

- 4 The application concerns a work flow management system of the sort where incoming work items are captured (eg by scanning) and each item is processed by sequentially forwarding the item to members of staff who are each able to conduct certain tasks. All this is done in an electronic environment for example through a network of PC terminals.
- 5 The application acknowledges that electronic work flow processors were well known at the priority date of the invention. However, it identifies a number of shortcomings with such conventional systems which the present invention seeks to overcome. More specifically, it is stated in the description that it is difficult to adapt these conventional workflow processors to suit a particular organisation's structure. Thus the object of the invention is stated to be "to provide a work flow management system is (sic) which the controller links the work flow processor to the business organization in a more structured manner for simpler and more business-orientated development and on-going maintenance".
- 6 The claims in their latest form comprise one independent claim and dependent claims 2 to 13. At the hearing discussion was focused on claim 1, Ms Strachan and I agreeing that if that claim was patentable then so were the dependent claims. I will therefore focus on claim 1 in this decision but should I find it to be unpatentable, I will consider the remaining claims and indeed the remainder of the specification for the presence of any patentable subject matter.
- 7 The independent claim reads as follows:

1.A controller for an external work flow processor comprising means for performing image document management and work item queuing, the controller comprising means for linking the work flow processor with an organisation and controlling it accordingly,

wherein the controller comprises:

means for generating a process model and an organisation model;

a reference database (28);

a reference database set-up means (27) for generating under user instructions:-

the organisation model (50) with organisation members, member types, accountability, and accountability types, and trays linked with member types, said trays linking members to work flow processing,

the process model (54,55) with process steps linked to process definitions;

a transaction database(29) of current process steps for work items;

a work flow processor interface (23) for controlling an external work flow processor according to the organisation and process models of the reference database (28), and for updating the transaction database (29) in real time with process status data;

wherein the organisation and process models of the reference database (28) are linked in

the reference database by work item queue, each queue contains work items, and said work items are linked with process steps of the process model; and

the reference database work items (53) are linked with the transaction database (29).

The law

- 8 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.@

- 9 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 invention is patentable.

Interpretation

- 10 In assessing whether the invention relates to excluded subject matter I shall adopt the following principles. First, it is the substance of the invention defined in the claims when viewed as a whole which is important rather than the form of claims adopted. Second, the effect of the final part of section 1(2) is that an invention is only excluded from being patentable if it amounts to one of the excluded areas “as such” and that following decisions of the UK courts and the EPO Boards of Appeal, an invention is not considered to amount to one of those thing “as such” if it makes a technical contribution. Third, whether an invention makes a technical contribution is an issue to be decided on the facts of the individual case. Fourth, it is desirable that there should be consistency between the Patent Office’s and EPO’s interpretation of the exclusion in the Patents Act and the EPC. Finally, as Ms Strachan was at pains to point out at the hearing, any doubt over the patentability of the invention should be resolved in favour of the Applicants.

Argument

- 11 Most of Ms Strachan’s efforts at the hearing were directed towards demonstrating that the

invention made a technical contribution and thus did not relate to one of the excluded items *as such*. Before considering the “technical contribution” point however, I think it would be remiss of me not to say something about the exclusions themselves. The invention concerns a system for distributing work around an organization so that the necessary tasks can be performed. To my mind that is the sort of administrative task that has previously been considered to fall within the business method exclusion. Prima facie I consider the invention to fall within the method of doing business exclusion. Moreover, in so far as it is implemented via a computer network, I also consider it to fall prima facie within the “program for a computer” exclusion. That the claims are framed in terms of computer hardware is a matter of form not substance and hence of secondary importance under UK law.

Technical contribution

- 12 Finding that the application falls within the general area of the “computer program” and “business method” exclusions is, as I have hinted above, not the end of the matter. What I must now do is decide whether it amounts to those things *as such* by applying the technical contribution test.
- 13 In her skeleton argument Ms Strachan sought to argue that the invention was not excluded by taking me through all the potential sources of technical contribution identified in Singer & Stauder’s “The European Patent Convention – A Commentary”¹. Whilst she did not address me directly at the hearing using that framework, she asked that I take the arguments raised in her skeleton into account when making my decision. Many of those issues were also raised at the hearing but I will come back to any that were not later.
- 14 The Applicants do not claim to have invented the concept of computerized work flow processors. Indeed, the application suggests that the workflow processor (WFP) employed can be an “off-the-shelf” package. The problem the invention seeks to overcome is identified in the specification as being that of simplifying the task of adapting such an off-the-shelf package to reflect a particular organizational structure. In conventional systems this is said to be extremely onerous. In essence the invention provides a controller allowing the WFP to be customized to suit a particular organization and the processes it conducts. This, it was argued, simplifies both the initial configuration of the workflow management system and reconfiguration should the organizational structure be changed subsequently.
- 15 This flexibility is provided through the provision of a “reference database” which contains details of the current organizational structure and processes. Any changes to the organizational structures or processes can then be implemented by adjusting the contents of the reference database without reconfiguring the WFP itself. In Ms Strachan’s words, the invention is the controller which “interfaces between an organization and a WFP to allow the organization to obtain optimum use of a chosen WFP”.
- 16 The benefits of making reconfiguration easier are self evident. However, the test for whether an invention is patentable is not that it is useful. It must make a technical contribution. In deciding whether this ease of configuration constitutes a technical contribution, I think it

¹ Singer & Stauder: “The European Patent Convention – A Commentary” Published by Sweet & Maxwell 17 July 2003. ISBN 0421831502

appropriate that I say a little bit more about the nature of the reference database and the link between the organizational and process models of the invention.

- 17 I should say at this point that I am wary of making too much of the similarity between the processes carried out in the invention and those adopted in a non-electronic workplace. After all, one of the intrinsic purposes of an electronic work flow management system is to replace (and to a certain extent replicate) the physical with the virtual. However, it is a comparison I feel obliged to make because the courts have decided² that merely automating what was previously done manually is not sufficient for an invention to be granted patent protection.
- 18 The data contained in the organization and process models appears to me to be exactly what you would expect. The organization model contains data on members of staff, their roles, structural hierarchy and their levels of responsibility. The process model contains data on the functions that need to be carried out in the day to day work of the organization.
- 19 Much has been made of the “trays” of claim 1. Ms Strachan described them as providing the link between the members of staff and the work flow processing. She said that each tray is linked with a work item queue containing, in turn, work items. Moreover, she said the queues and items were a bridge between the organization and process models, the points of contact being the trays on one side and the process steps on the other. That may be so, but as I said at the hearing that is precisely the role that a conventional (physical) in-tray plays in a non-electronic work place. Ms Strachan did not disagree.
- 20 As a former examiner, Ms Strachan is familiar with the processes that take place in the Patent Office and at the hearing I thought it reasonable to use the Patent Office as an example when drawing analogies between the operation of the invention and what happens in a physical workplace environment. Within the Office, even the most straightforward case is subject to multiple processing stages. For example the content of each new application received is checked, fees are recorded and a receipt issued. The application is made up into a file and the file forwarded to a formalities unit before being allocated to an examining group depending on its subject matter, and then to an examiner. At each stage in the process the file is sent to a member of staff who is empowered to carry out certain functions within the overall process before addressing it to someone to carry out the next stage in the process. Individual and group work queues are an intrinsic feature of such a system, as are in-trays and filing cabinets for receiving and storing the work.
- 21 In the Patent Office model (as I would venture in most organizations) changes to organizational structure and the way some functions are carried out is achieved without changing the overall office work flow process. For example, when an examiner retires, the work allocated to him is not left unactioned. His manager makes arrangements for someone else to take over responsibility for it. Similarly cover for other absence is provided to minimize the impact it would otherwise have on the overall process. This local, organization specific management is precisely what the reference database in the present invention aims to provide. Indeed, the specification states that cover for absence and rearranging resources to

² See for example Aldous LJ's decision in *Fujitsu Limited's Application* [1997] RPC 608

deal with bottlenecks are some of the difficulties the invention seeks to solve.

- 22 I cannot identify anything in the separation of the organizational and transaction information from the actual workflow process that could be said to make a technical contribution. Doing so is a matter of administrative convenience and one which to my mind is common place in manual workflow systems.
- 23 Ms Strachan stressed that this was not all the invention did. She impressed upon me the importance of the real time updating function provided by the invention of claim 1. She said that manual systems were simply not capable of providing such functionality and thus the invention was more than the mere automation of what had previously been done manually (which the Court of Appeal decided in *Fujitsu* did not amount to a technical contribution). Expanding upon this, she said that this functionality enabled multiple users to access up to date information on processes that had been carried out. Moreover she said it was truly up to date in that the updating took effect without the need to re-boot the system.
- 24 At the hearing I said I would have to re-read the specification to assess the extent to which this particular functionality was disclosed. I have now done that and I have to say there is very little detail of how the updating is achieved. The passage beginning at line 6 of page 12 of the specification as filed (and to which Ms Strachan specifically referred me) provides probably the clearest disclosure of this feature. That passage states:
- “The reference database 28 has a relational table structure. This structure defines organization and process models which are created by the set-up components 27 and are subsequently maintained by these components to cater for business organization changes.”
- 25 In the Patent Office model, electronic and/or paper record systems are updated to reflect the work carried out on individual cases and changes to organizational structure. It seems to me that real time record updating is precisely the sort of advantage you would expect to achieve from switching to a fully electronic workflow management system and I can see no technical contribution in providing this particular functionality. Whilst it may well be the case that according to the invention this updating is effected without re-booting the system, the absence of any specific disclosure of how this is actually achieved leads me to conclude that the updating requires only standard programming techniques which cannot it seems to me provide a technical contribution. If the updating requires anything other than standard techniques then the specification does not seem to provide a sufficient disclosure to allow the invention to be put into practice.
- 26 In fact, it seems to me that all the advantages the invention seeks to provide are precisely what you would expect to achieve by automation of the conventional process of workflow management. I cannot see how a technical contribution can be made by addressing those problems.
- 27 In attempting to convince me that the invention made a technical contribution, Ms Strachan also suggested care was needed in determining the particular field to which the contribution was made. The contribution, she said, was not to the field of workflow processors. Rather it was a contribution to the field of electronic data formatting and processing, and system

configuration. That, she said, was a technical field not an excluded one and hence the contribution was a technical one. I do not agree. What I have to do is identify the substance of the invention claimed. In the present case I find it impossible to divorce the inventive concept from the particular field of use, namely workflow processing. The information being processed is fundamental to and inseparable from, the invention. To my mind the contribution is to the field of workflow processing, not the field Ms Strachan has suggested. I do not consider workflow processing to be a technical field and thus I do not consider that a technical contribution is provided merely by virtue of the field to which the invention relates

- 28 Ms Strachan drew an analogy between the present invention and that deemed patentable by the Board of Appeal of the EPO in *Sohei et al's Application T769/92*. She described the Sohei application as being a new user interface for business management software and said that the Board found that invention patentable because the new user interface and the associated file structures were of a technical character which made the computer easier to operate.
- 29 I confess that I find the decision in *Sohei* to be of little help in determining whether the present invention is patentable. I agree entirely with Ms Strachan that it provides additional evidence that the present invention is not excluded merely because of the nature of the data being handled. Nor do I disagree that the controller of the present invention is of a technical nature. However, beyond that I find *Sohei* to be of little assistance. As far as I can tell the Board considered the technical contribution to result from the particular functionality and implementation provided by that system and in particular, the provision of a single transfer slip to allow the input of 2 different sorts of management information, and the particular file structure adopted to process the data input using that type of slip. However, the functionality and implementation of the present invention is necessarily different and the *Sohei* decision does not help me assess the merits of the present case.
- 30 Ms Strachan also drew my attention to a number of patents granted by the UK Patent Office and the EPO in the area of workflow management in support of her argument that the present invention was patentable. It emerged at the hearing that the purpose for doing that was predominantly to support the argument that the present invention should not be excluded solely because workflow management could be viewed as a business method or activity. I do not need to be convinced on that point. A work flow processor is patentable (as is any other invention) if it makes a technical contribution. Beyond that, the relevance of the earlier granted patents is minimal since as I said to Ms Strachan at the hearing, each case must be decided on its individual facts and the facts are different on those earlier cases. Thus the fact that an examiner found what he considered to be a technical contribution in a particular case is of little consequence in my decision on the present application. I am certainly not bound to decide the present application on the basis of what has been granted previously.
- 31 I said earlier that I would come back to the arguments put forward in Ms Strachan's skeleton. Whilst they have not attempted to provide an explicit definition of "technical contribution", the UK courts, EPO Boards of Appeal and Comptroller's Hearing Officers have provided a large body of decisions in this area to help assess what does and does not constitute a technical contribution. Various sources have drawn upon those decisions to develop a series of potential sources of technical contribution. In her skeleton argument Ms

Strachan used the framework adopted by Singer and Stauder to demonstrate how the present invention provided the required technical contribution. They identified five potential sources of a technical contribution in a computer implemented invention which I shall summarise as being that a technical contribution can be provided if:

- i) The underlying problem to be solved is of technical nature;
- ii) The means used to solve the underlying problem are of technical nature;
- iii) Technical effects are achieved by solving the problem;
- iv) The details of the solution in the invention require technical considerations that imply a technical problem and
- v) The computer program claimed achieves a technical effect going beyond the normal physical interaction between the program and the computer.

32 I confess that I was not previously familiar with this particular reference. However, the potential sources of technical contribution identified are not new to me and I am perfectly happy to follow this framework subject to one comment, namely that the final source is actually a qualification of the third. Ms Strachan accepted this at the hearing and in her skeleton where her argument in relation to the fifth potential source added nothing to that offered for the third.

33 Ms Strachan's skeleton identified simpler bespoke configuration (and reconfiguration) as the underlying problem to be solved. I have already given my reasons above why I do not consider that (or any other problem solved by the invention) to provide a technical contribution.

34 As to the nature of the means used to solve the underlying problem, I agree entirely that they are technical. However the courts have made it perfectly clear that the presence of conventional computing equipment in the claim is not sufficient in UK law for an invention to avoid the exclusions from patentability, as exemplified by the Court of Appeal's decision in *Fujitsu*. As I acknowledged at the hearing, the EPO Boards of Appeal take a different approach but as has been made clear by the Comptroller's Hearing Officers on numerous occasions³, decisions of the Boards of Appeal are only persuasive where as decisions of the courts are binding on them. To decide that an invention was patentable because the claim included technical means (in this case computers) would be to allow form of claim to take precedent over substance and the courts have made it abundantly clear that that is not the correct thing to do. It would be a different story if the hardware were new. However, all the indications in the specification are that the hardware through which the invention is implemented is conventional. Any new functionality seems to me to be provided by the program by which the system is controlled. Thus I can see no technical contribution provided by the technical means through which the invention is implemented.

35 On technical effect, I said earlier that I considered the fifth of Singer and Stauder's sources to

³ See <http://www.patent.gov.uk/patent/legal/decisions/index.htm>

be a qualification of the third. In essence it means that to provide a technical contribution, the technical effect achieved when a program is run must go beyond the normal physical interaction between the program and the computer. In her skeleton, Ms Strachan said that the invention provided a technical effect at two different levels. At an internal level she said the invention

“models an organisation , models work flow processes, automatically controls a WFP, captures transaction data in real time from the WFP and automatically links and synchronises the real time data with the organization and process models. Within the data structure there is an interlinked chain of components which ties together the real time live transaction data feed and the models.

Thus the controller can provide the required organization and process modeling and workflow status monitoring with a selected external WFP.”

And at an external, “higher” level she said the real time automation achieved is analogous to real time processing of tangible items such as in a production line.

36 I cannot see anything in any of these processes to make the present invention patentable. Whilst I agree that modeling may in some circumstances be patentable, all that the present invention does in this regard is store a representation of the organisation and workflow processes. Whilst these can be modified, I do not consider this to constitute modeling in any sense that could be patentable. I have said earlier that the updating process seems to me to follow on as a consequence of automation of the workflow management process. Finally, whilst the analogy with production line manufacturing might at first sight look attractive, there is no escaping the fact that the invention is not concerned with such a “tangible” system. It is a system for controlling workflow in an electronic environment. I can see no technical contribution derivable from what is being controlled.

37 Finally, I can see nothing in the implementation of the invention which provides a technical contribution as per Singer and Stauder’s fourth source. The hardware is conventional. Furthermore, the lack of any disclosure as to how the invention achieves real time up-dating leaves me no choice but to conclude that the programming techniques needed to implement the invention are conventional too.

Summary

38 The present invention allows a manager to allocate resources to a business process to reflect the particular organizational set up and circumstances existing at a given time, to obtain up to date information on the status of the workflow process and ultimately control that process. Thus, as far as I can determine, what the inventors have done is develop a computer program to facilitate standard management practices in an electronic environment. I have been unable to identify any technical contribution made by the invention in doing that, even bearing in mind that I must give the Applicants the benefit of the doubt.

Decision

39 I have found the invention of claim 1 to fall within the business method and computer

program exclusions and moreover 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. Furthermore, I can find nothing in the dependent claims or in any other part of the specification that would provide support for any patentable claim. Accordingly I refuse this application under Section 18(3) on the grounds that the claimed invention is excluded by Section 1(2)(c).

Appeal

- 40 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