BL O/026/07

19 January 2007

PATENTS ACT 1977

APPLICANT Fisher-Rosemount Systems, Inc

ISSUE Whether patent application number GB 0308581.8 complies with section 1(2)

HEARING OFFICER J J Elbro

DECISION

Introduction

1 Application no GB 0308581.8 was filed on 14 April 2003, claiming priority from an earlier US application dated 15 April 2002, and published under serial no. GB 2389427 A on 10 December 2003. An examination report was issued on 28 February 2005, and rounds of correspondence followed between the examiner and the applicant's agents. The examiner has maintained throughout an objection that the invention is excluded from patentability under section 1(2) of the Patents Act 1977, which the applicant has not been able to overcome despite amendment of the specification.

2 The matter therefore came before me at a hearing on 20 November 2006, at which the applicant was represented by its patent attorney, Dr Alex Lockey of Forrester Ketley & Co. The examiner, Mr Tyrone Moore, also attended.

3 The correspondence between the examiner and the applicant's agents during prosecution of the application was based on the law as it then stood in the light of case law. However on 27 October 2006, after the hearing had been appointed but before it was held, the Court of Appeal handed down its judgment in the matters of *Aerotel Ltd v Telco Holdings Ltd* and *Macrossan's Application* [2006] EWCA Civ 1371 ("*Aerotel/Macrossan*") setting out a new test for patentability, as outlined below. The examiner therefore wrote to the applicant in a letter dated 13 November 2006 re-assessing the application in the light of this new test and indicating that he still believed the invention to be excluded.

4 Dr Lockey replied in a letter faxed the day of the hearing arguing that the invention as presently claimed was still patentable. However, in the event that I did not agree, he submitted an alternative set of claims for my consideration.

The invention

5 The invention concerns the modification of a process control system application. The sole independent claim, claim 1, reads as follows in the patent:

> A system operable to create a custom function block for use with a process system having a process control system application with a function block component library, the system being operable to create the custom function block by performing steps comprising:-
>
> facilitating user selection of a function block component from the function block component library;
>
> facilitating user modification of the function block component such that the modified function block component includes a procedure not included in the function block component library;
>
> defining the custom function block to include the modified function block component; and
>
> incorporating the custom function block in the process control system application for use in the process control system.

6 The application is notably silent on what the "processes" that are controlled by the "process control system" actually are. Rather, the application discusses the use of distributed control systems, where one or more user interface devices, such as workstations, are connected by a databus to one or more controllers. These controllers are generally located physically close to a controlled process and are connected to various electronic monitoring and field devices such as electronic sensors, transmitters, valve positioners etc. that are located throughout the process. It is well known for process control system controllers to include one or more "function blocks" to perform control functions or portions of a control function. These are often found in standard libraries provided by a manufacturer, but can also be individually written by a programmer if there is no suitable library function.

Alternative Claims

7 The alternative claims filed by Dr Lockey differ only in claim 1, which reads as follows:

> A system for modifying operation of a process control system to permit the process control system to interface with another device or system,
>
> the process control system having a process control system application and a function block component library,
>
> the system being operable to create a custom function block to permit the process control system to interface with another device of system by performing steps comprising:-
>
> facilitating user selection of a function block component from the function block component library;
>
> facilitating user modification of the function block component such that the modified function block component includes a procedure not included in the function block component library,
>
> the step of facilitating user modification of the function block component comprising providing a source file in a high level programming language and permitting user modification of the source file, such that the modified function block component permits the

process control system to interface with the other device or system;

defining the custom function block to include the modified function block component; and

incorporating the custom function block in the process control system application to operate the process control system such that the process control system interfaces with the other device or system.

The law

8 The examiner raised an objection under section 1(2)(c) of the Patents Act 1977 that the invention is not patentable because it relates to a program for a computer as such. As explained in the notice published by the Patent Office on 2 November 2006[1], the starting point for determining whether an invention falls within the exclusions of section 1(2) is now the judgment of the Court of Appeal in *Aerotel/Macrossan*. It is not expected that this will fundamentally change the boundary between what is and is not patentable in the UK, except possibly for the occasional borderline case. In *Aerotel/Macrossan* the court reviewed the case law on the interpretation of section 1(2) and approved a new four-step test for the assessment of patentability, namely:

1) Properly construe the claim

2) Identify the actual contribution

3) Ask whether it falls solely within the excluded matter

4) Check whether the contribution is actually technical in nature.

9 As stated at paragraphs 45 – 47 of the judgment, reconciling the new test with the earlier judgments of the Court of Appeal in *Merrill Lynch* [1989] RPC 561 and *Fujitsu* [1997] RPC 608, the fourth step of checking whether the contribution is technical may not be necessary because the third step – asking whether the contribution is solely of excluded matter – should have covered the point.

10 At the hearing, Dr Lockey agreed that this was the correct test to apply.

Arguments and analysis

Construing present claim 1

11 The construction of current claim 1 is not disputed. The examiner's construction of the claim was that it is directed to

a system operable to create a function block, the system having a process control system application with a function block component library, the creation of the custom function block being achieved by the system assisting the user in selecting a function block component from the function block component library, modifying the selected function block component by introducing a

1 http://www.patent.gov.uk/patent/p-decisionmaking/p-law/p-law-notice/p-law-notice-subjectmatter.htm

> feature not present in the library and incorporating the modified function block into the process control system application.

This was accepted in the agent's letter of 20 November. The agent agreed with the examiner's construction of "custom function block" as meaning a function block which is created to the specifications of the user. The agent also acknowledges that a function block is a set of instructions used to operate a device within the process control system (while denying that the invention is a computer program *per se*).

Identifying the contribution made by the invention as presently claimed

12 Turning now to step 2 of the test and the actual contribution made by the invention, Dr Lockey put forward several advantages from being able to modify the control system in the manner claimed by the invention:

> it enables easy adaptation;
>
> it allows the new function block to be tested at a central point before being put up into the system; and
>
> compared with the prior art, this method allowed a user to modify the function block at a local controller rather than centrally.

13 The opening part of the description of the application also emphasises that compared to the "typical" implementation in the prior art, current ways of integrating a user-defined function block with the rest of the control system generally do not allow communication between such a custom block and controllers directly.

14 However, Dr Lockey was clear at the hearing that there is no new form of process control taking place in that any desired changes to the process control application could in the prior art be made by hiring a competent programmer to reprogram the application appropriately by rewriting a function block from scratch if the library function blocks did not suffice. He contended that the contribution made was that a user was more easily able to define a custom function block without requiring low-level programming skills or the like.

15 I must confess that I find it hard to see this contribution in claim 1, or indeed any of the dependent claims. It seems to me that claim 1 might cover a system allowing a programmer to rewrite part of the code (the function block) from scratch. Be that as it may, this could perhaps be rectified by amendment and for the purposes of determining whether a patentable invention could be obtained from this application I am prepared to accept that the alleged contribution is "a system which makes it easier for a user to modify a control system" – a characterisation which Dr Lockey accepted at the hearing. I note that this system will be a computer program as it actually modifies the "control system application"

Whether the contribution falls solely within excluded matter

16 Dr Lockey's letter of 20 November correctly highlights that although the system for modifying computer blocks would in practice be implemented using software, the mere fact that the invention is implemented in software does not mean that it is a computer program as such.

17 At the hearing Dr Lockey argued that in the present case the invention was modifying the operation of a system as a whole, with a view to modifying operation of the process performed by the system; the invention in this case affects the operation of a process control system – a manufacturing system which is broken down into modular components – and that, as such, it went beyond being solely a computer program.

18 He also made comparisons between the present case and the examples cited in the practice notice. This was primarily to distinguish the case from the examples which were refused, but in his letter he drew parallels with the office decision *Touch Clarity* (O/198/06), the conclusions of which are approved of in view of *Aerotel/Macrossan* in the Practice Notice. He drew an analogy between control of a robot (restricting the claim to which was deemed to render the invention patentable) and control of the process in the present case. He argued that because the present invention was restricted to use in a process control system, this would similarly render it patentable.

19 I think these arguments are misconceived. Dr Lockey accepted that the contribution does not lie in a new way of controlling a process. One does not have a better process control system after using the invention than what could have been achieved in the prior art by a skilled programmer. So the analogy with *Touch Clarity* – where the contribution has been deemed "a better robot" - breaks down. As noted above, the alleged contribution is instead a system that made it easier to get there. The process control itself is not affected.

20 In my view, this system is solely a computer program which allows effective editing of another computer program (the "control system application"). It thus fails step 3 of the *Aerotel/Macrossan* test.

21 Given my finding on this point, I do not need to apply the fourth step as noted above.

22 The dependent claims relate either to the detail of the function block or as to how the user modification occurs. Dr Lockey described this at the hearing as the "actual mechanics" and accepted that this would not take the invention outside of excluded matter if I held claim 1 excluded. I agree.

<u>The Alternative set of claims</u>

23 As noted above, the only distinction between the two sets of claims is in claim 1. The alternative claim 1 more closely ties the invention to the specific context of a process control system; the current claim 1 only requires that the custom function block is "for" a process system, and there was some dispute between the applicant and the examiner as to how limiting this was. There is also some further limitation in terms of exactly how the user modification

occurs (using a source file in a high level programming language) and that the modification is to permit the process control system to interface with the other device or system.

24 At the hearing, Dr Lockey argued that defined this way, the invention provided a contribution in a way of interfacing between components or systems, going beyond a mere computer program and providing the advantages of interfacing incompatible devices, providing added functionality to obsolete systems.

25 I do not agree. This functionality can be provided in the prior art by a skilled programmer rewriting the code. The alleged contribution here is once again, that this is easier as a result of using the claimed system. Hence, by my reasoning above, I consider the alternative version of claim 1 does not define a patentable invention either.

26 In addition, I have read the entire specification and can find no basis for any possible amendment which could result in a claim or claims which would be allowable.

Conclusion and next steps

27 I therefore find that the invention as presently claimed and as claimed in the alternative claims submitted with the agent's letter of 20 November is excluded from patentability under section 1(2). I have also found that no amendment is possible which could avoid this objection. I therefore refuse the application in accordance with section 18(3).

Appeal

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

J J ELBRO
Deputy Director acting for the Comptroller