

1(2) of the Act, as relating to a mathematical method, a method for doing business and a program for a computer as such. The relevant parts of this section read:

“1(2) It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of –

- (a) A discovery, scientific theory or mathematical method;
- (b) ...
- (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;
- (d)

but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.”

Issues of Principle

- 5 At the hearing, Dr Franks addressed me on a number of issues of general principle which were common to all four of his applications. I think it convenient to deal with those here before going on to discuss the particular application in any more detail.

Consistency with the EPO's interpretation of the EPC

- 6 The above identified provisions of the Patents Act are designated in section 130(7) as being so framed as to have, as nearly as practicable, the same effect as Article 52 of the European Patent Convention, to which they correspond. This means that as well as being bound by decisions of the UK courts taken under section 1 of the Act, I must also have regard to the decisions of the European Boards of Appeal that have been issued under this Article in deciding whether the invention is patentable.
- 7 At the hearing, Dr Franks addressed me at some length over the discrepancy in approach to assessing patentability between the UK courts and the Boards of Appeal of the EPO as most recently exemplified in *Hitachi*¹. In essence the discrepancy is that the presence of any technical means in a claim is sufficient in the eyes of the EPO for an invention to avoid the exclusions where as it is not in the eyes of the UK courts, as exemplified in *Fujitsu*². In relation to this issue, Dr Franks referred me to the decision of the Court of Appeal in *Gale's Application* [1991] RPC 305 where Nicholls LJ said at page 323 line 5:

“..it is of the utmost importance that the interpretation given to section 1 of the Act by the courts in the United Kingdom, and the interpretation given to Article 52 of the European Patent Convention by the European Patent office, should be the same. The intention of Parliament was that there should be uniformity in this regard. What is more, any substantial

1 Board of Appeal of the European Patent Office T 0258/03

2 Fujitsu Limited's Application [1997] RPC 608

divergence would be disastrous.”

8 Dr Franks put it to me that maintaining consistency of approach was of paramount importance. He said that I should take due account of the relative dates of the *Hitachi* and *Fujitsu* decisions and that in so doing, *Hitachi* should take precedence. To use his words, being of later date “Hitachi trumps Fujitsu”. Moreover, he put it to me that in order to maintain this consistency of approach to the exclusions, the Court of Appeal would now follow the *Hitachi* approach. I cannot accept that.

9 It is not for me to hypothesise how the courts might consider cases put before them in future. My role is to decide whether the present application meets the requirements of the Act as interpreted by past decisions of the courts. Whilst I must also have due regard to the decisions of the EPO Boards of Appeal, as Nicholls LJ went on to say in the passage following that quoted by Dr Franks above, the courts are not bound by them. Thus, when there is a divergence between the UK courts and the EPO Boards of Appeal I am in no doubt which path I must follow. The approach of the UK courts takes precedence. Those courts have made it abundantly clear that the mere presence of hardware in the claims is not sufficient for the exclusions to be overcome. That the decision in *Hitachi* is more recent has no bearing on the binding nature of older decisions of the UK courts. In short, I am not prepared to follow *Hitachi* in preference to the Court of Appeal’s decision in *Fujitsu*.

10 I have one more observation to make in this regard. Whilst they may have decided that the invention was not excluded in *Hitachi*, the Board of Appeal still decided that it was unpatentable by virtue of it failing to provide an inventive step. In making that assessment, the Board of Appeal decided that only features contributing to a technical character could be taken into account when assessing inventive step. Whilst this approach is also contrary to established UK practice I am confident that the end result would be the same irrespective of which approach was followed. And that it is the end result (and not the approach for getting there) that is important was I think made clear by Nicholls LJ in *Gale* when he said at line 9 page 323(my emphasis):

“What is more any substantial divergence would be disastrous. It would be absurd if, on an issue of patentability, a patent application should suffer a different fate according to whether it was made in the United Kingdom under the Act or was made in Munich for a European patent (UK) under the Convention.”

Whilst there may be a difference in approach between the UK and the EPO, that difference is not (in my opinion) “substantial” in terms of what is and is not patentable.

The TRIPS Agreement

11 Dr Franks asked that in my decision (and without prejudice to his case) I address the issue of whether the UK was in contravention of its obligations under the TRIPS Agreement in not granting patents for business methods. The specific article of interest to Dr Franks is Article 27 which concerns the range of subject matter for which patent protection must be made available by signatories to the TRIPS Agreement. Article 27 says that (subject to a number of provisions which are not relevant in the present context):

“patents shall be available for any inventions, whether products or processes, in all fields of technology, provided they are new, involve an inventive step and are capable of industrial application.”

- 12 In Dr Franks’ opinion, business methods and in particular computer implemented ones, relate to a field of technology and thus, he said, patents should be available for them.
- 13 However much Dr Franks might wish me to do so, it is not for me to make general pronouncements about the UK’s obligations under TRIPS – my role is to decide whether the application in suit meets the requirements of the Act. The TRIPS Agreement has not changed what is and is not patentable in the UK.
- 14 It is a general principle that Treaties are not self enacting. Therefore any changes in existing law that are to be introduced as a result of a treaty becoming effective need to be enacted in legislation. That the TRIPS Agreement is no exception to this principle was confirmed by Jacob J in *Lenzing AG’s European Patent (UK)* [1997] RPC 245. In his decision in that case Jacob J found that the Agreement has no direct effect. In other words, the Treaty did not automatically override any existing law when it became effective on 1 January 1996.
- 15 No amendments to the exclusions contained in section 1 of the Act have been deemed necessary following the coming into effect of the TRIPS Agreement. Thus inventions comprising methods of doing business as such remain unpatentable in the UK, including when implemented via a computer.

Technical Aspect

- 16 The third point raised by Dr Franks which was of relevance to all four applications concerned the interpretation of the words “as such” in the final clause of section 1(2). Dr Franks and I were in complete agreement that an invention is not excluded from being patentable merely because it is used in an excluded activity. However, quite what is needed to make an otherwise unpatentable thing patentable was the subject of some discussion between us. It is generally accepted that an invention in an otherwise excluded field can still be patentable if it makes a technical contribution. This follows on from the Board of Appeal decision in *Vicom*³ which was subsequently endorsed by the Court of Appeal in *Merrill Lynch’s Application* [1989] RPC 561 where Fox LJ said in his decision at page 569:

“It seems to me to be clear...that it cannot be permissible to patent an item excluded by section 1(2) under the guise of an article that contains that item – that is to say, in the case of a computer program, the patenting of a conventional computer containing that program. Something further is necessary. The nature of that addition is, I think, to be found in the *Vicom* case where it is stated: “Decisive is what technical contribution the invention makes to the known art”.”

- 17 In his decision in *Fujitsu*, Aldous LJ quoted that section of Fox LJ’s decision with approval. However, Dr Franks put it to me that Aldous JL went a step further. After quoting Fox LJ, Aldous LJ went on to say at page 614 line 40:

³ EPO Board of Appeal decision T 208/84

“However, it is and always has been principle of patent law that mere discoveries or ideas are not patentable, but those discoveries and ideas which have a technical aspect or make a technical contribution are.”

- 18 Thus, according to Dr Franks, the Court of Appeal decided in *Fujitsu* that an invention did not have to make a technical contribution for it to be patentable - it was sufficient for an invention to have a technical aspect. Whilst I can see some attraction in Dr Franks’ argument, I respectfully disagree. When actually making his decision to refuse the application in *Fujitsu*, Aldous LJ consistently used the lack of technical contribution as the basis for determining that the invention in that case was excluded as a program for a computer as such. He did not consider the invention against a separate “technical aspect” test. What Dr Franks asked me to do was to consider the “technical aspect or technical contribution” statement in isolation from the rest of Aldous LJ’s decision. I think it would be wholly inappropriate for me to do that and to ignore the most direct source of interpretation of those comments available to me. In interpreting what he considered made an otherwise excluded thing patentable, there is to my mind no escaping the fact that Aldous LJ found all the claims in *Fujitsu* to be unpatentable, including the apparatus claims. Apparatus claim 10 included a host of technical elements including computer storage and display means. Thus some of the claims refused in *Fujitsu* undoubtedly possessed technical character or a technical aspect but the Court of Appeal did not consider that sufficient for them to escape the exclusions. I feel bound to take the end result into account when interpreting Aldous LJ’s other comments in that case. I am certainly not prepared to accept Dr Franks’ suggestion that perhaps Aldous LJ had erred in the application of his own test.
- 19 On that basis I conclude that the correct test to apply in determining whether an invention is patentable is whether it makes a technical contribution. It is not sufficient for an invention to just include technical features.

The definition (interpretation) of technical

- 20 At the hearing Dr Franks made much of the fact that the courts have not attempted to define precisely what constitutes a technical contribution. He said that he thought the interpretation the UK Patent Office applied was unduly limited. In advancing his case he took me to various sources to provide definitions of “technical”, “technology”, “technological” and so forth which he said supported his case that his applications were patentable. These included the Collins English Dictionary from which he extracted the definition of technical as being “relating to, or characteristic of, a particular field of activity”. This he said showed that the normal meaning of technical was not restricted to some piece of technology or to some “physicality”.
- 21 At the hearing I said that the value of taking me through those definitions was limited. The courts have not found it necessary to provide a specific definition of “technical” or, more significantly “technical contribution” in assessing whether an invention was excluded and likewise I do not consider it necessary either. Moreover, as I have already said above, I do not need to be persuaded that the invention has technical character. That though is not the test I feel bound to apply – it must make a technical contribution.

- 22 I think it only fair, however, to deal with Dr Franks' efforts in this respect a little more fully. At the hearing he referred me to two specific references⁴ as evidence to support his view that the Patent Office was interpreting "technical" too narrowly when assessing patent applications. He said that both these texts used the expression "technical analysis" to describe the study of financial market action for the purpose of forecasting future price trends. These, he said, demonstrated that practitioners in the field of financial market forecasting considered their activities to be technical. Any contribution to these activities, whether involving computer hardware or not would then, in Dr Franks' view, constitute a technical contribution. He suggested that in deciding whether an invention made a technical contribution (and thus whether it was patentable) the Office should not apply a restricted definition of technical but should take account of what is considered to be "technical" in the particular field of the invention.
- 23 I do not agree. At no time have the courts suggested that what constitutes a technical contribution depends upon what terminology has become commonplace in a particular field. Moreover, doing so would lead to some ludicrous situations. At the hearing I drew Dr Franks' attention to the practice of marking a box between the dug-outs and the touchline at a football ground. The purpose of doing that is to define an area which the team manager or coaching staff are not allowed to venture beyond. These boxes are widely referred to as the "technical areas". Following Dr Franks' argument would lead one to conclude that the practice of marking the field in this way would not be excluded from patentability because in the particular art it was commonplace to refer to these areas as "technical". That would clearly be a nonsense.
- 24 The courts have not found it necessary to define what constitutes a technical contribution and I do not consider it necessary either. What they and the Boards of Appeal of the EPO have done is provide a wealth of case law indicating what does and does not constitute a technical contribution which I can use to help me decide whether the present invention is patentable.

Consideration of other granted patents

- 25 At the hearing, Dr Franks drew my attention to EP0927945B granted to Amazon.com. Whilst he did not address me in any detail on its subject matter he said that he considered the present invention to make more of a technical contribution than the invention disclosed in that patent. As I said at the hearing, whether a particular invention makes a technical contribution is to be decided on the facts pertaining to that case. Previous patents granted by the EPO (or the UK Patent Office) have little bearing on my decision regarding the present application.
- 26 The final point I wish to stress is that in reaching my decision on each of Dr Franks' applications I have taken account of all his submissions at the hearing, all the correspondence on file and the evidence and the witness statement regarding the development of the implementing software he presented at the hearing.
- 27 Summarising all this I shall apply the following principles (derived from the relevant precedent

⁴ Financial Prediction Using Neural Networks by Joseph Zirilli ISBN 1-85032-234-1 pages 24-25 and Introduction to Stock Exchange Investment by Janette Rutterford ISBN 0-333 34230-5 pages 261-264

case law) in deciding whether the present invention is patentable:

First, it is the substance of the invention which is important rather than the form of claims adopted. Moreover, merely including hardware or technical elements in the claims is not sufficient under UK law for the exclusions to be avoided;

Second, the effect of the final part of section 1(2) is that an invention is only excluded from being patentable if it amounts to one of the excluded areas “as such” and that following decisions of the UK courts and the EPO Boards of Appeal, an invention is not considered to amount to one of those thing “as such” if it makes a technical contribution;

Third, whether an invention makes a technical contribution is an issue to be decided on the facts of the individual case;

Fourth, it is desirable that there should be consistency between the Patent Office’s and EPO’s interpretation of the exclusion in the Patents Act and the EPC. However where there is a divergence I am bound to follow the approach adopted in the UK courts;

Finally, any doubt over the patentability of the invention should be resolved in favour of the Applicant.

The Specific Invention

28 The claims I was asked to consider at the hearing were filed with Dr Franks’ letter of 6 October 2004. Those claims number 29 in total all of which are framed in terms of a computer implemented method for determining cost data relating to trade mark applications. Of those, claims 1, 14 and 29 are independent. Whilst the precise wording used in the various independent claims is slightly different, I am in no doubt that in substance they relate to the same invention. For brevity therefore I shall (for the time being) limit my consideration to the subject matter of claim 1. However, my findings regarding the patentability of claims 14 and 29 will mirror what I find for claim 1: should I find claim 1 to be patentable, it follows that the remaining claims are also patentable. Should I find claim 1 to be unpatentable it follows that the other independent claims are unpatentable. In the latter case however, I will of course go on to consider the patentability of the dependent claims.

29 Claim 1 as presently on file reads as follows:

1. A computer implemented method for determining a cost data relating to a cost of a registered trade mark application, in an apparatus comprising a plurality of computer entities, said method comprising:

(i) receiving at a said computer entity input data describing a trade mark;

(ii) receiving at a said computer entity input data describing at least one territory for filing said registered trade mark application;

(iii) receiving at a said computer entity input data describing a number of classes of goods/services for said registered trade mark application;

(iv) electronically storing component cost data relating to a plurality of component costs of said registered trade mark application in at least one territory;

(v) electronically calculating substantially in real time said cost data relating to a cost of said registered trade mark application from said stored data; and

(vi) recalculating said cost substantially in real time as a user changes said input data.

30 Thus the present invention concerns a method for providing a user of an electronic trade mark filing system with an indication of the costs associated with the various options they have selected. These options include the number of territories in which protection is sought and the various classes of goods and services specified for each of those territories. The calculation is carried out in real time such that the user is able to see immediately the cost implications when (s)he makes changes to any of those options.

The Exclusions

31 I am in no doubt that the process of filing trade mark applications is a method of doing business and that the invention as claimed is potentially caught by the business method exclusion. As I have explained above, the fact that the claims include hardware elements is of secondary importance following the decisions of the UK courts in this area.

32 Having found that the invention potentially falls within one of the exclusions it is then something of a moot point whether it falls within any of the other specific exclusions. However all the evidence available to me, including the wording of the claims and the witness statement filed by Dr Franks outlining correspondence he had with the programmer appointed to put the invention into practice, leads me to conclude that the invention is implemented in software and is also potentially caught by the computer program exclusion. As for the other exclusions which the examiner has reported the invention to fall within, whilst the application contains elements of a mathematical calculation, there is so little detail of the calculation specified in the claim that I am doubtful whether it could be said to comprise a mathematical method. However, the process of collecting data, performing a calculation and then repeating that calculation when any of the data is changed seems to me to fall within the mental act exclusion. The usual test applied to decide whether a process comprises a mental act is to ask whether it could be done with a pen and paper. The answer to that question in the present case I think has to be “yes”. The fact that a computer is used to perform the act does not, as the courts have made clear, mean that the exclusion is avoided. As Aldous LJ said in *Fujitsu* at page 621 line 8:

“A claim to a method of carrying out a calculation (a method of performing a mental act) is no more patentable when claimed as being done by a computer than when done on a piece of paper. Methods of performing mental acts, which means methods of the type performed mentally, are unpatentable, unless some concept of technical contribution is present.”

In my opinion, the present method is just such a “method of the type performed mentally” and potentially falls within the mental act exclusion.

Technical Contribution

- 33 Finding that the invention potentially falls within the computer program, business method and mental act exclusions is not the end of the matter, however. As I have outlined above, following established UK practice, an otherwise excluded item is patentable if it makes a technical contribution. What I must now do is decide whether the present invention provides such a technical contribution.
- 34 In seeking to persuade me that the invention made the required technical contribution, Dr Franks focused on the problem the invention sought to overcome. This, he said, was how to configure a computer to give a real time response to a dynamic, changing input. Thus, he said, the contribution the invention made was to overcome a problem which occurred in determining the cost of manually filing trade mark applications using non-technical means. Moreover, he said, as the solution proposed for solving that problem employed technical means, the contribution made was a technical one.
- 35 Further elaborating on this, he said the invention was not merely the automation of what had previously been done manually which he said was the reason for the decision to refuse *Fujitsu*. He said that it was simply not possible to conduct such calculations manually in real time. Taking this a step further, Dr Franks stressed the importance of this “real-time” feature in the field of filing trade mark applications. In similar vein to the arguments put forward in his other applications, he said that inputting data for trade mark applications was particularly burdensome and that by providing a solution to that problem using technical means the invention made a technical contribution and was patentable.
- 36 Dr Franks also sought to distinguish his invention from that refused in *Fujitsu* by arguing that the invention was not “mere computerisation” in the sense that Aldous LJ intended in his decision in *Fujitsu*. He said that *Fujitsu* concerned a stand alone computer where as the present invention relied upon a network of computers. Mirroring the arguments put forward on the other applications considered at the hearing, Dr Franks said this was significant for the present invention because the service provider had no control over the hardware that customers would use to access its facilities. The user interface performance could be poor, he said, and the invention had to be able to cope with that whilst still maintaining an acceptable level of service to users such that they were encouraged to continue filing their applications electronically. Thus he said that whilst the invention might not make much difference where the user had access to a high performance system, it could make a very real difference at the low performance end such that it could make the difference between the system being usable or not. These, he said, were not issues that the computerisation in *Fujitsu* had had to take into account.
- 37 In support of this argument, Dr Franks submitted a witness statement comprising some correspondence he had with the programmer tasked with writing the software to put the invention into practice. This correspondence, he said, showed that he had had to employ inventive ingenuity in developing the solution to these problems. In Dr Franks’ opinion this

further demonstrated how the invention made a technical contribution through the method of implementation. I do not agree. In my opinion, what the exchange shows is that the programmer had an imperfect understanding of the trade mark system, for example what the Madrid system involves. Thus further input from Dr Franks was required to clarify the functionality required of the system and, in view of delays in providing the full functionality, to identify the minimum functionality the system should initially provide. To my mind this is precisely the sort of dialog I would expect to take place between an inventor and a program developer and I can see nothing in the particular problems encountered which could be said to provide the necessary technical contribution. Once the desired functionality was identified – in this instance the provision of an on-screen real time cost calculator – then its implementation was a matter of standard programming techniques. Indeed, the prior art identified by the examiner during the prosecution of the application showed that real time cost calculators were well known at the priority date of the invention, even if not in the field of filing trade marks.

38 Dr Franks went on to say that the network aspect was important in one other respect, namely that the system had to be able to obtain up to date information on costs associated with filing in different jurisdictions. He said that by providing that functionality, his invention provided a much more accurate running cost calculation than had been possible previously. He said that for each jurisdiction in which protection was to be sought, the cost calculation would need up-to-date values for exchange rates, agents' fees and the like. All of these could be subject to change at any time making it virtually impossible for such a calculation to be done manually. Moreover he said this could not be viewed as the mere automation of a manual process. Carrying out such a calculation manually would invoke its own costs due to the time taken to process the calculation thus affecting the result of the actual calculation. All that was, he said, avoided in the present invention and by providing such functionality he said the invention made a technical contribution.

39 Dr Franks also put it to me that cost data was technical data and that the processing of technical data in this way was not excluded. To support that argument Dr Franks submitted a representation of data which I have reproduced below:

Image data

1011011011111

Cost data

1011011011111

40 In doing this he was attempting to demonstrate that the same series of binary digits could be used to represent image data (in the first instance) and cost data (in the second). He said there was no getting away from the fact that the binary digits in each case were the same even though they were representing different sorts of data. Thus he argued, cost data was no different to image data and was technical. I have to say that I am at a loss to see how this supported Dr Franks' case. Whilst I agree that it may well be impossible to determine the nature of a signal merely by looking at the digital code it is made up of, there is I think no

escaping the fact that data relating to the cost of filing trade mark applications is economic data. I fail to see how that is technical data in the way that say data concerning the quality of an image is. I am certainly not willing to accept that the invention makes a technical contribution by virtue of it involving the processing of cost data.

41 I can see nothing in *Fujitsu* to suggest that Aldous LJ intended “computerisation” to be limited to the use of a single computer rather than a network. Moreover, this is a point that has been considered by the Comptroller’s Hearing Officers on numerous occasions⁵ and they have always concluded that the fact that a network of computers is used does not provide a technical contribution when the advantages obtained are those you would expect to achieve from using such a network. I see no reason to come to a different conclusion in this instance; the benefits provided are those you would expect to achieve by using a computer (or a network of computers) to do a task previously done manually and that does not provide a technical contribution.

42 Whilst I have no doubt whatsoever that the on-screen cost calculator would be useful to applicants for trade marks, the Comptroller’s Hearing Officers have made it clear on numerous occasions that usefulness is not the test that an invention has to pass for it to be deemed patentable; it must make a technical contribution. This follows from the decision of Aldous LJ in *Fujitsu* where he said at page 618 line 38:

“Mr Birss is right that a computer set up according to the teaching in the patent application provides a new “tool” for modeling crystal structure combinations which avoids labour and error. But those are just the sort of advantages that are obtained by the use of a computer program. Thus the fact that the patent application provides a new tool does not solve the question of whether the application consists of a program for a computer as such or whether it is a program for a computer with a technical contribution.”

43 It seems to me that the benefits provided by the present invention fall squarely into the same category as those which Aldous LJ said did not provide a technical contribution. I therefore fail to see how their existence can demonstrate that the invention makes a technical contribution, despite Dr Franks’ attempts to distinguish the present case from *Fujitsu*. Whilst I agree that the facts are different in *Fujitsu*, that does not in my mind affect the applicability of the general principles developed there. Using a computer to do what was previously done manually is not enough for an invention to be said to make a technical contribution.

44 There is nothing in the specification to suggest that the hardware used to implement the invention is anything other than conventional. Admittedly once programmed it may constitute a new tool but it seems clear to me that any novelty is in the functionality the computer provides. The computer is not operating in a different way at a technical level. The functionality provided is to allow the e-filing of trade marks which, as I have already said, is to my mind an excluded activity. I fail to see how any technical contribution can derive from

⁵ See BL 0/317/00 and 0/253/03 for example on the Patent Office website <http://www.patent.gov.uk/patent/legal/decisions/index.htm>

either the hardware or what the hardware is being used for.

- 45 Dr Franks' final line of argument as to why I should grant this application was that the lack of any agreed definition of "technical" or "technical contribution" meant that there was doubt as to precisely where the boundary lies between what is and is not patentable. Such doubt should, he said, be resolved in the Applicant's favour. Whilst it may be difficult to provide a precise definition of "technical" or "technical contribution", I am in no doubt whatsoever that the present invention falls on the excluded side of the boundary and thus there is no doubt to be resolved.

Decision

- 46 I have found the invention defined in claim 1 to be a program for a computer and a method for doing business or for performing a mental act. Moreover, I have found that the invention of claim 1 does not provide a technical contribution which could make an otherwise excluded invention patentable and thus to amount to those excluded items as such. As I said earlier, I consider the substance of claims 14 and 29 to be the same as that of claim 1 and find them to be similarly unpatentable. The remaining claims are concerned with auxiliary features such as displaying the cost in different currencies and the information that needs to be stored to permit the calculations to be made. I can see no technical contribution made by any of them. Moreover, I can find nothing in the specification which could form the basis of a patentable claim. I therefore refuse the application under section 18(3) as being excluded under section 1(2)(c).
- 47 In reaching this decision I stress that I have taken full account of all the arguments put forward by Dr Franks at the hearing and in the correspondence exchanged prior to it, as well as the witness statement and additional evidence he tabled at the hearing.

Appeal

- 48 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

A BARTLETT

Deputy Director acting for the Comptroller