

## **PATENTS ACT 1977**

### **IN THE MATTER OF**

Applications Nos. GB 9610924.4

& GB 0005604.4

in the name of Minnesota Mining  
and Manufacturing Company

### **DECISION**

#### **Introduction**

1. This decision relates to two patent applications, the earlier of which (“the parent” GB 9610924.4) was filed on 24 May 1996 in the name of Minnesota Mining and Manufacturing Company. It takes priority from a US application US 5752054 filed on 6 June 1995, and was published on 18 December 1996 as GB 2301915.
2. A first examination report under section 18(3) issued on 9 July 1999, and in it, the examiner reported, among other things, that the claims related to a program for a computer as such, and that consequently the application was excluded from patentability by section 1(2)(c).
3. Amended claims were filed on 10 January 2000 in the hope of overcoming the objections, but the examiner maintained the original objection that the invention defined in the claims was excluded by section 1(2)(c) as a program for a computer. Further correspondence failed to resolve the matter, and the applicants duly requested a hearing.
4. Before a hearing had been appointed, on 8 March 2000, the applicants filed a divisional application based on the disclosure of the earlier parent, but claiming the invention in a slightly different way. At the time of writing this decision, this divisional application had not been published. I note that arrangements for its publication are complete, and it is due to be published on 16 August 2000.

5. On 13 June 2000, the examiner issued a first examination report under section 18(3) in relation to the divisional application, in which report he raised the same objection — ie. that the claims related to a program for a computer as such — and also raised a further objection that the claims of the divisional also related to a scheme, rule or method for performing a mental act.

6. The applicant submitted amended claims for the divisional application on 3 July 2000, and argued that the claims as amended did not fall within any of the excluded categories. In a further examination report dated 6 July 2000, the examiner maintained the earlier objections under section 1(2), and also objected that the amendments that the applicant was seeking to make to the claims effectively disclosed subject matter that was not present in the divisional application (or the parent application) as filed.

7. The period allowed by section 20 for putting both parent and divisional application in order was due to expire on 10 July 2000, and by this time a hearing had been appointed to decide the outstanding issues on the parent application. Accordingly the examiner suggested that the divisional application could be decided at the same hearing; the applicant agreed that it would be appropriate to hear both applications at the same hearing. That hearing took place on 19 July 2000. At the hearing, the applicants were represented by Mr Lloyd Hoarton of Forrester Ketley & Co. Mr Alex Beattie (a colleague of Mr Hoarton) and the examiner also attended.

### **The Applications**

8. The applications relate to a workplace hearing protection program, for developing and maintaining records relating to various aspects of noise levels and sound protection in the workplace. The invention involves displaying a series of forms on a computer screen, each prompting input from a user. The information input by the user is stored in a database, and can be used to customise a workplace hearing protection program. The kind of information to be stored would typically concern the type of hearing protectors (eg ear plugs) that might be used, the location of areas (eg test suites) within a workplace in which the hearing of employees can be checked, and other details about the employees including for example the name of the person who is responsible for checking that noise safety standards are met in a particular area.

9. The parent application, as amended, has 89 claims. The two independent claims, claim 1 and claim 46 read as follows:

1. A method of customizing a workplace hearing protection program, the method comprising the steps, performed by a data processing system, of:

(a) executing first program code in order to display forms on a computer display, wherein the forms are useful in a customization of the workplace hearing protection program; and,

(b) executing second program code to prompt customization of workplace hearing protection requirements of the workplace hearing protection program based upon the displayed forms.

46. A computer readable storage medium having program code stored thereon, wherein the program code is arranged so that, when the program code is executed by a computer,

a) forms are displayed on a computer display, wherein the forms are useful in a customization of the workplace hearing protection program, and

b) customization of workplace hearing protection requirements of the workplace hearing protection program is prompted based upon the displayed forms.

10. The divisional application has one independent claim which reads:

1. A method of protecting the hearing of employees in a workplace, comprising the steps of:

developing and maintaining a workplace hearing protection program by executing first program code on a data processing system to prompt the development of a workplace hearing protection program which includes hearing protection requirements and creation of records;

executing second program code on the data processing system in order to maintain the workplace hearing protection program and in order to maintain the records so as to stay in compliance with the hearing protection requirements; and

reducing noise levels to a selected level by the use of engineering or administrative controls designated by a user in response to an output from the data processing system.

(The dependent claims of the two applications were not considered during the hearing. It was understood that the patentability of the dependent claims rested on the outcome of the respective independent claims in each case.)

11. During substantive examination of the parent application, the examiner initially raised a number of objections regarding plurality of invention, lack of novelty and inventive step, clarity and support. The examiner further objected that the claims relate to nothing more than a program for a computer as such, and that consequently they are excluded from patentability by section 1(2)(c). It is this latter objection (ie patentability) that was argued and maintained by the agent and the examiner respectively in further correspondence, and that ultimately fell to be decided at the hearing.

12. When the divisional application was examined, the same objection was raised — ie that the invention as claimed relates to a program for a computer as such. Furthermore, the examiner also objected that the claims were directed to a rule, scheme or method for performing a mental act.

13. Following the first examination report, the claims of the divisional application were amended. In particular claim 1 was amended to define:

“A method of protecting the hearing of employees in a workplace ....”

whereas previously it had read:

“A method of developing and maintaining a workplace hearing protection program ...”

14. At the same time, a further paragraph was added to the end of claim 1, including the additional step of “reducing noise levels to a selected level by the use of engineering or administrative controls designated by a user in response to an output from the data processing

system.” In the last examination report issued by the examiner in relation to the divisional application, he objected that this amendment constituted added matter, contrary to section 76, on the grounds that the application as filed did not disclose a method of reducing noise levels.

15. At the hearing that took place on 19 July 2000, Mr Hoarton addressed me initially on the subject of added matter, as he believed that my decision on the point could have a material effect on his submissions in relation to the remaining issue of patentability. For the same reason it is convenient to deal with this issue first in my decision, and then I will go on to determine whether or not the inventions claimed in these two applications are excluded from patentability by section 1(2).

### **Added Matter**

16. Mr Hoarton drew my attention to a case decided by the Court of Appeal in 1972 - *The General Tire & Rubber Company v The Firestone Tyre and Rubber Company and Others*<sup>1</sup>. In particular, Mr Hoarton took me to the passage that bridges pages 485 & 486, reproduced here for convenience:

“The prior inventor, however, and the patentee may have approached the same device from different starting points and may for this reason, or it may be for other reasons, have so described their devices that it cannot be immediately discerned from a reading of the language which they have respectively used that they have discovered in truth the same device; but if carrying out the directions contained in the prior inventor’s publication will inevitably result in something being made or done which, if the patentee’s patent were valid, would constitute an infringement of the patentee’s claim, this circumstance demonstrates that the patentee’s claim has in fact been anticipated.”

17. The thrust of Mr Hoarton’s argument here was that the directions contained in his application would “inevitably result in something being made or done”, in this case it would inevitably result in sound levels being reduced, and that therefore this ‘inescapable’ consequence should be notionally considered to be a part of the disclosure. While I recognise

---

<sup>1</sup> [1972] RPC 457

the force of this argument, it seems to me that Mr Hoarton was asking me to lift part of the sentence out of its context. The court is here considering whether a claim in a later patent has been anticipated by the disclosure of an earlier patent. What the court is actually saying, or so it seems to me, is that it is right and proper when determining the state of the prior art to consider not only what is actually disclosed within a patent, but also the inevitable consequences of carrying out directions contained therein. That being so, the passage here is of no immediate relevance.

18. However, I did indicate at the hearing that in my view the additional step added to claim 1 as amended on 3 July 2000 does not represent added matter. Although the description of the invention does not concern the actual *implementation* of a hearing protection or noise reduction scheme, it seemed self-evident to me that this must be the intended purpose and to that extent I am satisfied that the claims as amended do not materially extend the disclosure beyond that of the application as filed. I take some comfort from the fact that another Hearing Officer acting for the Comptroller in a similar case, Fujitsu Limited's Application<sup>2</sup>, reached the same conclusion. This was a method of processing images of two crystals to produce a display representing a third crystal that was a combination of the first two crystals. As the Hearing Officer said at line 22 of page 518:

“... all the references to manufacture in the present specification have been added during the course of examination. This may be a small point but in my view it is of significance for present purposes because it demonstrates that any manufacture which is involved can only be the natural, perfectly conventional, follow-up to a design process because otherwise the addition of references to it in the specification would involve added matter contrary to section 76.”

19. It could be argued that the words “in response to an output from the data processing system” themselves lack foundation in the specification as filed. However, I am satisfied that if somebody were to read the relevant screen and take some action as a result of doing so, this would fit these words, and hence conclude that no matter is imported by this amendment.

---

<sup>2</sup>[1996] RPC 511

## **Interpretation of the Amended Claim**

20. Notwithstanding my decision to allow the amendment to claim 1 of the divisional application, the specific meaning of the passage in question (the last paragraph of the claim) could still be critical in determining whether or not the invention described and claimed in these applications is patentable. The amendment adds the following step to the method defined in the claim:

“reducing noise levels to a selected level by the use of engineering or administrative controls designated by a user in response to an output from the data processing system.”

21. In his letter dated 3 July 2000 (responding to the first examination report on the divisional application), Mr Hoarton provides the following explanation of the meaning of the words “engineering or administrative controls”:

“This control might, in a particular workplace, take the form of the switching off of an excessively noisy machine (ie. an administrative control, as required by the present invention) or the adjusting of an excessively noisy machine to reduce the noise thereof (an engineering control, as required by the present invention).”

22. I have not been able to find any indication in the description (of either application) that the computer directly controls a piece of machinery in order to reduce the noise generated by that machine. Neither was Mr Hoarton able to point me to anything in the applications that might suggest such an arrangement. Moreover, given that the steps necessary to reduce the noise of a particular machine will vary considerably depending on the actual machine, it is perhaps not surprising that the applications are silent as to the specific measures that should be taken to reduce noise. For example, it may be the case with some machines that the most that can be done is to place a sound-proof blanket over the machine. With other machines, it may be possible to reduce noise by improving the lubrication or by reducing the speed of the machine. In any event, no such measures are specifically disclosed in either application, and the most I can do is to construe the claim as a method of protecting the hearing of employees in which noise levels in the workplace are reduced *by purely conventional means* because a computer produces an output to advise a user of the computer that something should be done to

reduce the noise levels. I note that this is consistent with the construction placed upon the claims by the Hearing Officer in Fujitsu Limited's Application as quoted above.

### **A Program for a Computer**

23. The examiner objected that the claims of both the parent and divisional applications related to a program for a computer as such. This objection is based on section 1(2)(c) of the Act, the essential parts of which 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 purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.

24. In the correspondence between the examiner and the agent it appears to have been accepted that the invention utilizes a computer program, and that the computer itself is conventional. Certainly Mr Hoarton did not disagree when I put it to him at the hearing. Thus the relevant law was agreed to be that stated by the Court of Appeal in Merrill Lynch's Application (1989) RPC at page 569 where Fox LJ said:

“On the other hand, it seems to me to be clear, for the reasons indicated by Dillon L.J., that it cannot be permissible to patent an item excluded by section 1(2) under the guise of an article which 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". There must, I think, be some technical advance on the prior art in the form of a new result (eg., a substantial increase in processing speed as in *Vicom*)."

25. Consequently, Mr Hoarton agreed that in order to avoid exclusion as a program for a computer, he would need to establish that his invention made a technical contribution to the known art. In particular, Mr Hoarton submitted that the last paragraph of claim 1 of the divisional application provided precisely the kind of "technical effect" that was required by the law. He argued that it was irrelevant whether or not the administrative or engineering controls were technical by nature. What mattered was that reducing noise levels in response to a particular method was an end result which was technical. In other words, Mr Hoarton submitted that the claim defined a method of controlling (ie. reducing) sound levels in the workplace, and that that is essentially a technical invention, and not a program for a computer as such. That is to say, it may use a computer program for some of the steps of the method, but the overall invention is more than just a computer program.

26. Taking the best view I can of the matter, I am unable to agree with Mr Hoarton's submission. Whichever way I look at it, the invention in these applications is a program for developing and maintaining a database of records relating to a hearing protection scheme in the workplace. Throughout the eighty nine pages of the description, there is only one reference to noise levels being reduced. Mr Hoarton drew my attention to it on page 53, where the various screen displays generated by the program are documented. At line 14 of page 53, item (vi) reads:

"(vi) a screen display permitting the user to designate that feasible engineering or administrative controls shall be used to reduce noise levels to a selected noise level;"

27. At the hearing, Mr Hoarton addressed the subject of collocation, and referred me to Lux Traffic Controls Ltd v Pike Signals Ltd<sup>3</sup>. His argument, as I understand it, was that the "inventive part" in the Lux Traffic case lay within the computer program, which was connected to a standard set of traffic lights. The new algorithm incorporated in the program allowed the

---

<sup>3</sup>[1993] RPC 107

traffic lights to be operated more simply and more efficiently than existing traffic lights. He maintained that, by analogy, the inventive part of his application lay within a computer program and the program was just “bolted onto an existing noise reduction system”. I do not accept this analogy for several reasons. Firstly I am not aware that there is any suggestion that the computer hardware in the Lux Traffic Controls case was a conventional computer, and consequently no-one would say that it should be excluded as being a program for a computer. Secondly, the invention in Lux Traffic Controls was a traffic light control system and, notwithstanding the fact that the system used a computer program, the system itself controlled the lights directly. As I have already concluded, there is no suggestion in the present application that the computer reduces the noise generated by a machine by controlling the machine itself.

28. In my opinion, the fact that the program generates a screen that permits a user to designate that something should be done to reduce noise levels, does not make the invention anything more than a computer program. In particular I am not persuaded that the function provided by this screen display makes the invention a noise reduction system. Rather I believe that the additional step of reducing noise levels is, in this instance, a collocation. As such the additional step of reducing noise levels cannot provide the necessary technical effect that Mr Hoarton was seeking to identify.

29. In reaching this decision I draw further comfort from the fact a similar conclusion was reached in Fujitsu Limited’s Application (see above). In that case claims for a method of processing images representing crystal structures were followed by a further claim (claim 9) to a method of manufacturing a structure after it had been modelled using a method according to any of the preceding claims. The Hearing Officer regarded the additional step of manufacturing the crystal as a collocation. At line 30 of page 518 he says:

“... the process of manufacture is in my view incidental in any event because it is wholly immaterial to that process whether the structure to be manufactured is designed by the prior art processes or by using the present invention. The use or otherwise of the present invention has no technical effect on any process of manufacture so the two stages, of design and manufacture, are quite independent and seem to me to be a mere collocation

rather than a true combination. As a result, I can see no technical advance in the form of a new result stemming from any manufacture.”

30. Having concluded that the additional step of reducing noise levels is a collocation and cannot contribute the necessary technical advance, I have considered the remainder of the invention as claimed both in the parent and the divisional, but I have been unable to identify any technical advance. Neither was Mr Hoarton able to point out any other technical advance provided by the invention. Consequently I find that the invention as claimed in both applications is excluded from patentability as a program for a computer as such.

### **Rule, Scheme or Method for performing a Mental Act**

31. This objection, based on section 1(2)(c) of the Act (see above), has only formally been raised against the divisional application, although it seems to me that if it is relevant at all, it applies with equal force to the claims of the parent application. The fact that a patent application consists of a program for a computer does not mean that it does not also consist of a method for performing a mental act.

32. In the first examination report issued in respect of the divisional application, the examiner reported that a conventional computer, when programmed to perform a mental act, is not patentable irrespective of whether or not there is a technical advance. The examiner based his objection on the judgment of Fox LJ in Merrill Lynch's Application (above) in which he continued on page 569:-

“Now let it be supposed that claim 1 can be regarded as producing a new result in the form of a technical contribution to the prior art. That result, whatever the technical advance may be, is simply the production of a trading system. It is a data-processing system for doing a specific business, that is to say, making a trading market in securities. The end result, therefore, is simply "a method .... of doing business", and is excluded by section 1(2)(c). The fact that the method of doing business may be an improvement on previous methods of doing business does not seem to me to be material. The prohibition in section 1(2)(c) is generic; qualitative considerations do not enter into the matter. The section draws no distinction between the method by which the mode of doing business is achieved. If what is produced in the end is itself an item excluded from patentability

by section 1(2), the matter can go no further. Claim 1, after all, is directed to "a data processing system for making a trading market". That is simply a method of doing business. A data processing system operating to produce a novel technical result would normally be patentable. But it cannot, it seems to me, be patentable if the result itself is a prohibited item under section 1(2).”

33. In other words, because a method for performing a mental act is an item excluded from patentability by section 1(2), a conventional computer running a program which performs a mental act is not patentable irrespective of any technical advance on the prior art because it amounts to no more than a scheme, rule or method for performing a mental act as such.

34. The examiner also referred to the decision of Aldous J in Wang Laboratories Inc's application (1991) RPC at page 473 in which he held that:-

“The method remains a method for performing a mental act, whether a computer is used or not. Thus a method of solving a problem, such as advising a person whether he has acted tortiously, can be set out on paper, or incorporated into a computer program. The purpose is the same, to enable advice to be given, which appears to me to be a mental act. Further, the result will be the advice which comes from performance of a mental act. The method may well be different when a computer is used, but to my mind it still remains a method for performing a mental act, whether or not the computer program adopts steps that would not ordinarily be used by the human mind.”

35. In the present case, a suitably programmed computer is used to develop and/or maintain a workplace hearing protection scheme. As outlined above, the program operates by displaying a series of forms on a computer screen, enabling a user to record a variety of pieces of information relating to the operation of the hearing protection scheme. Although I can see that using a computer to store and manage the information in this way has a number of advantages over other, more traditional methods, it is nonetheless true, or so it seems to me, that the hearing protection scheme could be implemented using pen and paper. This being the case, then according to Fox LJ these claims (of both parent and divisional application) cannot be patentable because the “result itself is a prohibited item under section 1(2)”, ie. a scheme or method for performing a mental act.

36. In reaching this conclusion I have treated the final step of the method claimed in the divisional application, reducing the noise levels etc., as a collocation for the reason already stated above.

### **Summary**

37. In summary I have decided that the amendment sought in relation to claim 1 of the divisional application is allowable, but that the invention as claimed in both applications (parent and divisional) is a program for a computer as such, and a rule, scheme or method for performing a mental act. Having read the specifications in their entirety, I cannot envisage any amendment to the claims that would be allowed having regard to section 76, and that would be overcome the exclusions to patentability. Accordingly I hereby refuse both applications under section 18(3) on the grounds that the inventions claimed therein are excluded by section 1(2)(c).

### **Appeal**

38. This being a substantive matter, any appeal from this decision must be lodged within six weeks of the date of this decision.

Dated this 31<sup>st</sup> day of July 2000

M G Wilson

Deputy Director, acting for the Comptroller

**PATENT OFFICE**