



20 February 2009

**PATENTS ACT 1977**

APPLICANT                      Epic Systems Corporation

ISSUE                              Whether patent application number GB  
0313574.6 complies with section 1(2)

HEARING OFFICER              R C Kennell

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**DECISION**

- 1      This application results from the entry into the national phase in the UK of international application no. PCT/US01/49377, which was filed on 20 December 2001 claiming priorities of 22 December 2000 and 10 December 2001 from earlier US applications. It was published under serial no. WO 02/052392 A2 on 4 July 2002 and reprinted under serial no. GB 2386228 A on entry to the national phase.
- 2      Amendments having failed to overcome her objection that the invention was not patentable within the meaning of section 1(2) of the Act, the examiner offered a hearing in her letter of 10 June 2005. The period for putting the application in order under the Patent Rules 1995 which were then in force was due to expire on 27 June 2005.
- 3      No reply was received. A hearing still apparently being pending, the examiner wrote on 16 November 2005 and 15 February 2007 to explain changes in the relevant case law; in the latter instance she restated her objection in accordance with the test in the *Aerotel* case<sup>1</sup> discussed below. The applicant's patent attorneys (Barker Brettell) confirmed by telephone in each case that they did not intend to reply. In a telephone call on 2 March 2007, the Office's Litigation Section stated that in the absence of a reply the Office would take the view that the attorneys did not disagree with the examiner's arguments and that the case would go to a hearing officer for a decision on the papers.
- 4      Unfortunately, for reasons unknown the application appears to have gone astray within the Office after that, and the fact that a decision is outstanding has only

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<sup>1</sup> *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371, [2007] RPC 7

recently come to light. I regret any inconvenience which the long delay has caused, and will now decide the matter on the basis of the papers on file.

- 5 The applicant has however not requested any extension of the prescribed period for putting the application in order, which expired 3½ years ago. The application can therefore proceed only if on that date it complied with the Act and with the Rules then in force.

### **The invention**

- 6 The invention is concerned with the generation of instructions for patient care (“orders”) in an acute care environment. Often in this situation a large number of orders for medication, tests and nurse intervention will have to be placed at the same time by doctors, nurses and administrative or ancillary staff, and will require complex parameters such as frequency, interval, count, dose and route to be specified. As the specification explains, known electronic ordering systems are cumbersome because they require a user to select an order from a database and enter the relevant parameters as text in a series of windows.
- 7 The invention takes account of the fact that few cases require an order to be created from scratch with parameters that could not be anticipated, since the likely values for a given order belong to a predictable set. It therefore filters the information in the database to present the user with a limited set of parameter value options selected on the basis of user profile and patient history. In one embodiment a series of order templates, each having a set of predicted parameters which can be used to populate the order, is similarly filtered to present the user with a limited set of order templates.
- 8 The latest amendments to the claims were filed with the applicant’s letter of 11 May 2005. These consist of two alternative sets; the independent claims of each set are recited in an annex to this decision.

### **The law and its interpretation**

- 9 Section 1(2) 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) a discovery, scientific theory or mathematical method;
- (b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;
- (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;
- (d) the presentation of information;

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.”

- 10 In the *Aerotel* case at paragraphs 40-48 the Court of Appeal approved a four-step

approach in order to decide whether an invention was excluded under section 1(2):

- 1) Properly construe the claim.
- 2) Identify the actual contribution (although at the application stage this might have to be the alleged contribution); as explained at paragraph 43 this is “an exercise in judgment probably involving the problem said to be solved, how the invention works, what its advantages are”; it is essentially a matter of determining what it is the inventor has really added to human knowledge, and involves looking at substance, not form.
- 3) Ask whether it falls solely within the excluded matter, which (see paragraph 45) is merely an expression of the “as such” qualification of section 1(2).
- 4) If the third step has not covered it, check whether the actual or alleged contribution is actually technical.

11 The interpretation of section 1(2) has recently been given further consideration by the Court of Appeal in *Symbian Ltd's Application* [2008] EWHC Civ 1066, decided on 8 October 2008. *Symbian* arose under the computer program exclusion, but as with *Aerotel*, the Court gave guidance of a more general nature on section 1(2). Although the Court approached the question of excluded matter primarily on the basis of whether there was a technical contribution, it was quite clear (see paragraphs 8-15 of the decision) that the structured four-step approach to the question in *Aerotel* was never intended to be a new departure in domestic law; that it remained bound by its previous decisions which rested on whether the contribution was technical; and that any differences in the two approaches should affect neither the applicable principles nor the outcome in any particular case. Indeed the Court at paragraph 59 considered its conclusion in the light of the *Aerotel* approach. It therefore remains appropriate for me to apply the *Aerotel* test, but with due regard to the clarification that *Symbian* provides as to when a computer program makes a technical contribution.

12 *Symbian* also clarifies the extent to which I should follow the decisions of the European Patent Office (EPO) Boards, section 1(2) being amongst those sections of the Act which are by virtue of section 130(7) intended to have the same effect as corresponding provisions of the European Patent Convention (in this case Arts. 52(2) and (3)). In the absence of any settled approach to the matter by the Boards, *Symbian* (see paragraph 51) binds me to follow the approach taken by the EPO Boards in *Vicom* (T 208/84), *IBM Corp/Data processor network* (T 06/83) and *IBM Corp/Computer-related invention* (T 115/85) and by the Court of Appeal in *Merrill Lynch's Application* [1989] RPC 561 and *Gale's Application* [1991] RPC 305.

13 I do not therefore see that any useful purpose is now to be served by referring to any other of the pre-*Aerotel* EPO Board decisions that were argued during the prosecution of the application. However, I bear in mind the Court's belief in *Symbian* that it was possible, at least in principle, to reconcile the test with a later

decision of the EPO Board in *Duns Licensing Associates* (T 0154/04) - which was critical of the *Aerotel* approach - by conflating the third and fourth *Aerotel* steps. The Court was fortified in its view by the approach taken in a more recent decision of the Board in *Gameaccount Ltd* (T 1543/06) holding that patent protection should not be conferred “where the only identifiable contribution of the claimed technical implementation to the state of the art is the excluded subject-matter itself”. The Court stated at paragraph 15 that the *Gameaccount* approach:

“.... plainly requires one to identify the contribution (which equates to stage 2 in *Aerotel*) in order to decide whether that contribution is solely “the excluded subject-matter itself” (equating to stage 3 in *Aerotel*), while emphasising that the contribution must be “technical” (effectively stage 4 in *Aerotel*). The order in which the stages are dealt with is different, but that should affect neither the applicable principles nor the outcome in any particular case.”

- 14 I deal briefly with two further points of law which the applicant pressed very strongly in correspondence before *Aerotel* was decided. First, that on public policy a narrow construction of the exclusions was mandated by the UK’s obligations under TRIPS Art 27.1 requiring (with some exceptions) patents to be available “for inventions in all fields of technology”. However, as the examiner has explained, the TRIPS Agreement does not override any existing UK law. In any case, as is clear from *Aerotel* (paragraph 16) and *Symbian* (paragraph 21), it merely begs the question as to the extent to which a computer program invention is within a “field of technology”.
- 15 Second, that a burden of proof lies on the examiner to show that an invention lies within an excluded category and that the benefit of any doubt should be given to the applicant. Whatever might have been the position at the time this argument was raised, it is no longer tenable in the light of *Aerotel*: as paragraph 5 makes clear, any pure question of law should be decided during prosecution and it is not enough at that stage to show that the application merely arguably covers patentable subject-matter.

### **Arguments and analysis**

- 16 In her letter of 15 February 2007 applying the *Aerotel* test, the examiner took the view that in the claims of set 1 relating to a dynamic order composer device the device itself was no more than a standard computer system and the contribution therefore lay in the instructions which were given to the device, which would determine responses to the data input by the user. For the claims of set 2 relating to a method of manufacturing a product, she considered that the product was no more than a list compiled by a user choosing from a selection of parameters and the contribution was the process for providing the selection from which the choice was to be made. In each case she considered the contribution to be solely a computer program.
- 17 Bearing in mind that the contribution is to be determined as a matter of substance rather than by the specific form in which the invention is claimed, I agree that in all the claims presented for my consideration (including the graphical user

interface claims of set 2 which the examiner did not specifically mention) the contribution lies in a computer program. I do not accept the applicant's argument that the contribution is a new physical system; as the examiner has explained, the invention appears to lie in software running on standard hardware which remains unchanged.

- 18 Nor do I accept the argument that the invention becomes more than just a computer program because it operates on data representing real physical entities to manufacture something real - an order - which may be output in physical form. A similar argument could be put for pretty well any application program in order to try to turn it into a method for manufacturing an article, and again I think it exalts the form of the claims over the substance of the invention.
- 19 On this point, the applicant sought to draw an analogy with *Vicom*. In that case the EPO Board held that a mathematical method was not excluded if it was used in a technical process carried out a physical entity resulting in changes to the entity. The applicant argued that there was likewise a technical process because the user clicked on areas of a graphical user interface to manufacture a product which could be a sheet of instructions – analogous to the photograph which was produced in *Vicom*. However, it seems to me that this argument is flawed. I cannot see that there is any corresponding “physical entity” on which a supposedly technical process might be said to be operating, and in any case as I read *Vicom* the Board's decision did not turn on the form of the output.
- 20 The applicant rightly reminds me that *Vicom* (see paragraph 16 of the reasons for the decision) held that an invention which would otherwise be patentable should not be excluded merely because it relied on a computer program for its implementation. That begs the question of whether there is any such “otherwise patentable” method here, and in any case I think it misses the point in issue. As the same paragraph of *Vicom* states, “decisive is what technical contribution the invention as defined in the claim when considered as a whole makes to the known art”. I therefore consider that the real question in the light of *Vicom* and *Symbian* is whether the computer program makes a technical contribution. On this point, I am mindful that the examiner's reasoning pre-dated *Symbian* and (the above-mentioned telephone discussion of 2 March 2007 notwithstanding) I therefore believe it appropriate to revisit the applicant's arguments as to the advantages of the invention.
- 21 As I read paragraphs 52-59 of *Symbian*, I must look at the “practical reality” of what the program achieves. If it brings about a technical innovation whether within or outside the computer that will normally suffice to ensure patentability. The Court, noting the example in *Aerotel* of “a change in the speed with which the computer works”, drew a distinction between something which was just a better program and something which resulted in a faster and more reliable computer – that result arising in *Symbian* because the program solved a technical problem lying within the computer itself.
- 22 As the applicant emphasised in its letters of 25 February and 11 May 2005, the present invention takes advantage of how data is stored on a computer in order to predict and pre-select the order templates and parameters most likely to be

used. As a result, it reduces the amount of data to be entered by a user and hence also reduces the amount of data to be transferred across a network. Further, by selecting a parameter from a pre-selected choice rather than textual entry, the likelihood of errors is reduced and the efficiency of processing data is therefore increased.

- 23 It seems to me that these are indeed the practical realities of what the program achieves, leading to greater speed and efficiency in producing orders. Nevertheless this does not come about because the computer itself is being caused to operate in any technically differently way, or because (as in *Symbian*) any technical problem with the way in which it was programmed to operate has been overcome. In my view the contribution is a program for carrying out a better administrative procedure which even if not carried out by computer would constitute a method for doing business (although no point was taken during prosecution of the application as to whether the invention might be excluded on that ground). I do not therefore consider that the contribution is technical in nature.

### **Conclusion**

- 24 Since it is clear from paragraph 27 of *Symbian* that the use of a computer program does not mean that something otherwise excluded as a business method becomes patentable, I consider the invention to be excluded under section 1(2) as both a computer program and a business method as such.
- 25 I therefore conclude that the claims of both sets 1 and 2 filed with the applicant's letter of 11 May 2005 did not meet the examiner's outstanding objections. In consequence, the application was not in order at the expiry on 27 June 2005 of the period prescribed by rule 34 of the Patents Rules 1995. The point is academic, but having read the specification I do not consider that any saving amendment to avoid the section 1(2) objection would have been possible
- 26 The application is therefore treated as refused under section 20(1).

### **Appeal**

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

**R C KENNEL**

Deputy Director acting for the Comptroller

## **ANNEX TO DECISION O/049/09**

### Claim set 1

1. A dynamic order composer device for providing users with decision support tools and features triggered by an order entry activity, the order composer device being coupled to and operating in conjunction with an integrated medical record system, the order composer device comprising:

means to identify one or more orders that correspond to an order type selected by the user, the orders identified based on a user profile associated with the user, order records and patient data stored in a database repository, the database repository being part of the integrated medical record system;

means to retrieve from the database repository and identify one or more order parameters associated with each of the one or more orders that correspond to the selected order type;

means to retrieve from the database repository and identify default values for at least a portion of the one or more order parameters associated with each of the one or more orders;

means to provide the user with the ability to modify the default values associated with the user;

means to update the default values stored in the database repository to reflect any modified default values;

means to store the order parameters and default parameter values in the database repository as entered by the user;

means to generate a first alert, the first alert associated with data stored in the integrated medical record system to aid a user in an order selection process;

means to generate a second alert, the second alert associated with patient record data to indicate a specified order is specifically indicated or counter-indicated for a patient's condition;

means to generate a third alert, the third alert associated with a query to be answered each time a specified order is placed, the third alert including the required query;

means to generate a guideline list, the guideline list associated with guidelines retained within the integral medical records system to help the user select orders and order parameters consistent with recommended care protocols;

means to generate a dynamic order data summary having the order parameters and default parameter values associated with one or more orders selected by the user.

### Claim set 2

1. A method of manufacturing a product, the product being an order transmittal comprising:

accessing a database repository holding a large set of possible order templates and order parameters available for the order;

generating a predictive set of order templates from the order templates available in the database, the predictive set of order templates being significantly smaller than the set of possible order templates;

displaying a list of the predictive set of order templates on a display;

generating, for an order template selected from the predictive set of order

templates, a predictive set of order parameters from the order parameters available in the database, the predictive set of order parameters being significantly smaller than the set of possible order parameters;  
displaying the predictive set of order parameters on a display;  
producing an order transmittal constructed using a selected order template and parameters selected from the predictive set of order parameters.

8. A graphical user interface for use on a client computer coupled to an enterprise electronic medical records system comprising:  
means for indicating order parameters for a selected clinical order, wherein the order parameters are a reduced and predictive set of order parameters selected from a data repository of possible order parameters available for the order.

10. A method of manufacturing a product, the product comprising a sheet of printed instructions or a display of instructions on a screen, the method comprising:  
accessing a data repository of possible order parameters available for the order;  
producing a reduced set of parameters from the order parameters available in the database;  
displaying the reduced set of order parameters on a display;  
producing the product by printing parameters selected from the reduced set of order parameters on a sheet or displaying parameters selected from the reduced set of order parameters on a screen.

**R C KENNEL**  
20 February 2009