

PATENTS ACT 1977

APPLICANT JDA Software Group, Inc.

ISSUE Whether patent application number
GB0907144.0 complies with section 1(2)

HEARING OFFICER H Jones

DECISION**Introduction**

- 1 Patent application GB0907144.0 relates to a computer-implemented method of dynamically routing salvage equipment in a transportation network. It was filed on 27th April 2009 and published as GB2459388 on 28th October 2009. The application claims an earlier priority date from US applications filed on 25th April 2008 and 22nd April 2009.
- 2 The first examination report issued on 27th October 2011 had the effect of extending the period for putting the application in order to 27th October 2012. In this first examination report, the examiner maintained the view expressed at search stage that the invention falls squarely within the exceptions set out in section 1(2) and is not patentable - at search, the examiner issued a report under section 17(5)b stating that a search would serve no useful purpose because it related to excluded subject matter. As things currently stand, no search of the prior art has been conducted.
- 3 Despite attempts to amend the application to overcome the section 1(2) objection, the applicant has been unable to convince the examiner otherwise and has requested a hearing to decide the matter. A hearing was held on 26th September at which Mr Toby Gosnall and Mr Richard Abel of Barker Brettell LLP attended as patent attorneys representing the applicant. The issue I have to decide is whether the invention is excluded by section 1(2) as computer program or a business method.

The invention

- 4 The application relates to a method of determining a transportation plan for delivery of goods and retrieval of associated salvage equipment, e.g. pallets, cages, containers, throughout a transportation network. The network may comprise a number of distribution centres, supplier locations, stores and delivery locations, and the aim of the invention is to optimise the scheduling of fleet operations for the delivery of goods and the collection of salvage equipment once the goods have been

delivered and unloaded. The method involves the modelling of a virtual location as a destination for salvage equipment and in constraining the virtual location to be at a zero distance from a de-kit location and an infinite distance from other locations. The modelling is undertaken by computer and a transportation plan is developed in the form of delivery schedules for fleet operators. The modelling of virtual locations in this way allows the optimum transportation plan to be determined more quickly and with less search space than the prior art. The application describes an added level of sophistication whereby the model is updated dynamically and the transportation plan revised in real time based on performance data from within the transportation network, e.g. delivery times, capacity, costs, etc.

5 An amended set of claims was filed on 14th March 2012 having a single independent claim as set out below:

1. A method of controlling a transportation vehicle to transport salvage equipment in a transportation network, the method comprising:

determining, using a computer, a transportation plan for delivery of shipments and picking up of salvage equipment throughout the transportation network, comprising

a) generating an initial virtual hub assignment as a destination for salvage equipment, the virtual hub modelled as zero distance from a dekit location and an infinite distance from other locations;

b) varying the initial virtual hub assignment to generate multiple solutions; and

c) searching the multiple solutions to determine an optimal solution; and

d) determining a route for salvage equipment to the virtual location; and

moving transportation vehicles in accordance with the transportation plan.

The law

6 The relevant provision in relation to excluded inventions is section 1(2), which reads:

1(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) 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 In order to decide whether an invention relates to subject matter excluded by section 1(2), the Court of Appeal has said that the issue must be decided by answering the now well-established question of whether the invention reveals a technical contribution to the state of the art (cf *Symbian*¹, *Aerotel*²). The Court of Appeal in *Aerotel* set out the following four-step test to help decide the issue:

- 1) *construe the claim;*
- 2) *identify the actual (or alleged) contribution;*
- 3) *ask whether it falls solely within the excluded subject matter;*
- 4) *check whether the actual or alleged contribution is actually technical in nature.*

Arguments and analysis

8 In his skeleton argument submitted shortly before the hearing and also at the hearing itself, Mr Gosnall agreed that the basis for determining whether an invention is patentable should be the “technical contribution” test set out by the Court of Appeal. Much of the subsequent discussion at hearing was focussed on the nature of the contribution made by the invention and in assessing what the Courts have previously found to be technical, i.e. steps three and four of the *Aerotel* test.

9 The examiner suggests that the facts of this application are so similar to those considered by the Patents Court in *Cappellini*³ that it would be very difficult to arrive at any other finding than the present invention is not patentable. In reviewing the facts of *Cappellini* at the hearing, it was agreed that despite the superficial similarity of the two cases, there was a subtle distinction between the two cases that might give rise to a different conclusion: the invention in *Cappellini* involves identifying an optimum transport plan for routing fleet operations whereas the contribution in the present application lies in improving the efficiency and/or speed of the model that generates the plan. It is necessary therefore to consider whether this difference leads to a different conclusion to the one arrived at by the Patents Court.

10 There is no particular difficulty in construing the meaning of claim 1 or in identifying the contribution allegedly made by the invention, although Mr Gosnall did accept that some form of amendment was necessary to claim 1 in order to remove the suggestion that the invention was in any way a method of controlling a transportation vehicle (no more than a weekend shopping list is a method of controlling my wife). The contribution made by the invention is a better transportation model which generates a route more quickly and more efficiently (in terms of computer resources) than the prior art. This contribution quite clearly does not fall within the meaning of a business method, but since the model is required to be run on a computer then I consider that it does fall within the meaning of a computer program. The next step is to decide whether the contribution is technical.

11 The examiner has relied on the signposts set out by Lewison J in *AT&T/CVON*⁴ as a guide in deciding what is technical. Mr Gosnall suggests that one of these signposts actually supports his argument that the contribution is technical. He also adds that the Court of Appeal has long accepted the principle set out in the EPO Board of

¹ *Symbian Ltd. v Comptroller-General of Patents* [2008] EWCA Civ 1066

² *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371

³ *Cappellini's Application & Bloomberg LP's Application* [2007] EWHC 476 (Pat)

⁴ *AT&T Knowledge Ventures/CVON Innovations v Comptroller of Patents* [2009] EWHC 343 (Pat)

Appeal's decision in *Vicom*⁵ that a computer programmed to perform a technical process is patentable if that process would be patentable when it were not programmed on a computer. I consider this latter point to be moot since the transportation model and the benefits it provides in terms of faster processing and efficient use of computer resources cannot exist outside the computer.

12 Turning to the signposts in *AT&T/CVON*, it goes without saying that these do not provide a definitive account of what is and what isn't technical, but they do provide useful guidance of where the Courts have determined a technical contribution can be made. The signposts are as follows:

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; and

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

13 The examiner argues that the use of a computer to carry out calculations or other processes may well be quicker than doing the same operations by hand, and indeed the invention may well provide a faster method of modelling a transportation network than other computer-implemented solutions, but the invention does not materially affect the way that the computer operates or allows it to perform its operations in a faster or more reliable way. At the hearing the examiner put this another way by saying that invention does not allow the computer to carry out more processing steps in a given time; instead, it simply reduces the number of steps a conventional computer needs to perform in order to determine the transportation plan.

14 Mr Gosnall's argument is that the speed of the computer when executing the computer is quicker than the speed of the same computer when executing prior art methods, and therefore the fourth of the *AT&T/CVON* signposts is met.

15 I find that I am in agreement with the examiner on this. The increase in speed or reliability of the computer referred to in the fourth signpost is the type of effect found in *Symbian* where the performance of the computer itself is improved. The contribution here is in improving the efficiency of the model and not in improving the efficiency of the computer. In other words, the computer processes the modelling instructions and shuffles data as efficiently as it did before, but the benefit is derived from having a more efficient model that requires fewer instructions and data processing steps in arriving at a result. In my view, there is nothing in these signposts to suggest that a transportation model which generates a route more

⁵ *Vicom* T0208/84

quickly and more efficiently (in terms of computer resources) is to be regarded as technical in nature.

- 16 Mr Gosnall's final point is that the EPO appears to be granting patents on inventions that the UK IPO would regard as not being technical, and that the UK IPO should be aiming for consistency with the EPO. In his skeleton argument, he referred to a number of granted European patents relating to satellite navigation technology and suggested that the UK IPO would not regard such technology as being patentable. The suggestion is that the present invention would be allowed by the EPO and therefore we should allow it here. At the hearing, I made the point that at least one of the European patents in his skeleton argument had an equivalent GB application that had been granted by the UK IPO. The examiner also made reference to the following comments of Mr John Baldwin QC as Deputy Judge in *Really Virtual*⁶ (para 18):

*Before doing so I record that Mr Davis drew my attention to the different approach of the EPO when assessing inherent patentability under Art. 52. He submitted that the EPO route was easier to follow and that it was open to me to follow it and thereafter to confirm that I had reached the right answer by using the route stipulated by the Court of Appeal in *Symbian*. He said that since both routes were supposed to lead to the same result, such would be a useful exercise. I decline Mr Davis' invitation. I am bound to follow the *Aerotel* route, although not blindly, and to take into account the guidance given in the authorities identified in *Symbian*. I also have the further help from the observations of Lewison J in *AT&T Knowledge Ventures*. If I get the same answer using the EPO route I will have achieved nothing (except, perhaps, some satisfaction) and if I get a different answer I will also have achieved nothing (except, perhaps, some frustration).*

- 17 Like Mr Baldwin QC, I am bound to follow the *Aerotel and Symbian* route and to take account of the clear guidance given in the precedent authorities of the UK Courts. In doing so, I have found that the contribution made by the inventions falls solely within the meaning of a computer program and that it is not technical in nature.

Conclusion

- 18 I find that the invention set out above is excluded under section 1(2)(c) as a computer program. I can find no possible amendment in the specification that will render the claims patentable. I therefore refuse the application under section 18(3).

Appeal

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

H Jones

Deputy Director acting for the Comptroller

⁶ *Really Virtual v Comptroller of Patents* [2012] EWHC 1086 (Ch)