

PATENTS ACT 1977

APPLICANT GE Medical Technology Services Inc

ISSUE Whether patent application number GB
0425836.4 complies with section 1(2)

HEARING OFFICER Mrs S E Chalmers

DECISION

Introduction

- 1 This decision concerns the issue of whether the invention claimed in UK patent application GB 0402836.4 relates to non-excluded subject matter as required by section 1(2) of the Act. The application is entitled "System and method for providing potential problem solutions to a service provider". It was filed on 24 November 2004 claiming priority from a US application and was published as GB 2408604A.
- 2 During the examination process, the examiner reported that the invention defined in the claims is excluded as a method for doing business and as a program for a computer. Despite a number of rounds of amendment and re-examination, the Applicants and the examiner were not able to resolve this issue and a hearing was held on 9 July May 2008. The Applicants were represented by Dr Grant Bedford of GE International Inc's London Patent Operation. Mr Ben Widdows, the examiner, also attended.

The invention

- 3 The invention concerns the identification of potential solutions to a problem associated with medical devices such as medical imaging systems. As the specification explains, the complexity of these devices makes identifying and correcting problems difficult and time-consuming. The solution proposed by the applicant is to automate this fault-finding process. This is done by sending data, for example operating parameters, from the medical device to a server which searches a database containing historic data for the device. The server then uses the data from the medical device and the historic data to search a database of solutions to problems associated with the medical device and finally transmits potential solution(s) to a user. The user can then download the solution in the

form of a program to the medical device.

- 4 The claims I was asked to consider at the hearing were filed on 20 February 2008 and there are 6 claims in total. Claim 1 reads:

A system for automatically providing a user with at least one potential solution to a problem associated with a medical device, comprising:

a server system operable to receive data from a remote medical device, said data including a request for service containing medical imaging system data including the model number of the medical device, the server system comprising:

a first database containing historic data for a plurality of medical devices related to the medical device;

a second database containing a plurality of solutions to problems associated with a plurality of medical devices; and

an application service provider that directs the server system to use the data from the medical device to identify a problem and automatically search the first database for historic data for the medical device and to automatically search the second database for at least one potential solution to the problem associated with the medical device using the data from the medical device and the historic data for the medical device and, the server system transmits the at least one potential solution to a problem associated with the medical device to a remote computer, further wherein the at least one potential solution to the problem comprises a program to be downloaded to the medical device.

- 5 Claims 2-5 relate to details of the operation of the system and claim 6 is an omnibus claim to the system.

The law and its interpretation

- 6 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

7 It is not disputed that the assessment of patentability under section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel Ltd v Telco Holdings Ltd* and *Macrossan's Application* [2006] EWCA Civ 1371, [2007] RPC 7 ("*Aerotel*"). In this case the court reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of patentability, namely:

- 1) Properly construe the claim
- 2) Identify the actual (or alleged) contribution
- 3) Ask whether it falls solely within the excluded matter
- 4) Check whether the contribution is actually technical in nature.

8 The operation of the test is explained at paragraphs 40-48 of the judgment. Paragraph 43 confirms that identification of the contribution is essentially a matter of determining what it is the inventor has really added to human knowledge, and involves looking at substance, not form. Paragraphs 46-47 explain that the fourth step of checking whether the contribution is technical may not be necessary because the third step should have covered the point.

Arguments and analysis

Construe the claims

9 The first step of the *Aerotel* test requires me to construe the claims and I agree with the examiner that the claims relate to a method of automatically providing a user with at least one potential solution to a problem associated with a medical device. However, as I said at the hearing, it is not entirely clear to me from the claims how the problem is identified but I do not think anything turns on this as far as this decision is concerned.

Identify the contribution

10 The second step is to identify the contribution. This was the subject of discussion at the hearing and the source of the difference of opinion that exists between Dr Bedford and the examiner.

11 In paragraph 43 of *Aerotel*, it is made clear that identifying the contribution is probably best summed up as determining what the inventor has really added to human knowledge, and this involves looking at the substance and not the form of the claims.

12 In essence, Dr Bedford argued that the actual contribution comprised the combination of the claimed hardware and the software components which provided a synergistic effect through the automated management and monitoring of distributed complex medical devices to diagnose problems with the devices

and identify the optimal solutions. He emphasized that, rather than just presenting a set of results, the aim was to determine which of those possible solutions was the most likely. As Dr Bedford explained, it was not always possible to foresee problems that might occur. The provision of a server system with centralized databases enabled you to connect various devices to the system so they could be polled periodically to determine their status, check various errors on them such that faults could be corrected using a single updating process. For example, a latent fault might not be apparent from looking at one machine: it was only by taking data from a number of separate machines that you could pick up there was a latent fault and be able to identify and correct it automatically. The claimed system could therefore be used to identify previously unknown problems or ones you could not identify from one machine alone.

- 13 The examiner, on the other hand, contends that the hardware is conventional. In his view, what the applicant has really added to the stock of human knowledge lies in the identification of at least one potential solution – in the form of a downloadable program – to a problem associated with a medical imaging device based upon received data, including a model number, and historic data for the device..
- 14 So what *in substance* has really been added to human knowledge? In determining the contribution made by the claimed invention, ascertaining what is or is not known is not the end of the matter. It does not necessarily follow that because a particular feature of a system is known, any contribution made by that particular feature can be dismissed. This is because it is not as simple as slicing the invention up into its component parts and then assessing the novelty or inventiveness of each of those parts. What is required is to assess the contribution made by the claimed invention as a whole, and so the interaction between the various features (known or otherwise) needs to be considered when making that assessment.
- 15 In this case, having carefully considered the description and the applicant's arguments, I am not satisfied that there is any interaction between the hardware (which is known) and the software for it to be said that there is a contribution made by the system as a whole. I am also not persuaded by Dr Bedford's contention that the contribution lies in identifying the optimal solutions to any problems. I accept that the description mentions the possibility of prioritizing the potential solutions but no weight is attached to this nor does this step feature in any of the claims. Furthermore, it is not clear to me how the system may be used in a pre-emptive way to identify faults, as Dr Bedford suggests, and I can find no reference to this technique either in the claims or elsewhere in the specification.
- 16 As far as I can see the claimed contribution lies in programming the server to carry out database searches in response to received data and to present the results in a particular way. I therefore agree with the examiner that the contribution lies in the identification of at least one potential solution – in the form of a downloadable program – to a problem associated with a medical imaging device based upon received data, including a model number, and historic data for the device.

Does the contribution fall solely within excluded subject matter?

- 17 It seems to me that if the contribution made by the invention, considered as a matter of substance rather than the form of claim (see paragraph 43 of *Aerotel*), consists solely of a method for doing business and/or of a program for a computer, then the invention will be excluded under section 1(2) and will not be saved by reference to a possible technical effect. I should not now give the applicant benefit of any doubt as to whether the invention arguably covers patentable subject-matter, as paragraph 5 of the judgment makes clear. Nevertheless, it bears emphasising that the exclusion of section 1(2) applies only where the invention relates to excluded matter as such. I am conscious of the warning given in paragraph 22 of *Aerotel* that just because an invention involves the use of a computer program does not necessarily mean it is excluded from patentability. I must therefore be satisfied that the contribution lies solely in a computer program before finding against the applicant. Paragraphs 68 and 69 of *Aerotel* also make clear that the business method exclusion is not limited to abstract matters nor to a completed transaction.
- 18 So, does the contribution fall solely within the excluded subject matter? Dr Bedford argued that by automating the fault-finding and correction process, it was possible to take a global view by collecting data from a number of devices and analyzing this data to identify patterns and problems that were not previously known and could not be identified from one machine alone. In his view, the advantages obtained through this synergy (to use Dr Bedford's word) between the hardware and software provided a technical effect which took the claimed invention beyond a purely administrative or management process and a computer program *as such*.
- 19 I do not agree. In short, I can find nothing to suggest that the advantages that Dr Bedford identifies are anything other than what you would expect to gain as a result of computerizing an otherwise laborious manual process. Indeed, I note that the specification includes embodiments where the database searches are conducted manually to identify potential solutions. Further, the contribution does not solve any technical shortcoming in the computer itself: I can find nothing in the application to show any effect over and above that to be expected from the mere loading of a program into a computer. I therefore find that the contribution made by the claims boils down to nothing more than a computer program and hence sits squarely within the computer program exclusion.
- 20 For completeness, I will now consider whether the contribution is excluded as a method for doing business. Dr Bedford argued that the contribution was a technical process for identifying technical faults in technical systems that you did not previously know existed which involved analyzing a number of individual systems. In his view, this could not be purely administrative because you were gaining new information. I fully appreciate that the information gained through compiling fault data from many networked devices may be beneficial but I cannot agree that this is a "technical" effect as Dr Bedford asserts. In my view, the contribution relates solely to an administrative process relating to the management of medical devices in which a potential solution to a problem is identified by interrogating a database using received and historic information. I therefore find that the contribution made by the claims is a method for doing

business *as such*.

Check whether the contribution is technical in nature

- 21 I have found above that the contribution relates to a method for doing business and a computer program *as such* and that there is no technical effect. Hence I do not need to apply step 4 of the test.

Decision

- 22 I have found that the contribution made by the invention falls solely within excluded subject matter and that the invention defined therein is excluded as a program for a computer and a method for doing business *as such*. I have read the specification carefully and I can see nothing in any of the dependant claims or anywhere else in the specification that could be reasonably expected to form the basis of a valid claim. I therefore refuse the application under section 18(3).

Appeal

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

MRS S E CHALMERS

Deputy Director acting for the Comptroller