BL O/277/04

15 September 2004

PATENTS ACT 1977

APPLICANT eSpeed, Inc.

ISSUE Whether patent application GB 0217629.5 is excluded from being patentable under section 1(2)(c)

HEARING OFFICER D J Barford

DECISION

Introduction

1 International patent application number PCT/US01/01247, entitled 'Systems and methods for matching desired purchases and sales of mis-matched items', was filed on 12 January 2001 in the name of CFPH, L.L.C., claiming priority from two United States applications, with an earliest date of 14 January 2000. The international application was published as WO 01/52091 on 19 July 2001. The applicant was subsequently changed to eSpeed, Inc.

2 On 11 October 2001, the European Patent Office acting as the International Search Authority issued a declaration of non-establishment of international search report under article 17(2)(a) of the Patent Cooperation Treaty on the grounds that claims 1-28 and 30-33 related to a method of doing business and claim 29 to commonplace technological features for performing that method.

3 A request to enter the national phase together with a new set of claims was filed on 30 July 2002 and the application was republished as GB 2375638 on 20 November 2002. The UK examiner issued a first examination report under section 18(3) on 29 July 2003, objecting that the application was excluded from patentability under section 1(2)(c) of the Act as a method for doing business and a computer program, and pointing out that since no search had been made, it was not possible to consider novelty and inventiveness. The applicant's agent responded in a letter dated 7 January 2004 together with a third set of claims, however the patentability objection was maintained in a second examination report issued on 26 January 2004. The agent responded on 21 July 2004 with a fourth set of claims, acknowledging that "The basis of the present invention is undeniably a business method" but arguing that the system claimed provides a technical advance.

4 The examiner's objections still being maintained, the matter came before me at a hearing on 25 August 2004 at which the applicant was represented by Mr Peter Hale and Mr William Neobard of patent attorneys Kilburn & Strode, assisted by Mr Peter Barrett of the same firm. Mr Steven Gross attended for the Patent Office.

5 I should add that in this decision I have also taken into account further submissions made by the applicant subsequent to the hearing in a letter dated 26 August 2004.

The application

6 The application concerns a computer-based transaction system for matching desired purchases and sales, which communicates with users over a computer network. The system may be used to match purchases and sales of any items, such as goods, services, financial instruments, and property interests.

7 Users are required to enter data identifying "items" that they wish to buy or sell (eg currencies; time-share rentals) and associated "traits" (eg buy and sell dates; time-share availability dates). The software indexes, groups and tabulates the data, searches the tabulated data for the best match between buyers and sellers - and displays the results. Thus for instance a time-share period put on offer by a seller may be matched (or nearly matched) by a number of buyers who between them cover the period on offer.

8 The claims before me are those filed with the agent's letter of 21 July 2004. There are 25 claims, of which claim 1 is the only independent claim. It reads:

> "A system for enabling a transaction by matching an offer to a purchase or sell a first item with a set of offers to sell or purchase at least a second item and a third item, the system comprising:
> a plurality of display terminals enabling each of a plurality of users to input data relating to at least one of the offers the data comprising a first and a second trait associated with the offer;
> a processor;
> a communications network connecting the terminals with the processor;
> each of said terminals being responsive to a further user input to transmit the data to the processor over the network with a request for the offer to be matched to other transmitted offers, the processor being responsive to receipt of the offers and the requests to match to designate one or more of the offers to sell or buy and one or more corresponding offers to buy or sell as forming at least a portion of a transaction match when the first trait of one offer to sell substantially corresponds to the first trait of the offer to buy, the processor automatically communicating the correspondence of the one and the other offers to the terminals originating the designated offers."

The law and practice

9 The relevant provisions of section 1 of the Act are:

> 1.-(1) *A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say -*

(a) the invention is new;

(b) it involves an inventive step;

(c) .....

(d) the grant of a patent for it is not excluded by subsections (2) and (3) below;

and references in this Act to a patentable invention shall be construed accordingly.

(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 purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.

10 A number of United Kingdom authorities and decisions of the Technical Board of Appeal of the European Patent Office were referred to at the hearing, including *Fujitsu Limited's Application* [1997] RPC 608; *Kirin-Amgen Inc v Roche Diagnostics GmbH*, [2002] RPC 1; *Merrill Lynch's Application* [1989] RPC 561; *Dell USA's Application* (BL O/432/01); *Vicom/Computer-related invention* [1987] 1 OJEPO 14 (T208/84) *Hitachi Ltd* (T 0258/03) *; Pension Benefits Systems Partnership* [2001] 10 OJEPO 441, [2002] EPOR 52 (T 931/95)*;* and *Koch & Sterzel/X-ray apparatus* [1988] 1-2 OJEPO 19 (T26/86).

11 It was accepted at the hearing that in respect of practice under section 1(2) the Patent Office is governed by the well known principles laid down by the Court of Appeal in *Fujitsu* - in particular that what is needed to make patentable something that would otherwise be excuded under section 1(2) is a technical contribution, and that what is patentable depends upon the substance rather than the form of what is claimed. Patent Office practice here is set out in a practice notice issued on 24 April 2002 entitled "Patents Act 1977: interpreting section 1(2)" which, taking into account the judgements in *Fujitsu* and in *Kirin-Amgen*, states that "inventions which involve a technical contribution will not be refused a patent merely because they relate to business methods or mental acts". It was also common ground at the hearing that

assessment of technical contribution for the purposes of section 1(2) is a separate matter from assessments of novelty and inventive step for the purposes of section (1)(1)(a) and (1)(1)(b).

The issues

12 There is no dispute that the basis of the present invention is a business method, and that the method is executed by a computer program running on hardware that is conventional. As already noted above, there is also no dispute as to the legal principles that apply. The sole matter at issue is whether or not the invention provides a technical contribution.

13 Mr Hale sought to distinguish his case from *Fujitsu*, noting that in that case the method was *operator dependant*, and referred to the words of Laddie J quoted by Aldous LJ at page 613:

> *In this case, Fujitsu's application leaves it to the operator to select what data to work on, how to work on it, how to assess the results and which, if any, results to use. The process is abstract and the result of use of it undefined.*

14 Mr Hale pointed out that *Fujitsu* simply had a standard computer loaded with software, and since it required operator input, the result was indeterminate. He contrasted this with the invention in suit in which he argued that there is a deterministic result by virtue of the inter-relationship of the integers, and this provides a technical solution to a problem. He argued that although the considerations underlying the invention relate to a business method, there is a technical consideration in arriving at a solution to a problem.

15 Mr Hale also noted the words of Aldous J at page 615 of *Fujitsu* in which he refers to the *Vicom* decision as follows:

> *The reasoning in* Vicom *as to what was the technical contribution is not easy to ascertain. However I do not read the decision as concluding that all claims to processing real images are patentable and I can see no reason why, it they are, the same reasoning should not apply to all useful images. As I read the decision, the Board saw a technical contribution, namely the generation of the enhanced picture.*

and argued that this indicates that it is not the fact that an image is produced that is important, rather it is the *way* that it is produced that counts.

16 In order to illustrate his case, Mr Hale focussed primarily on the use of the system to manage time-shares. He argued that in the existing method of doing business in this area, there was never an option of matching multiple sellers and buyers because there was always the problem of having to get someone to agree to a partial deal and then having to find someone else to complete that deal. Mr Hale described this as a *serial* process which was impracticable and discouraged anyone ever dealing in that way.

17 He contrasted this with the invention in suit in which a pooled matching process can be carried out and the results sent automatically and simultaneously to the display screens of all potential parties to the transaction. Mr Hale described this as a *parallel* process; and argued that it represented an advance over the serial process, an advance that required technical considerations to put into effect; and that it was not simply a business method because parallel processing could not have been done before the invention. He explained that the invention enabled the market, not by changing the market or the way it did business, but by providing a technical solution to the way information was got across to users. He said that the system created confidence amongst users that everyone would get all the required information at the same time, thereby creating confidence in the market which was vital in this type of commodity trading.

18 Mr Hale went on to say that the invention in suit did not change the underlying business method; nor did it simply put an existing business method onto a computer; nor did it simply enable a person to process data more quickly; nor did it simply implement a human thought process - rather the invention provided a technical solution to the problem of why the business could not be done by providing the underlying functionality required to allow it to take place.

19 As to at what point in the development of the invention the technical advance comes in, Mr Hale responded that this should be viewed in the context of a non-technical business man aware that assets could be traded by matching partial solutions, but having no way to address the problem. The business man puts this to systems and software engineers who then have to invent a system that will enable this market to take place.

20 It is a central pillar of the applicant's case then that the invention makes no change to a known business method. Any technical contribution therefore must necessarily lie elsewhere. Although the claims relate to a system comprising a number hardware features - namely display terminals, a processor and a communications network - this is a conventional set up, and it is the functionality provided by the software which must provide a technical contribution if the invention is to satisfy section 1(2). It seems to me therefore that the case boils down to the question of whether or not this software, which in the applicant's submission enables a known but impracticable business method to be put into practice, provides a technical contribution.

21 I pointed out at the hearing that in the case of a computer program it is accepted practice that a technical contribution may be found through either (i) a computer running the program operating some external apparatus in which a technical change is produced, for instance an X-ray apparatus as in *Koch & Sterzel*, or (ii) the program causing the computer itself to operate in a technically different way.

22 Mr Hale responded that he felt that his case fell primarily under category (i) in that there was a "tangible technical outcome", namely the simultaneous production of market-enabling information on participants' display screens, and that this was on all fours with *Koch & Sterzel*. He also felt that the move from serial to parallel processing arguably fell within category (ii).

23 I turn then to category (i) and firstly to *Koch & Sterzel*. In this case, in which an X-ray apparatus was controlled by a programmed computer so as to provide optimum exposure with protection against overload, the Board of Appeal held that this produced a technical effect in the X-ray apparatus. It is also convenient at this point to look at *Vicom* in which a computer based system which used a mathematical method to operate on numbers representing an image was accepted by the Board of Appeal on the grounds that the invention related to the technical quality of the image.

24 There seems to me to be clear water between the invention in *Koch & Sterzel*, in which a physical process (exposure to X-rays) which is undeniably technical in character is controlled by a programmed computer, and cases - including the present invention and that in *Vicom* - in which any technical effect is manifested as an image. However it seems to me that there is also a distinction between *Vicom* and the present case. Merely producing an image on a display screen - albeit an image conveying tangible and useful information - does not seem to me to constitute producing technical change in an external apparatus. It would be a different matter if the contribution were directed to the production of the image independently of its content - for instance as in *Vicom* where the technical quality of an image was affected - but that is not the case here. If this argument were accepted, then it seems to me that *any* software which generated an image for display - whatever its application and however it functioned - would escape exclusion. Moreover, Mr Hale's argument that *Vicom* teaches that it is not the fact that an image is produced that is important, rather it is the *way* that it is produced that counts, is to my mind right only up to a point. It is a valid argument if, as in *Vicom*, the way the image is produced affects its technical quality independently of its content; it is not a valid argument if the way the image is produced affects only its content as in the present application.

25 I also agree with Mr Hale that in contrast to *Fujitsu*, the present invention provides a result that is deterministic rather than operator dependent and that is tangible, but it remains a result characterised solely by its content.

26 In the light of the above reasoning I conclude that controlling display screens in the manner of the present application does not constitute providing a technical change in external apparatus and therefore that there is no technical contribution under the first category.

27 Although it does not affect this reasoning, I should add for completeness, regarding the words of Laddie J quoted above by Mr Hale from *Fujitsu*, that in the Patents Court Laddie J rejected the invention as a method for performing a mental act, whereas in the Court of Appeal the invention was rejected as a computer program as such.

28 Turning then to the second category, does the program cause the computer itself to operate in a technically different way? Mr Hale argued that it did; in moving from serial to parallel processing. Looking more closely at the method however, it seems to me that the initial steps in the method in fact remain serial, and it is only the final step that can be regarded as a parallel process. In operation, individual users have firstly to submit offers to buy or sell; the corresponding data is then indexed, grouped and tabulated by the computer; potential matches are then found; and finally the results are sent out simultaneously - or in parallel - to users' screens. Once data has been entered,

subsequent steps may be carried out very quickly, but they are still carried out in turn until the final display step.

29 Whether serial or parallel however, the initial sorting and matching steps carried out by the software do not to my mind provide a technical contribution. They may be carried out quickly and accurately, but that is to be expected of software and does not in itself constitute a technical contribution unless the computer itself is caused to operate in a technically different way. Here the software is doing no more than carrying out steps of the known business method - albeit in an ingenious way; there is no technical contribution. Equally sending out the results of the matching process simultaneously to several users - the parallel aspect of the procedure - does not seem to me to provide a technical contribution either; it is what computer networks do.

30 On this last point, when asked whether a salesman sitting at a desk could not carry out the method by taking in bids and offers and then matching them up, ie in the words of *Dell* do "no more than a respectable salesperson would do", Mr Hale argued that having made the matches, the salesman would still have to contact participants in turn, which was a serial rather than a parallel process. It was pointed out at the hearing that email contact would get around that, but Mr Hale responded that the method could not be regarded as what a respectable salesperson could do since there was nothing in the background to indicate that the method of the invention would be do-able.

31 It seems to me that the email analogy is a valid one, and adds weight to the argument that what the software contributes to the known business method in this case is what is to be expected of software operating in a networked system, namely speed and accuracy of processing and simultaneous display to a number of users.

32 In the light of the above reasoning I conclude that the software - either taken as a whole, or as that element responsible for controlling display screens - does not cause the computer system of the application to operate in a technically different way. I conclude therefore that there is also no technical contribution under the second category.

33 Having regard to the above I find no technical contribution in the software.

34 Is there a possibility that further amendment might meet the patentability objection? As is clear from above, the applicant has had several unsuccessful attempts at drafting claims to meet the objection. The specification has twenty five claims, is over twenty pages long and has a total of twenty two figures, but the content of the claims appendant to claim 1, and indeed of the whole of the description and drawings, seems to me to be directed exclusively to providing more detail about the steps of the method executed by the software, and does not to my mind constitute patentable subject matter. It seems to me therefore that it is not possible to amend the application to overcome the objection, and that it would not be appropriate to give a further opportunity for amendment.

Conclusion

35 I have found that the invention claimed fails to provide any technical contribution and is therefore excluded from patentability under section 1(2)(c) as a program for a computer as such. I have also concluded that it is not possible to overcome this finding by amendment. Accordingly I refuse the application under section 18(3).

Appeal

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

David Barford
Deputy Director acting for the Comptroller