



12 May 2011

PATENTS ACT 1977

APPLICANT Oracle International Corporation

ISSUE Whether patent application
GB0907503.7 complies with
section 1(2) of the Act

HEARING OFFICER Jim Houlihan

Introduction

1. Patent application GB0907503.7 entitled "Data approval system and method" was filed on 30 April 2009 in the name of Oracle International Corporation and claimed a priority date of 14 July 2008 from a US patent application, US 12/172,982.
2. The examiner had raised objections in three rounds of examination reports that the claims did not comply with section 1(2) of the Act because they related to a computer program, as such. Consequently, the applicant's attorneys requested a hearing in a letter dated 22 November 2010.
3. The hearing was held on 17 March 2011. The applicants were represented by Matthew Cassie and Skone James of Gill Jennings & Every. The examiner, Mr Jake Collins, was also present.
4. In his official letter of 7 December 2010 Mr Collins summarized his arguments as to why the claims did not meet the patentability requirements of section 1(2) of the Act, by applying the four step test laid out by the Court of Appeal in *Aerotel/Macrossan* [2007] RPC 7. At the beginning of the hearing Mr Cassie agreed that Mr Collins' letter summarized fully the issues that he had raised in the previous correspondence with the applicant. I note that Mr Collins had previously also raised objections that the claims were not novel or inventive and related to a business method but on account of the agent's arguments and amendments he had withdrawn these objections.
5. The single issue before me therefore was whether the claims relate to a computer program as such. The set of claims under consideration were filed on 26 February 2010.

The application

6. The application relates to a system and method for managing data during the process of approving a transaction in a computerized system. It acknowledges that systems already exist which result in the modification of data during an approvals process, for example in approving promotion or pay rises by company HR departments. It says that in these existing systems the approvals systems have been developed separately for different approvals processes. In contrast, the application seeks to provide a system which can be applied to multiple approvals processes which, the application suggests, is therefore more flexible than those systems that were already known at the filing date.
7. The object of the invention is aptly described in paragraph 5 of the application which reads "...there is a requirement in the art for a flexible approvals system that can be efficiently produced with a minimal duplication of effort".
8. Amended claim 1 of the set of claims filed on 26 February 2010 reads:

A data approval system comprising:

a transaction model comprising program code for implementing one or more computer-implemented methods for use in an approval process, the approval process comprising an approval operation for one or more changes in data stored in a database;

a plurality of differentiated data-handling modules adapted to provide different methods for managing data during the approval process, wherein each module comprises program code for implementing one or more computer-implemented methods and produces a substantially identical modification in the database; and

a storage device for storing configuration parameters that are configurable for a particular approval process;

wherein the data approval system is adapted to select one or more data-handling modules from the plurality of modules to manage data during implementation of a particular transaction model method during the approval process based on the configuration parameters.

9. Claim 8 is an independent claim which refers to a method of managing an approval request. Although some of the features of claim 1 were not present in claim 8 Mr Cassie submitted that the issue of whether the invention claimed in both claim 1 and claim 8 related to a program, as such, is the same. I agreed that claim 8 therefore does not require separate consideration.

The Law

10. Section 1(2) of the Patents Act reads:

“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”.

The examiner had cited the following cases in his official letters:

Aerotel Ltd v Telco Holdings Ltd; Macrossan’s Application [2007] RPC 7 (hereinafter referred to as “Aerotel”)

Symbian Ltd v Comptroller-General of Patents [2008] EWCA CIB 1066 (hereinafter referred to as “Symbian”)

AT&T Knowledge Ventures’ LP and CVON Innovations Ltd’s Application v Comptroller-General of Patents [2009] EWHC 343 (Pat) (hereinafter referred to as “AT&T”)

Kapur [2008] v Comptroller-General of Patents EWHC 649 (Pat)

Autonomy Corporation Ltd v Comptroller-General of Patents [2008] EWHC 146 (Pat)

Research In Motion UK Ltd v Inpro Licensing [2006] RPC 20

Everest Software BL O/014/08 [2008]

11. The agent’s letter dated 8 March 2011 in preparation for the hearing drew my attention to *Aerotel*, *Symbian* and *AT&T* and also *Cranway Limited v Playtech Limited et.al. [2009] EWHC 1588 (Pat)*.

12. Only *Aerotel*, *Symbian* and *AT&T* were actually referred to at the hearing by the applicant’s attorneys. I shall therefore confine my decision to these cases as there was broad agreement between the applicant’s attorneys and the examiner that these cases were the most relevant to the issues in question.

13. At the beginning of the proceedings Mr Cassie agreed that it was appropriate to base this decision on the well-established four point test in *Aerotel* which is

as follows:

- i. Properly construe the claim;
 - ii. Identify the actual contribution;
 - iii. Ask whether the identified contribution falls solely within the excluded subject matter;
 - iv. Check whether the actual or alleged contribution is actually technical in nature.
14. The hearing proceeded to address each of these questions in sequence. While accepting the relevance of *Symbian*, Mr Cassie disagreed with the examiner's comment in his examination report (July 23 2010, paragraph 4) that the facts in this case were distinguished from *Symbian*. In his opinion the examiner had not followed the *ratio decidendi* in *Symbian*. The examiner clarified his opinion and agreed that *Symbian* was applicable. I agree.
15. It is appropriate at this juncture to comment on the applicability of the European Patent Office's decisions in two IBM cases which Mr Cassie had relied upon by saying that these cases had been endorsed by the UK Court of Appeal. The cases are: IBM CORP/Data processor network (1988) T06/83 [1990] O.J.E.P.O. 5 [1990] E.P.O.R 91 and IBM CORP/Computer-related invention (1988) T115/85, [1990] E.P.O.R 107.
16. I agree that UK Court of Appeal's comments about the IBM cases in *Symbian* represent that Court's endorsement of the approach taken by the EPO in these cases on the issue of "technical contribution". I note, in particular, that Lord Neuberger said in *Symbian* "*In deciding whether the Application reveals a "technical" contribution, it seems to us that the most reliable guidance is to be found in the Board's analysis in Vicom and the two IBM Corp. decisions, and in what this court said in Merrill Lynch and Gale. Those cases involve a consistent analysis, which should therefore be followed unless there is a very strong reason not to do so*".
17. Clearly then, I will follow the UK case law fully in forming my decision and take account of the points made by the EPOs Boards in Re. IBM with respect to the question of technical contribution.

Step I - Properly construe the claim

18. Claim, directed to a data approval system, has a number of related integers; a transactional model; a plurality of data-handling modules; configuration parameters stored in a storage device. This allows the system to select one or more of the data handling modules based on the configuration parameters.
19. There was agreement between the examiner and Mr Cassie about the construction of claim 1 and also claim 8. To me, both claims are clear and provide a firm basis on which to consider the next question of the *Aerotel* test.

Step 2 - Identify the actual contribution.

20. Mr Cassie began his submissions under this header with his opinions on the current knowledge, the prior art. He said it was accepted that approval systems exist. However, in his view if these needed to be able to handle data in a different way the program code would need to be changed in each application and that this may involve “*errors creeping in*” and compromise reliability. He made it plain that the contribution was not a better approval system in itself. The applicant was not claiming that each configuration of data handling is new. Rather, Mr Cassie submitted, the contribution is providing a new technical idea implemented by a computer program which enables data to be handled in a more flexible way. The kernel of the applicant’s contention about what the invention adds to the sum of human knowledge had been submitted in their letter of 25 February 2010 which reads:

“An approval system that provides a transaction model to implement an approval process, a particular transaction model method mapping onto one of a plurality of data-handling methods for updating a database, each of the data-handling methods achieving a substantially identical effect on the database, wherein the particular data-handling method used by a particular transaction model method is changeable based on configuration parameters”

21. Mr Skone James pointed out that on reflection the applicant’s contention was that “flexible” is a better term than “changeable”. Mr Collins confirmed that he agreed with this analysis, as indicated in his latest official letter of 7th December 2010.

22. Mr Cassie drew my attention to a particular passage on page 55 of the description was he said was really the nub of the inventive concept. This reads: “*The use of configuration parameters enables different software products implementing different approval processes to use different storage policies. To use a different storage policy all a developer or system administrator need do is change the entry of the configuration parameters for a particular storage policy*”. This, for example, could be an entry in a Java hash table which had been assigned a particular method name.

Step 3 - Ask whether the identified contribution falls solely within the excluded subject matter

23. In Mr Cassie’s view the transactional model of the approval system was a technical process carried out by a computer program. The approval system could be applied to variety of situations, for example rental of media, purchasing car rentals, hotel reservations etc. The data handling methods provide a choice about the way in which data at a lower level is handled. Mr Cassie submitted that this choice was a technical consideration. Referring to how this choice can be made Mr Cassie said “*The choice of which particular data handling module of use in each transaction method of a particular approvals process is configured by the configuration parameters stored in a storage device*”. He emphasized that the “*configuration parameters provide a flexible way for the low level data handling method to be chosen at each stage*

in a transactional approval process” and said that this could be done by a systems administrator as opposed to requiring reprogramming by a programmer.

24. In beginning his submissions on this point Mr Cassie noted the examiner’s withdrawal of a business method objection and inferred that this, in turn, provided an acknowledgement that the invention was technical. I do not agree with that line of argument. Because an invention does not fall foul of one of the exclusions detailed in section 1(2) of the Act does not mean it qualifies as technical. It may merely be due to the way in which an invention is defined in the claims.

25. Much of the discussion on this point centred on the *Symbian* decision and in particular Neuberger’s LJ reference to the EPO’s decisions in *Re IBM*, particularly in paragraph 57 of *Symbian* which reads:

“We also have some difficulty in seeing a logical or principled basis for holding that the contribution in the present case should not be treated as technical given the contribution in the two claimed inventions in the IBM Corp. decisions of the Board which were held to be technical. In particular, in IBM Corp./Data processor network, the “technical” contribution identified by the Board was, as explained in [88] of Aerotel, “the removal of limitations of prior art systems with the result that the data processing system was more flexible and had ... ‘improved communication systems between programs and files....”

26. As I have mentioned above, I agree that the reference made by the Court of Appeal to the *IBM* decisions is relevant to the question of technical contribution.

27. Mr Cassie said that *Symbian* essentially provides the test that if a system provides a better computer and solves a problem within a computer then it is not excluded as a computer program as such. I agree. He went on to emphasise that the invention in suit made the computer a better computer because it was more flexible and more reliable. He said that the increased reliability in *Symbian*’s invention was only a “knock-on” effect and did not directly lead to reliability. He submitted that increased reliability in *Symbian*’s invention only came about when users tried to make changes and additions to the dynamic link libraries (DLL). He also said that the increased speed in *Symbian* only came about because it allowed referencing by ordinal, instead of the prior art methods of referencing by name.

28. Mr Cassie surmised that if something provides a more flexible computer at a technical level it brings it above the level of a computer program as such. It is true that the Court of Appeal made reference to the “knock-on” effect of the program in *Symbian*. In its response on step 3 of the *Aerotel* test - whether the invention in *Symbian* was fully confined to excluded matter - the Court of Appeal said *“No because it has a knock-on effect of the computer working better as a matter of practical reality”*.

29. However, I am inclined to consider Mr Cassie's reference to a "knock-on" effect as stretching the interpretation of what the impact of the technical feature in question is. In one sense any impact of a feature within a wider technical system could be regarded as having a "knock-on" effect on the technicalities of the overall system. Rather, I consider the critical question to address in determining whether an impact is a technical one is to ask whether an invention has an impact on the infrastructure of the computer so that it works better in a technical sense.

30. Mr Cassie then referred to the five signposts laid out by Lewison J in *AT&T* and emphasized that they provided guidance to be taken in the context of answering the tests in *Symbian* and that they were not exhaustive. I have no problem with this approach. Below is the excerpt from the decision in *AT&T* which outlines the five signposts:

As Lord Neuberger pointed out, it is impossible to define the meaning of "technical effect" in this context, but it seems to me that useful signposts to a relevant technical effect are:

i) whether the claimed technical effect has a technical effect on a process which is carried on outside the computer;

ii) whether the claimed technical effect operates at the level of the architecture of the computer; that is to say whether the effect is produced irrespective of the data being processed or the applications being run;

iii) whether the claimed technical effect results in the computer being made to operate in a new way;

iv) whether there is an increase in the speed or reliability of the computer;

v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.

31. Mr Cassie highlighted signposts (ii) and (iv) and focused, in particular, on the level of architecture at which the invention in suit operates at. This was natural enough given that both *Symbian* and the *AT&T* signpost (ii) focus on the question of the level of architecture at which a program operates at. His submission was that the invention in suit operated at exactly the same level of architecture as in *Symbian* because the invention in suit operated at a level above the applications which could be run. He argued that the technical test was whether the invention was independent of the application being run. I disagree with Mr Cassie's interpretation of the technical test in *Symbian* on this point. I do not consider that *Symbian* establishes that as a matter of general principle if a program runs independently of applications then it is necessary technical.

32. I put the question to Mr Cassie that the invention in suit offered flexibility at the level of handling the data (by the handling modules configured by the configuration parameters). He agreed and said that the invention provides "a

way in which data is handled at a low level to be changed”.

33. To my understanding the level at which the invention in *Symbian* operated at was at a higher level of architecture - the interface between the operating systems and applications. I cannot see that in the invention in suit. It is true that it operates at a level above low level discrete applications but it does not seem to provide an interface between an operating system and applications in the same way as *Symbian's* invention does.
34. Having re-read the specification in suit I think my point is reinforced by paragraph 49 which reads *“In order to provide flexibility within the data approval system, the present invention allows a developer or system administrator to select one of the plurality of data handling modules to provide a high-level data handling function (my emphasis) in the approval process”.*
35. The invention in *Symbian* enhances the compatibility of different application programs with modules and functions in a DLL and overcomes fragmentation of operating system/user interface platform. In my view that is operating within the infrastructure of the computer. The DLL system interfaces directly with the operation system. To my mind the present invention is operating not only at a different level within a computer's architecture but more importantly the function and purpose of its operation is different from the invention in *Symbian*.
36. Mr Cassie elaborated further on this point saying that the invention in suit was broadly applicable across a range of data management applications and is not limited to one. Consequently, he submitted that the invention is provided at the interface between the applications and the operating system. I think this is a critical issue in deciding this matter. I would agree that the system works across different data management applications. But I cannot see how it directly impacts on the operating system and consequently cannot envisage a direct line of a “knock-on” effect of the invention in suit on the workings of the computer.
37. The invention in suit allows a user to apply an approval process to different applications. Even if I take Mr Cassie's point that the invention in suit function's at a relatively high level of architecture in my view, as a matter of practical reality, it is distinct in function from impacting on the operating system. Plainly, in any computer, however many vast and multifaceted programs it contained, it is theoretically possible to draw a thread between any piece of code and the operating system. This being the case then the vast majority of programs could justify being outside the exclusion which would then clearly render the exclusion meaningless.
38. Central to Mr Cassie's argument was the issue of flexibility. He rightly pointed out that flexibility afforded by a computer program in question is an important consideration as it is specifically referred to in the EPO's IBM decisions which the Court of Appeal specifically highlighted as recited in the passage above. Mr Cassie succinctly put his case on this point by saying that the *“technical problem is how to configure the computer to make a more flexible*

implementation of an approval system". He said the invention in suit solved this problem.

39. I accept that the invention presents advantages to administrators of approval processes and I do not disagree that it affords the user more flexibility. However, in my view this flexibility is not technical in character. Rather the flexibility derives from the functionality of the approvals program code itself. It might be in some circumstances that such flexibility enables a computer to work better from the end user's perspective. But this could be said of any new, modified or updated program. Otherwise why would software developers seek to constantly improve programs. To my mind the flexibility provided by the invention lays in allowing an approvals administrator to manage different datasets in different transaction processes by selecting one from a plurality of data handling modules. That selection and the ability to choose and change selections is, in my view, not a technical process.
40. Next I will consider signpost 4 as defined in AT&T. Does the program provide a faster and more reliable computer? Mr Cassie submits that it does. I can see that from the end user's perspective it might provide a faster system if they needed to approve different transactions. However, my view is that this speed is not inherent within the operation of the computer itself but how the user can switch between applications. I cannot see any impact of the invention in suit on how the integral workings of the computer are speeded up. Mr Cassie did not make any particular submissions on the potential of the invention to enhance the speed of the computer.
41. The issue of reliability was discussed at some length. Here, Mr James drew parallels between the present case and *Symbian* where he said the increased reliability in *Symbian* came about in which the content of the libraries was changed. He submitted that, in the same way, the invention in suit enables the user to control the way in which to decide which data handling module to use and makes it much easier to select data handling modules using configuration parameters.
42. Mr Cassie submitted that because the invention avoids the need for reprogramming which could introduce errors that it produced a more reliable computer. That to me is an indirect consequence not a direct one. The Examiner, Mr Collins, commented on this point. In his view the reliability of the data handling modules would remain the same irrespective of the facility to change between them. While he accepted that computers would have to be reprogrammed to run different applications or that different data handling modules could be run on different computers, the reliability of those modules remains unaffected by the invention. In Mr Collins' view the reliability of the data handling modules was only dependant on their original code. Having explored the application on the "reliability" point and having listened carefully to Mr Cassie's submissions I do not consider that invention in suit itself improves the inherent reliability of the computer within which it operates.

Step 4 - Check whether the actual or alleged contribution is actually technical in nature.

43. Mr Cassie did not make any particular submissions under this heading. I would agree that the issue of whether the invention is technical in nature has been fully considered in the arguments and submissions under step 3. I am also guided by Neuberger LJ comments in *Symbian* (paragraph 11) indicating that it is reasonable to conflate steps 3 and step 4 of *Aerotel*.
44. In concluding Mr Cassie made the point that my decision should not be prejudiced by the fact that the applicants are in the field of computing. I can confirm that I would not take the applicants field of activity in account or even the particular role of an inventor, such as whether his job description referred to him as a “programmer”. Rather, I have focused solely on the nature of the alleged invention and whether it has a technical character.

Conclusions

45. Central to the applicant’s attorneys’ arguments was that the invention makes a technical contribution (and therefore does not lie solely in the field of excluded subject matter) because it makes the computer more flexible and more reliable and therefore a better computer, even if this is a “knock on” effect of the invention. They also argued that the invention was inherently technical because it operated at a high level of architecture within the infrastructure of the computer and that is similar to the level of architecture of the invention in *Symbian*.
46. However, I am not convinced that the applicant’s invention has a “knock on” effect, as a matter of practical reality, on the working of the computer which makes it more reliable or more flexible. In my view the contribution which the invention appears to make lies in how the operator handles data. I can accept that this provides an advantage insofar as it allows the user the flexibility to move between applications but that flexibility is not technical. Having considered the specification and the attorneys’ submissions I cannot see a clear interface between the invention in suit and a computer’s operating system that effects the technical functioning of a computer nor can I find evidence that inherently it would make a computer more reliable. The applicant’s invention might be a positive contribution to the art but, unfortunately for them, I do not regard it as a technical contribution but consider that it lies solely in the field of excluded subject matter.
47. Consequently, I hold that the claimed invention relates to a computer program, as such. I have carefully considered the specification and cannot see any saving amendments and note that the applicant’s attorneys have not proposed any. I therefore refuse the application for failing to comply with section 1(2) of the Act.

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

Jim Houlihan
Deputy Director acting for the Comptroller