BL O/147/04

25th May 2004

PATENTS ACT 1977

APPLICANT CFPH L.L.C.

ISSUE Whether patent application number GB 0128602.0 is excluded from being patentable under section 1(2)

HEARING OFFICER A Bartlett

DECISION

Introduction

1 International patent application number PCT/US00/11374, entitled 'Systems and methods for trading', was filed on 27 April 2000 in the name of CFPH, L.L.C. The application claimed priority from two US applications, the earliest of which was filed on 30 April 1999. It was published by WIPO as WO 00/67172 on 9 November 2000.

2 The international search authority declined to search the application whilst it was in the international phase since in their opinion it was excluded from being patentable as a method for doing business. The International Preliminary Examination Report issued on 15 May 2001 did not establish an opinion regarding novelty, inventive step and industrial applicability for the same reason.

3 The application entered the national phase on 29 November 2001 and was re-published as GB 2365185 on 13 February 2002.

4 A revised set of 52 claims was filed on 29 November 2001 upon which the substantive examination report of 30 January 2003 was based. In that report, the substantive examiner objected that the claims lacked unity of invention (relating to at least 10 separate inventions) and that these inventions were excluded from patentability under Section 1(2)(c) as methods for doing business as such.

5 The applicants responded to the first examination report on 29 August 2003 by filing amendments to the claims and description and making observations on the issue of patentability. In a subsequent report the examiner reported that the amended claims still lacked unity of invention and maintained the existing patentability objection but supplemented to include objection that the invention also appeared to be excluded as a program for a computer and the presentation of information. In addition, the examiner objected that the 42 independent claims were excessive and rendered the invention unclear.

6 The applicants filed further amendments on 1 December 2003 which disposed of the plurality and clarity issues and upon reconsideration the examiner decided that the presentation of information objection was no longer appropriate. However, the examiner remained of the opinion that the invention was excluded as a method for doing business and a program for a computer. He issued a further examnation report on 22 December 2003 reiterating these objections and offering a hearing. The applicants accepted that offer and the matter came before me at a hearing on 6 February 2004 where they were represented by Mr D C Jones of Withers and Rogers European and Chartered Patent Attorneys. Mr Michael Sweeting and Mr Robert Falkner of the applicants' UK associate company, eSpeed, also attended.

The application

7 The application relates to an electronic system for trading financial assets such as currencies, options, commodities, derivatives and government bonds. Prior to the hearing the applicants submitted a further set of claims and requested these be the subject of consideration at the hearing. Thus the claims presently on file comprise independent claims 1 and 8 and dependent claims 2-7 and 9-14, claims 1-7 being to a system and claims 8-14 being corresponding method claims. The independent claims read as follows:

> 1. An electronic trading system including a computer system, the computer system comprising:
>
> a plurality of workstations being configured to substantially simultaneously present a plurality of bids and offers, each of the plurality of bids and offers having a price and a total size, the total size comprising a shown portion that is displayed on a workstation display of each of the plurality of workstations and a hidden size portion that is not displayed; and
>
> a server coupled to each of the plurality of workstations , the server being configured to:
>
> store the plurality of bids and offers;
>
> compare the plurality of bids and offers in order to determine a priority for each of the plurality of bids and offers;
>
> store a trade command to hit or lift one of the plurality of bids and offers, the trade command being entered at one of the plurality of workstations and having a size;
>
> compare the size of the trade command with the total size of the one of the plurality of bids and offers;
>
> if the size of the trade command is greater than the total size of the one of the plurality of bids and offers, to execute a trade for at least the total size; and
>
> if the size of the trade command is not greater than the total size of the one of the plurality of bids and offers, to execute a trade for at least the size of the trade command.

> 8. A method for electronic trading using a computer system comprising:
>
> storing a plurality of bids and offers, each of the plurality of bids and offers having a price and a total size, the total size comprising a shown size portion and a hidden size portion;

comparing the plurality of bids and offers in order to determine a priority for each of the plurality of bids and offers;

presenting each of the plurality of bids and offers on a plurality of workstations substantially simultaneously such that the shown size portion is displayed on a workstation display and the hidden size portion is not displayed;

storing a trade command to hit or lift one of the plurality of bids and offers, the trade command being entered at one of the plurality of workstations and having a size;

comparing the size of the trade command with the total size of the one of the plurality of bids and offers;

if the size of the trade command is greater than the total size of the one of the plurality of bids and offers, executing a trade for at least the total size; and

if the size of the trade command is not greater than the total size of the one of the plurality of bids and offers, executing a trade for at least the size of the trade command.

8 At the hearing Mr Sweeting provided an extremely useful demonstration of the invention so that I was able to observe the kind of trades that were taking place, the way in which the system operated and probably most impressive, the scale of the activities and speed at which the market in US Government bonds moved in the hours after the latest US unemployment figures had been announced. That demonstration was very enlightening and my summary here will undoubtedly not do it justice.

9 In a nut shell, the system comprises a network of workstations coupled to a server where each workstation allows a trader to take part in what is effectively an online market. Offers of assets for sale and bids to buy are displayed on each workstation so that traders are able to observe and participate in the market. Each offer or bid consists of a total size and a price and the system compares all current offers and bids according to some priority. When a trade command is entered to "take" or "lift" an offer or to "hit" a bid, the system decides whether the trade is executed for the whole or part of a particular bid or offer. Each bid or offer can comprise shown and hidden portions, the purpose of which is to allow a trader to register an interest in trading a particular type of asset without having to show the full extent of how much he is prepared to buy or sell. Thus a trader can enter the market place without distorting it – without pushing the market away from him as Mr Sweeting put it.

10 As well as the shown and hidden aspect of each bid or offer, the other key part of the invention which the demonstration brought out was the prioritizing function. I shall come back to that later, but for the time being it suffices for me to say that the system responds dynamically to the conditions existing in the market place to change the priority given to various participants. In the particular example demonstrated by Mr Sweeting, this prioritizing was such that traders already active in a market place were given priority in particular trades to the exclusion of others for a very limited time period after a new offer or bid was made. In the market place demonstrated, this time period was approximately 4 seconds which served to speed up the market place so that huge transactions were taking place at what seemed to me (with my more conservative spending habits) frightening speed.

The law

11 The examiner has maintained that the application is excluded from patentability under Section 1(2)(c) of the Act, as relating to a method for doing business and a program for a computer as such. The relevant parts of this section read:

> A1(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) ....
> (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 purpose of this Act only to the extent that a patent or application for a patent relates to that thing as such.@

12 These provisions 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. I must therefore also have regard to the decisions of the European Boards of Appeal that have been issued under this Article in deciding whether the present invention is patentable.

Interpretation and argument

13 Mr Jones accepted that the activities being undertaken in performing the invention amounted to the administration of a trading system and that the invention could potentially fall within the "business method" exclusion. Moroever he also accepted that the invention could be embodied in software and the invention could potentially be excluded as a program for a computer.

14 However that is not the end of the matter. According to both section 1(2) of the Patents Act and Article 52 (3) of the EPC, an invention is only excluded to the extent that a patent or application for a patent relates to that thing *as such*. The Patent Office Practice Notice issued on 24 April 2002 entitled APatents Act 1977: interpreting Section 1(2)@ provides what I consider to be a convenient summary of the approach to be adopted in determining whether an invention constitutes an excluded item *as such*. I would summarize the practice notice as saying that even if an invention relates to an excluded field, it will not be refused as being unpatentable if it provides a technical contribution. In other words, if it makes a technical contribution is does not relate to the excluded item A*as such*@.

15 This interpretation follows the decision in *Fujitsu Limited=s Application* [1997] RPC 608, in which Aldous LJ said at page 614:

> AHowever, it is and always has been a principle of patent law that mere discoveries or

> ideas are not patentable, but those discoveries and ideas which have a technical aspect or technical contribution are. Thus the concept that what is needed to make an excluded thing patentable is a technical contribution is not surprising. This was the basis for the decision of the Board in *Vicom*. It has been accepted by this court and by the EPO and has been applied since 1987. It is a concept at the heart of patent law.@

16 Mr Jones accepted the principle that an invention is not deemed to amount to one of these items as such if it makes a "technical contribution". This was hardly surprising since much of the correspondence leading up to sought to convince the examiner that the invention made the required technical contribution. Indeed, at the hearing itself Mr Jones advanced a good deal of argument seeking to convince me that the invention made such a contribution. However, before I go on to deal with those arguments, I need to address one other issue which Mr Jones raised.

Substance vs Form

17 At the hearing Mr Jones was at great pains to stress that claim 1 under consideration was drafted in terms of "an electronic trading system" including various pieces of hardware. As a result, he argued, the invention defined in that claim was not a program for a computer or a method for doing business as such and thus did not amount to excluded subject matter. He said that in assessing whether or not a patent should be granted for it, I should follow the approach taken by the Board of Appeal of the EPO in *Pension Benefit Systems Partnership* [2002] EPOR 52 (T931/95). That particular application concerned a system for administering a pension scheme. As Mr Jones quite rightly pointed out, in assessing the patentability of that invention, the Board drew a distinction between the method claims (which it deemed to be excluded as a business method as such) and the apparatus claims (which it found to be technical and thus not excluded, but unpatentable as failing to provide an inventive step). This approach contrasts with that adopted by the UK courts where on numerous occasions the Court of Appeal has made it abundantly clear that in assessing whether an invention is patentable, it is the substance of the invention that is crucial, not the form of wording employed in the claims. For example, when discussing the *Gale*[1] precedent in the *Fujitsu* decision, Aldous LJ said at page 618:

> "The Court of Appeal decided that….the court should look at the claims as a matter of substance. It was both right and convenient to strip away, as a confusing irrelevance, the fact that the claim was for "hardware".
>
> There is only one invention. The fact that it is claimed as a method, a way of manufacture, or an apparatus having appropriate features is irrelevant."

18 In Mr Jones's view, the *Pension Benefits* approach was a more appropriate approach to follow since it was much more in line with the actual wording of the statues. Whilst that may appear prima facie to be an attractive argument, I am not persuaded by it. This is not the first time the discrepancy between the *Pension Benefits* approach to assessing patentability and

---

1 Gale's Application [1991] RPC 305

that adopted in the UK has been raised before one of the comptroller's hearing officers. At the hearing I referred Mr Jones to the decisions issued on two applications where this was considered in detail, *Hutchins' Application* [2002] RPC 8 and *Pintos Global Services' Application* SRIS O/171/01. On both occasions the hearing officer appreciated the attractivess of the applicants' arguments that the *Pension Benefits* approach to assessing patentability should be followed. However, because EPO case law was only persuasive where as precendents set by the UK courts were binding on them, the hearing officers on both occasions found they were bound to follow the approach of the UK courts on this issue. I can see no reason why I should come to a different conclusion on that point.

19 Thus whilst there is an obvious attraction from the present applicants' point of view in my taking account of the form of the claims, I am simply not able to do that. What I must do is identify the substance of the invention defined in the claims when properly construed and decide if that amounts to an excluded item as such.

20 Mr Jones also impressed upon me the fact that Intellectual Property systems are becoming increasingly globalised. Policy makers, he said, needed to take that into account when developing IP policy and they should attempt to minimize significant discrepancies between patent law in the UK and Europe and elsewhere, particularly the US where a more liberal approach existed. Again whilst I am sympathetic to that view, as I reminded Mr Jones at the hearing, my task is to decide whether the application complies with the law as it currently exists, that is the patents Act 1977 as interpreted by the UK courts, not to consider how it should develop in future.

Technical contribution

21 Having agreed that the invention was potentially excluded as a method for doing business and a program for a computer, Mr Jones sought to demonstrate that it did not relate to those things as such by virtue of the technical contribution it made. In making his case, Mr Jones focused his attention on the system claims, and in particular claim 1. He accepted that if I found that claim to be unpatentable, corresponding method claim 8 would also be unpatentable. It therefore makes good sense for me to likewise focus my attention on claim 1, at least for the time being.

22 As Mr Jones pointed out at the hearing, what constitutes a technical contribution has never been precisely defined and each case has to be judged on its merits to decide whether one exists. There is, however, a good deal of case law to help me interpret what does and does not constitute a technical contribution. One potential source is of course the hardware through which the invention is put into effect. However Mr Jones did not seek to convince me that either the hardware or communications protocols employed to implement the invention were anything other than conventional. Indeed the application admits as much on pages 7 and 8. He did though argue that the way the hardware was configured to carry out the invention resulted in it providing a technical contribution. In particular he said that the workstations were configured to display a series of bids or offers to users of the system, each bid or offer having a price and total size. Moreover, each bid or offer can have hidden parts and parts that are displayed. Thus, in Mr Jones's words, the workstations are "technically

configured to show part of a bid and offer and hide part of that bid and offer". Mr Jones went on to say that the steps of storing bids and offers, comparing them to determine their respective priorities, storing a trade command and comparing the respective sizes of the trade command and a corresponding offer or bid were all technical steps which the system was configured to carry out. Mr Sweeting described these steps as the "interaction" between the participants and the system's functions. In their view, this interaction provided the required technical contribution.

23 I do not agree. The means for implementing the invention is undoubtedly technical but the Court of Appeal has made it abundantly clear that that is not the same as saying that the invention makes a technical contribution. In particular, in *Fujitsu*, Aldous LJ said at page 618:

> AMr. Birss is right that a computer set up according to the teaching in the patent application provides a new Atool@ for modelling 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.@

24 No search has actually been conducted on the present application so I am not able to say whether any system providing this precise functionality has ever been provided before. That, though, is of no significance in assessing the patentability of the present invention. Even if I assume it to be novel, the invention consists of a tool for making a trading system. Each of Mr Sweeting's "interaction" steps forms part of that trading process. The computer system in *Fujitsu* was configured to model crystal structures but the Court of Appeal decided that was not sufficient for it to be said to make a technical contribution. Likewise, in my opinion, a system configured to carry out each of the interaction steps does not necessarily make a technical contribution.

25 At the hearing Mr Jones stressed that the system was configured to be able to process all these steps in a very short space of time. To my mind, increased processing speed is just the sort of advantage that follows on as a consequence of using a computer to carry out a task and from the passage of the *Fujitsu* decision that I have quoted above, Aldous LJ made it clear that conferring that sort of advantage does not in itself provide the required technical contribution. I think Mr Jones acknowledged the obstacle the *Fujitsu* decision provided in this regard as he did not seek to argue that this increase in speed of itself provided a technical contribution. Instead he sought to convince me that what was going on in the background to allow the process to be conducted quickly provided the technical contribution. Putting that another way, the technical contribution was provided by the way the various steps were conducted rather in the nature of the steps themselves.

26 In particular, Mr Jones sought to persuade me that what the invention did was not only to allow these processes to be carried out more quickly, but to cause the computer to operate more efficiently in performing them. It did this, he said, by reducing the "down time" when the computer was not processing these interactions. I accept that if the computer was indeed

operating more efficiently, then the invention might indeed be patentable. However I do not agree that that is what is actually happening here. In coming to that conclusion I have found it intuitive to take a step back and consider the problem that the invention is seeking to overcome.

27 In my mind there is no doubt that the underlying purpose of the invention is to maximize the number of transactions that are conducted in any given time period. The invention seeks to achieve this by allowing bids or offers to be entered in hidden and displayed parts so that a trader can register his full intention in one go without pushing the market away from him. By doing this, the invention removes the need for traders to type in data relating to so many individual trades which Mr Sweeting identified as a major source of delay in existing electronic trading systems. Whilst the application as filed did not put a lot of emphasis on the benefit of reducing the data input burden, I am content to accept that the system disclosed does allow the market to progress more quickly once trading is under way. Furthermore, the prioritizing function I referred to earlier also contributes to this increased level of trading and I need to say a little more about that function now.

28 Mr Sweeting's demonstration showed the prioritizing function to be a key part of the applicants' trading system. He explained that the system automatically responded to conditions prevailing in the market place by temporarily adjusting the priority afforded to the various bids and offers that have been registered. For example, in a conventional market place, highest priority would typically be given to offers or bids depending on price and/or size. However in the applicants' system, that priority could be temporarily changed so that for a very limited period, traders who were already dealing were offered a window of opportunity in which to take part in a further trade to the exclusion of everyone else. This encouraged them to act quickly before the window was closed, thus increasing turnover. Mr Sweeting likened this function of the system to the way an auctioneer controls who is active in an auction at any given time. The traders actually decide whether and what they want to bid, but the auctioneer actually decides who to look to for bids. As long as two bidders remain active and don't hesitate for too long, Mr Sweeting said, an auctioneer would exclude others from the process. However, once one participant hesitated, the auctioneer looked to others to place bids.

29 At no time prior to the hearing had the significance of the adjusted priority feature been highlighted. Indeed whilst this feature was disclosed in the application, it has never been explicitly brought out in the claims. Thus it cannot be relied upon to confer a technical contribution to the invention defined in the claims as they currently exist. However, even if it were brought out in the claims, I cannot see how changing priority in this way could confer the required technical contribution. In effect, the program controls the rules of participation to encourage traders to enter the market. In doing so it is solving a business problem (namely throughput) and I can see no technical contribution in the way this is achieved.

30 Furthermore, as Mr Sweeting said, this prioritizing step is exactly analogous to what an auctioneer would do in a conventional auction, namely looking to existing bidders whilst they remain active. Automation of the techniques an auctioneer would employ is not in my view sufficient for the invention to be said to make a technical contribution.

31 I simply do no accept Mr Jones's assertion that the computer is being made to operate more efficiently when configured according to the invention. If more trades are processed it is because the trading rules with which the system is programmed permit more trades to take place. It is not because the computer is operating more efficiently. The program has not caused the computer to operate in a technically different way. The computer is operating differently at a functional level but that is a consequence of running any novel program on a computer. In this instance the program changes the trading rules ie the method by which the business is conducted. It does not in my view provide a technical contribution.

Conclusion

32 I have been unable to find any technical contribution in the invention defined in claim 1. At the hearing Mr Jones asked me to give additional consideration as to the allowability of claims 5, 6 and 7 in case I found claim 1 to be excluded. Claims 5 and 6 are concerned with the criteria by which priority for each bid or offer are determined, claim 5 being based on the time of the bid or offer and claim 6 being based on their total size. In my view these are purely business considerations and assigning priority according to one or other regime does not make a technical contribution. Claim 7 concerns the determination of whether a queue already exists for a particular bid or offer with the bid or offer being placed in the respective queue (if there is one) or a new queue being created (if there isn't an existing one). Again I can see nothing in this process which could be said to make a technical contribution.

33 Similarly I can find no technical contribution in any of the corresponding method claims. Moreover, having read the specification in its entirety, I can find nothing in it which could form the basis of a patentable invention.

Decision

34 I have found that the invention falls into the areas excluded from patentability as a business method and a computer program, and that it fails to provide a technical contribution. I therefore find that it is excluded from patentability as a method for doing business and a program for a computer as such. Accordingly I refuse this application under Section 18(3) on the grounds that the claimed invention is excluded by Section 1(2)(c).

Appeal

35 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