with the rest of the assembly, it stays there.

100. This design strikes me as a development of the January design, taking us half a step closer to the design shown in the patent. Miss Jones argued that this was not a development of the January design, but that argument was based on the premise that the January design included plug-in units, and I have already rejected that premise. Some of the requirements of

claim 1, though, are still missing from the June design, namely contacts which slide to make connection with their wires, units which are removably “plugged-in”, and linking the exchange and drop wires via the plug-in units. Thus this design is certainly not consistent with Mr Dooley already being aware of all the key features of the invention from BT. As Mr Dooley himself said, if he had been aware that BT were looking for plug-in units for any purpose, he would have included them. Rather, the design and the events surrounding them again appear to me to be consistent with the proposition that Egerton were engaged in their own design process, albeit one in which Egerton were trying to guess what BT might want in order to ensure that their design would meet BT’s needs.

101. Mr Dooley says that he then decided to redesign the connector so that protection could be incorporated via a plug-in module, which he called a “personality module”. We have two documents setting out the result. The first (exhibit APCD6) is in the form of a draft patent application with a rather sketchy set of drawings. Mr Dooley said it was produced in July or August 1992. The second (exhibit APCD11) is dated 15 September 1992, and includes a more-detailed set of drawings. The second set includes drawings more or less identical to figures 2 to 5 of the patent specification, though there are variations in the detail of figure 5. Documents APCD6 and 11 include all the features of claim 1 (and indeed, most of the features of the subordinate claims too).

102. As an aside, I should perhaps say that in his written evidence, Mr Dooley refers to another drawing (exhibit APCD5) which he said was a step on the route to the two sets of drawings I have just mentioned. This is clearly wrong, since APCD5 is dated 14 September 1993. Mr Dooley was not asked about this during cross examination, but I do not think anything turns on this drawing, since it appears to me to be no more than a different view of the connector shown in APCD11. I need say no more about it.

103. APCD6 and 11 are contemporary documents, not assertions made several years later, and they therefore provide compelling evidence of what Egerton had in mind and were doing at that stage. APCD6 is undated, but it is clear both from its content and from the document number Mr Dooley assigned to it at the time that it predates APCD11, and nothing hangs on

its exact date. APCD11 is clearly dated 15 September 1992.

104. Miss Jones drew my attention to what she submitted was an inexplicably long gap between Egerton finalising their design in September 1992 and applying for the patent in February 1993. I assume she was inviting me to infer that the September date cannot have been correct, although she adduced no other evidence to challenge this date. Mr Dooley admitted he could not explain the length of this gap, but I observe from BT's own evidence that Pouyet had apparently established their design by at latest January 1993, and yet they did not apply for a patent until August 1993. Miss Jones' argument that the gap was inexplicably long might have been more convincing if there hadn't been a similar gap with Pouyet. As it is, I would need rather more than this to justify questioning the September 1992 date.

105. I am satisfied, therefore, that by 15 September 1992 at the latest Egerton had arrived at the invention of claim 1. I must now look more carefully at what information passed from BT to Egerton in 1992 prior to 15 September, and consider what bearing that has on entitlement to the invention.

Did the invention come from BT in 1992?

106. BT do not assert that they told Egerton anything about the invention between their post-tender meeting with Egerton on 7 January 1992 and 15 September 1992 (or, for that matter, the filing date of the priority application). Rather, this is where Miss Jones was relying most heavily on her submission that I should infer copying on the basis of similarity combined with the possibility of access. BT allege they developed the invention and reduced it to practice during this period and that therefore, following Miss Jones' submission, this puts the onus on Egerton to prove they have not copied. They imply that Egerton must have found out about what they were doing somehow or other, even though BT did not tell them direct.

107. I have already made clear that in my view the onus does not shift to Egerton quite as easily as Miss Jones suggested. I will also observe that there is no evidence BT reduced

anything to practice, or indeed that they ever intended to. It was the collaborators who were to do the reducing to practice, and there is no adequate evidence that any of them did this prior to 15 September 1992. However, I accept that the fact that BT had not reduced the invention to practice does not mean they cannot have made any contribution which would justify some degree of entitlement.

108. In pursuance of her argument that I should infer copying, Miss Jones invited me to decide whether BT's or Egerton's account of the genesis of the invention was the more credible, quoting *Norris's Patent [1988] RPC 159* in support. She said Egerton's version of events was not credible because it did not represent a coherent sequence of development. They had, she said, come up with the idea of plug-in units in their January 1992 design, gone right away from it in their June 1992 design, and then unexpectedly come back to it in their subsequent design.

109. Deciding which account of the genesis of the invention is the more credible may be fine when it is accepted that the invention was only made once, but it is not much help when independent development of the invention by two different parties is a possibility, and that seems to be the position here. Egerton are not denying that BT and their collaborators eventually developed something very similar to what is in the patent. They are simply saying their own design process was independent of BT's. In these circumstances, I do not accept that Miss Jones approach is appropriate. In any case, her submission that Egerton's version does not represent a coherent sequence of development fails on two counts. Firstly, I have already concluded that their January 1992 design did not envisage plug-in units. Miss Jones argument that it did is based on using hindsight to put meanings on words that, I am satisfied, were never intended at the time. Secondly, even if Egerton's sequence of development had not been a linear progression, that would not in my view have made it improbable because, as I indicated when assessing Mr Dooley as a witness, I can well believe he is the sort of person who would not merely plod away developing one idea in a simple fashion.

110. Again in pursuance of her argument that I should infer copying, Miss Jones also submitted that what she called "BT's design" always appeared to have been in the mind of

Egerton, referring me to another passage in *LB (Plastics) Ltd v Swish Products Ltd* at p580 where such a factor had been taken into account. As I understand it, she was implying Egerton were clearly keen to copy BT. Indeed, she submitted that the way the Egerton design developed mirrored the progressive acquisition of further snippets of information about what BT wanted. I readily accept that the desirability of producing something that would meet BT's requirements was always in Egerton's mind. I do not for one moment believe Egerton would deny that, because BT were an important customer for Egerton, albeit not the only one. However, trying to find out what your customer wants and designing something to meet it is not a sin - it is no more than basic good business practice. It is very different from attempting to mimic one of your competitor's products in order to satisfy a customer, as was the case in *LB Plastics*.

111. In developing her argument that Egerton had merely copied "BT's design", Miss Jones also took me to designs produced by BT's collaborators. As described by Mr Honey with reference to his diagram, PSI's connector had the isolated contacts required by claim 1 and it also had plug-in units, though what functionality they had is not clear. The exchange wire contact did not slide, and whilst the drop wire carrier was screwed down on to its contact, it was not clear that the contact moved through a bore in the process. Thus as described, this connector did not have all the features required by claim 1 either as granted or as currently amended. Further, its general design is quite different from Egerton's September 1992 design. In the Egerton design, the base unit is a single moulding which has bores for both the exchange wires and drop wires and which carries both the exchange wire and drop wire contacts. The drop wire contact is moved by a cam and the exchange wire contact by the insertion of the plug-in unit, which sits on top of the whole connector. In the PSI design, the exchange wire is carried by a separate unit that snaps in place, whilst the drop wire is carried by a separate body member which is screwed down on to the main body. The plug-in unit sits at the back of the connector, not on the top. Further, in the Egerton design the exchange wire port is above the drop wire port and the whole connector is angled, whereas the PSI design has the drop wire port uppermost and the connector is not angled. Taking all these points together, the designs are manifestly so different that I cannot for one moment believe Egerton's design was arrived at from the PSI design.

112. There is no explanation accompanying the drawings of Pouyet's design, and it is not easy to work out from the drawings on their own quite what is going on. However, in June 1994 Pouyet applied for a patent application (claiming priority from a French application dated August 1993) whose drawings show a connector that looks much like the one shown in the 15 January 1993 drawings. I will assume the two are essentially the same and rely on the patent specification to interpret the earlier drawing.

113. Again the design of Egerton's September 1992 connector is quite different from the Pouyet connector. In the Pouyet design, the base unit is in three parts, one carrying the exchange wire bore, a second carrying the two contacts and a third carrying the drop wire bore. The contacts are moved by bolting the three parts together. Like PSI, the plug-in unit sits at the back of the connector, not on the top, the drop wire port is above the exchange wire port and the connector is not angled. There are many other differences too. For example, in the Egerton connector both the exchange wire and drop wire contacts are short and straight, and link the wires directly to the module whereas the Pouyet has multiple interconnecting contacts between the wires and the module. Taking all these points together, the designs are so different that I cannot believe Egerton's design was arrived at from the Pouyet design either. There is more similarity between PSI and Pouyet than there is between either of them and Egerton.

114. There are other problems with BT's argument in relation to these designs. For Egerton to have copied either of them, they would have to predate Egerton's design, but BT have provided no evidence of this. Indeed, the Pouyet drawing date is some months later than Egerton's, whilst the internal BT memo of 28 October 1992 refers to PSI's drawings for the constituent pieceparts as "now" being complete, implying this was a recent event. Thus in the absence of other evidence I must presume that the Egerton design predates both of these. Further, BT have provided no evidence of communication from Pouyet or PSI to Egerton, nor evidence that Egerton might have had access to either of these designs.

115. I am entirely satisfied, therefore, that the Egerton design of APCD6 and 11 owed

nothing to the PSI and Pouyet designs. I have to say that even if Miss Jones had persuaded me they did, BT would still be in difficulty because on their own evidence the PSI and Pouyet designs were not BT designs. By virtue of the agreements of March and June, BT had deliberately declined any rights to the IPR in what I might call the internal design of the connectors. Thus *prima facie* BT has no obvious right to assert entitlement as a result of the PSI and Pouyet designs.

116. In considering whether one of the collaborators might have passed information to Egerton, I was referred to the meetings between BT and the collaborators on 9 March 1992 and again on 29 June 1992. BT's evidence, which I have accepted, is that they signed an agreement on each occasion. Those agreements were not just concerned with the ownership of any intellectual property rights that emerged from the collaboration. They also bound the parties to a certain degree of confidentiality for six months.

117. It is convenient to look first at the second agreement. This made confidential "all information disclosed by a party at the meeting", save for "any information which is published or in the public domain before the Meeting or is subsequently published other than in breach of this Agreement" and certain other exceptions which need not concern us. The purpose of the meeting was described in the agreement as:

"... to enable the Parties to collaborate on designing a new standard form of backrail and footprint for protector inserts and for details of the Design [*ie of the backrail and footprint*] to be agreed by the parties and recorded by a BT draftsman at the Meeting."

Looking at the agreement as a whole, it is fairly clear that BT's intention in including the confidentiality clause was to encourage the collaborators to pool their ideas for connectors so far as they affected the design of the backrail and insert footprint. Clearly that may have involved the collaborators disclosing some other features of their designs, and the agreement allowed for that in the provisions it included for ownership of what it called "background IPR". However, there is nothing in the agreement to suggest that the confidentiality extended beyond the design of the backrail and the footprint, and any incidental information about the

collaborators own designs disclosed at the meeting. In particular, there is nothing to suggest it extended to the very idea of having plug-in units or having a five-pin footprint.

118. It is more difficult to determine the scope of the confidentiality clause in the first agreement because in evidence we only have an incomplete draft of this agreement, but from what is available it looks broadly similar to the second one. Certainly the “notes on the IPR agreement”, which were either part of or accompanied the text, expressly say that during the six months confidentiality participants could not disclose information received at the meeting, but that after that “there is freedom to use the design generated at the meeting”, and this reinforces the view that what was confidential was the design of the backrail and the footprint, and any incidental information about the collaborators own designs disclosed at the meeting.

119. There is nothing in the evidence to suggest that the designs that emerged from these meetings were not in fact kept confidential. Certainly it would not have been in the interests of any of the collaborators to disclose the designs to third parties, because by doing so they would have been undermining the competitive advantage they had as a result of being short-listed by BT. Equally the confidentiality agreements appear to have been limited in scope and did not debar disclosure of all information about the project.

120. As Mr Vanhegan correctly pointed out, because BT admit their documentation is incomplete as a result of their document destruction policy, we do not know whether there were any other confidentiality agreements concluded by the parties. If there were, other matters may have been confidential and/or the period in which the designs of the backrail and footprint were to be confidential may have been extended. In the absence of evidence to the contrary, though, I must work on the assumption that no other relevant confidentiality agreements were made. I also observe that the confidentiality clauses in both agreements envisaged the possibility that information might, in fact, be “subsequently published other than in breach of this Agreement”, so it is possible some information did not stay confidential for the full six months. BT’s evidence does not address this point adequately (and the onus is, of course, on them), but in the event I do not think anything turns on this.

121. Quite apart from these confidentiality agreements, Miss Jones suggested that internal BT documentation or other confidential information may have become available to Egerton during this period. She could offer no direct evidence that this happened, and indeed BT's own witness, Mr Leaver, said that no confidential information was passed to Egerton after their rejection. On Egerton's side, Mr Tomkins and Mr Dooley both say that Egerton were excluded from all the developments from the time of their rejection. In her summing up, Miss Jones insisted that Mr Tomkins had accepted during cross examination that Egerton could have had sight of BT drawings in 1992 because he had said "anything is possible". That may be an accurate quotation of his words, but it is a complete misrepresentation of his meaning. He had been consistently maintaining that it was unlikely Egerton had seen the particular document being discussed, and his statement "anything is possible" came in response to persistent questioning by Miss Jones as to whether, even though it was unlikely, it was possible Egerton had seen the document. Trying to force answers like this out of witnesses cuts no ice and is a futile exercise.

122. Nevertheless, whilst Miss Jones was unable to provide any specific instance of BT or any of the collaborators releasing information to Egerton, Mr Dooley came to her rescue. He readily acknowledged that what prompted him to redesign the 2G3 connector into the design of APCD6 and 11 was his becoming aware that BT wished their connectors to be protected by five-pin plug-in protector units. He was not sure where this information had come from, but speculated that it may have been via Egerton sales staff, who in turn probably got it from Egerton's customers, some of whom supplied BT or bought from Egerton's competitors. He specifically mentioned the possibility that he may have learned about it when ADC/Mondragon (one of the collaborators) started offering a connector with a five-pin plug-in unit in South America. This is the first concrete evidence of anything passing from BT to Egerton about their requirements since the SOR, but the route by which the information travelled is unclear.

123. Whilst Mr Dooley had learned more about BT's requirements, he certainly didn't know everything. The following three quotes from APCD11 are examples which demonstrate this:

“Since the 5 pole module is so central to the design, I cannot start any system design until we have more information from British Telecom. This all depends on my assumptions of what is inside the plug-in device.”

“A difficulty is the lack of knowledge of BT’s dimensional requirements. However, we do now believe that the 5 pole personality module is to form a key part of BT design. If (*sic*) fact, if my interpretation of the uses of the pins is correct, that module renders useless the work I have done on a look-both-ways connector.”

“We have it from a couple of sources that the pins are 4 rectangular section blades arranged in a square, plus a central round pin.”

124. In my view, this clearly demonstrates that Mr Dooley did not know what the “footprint” of the plug-in unit should be. Indeed, this is reinforced by the fact that Mr Dooley’s sources had got it wrong - the central pin was to be rectangular, not round. This is all consistent with BT’s evidence that the footprint was a feature that was being kept confidential by BT and their collaborators at this time. Miss Jones took him to the BT drawing showing the module dimensions and footprint dated 22 April 1992 and suggested he had seen it before arriving at his design. Mr Dooley said that he had not seen it before, and if he had, it would have been unnecessary for him to try to second guess the dimensions and footprint. The BT drawing does not show a round centre pin, so the very fact that Mr Dooley got it wrong is, I feel, convincing evidence that he had not seen the drawing.

125. The above quotations from APCD6 and 11 also demonstrate that Mr Dooley was not entirely sure what was to go inside the plug-in unit. He is emphatic that he was not aware that BT intended the modules to be used for anything other than protection, and he remembers thinking this would be the ideal opportunity to incorporate other circuitry than just protection. Since I have already found BT did not tell its collaborators that it was contemplating functions other than just protection until probably the end of September 1992, it would have been surprising if Mr Dooley had been aware of BT’s intention.

126. There is some evidence that could point the other way. APCD11 shows four possible modules under a heading “The British Telecom version”, and those four are “simple connection”, “protected”, “RID” (which, it is clear from APCD6, meant look-both-ways testing plus remote subscriber disconnection) and “as shipped with Soft Dial Tone module in place” (and again, it is clear from APCD6 that soft dial tone here means what I have called dummy termination). This contrasts with the “Bell system version” (for the US market) shown in the document which only includes a protection module. The first three functions given for the BT version were all in the original SOR, but as I have found, not the fourth. One might therefore ask why Egerton should propose shipping to BT (but not to Bell) a connector with a dummy termination unit in place. This was not explored in cross-examination, but as I have already found BT’s own collaborators were not aware they required any functionality other than protection at this time, I do not believe that the inclusion of dummy termination implies Egerton had inside information that BT required this function. As I have indicated earlier, it may well be that Mr Dooley had already contemplated offering a dummy termination function in his design of 6 January 1992. Presumably it was not included in the Bell version because Egerton understood or assumed Bell did not require a multiplicity of functions.

127. Whilst APCD6 and 11 show Mr Dooley was not fully aware of what BT wanted, he was clearly aware that the footprint was to be a five-pin one. A five-pin protection unit requires circuit components to be interposed between the exchange and drop wire contacts, in contrast to a three-pin unit, which would just provide overvoltage protection and would not require any break in the exchange to drop wire connection. Miss Jones argued that given, BT’s SOR plus the idea of five-pin plug-in units, the rest of the invention as claimed in claim 1 follows inevitably. The argument as I understand it is that a) the separate termination of the exchange wires and drop wires is a natural outcome of the use of such units, and b) the use of IDC contacts sliding in bores is the only way to terminate the wires.

128. I do not think the designer is constrained to such a degree that the invention as claimed follows inevitably, as Miss Jones suggested. Looking first at the termination point, I accept

that separate termination of the exchange and drop wires is one fairly obvious way to allow the use of five-pin circuitry, but it is not the only way, as one could also have normally engaged contacts which are disengaged when a five-pin unit is inserted. Miss Jones said that the prohibition on the use of break jacks with wiping contacts in the SOR would prevent the designer using this arrangement, but I think this is too narrow a view. This prohibition was in respect of the test access, not the insertion of plug-in functional units, which only came later. The plug-in units would have a very different pattern of usage and there is no reason to suppose they would be subject to the same constraints as a test access facility. Further, as I have said previously, the ban was not on all break jacks but only those with “wiping contacts”. Taking all these factors into consideration, I do not accept that separate termination inevitably follows from BT’s requirement, although as I have said, it is one obvious option to consider.

129. On the sliding IDC contact point, I agree the designer would be obliged to use IDC connectors since that was in the statement of requirements (at least for the drop wire). However, merely because a connector uses insulation displacement does not mean it has to slide in bores. Although I hesitate to refer to it because it was not mentioned at the hearing, the well-known BT domestic telephone socket (in use from well before the period in question) is an obvious example of IDC connectors that do not slide in bores. The Raychem Z fold connector, which is in the evidence and is actually in the context of pole top distribution points, is another, and although I was not shown it, I got the impression that the “BT76/86” designs Egerton were currently supplying to BT were a third. Further, Mr Honey (who, it will be remembered, was giving evidence for BT) confirmed in re-examination that in his view it was not necessary for the IDC contacts to slide in bores. One could, he said, use a “snapping device” where the force of a finger or a screwdriver was used to push the wire home. I lost count of the number of times that Miss Jones referred either to the alleged inevitability of contacts sliding in bores or to “BT’s idea of contacts sliding in bores”, and yet not once did she offer a shred of evidence to show sliding contacts were inevitable or that they had come from BT. Perhaps she was hoping that by constant repetition I would be numbed into accepting these as self-evident “facts”, but they are not.

130. I am quite satisfied, therefore, that Egerton did not learn about the combination of features that make up claim 1, whether as granted or as now amended, from BT. Nevertheless, on their own evidence Egerton accept that their learning of BT's requirement for a five-pin plug-in protector unit was a trigger for the development of the invention, and so I must consider whether that qualifies BT for joint entitlement. As I discussed earlier when considering the appropriate approach to adopt, it could only do so if the information about the requirement was conveyed either in circumstances of confidentiality or in breach of confidentiality. To put it in simple language, if I tell the world I am interested in purchasing a widget having certain features, I cannot expect to own or part-own the patent rights in any widget designs that manufacturers come up with to met my requirements. However, if I had told those manufacturers in confidence that I had the bright idea of providing widgets with certain features, the position may be different.

131. The onus of showing that the requirement for a five-pin plug-in protector unit was confidential must rest with BT, and in my view they have not discharged that onus. They have shown that the detailed design of the footprint was confidential at the time, but as I have already found, Egerton did not receive that information. BT have not provided any evidence that the mere idea of having a five-pin plug-in protector unit was confidential, or even intended to be confidential. The confidentiality agreements, for example, did not ban the collaborators from disclosing the fact that BT wanted plug-in units as this idea had been given to the collaborators (without, on the evidence available, any confidentiality undertaking) before the confidentiality agreements were signed. It is less clear when the fact that they were to be five-pin was disclosed to the collaborators, but I can see no basis for assuming this was confidential when there is no evidence to support that assumption.

132. I should say that five-pin protectors *per se* were not new. Mr Dooley said in evidence that he knew they had been used in the US for 40 year, but only inside telephone exchanges. However, I am not sure whether their use in pole top distribution points was known.

133. In short, then, I accept that knowledge of BT's requirement for a five-pin plug-in protector unit contributed to the development of the invention, but that in itself does not

qualify BT for joint proprietorship of the patent because there is no reason to suppose this requirement was not in the public domain.

Other arguments

134. There are some further arguments put forward by BT which I need to deal with.

135. BT say that Egerton's use of the term "soft dial tone" to mean what I have called "dummy termination" rather than "true soft dial tone" is evidence that Egerton obtained their understanding of soft dial tone from BT, because Mr Springett's team were the only other people in the industry using the term in this way. I do not consider BT to have shown this to be the case. They have not demonstrated satisfactorily that the use they allege was restricted to a small part of BT was in fact so limited in the industry in general. Moreover, Egerton appear to have had strong contacts with the alleged source of BT's information, namely Bell Corporation in the US and may well have obtained a similar impression of the meaning and use of soft dial tone from Bell. Quite apart from that, even if Egerton had got this meaning of the term from BT, that would not in my view show BT had contributed this to the invention. Dummy termination was nothing new even at the time of the SOR, as evidenced by the Chesilvale device. As suppliers of the previous pole top distribution points, Egerton were in close contact with BT at that time and so could well have picked up this use of the term then, in a context outside the present invention. Consequently I do not consider I can attach any significance to this argument.

136. Miss Jones also drew my attention to the similarity between the names ECM1A and EPM1A that Egerton gave its product, and the name External Connection Module 1A which BT ascribed to the plug-in unit as early as January 1992, suggesting this was further evidence of copying. I accept that Egerton very probably did choose to use the same names to indicate the purpose of the units to customers, but there is no evidence these names were kept confidential by BT, nor that Egerton used these names before the filing date of the patent application, so the similarity does not affect my findings.

137. BT also said that Egerton misrepresented one of their connectors as BT approved and a BT drawing as Egerton copyright. Egerton deny this, but whatever the truth I am at a complete loss to see what bearing this could have on the present action.

Other disclosures in the patent specification

138. So far I have dealt with the broad concept of the invention as set out in claim 1 (both as granted and as now amended), and considered the original embodiment shown in the priority application. However, when the application for the present patent was filed a year later on 10 February 1994 it included a second embodiment, illustrated in figures 6(a) to (c). Figure 6(b) is reproduced earlier in this decision. Not long before this, Egerton had been invited to tender for the plug-in units that were to be used with the new pole top distribution points and Mr Dooley agrees BT showed them drawings illustrating the plug-in unit to enable them to tender. Miss Jones described this as receiving drawings of “BT’s embodiment” and alleged that these were used for the basis of the figure 6 embodiment.

139. There is no evidence Egerton received anything other than the drawings of the plug-in units, but if Miss Jones is implying they saw and copied connector designs such as Pouyet’s or PSI’s, a comparison of figure 6 with the Pouyet and PSI designs again shows that to be highly improbable. Figure 6 does move closer to Pouyet and PSI in one important respect - it moves the plug-in unit to the rear of the connector. It also moves closer to Pouyet in that the drop wire is moved on to its contact rather than *vice versa*,. However, like Mr Dooley’s September 1992 version, it differs from Pouyet and PSI in many other respects. It seems highly likely that Egerton learnt that BT were considering putting the plug-in units at the back from whatever information they were given to tender for those units, and we know from evidence of a connector exhibited in Geneva in 1991 that Mr Dooley was already aware that it was possible to move the drop wire on to the contact. If Egerton had seen the Pouyet or PSI designs and were trying to copy them, I am sure they would have come up with something closer to them than figure 6. Egerton’s assertion that figure 6 is simply what Mr Dooley came up with when he tried to modify his original design to put the plug-in unit at the back seems much more plausible. Thus I do not consider BT have shown any entitlement to the figure 6

embodiment.

140. There are, as always, many details in the claims and the embodiments described in the patent specification. Some relate to features which appear to have been already known in the art, but not all. I can see nothing, however, to which arguments different from those I have already considered might apply so as to justify a claim by BT that they are entitled to that aspect. As I have already found, all the embodiments are (to borrow Mr Leaver's expression) Dooley designs, and so insofar as they include inventive features, those features belong to Egerton.

Conclusion

141. Having reviewed all the evidence and argument, I am entirely satisfied that Egerton did not get the combination of features in claim 1, either as granted or as now amended, from BT, nor is there any other subject matter in the patent that was invented by BT. I reject their claim that, as between BT and Egerton, it is BT that has title to what they call the alleged invention. Even when I look at the features of claim 1 individually, the closest BT come to contributing a key element that led to the invention was their requirement for five-pin plug-in protector units, and I have found that this does not qualify them for joint proprietorship.

142. Since I have not found that the patent was granted to a person who was not entitled to it, BT's application for revocation also fails.

143. In the light of my findings, it is perhaps not surprising that BT were unable to identify an inventor or inventors of their own. Whilst I reluctantly agreed to consider their claim to entitlement despite the fact that they had not named an alleged inventor, with hindsight their inability to name an inventor should have been a warning to BT that their claim rested on a very shaky foundation. The same may be true of the fact that they had to change their pleadings part way through the case.

Appeal

144. As this decision does not relate to a matter of procedure, any appeal should be lodged within six weeks

Costs

145. At the hearing, I agreed to defer the consideration of costs and give the parties the opportunity to make representations in the light of this decision. As I indicated at the hearing, I hope it will prove possible to deal with this in writing, but I will arrange a supplementary hearing if necessary. In the first instance, each side should make submissions on costs in writing within the period allowed for appealing against this decision (ie six weeks). I will then ask the parties whether they want a hearing on costs and, if not, whether they wish to make any submissions “in reply”, before deciding the matter.

146. Mr Vanhegan has already made some initial comments on costs in his outline closing submissions, and I will of course take these points into account.

Dated this 12th day of May 2000

P HAYWARD

Divisional Director acting for the Comptroller

THE PATENT OFFICE