

The application

- 5 The application relates to computer apparatus for determining the price of a contract on the basis of the total number of indications to participate in a purchasing scheme and the relative timings at which those indications are received.
- 6 The application acknowledges that it is known to provide computer apparatus to enable individuals to take advantage of bulk buying discounts via the Internet. In known computerized bulk purchasing systems, a server accessible from a number of remote user stations is provided which enables users to record an indication that they wish to purchase a particular product. When a sufficient number of individuals have registered an interest to buy a product, a bulk purchase order is sent to the supplier and the goods are subsequently distributed to individuals in accordance with their initial indication to purchase.
- 7 The application suggests that one disadvantage of prior art computerized bulk purchasing systems is that no bulk purchase order will be made if only a limited number of individuals register an interest. It also suggests that because the likelihood of a bulk purchase order being made increases with the number of individuals registering an interest, there is an incentive for individuals to delay registering an interest until others have committed themselves, thus acting to discourage early registration.
- 8 In order to encourage individuals to register their intentions to participate earlier, the applicant provides a link between the purchase price of a product and the time of registering an interest to purchase. This is achieved by associating with each input indication of intention to participate, data indicative of the order in which such indications are received, and then utilizing the order data to assign different prices to indications of intention to proceed at different times. This would allow later data orders to be assigned a higher price than earlier ones, whilst still ensuring that later registrants are able to benefit from bulk purchase discounts.
- 9 The claims currently on file include independent claims 1, 13 and 14, which read as follows:

“1. Computer apparatus for associating price data with indications of intent to participate within a purchasing scheme comprising: interface generation means for generating user interface means adapted to enable the input of order data representative of indications of intent to participate within a purchasing scheme; receiving means for receiving order data input via said user interface means; association means for associating items of order data received by said receiving means with timing data indicative of the relative timings at which said items of order data were received; and price generation means for associating with each of said items of order data, price data, said price data generation means being arranged to associate different price data with different items of order data, wherein the price data associated with an item of order data is selected utilizing a determination of the total number of items of order data received and said timing data associated with said items of order data.”

“13. Apparatus for associating price data with data indicative of intent to participate within a bulk purchasing scheme comprising: means for receiving data indicative of intent to

participate within a bulk purchasing scheme; and means for associating with received data, price data determined on the basis of the total number of items of data indicative of intent to participate and the relative timing of the receipt [of] said data.”

“14. An apparatus for associating price data with indications of intent to participate within a purchasing scheme comprising: means for receiving items of order data; and means for associating with said items of order data price data selected on the basis of the total number of items of order data within a received sequence of order data and the relative position of an item within said sequence.”

- 10 The amended claims submitted shortly before the hearing comprise a single independent claim, claim 1, whose scope is substantially the same as claim 1 currently on file. At the hearing, the agent explained that claim 1 was amended in order to bring out the network nature of the invention, and reads as follows:

“1. Computer apparatus for associating price data with indications of intent to participate within a purchasing scheme of a fixed period, the computer apparatus comprising: interface generation means for generating user interface means over a communication network, said user interface means being adapted to enable the input of order data representative of indications of intent to participate within a purchasing scheme; receiving means for receiving order data input via said user interface means over said communications network; association means for associating items of order data received by said receiving means with timing data indicative of the relative timings at which said items of order data were received during said fixed period; and price generation means for associating with each of said items of order data, price data, said price data generation means being arranged to associate different price data with different items of order data, wherein the price data associated with an item of order data is selected utilizing a determination of the total number of items of order data received and said timing data associated with said items of order data to represent a price which is lower than a price represented by price data associated with later received items of order data.”

The law

- 11 The examiner has maintained that the claimed invention relates to subject matter excluded from patentability under section 1(2) of the Act, in particular to a method of doing business or a computer program under section 1(2)(c). 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)

(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 (EPC), to which they correspond. I must therefore also have regard to the decisions of the Boards of Appeal of the European Patent Office (EPO) that have been issued under this Article in deciding whether the present invention is patentable.

Interpretation

- 13 At the hearing, Dr Collins accepted that the principles to be applied when considering whether an invention relates to an excluded field should follow practice laid down by the UK Courts. These principles are set out in *Fujitsu Limited's Application* [1997] RPC 608, where at page 614 Aldous LJ said:

“...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 make a technical contribution are. Thus the concept that what is needed to make an excluded thing patentable is a technical contribution is not surprising. That was the basis for the decision of the Board in *Vicom*. It has been accepted by this Court and the EPO and has been applied since 1987. It is a concept at the heart of patent law.”

- 14 In other words, inventions relating to an excluded field which involve a technical contribution will not be considered to relate to the excluded matter as such. Dr Collins accepted that there is an implicit requirement under section 1(2) for the invention to make a technical contribution, and that there also exists an implicit requirement for technical character under Article 52 of the EPC.

- 15 Dr Collins emphasized, however, that there is also a requirement under section 130(7) for section 1 of the Act and Article 52 of the EPC to have, as nearly as practicable, the same effect. This requirement for consistent interpretation between section 1 and Article 52 was clearly set out in *Gale's Application* [1991] RPC 305, where at page 323 Nicholls LJ said:

“... 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 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.”

- 16 On the basis of recent decisions issued by the Boards of Appeal of the European Patent Office, the UK Courts and the UK Patent Office, Dr Collins argued that the test for determining whether an invention makes a technical contribution under section 1 of the Act differed significantly to the test for technical character applied under Article 52 of the EPC. Dr Collins suggested that this could lead to substantial divergence between the interpretation

given to section 1 and Article 52, despite the requirement for consistency under section 130(7). I will summarise very briefly the evidence presented by Dr Collins in support of his argument.

- 17 Dr Collins referred to the decision of the EPO Board of Appeal in *Pension Benefit Systems Partnership* (T0931/95), in which it appeared that the test for technical character had moved from the point of determining exclusion from patentability to the point of determining inventiveness.
- 18 Similarly in *Comvik GSM AB* (T0641/00), the “problem and solution approach” used to determine whether an invention meets the requirements of inventive step is set out as comprising the following steps: a) identification of the technical field of the invention, b) the identification of the closest prior art in the field, c) the identification of the technical problem solved in relation to the closest prior art, and d) an assessment of whether or not the technical features from the solution claimed could be derived by the skilled person in that field in an obvious manner from the state of the art. The issue of technical character is dealt with as part of the “problem and solution” approach to determining inventive step.
- 19 In *Systran S.A.* (T1177/97), the Board used the problem and solution approach to determine inventive step and concluded that information and methods related to linguistics may in principle assume technical character if they are used in a computer system and form part of a solution to a technical problem.
- 20 In the UK, Dr Collins argued that the test for technical contribution is firmly embedded in the assessment of whether an invention relates to excluded matter as such. He referred to the decisions of the Court of Appeal in *Merrill Lynch’s Application* [1989] RPC 561 and *Gale’s Application* [1991] RPC 305 in which exclusion from patentability under section 1(2)(c) had been addressed, where it was made clear that it is the substance of the claimed invention rather than its particular form that is important in assessing technical contribution. Once the substance of the invention has been determined, and following the Court of Appeal’s decision in *Fujitsu Limited’s Application*, it is then necessary to determine whether the substance of the invention falls into any of the categories listed under section 1(2)(c) and, if so, decide whether the substance of the invention makes a technical contribution such that it cannot be said to amount to excluded matter as such.
- 21 Dr Collins took particular exception to this use of the word “substance” by the courts, whose meaning he considered to be unclear and its application in what ought to be a precise and objective test for patentability he regarded as extremely unhelpful. However, the fact that the meaning of the word may be disputed does not in itself constitute a good reason for not using the term, especially when case law helps to clarify the issue. I consider that the case law does indeed provide this clarification. For example in *Gale’s Application* (page 315):

“...I conclude that the first task of the court is to construe the claim, as that is where the invention is defined. If the claim properly construed is drafted so as to relate to any of the matters disqualified by section 1(2) then the invention is not patentable. If however, the claim is drafted to a process or technique or product and the basis of such process or technique or product is a disqualified matter, the court should go on to

consider whether the claimed invention is in fact no more than a claim to an invention for a disqualified matter. It is a question of fact to be decided in each case, but if the claimed invention is more than a claim to an invention for a disqualified matter then it qualifies as a patentable invention.

In deciding that question of fact it is always important to consider whether the claimed invention is part of a process which is to be used in providing a technical result. If it is, then the claim cannot be said to be an invention relating to no more than one of the disqualified matters. Similarly, where a claim is directed to a product, it is important to consider whether the product claimed is a new technical product or merely an ordinary product programmed in a different way as in the latter case the claim is in reality to the program and therefore could not relate to a patentable invention.”

22 And subsequently in *Fujitsu's Application* (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.”

23 Dr Collins went on to suggest that the problem and solution approach to determining inventive step meant that there was no longer a need to go through the contortions of deciding whether an invention related to excluded matter as such. He also suggested that it provided a far simpler and a far clearer test for patentability than the current UK approach. Dr Collins then went on to draw my attention to the recent proposal for an *EC Directive on the patentability of computer implemented inventions* (9713/04 PI46 CODEC 752), and in particular to certain passages which he suggested support his view that technical contribution ought to be regarded as a requirement for inventive step. For example, paragraph 11 states that:

“It is a condition for inventions that, in order to involve an inventive step, they should also make a technical contribution to the state of the art,”

24 Again, at paragraph 12:

“Accordingly, although a computer-implemented invention belongs to a field of technology, where it does not make a technical contribution to the state of the art, as would be the case, for example, where its specific contribution lacks technical character, it will lack an inventive step.”

25 Dr Collins made the point that the proposed EC Directive is a long way from entering into force in the UK, but it serves as an useful indication of the direction in which Europe is moving.

26 On the basis of the case law presented to me by Dr Collins, it does seem that he is correct in his assessment that the approach adopted by the Boards of Appeal of the EPO in setting the

test for technical character at the point of determining inventive step is different to that adopted by the UK courts and the UK Patent Office, where the test for technical contribution is used to determine whether an invention relates to excluded matter as such.

27 However, I am not convinced that this in itself amounts to a difference in interpretation between section 1 of the Act and Article 52 of the EPC. Whilst Dr Collins was able to demonstrate that the test for technical contribution/character is applied at different points in the assessment of patentability, he was unable to provide any evidence to suggest that the test for technical contribution differed in any material way to the test for technical character. It is this material difference, where a patent application might suffer a different fate according to whether it was made in the UK under the Act or made in Munich under the Convention, that section 130(7) sets out to avoid.

28 In fact, the question of what constitutes technical contribution/character was considered by the hearing officer in one of the UK Patent Office decisions relied on by Dr Collins in support of his argument. In *Regan's Application* (BL O/030/04), the hearing officer noted that:

“22. What constitutes a ‘technical contribution’ has been the subject of a good deal of argument before the UK Courts and the Boards of Appeal of the EPO. The arguments submitted on behalf of the applicant and the specification itself focus on two potential sources of technical contribution; the problem solved by the invention and the solution to that problem.”

29 This echoes precisely the comments made by the same hearing officer in *Accucard Limited's Application* (BL O/145/03):

“14. What constitutes a “technical contribution” has been the subject of a good deal of argument before both the UK Courts and the Boards of Appeal of the EPO. That case law suggests it can result from:

the problem underlying, and solved by, the claimed invention;
the means, that is the technical features, constituting the solution of the underlying problem;
the effects achieved in the solution of the underlying problem and/or
the need for technical considerations to arrive at the computer implemented invention as claimed.

15. These, I think, break down into two categories; the nature of the problem to be solved and the way the solution is achieved.”

30 These comments reinforce my view that although applied at different points in the determination of patentability, the test for technical contribution adopted by the UK Patent Office is entirely consistent with the “problem and solution” test for technical character adopted by the European Patent Office, and that there is no basis for Dr Collins’ argument that the interpretation given to section 1 of the Act by the UK Patent Office is different to the interpretation given to Article 52 of the European Patent Convention. In view of this, I consider that it is entirely correct for me to apply the principles set out in *Fujitsu's*

application when considering whether the invention complies with section 1(2), i.e.:

- does the claimed invention fall within the categories of excluded matter mentioned in section 1(2) ? If yes,
- does the invention provide a technical contribution ?

Argument

31 As indicated above, the application relates to computer apparatus for determining the price of a contract on the basis of the total number of indications to participate in a bulk purchasing scheme. The claims are directed to computer apparatus for associating price data with indications of intent to participate within a purchasing scheme, and the application clearly acknowledges that the computer hardware for executing the improved bulk purchasing scheme is entirely conventional. The computer hardware facilitates an improved transactional process characterised by the provision of a link between the purchase price of a product and the time of registering an interest to purchase. It is this link which enables a financial incentive to be offered to individuals registering early in a bulk buying scheme. This improved transactional process is clearly a business consideration and I have no doubt that the invention falls within the exclusion of section 1(2)(c), both as a business method and as a computer program for its implementation. I am reinforced in my view by the comments made by Dr Collins at the hearing, where he stated that the computer system is performing a function which is obviously in the field of business.

32 Having found that the invention falls within the categories of excluded matter mentioned in section 1(2), I now need to decide whether it provides the technical contribution required to make an otherwise excluded invention patentable. In doing so, it seems entirely appropriate in this case to look for the technical contribution in the nature of the problem to be solved or the way the solution is achieved.

The problem to be solved

33 The application sets out clearly the problem to be overcome by the invention, namely to reduce the incentive for individuals to delay registering an interest in purchasing a product until others have committed themselves to a purchase. Dr Collins acknowledged that the primary problem addressed by the invention is the fulfillment of an improved ordering and selling of goods or services. He went on to suggest that a secondary problem addressed by the invention was to minimize the skewing of processing load across the network that results in a large amount of requests arriving at an offer end time caused by a rush of last minute purchases.

34 Dr Collins stated that it was well known in Internet technology that a large number of requests transmitted at the same time to a server can cause server overload. At the hearing, Dr Collins agreed that this secondary problem is not mentioned at all in the application, but argued that the secondary problem is an inherent problem with communication networks and that it is implicit from the specification that the invention seeks to address this problem.

35 I am perfectly prepared to accept that network overload is an inherent problem with

communication networks. However, I cannot see any link, either explicit or implicit, between the invention disclosed in the application and the general desire to minimise network overload. Had there been an implicit link between the invention and the general desire to minimise network overload, I would have expected to find some indication that network traffic is managed in some way to take account of capacity. I can find no suggestion of this in the application. Moreover, it seems entirely possible for all the purchase requests previously left until the last minute to be made at the very start of the purchase offer, thereby only shifting the network traffic problem from the end of the offer to the start.

- 36 Having discounted the notion of an implicit secondary problem, there remains only the primary problem of reducing the incentive for individuals to delay registering an interest in purchasing a product. By its very nature, this is not a technical problem.

The solution achieved

- 37 The solution provided by the invention is a data structure representing a variable price for products during a particular bulk purchase offer, with the price increasing as the number of units in the offer are purchased. Dr Collins argues that this is a technical solution which results in the re-distribution of network traffic and the reduction of overload. As I have already explained above, I do not agree that a necessary consequence of this invention is the reduction of network overload. The solution is based on standard computer hardware programmed in a different way, where a different way of structuring data allows for a price record to be associated with a record within a product database, and the price record includes a number of different prices based on the number of products purchased.
- 38 Therefore, price data within each product record is replaced by a matrix of possible prices. I do not consider that the addition of this extra data to a product record within a conventional database requires any technical effort whatsoever. The extra data itself is a consequence of financial/business considerations having no technical significance. As a result, I do not consider any technical contribution to result from the proposed solution to the primary problem.
- 39 Having reviewed the amended claims submitted shortly before the hearing and also the application as filed, I am unable to find any basis for a valid claim incorporating a technical contribution.

Conclusion

- 40 I have found that the invention as claimed in the application fails to provide any technical contribution and that it is therefore excluded from patentability as a method of doing business and a computer program under section 1(2)(c) of the Act. I have found this to be the case for the invention as currently claimed and as set out in the amendments submitted shortly before the hearing. Having also found that there is no prospect of any amendment which would result in an allowable claim, I accordingly refuse the application under section 18(3).

Appeal

- 41 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be

lodged within 28 days.

H JONES

Deputy Director acting for the Comptroller