



## PATENTS ACT 1977

APPLICANT Motorola Solutions, Inc.

ISSUE Whether patent application GB1710518.0 complies with section 1(2) of the Patents Act 1977

HEARING OFFICER Phil Thorpe

---

## DECISION

### Introduction

1. Patent Application GB1710518.0 was filed on 30<sup>th</sup> June 2017 (with a priority date of 7<sup>th</sup> July 2016) and published as GB 2552423 A on 24<sup>th</sup> January 2018.
2. Despite a number of rounds of correspondence between the examiner and the applicant's attorney, and amendment of the claims, the applicant was unable to satisfy the examiner that the application met the requirements of the Patents Act 1977 (the Act). In particular the examiner was not satisfied that the claimed invention is not excluded from patentability.
3. The applicant's attorney (Dr Tolfts), in her letter of 26<sup>th</sup> August 2020, requested that a Hearing Officer make a decision on the papers. My reasoning considers the arguments presented in the letter from Dr Tolfts of 9<sup>th</sup> March 2020.

### The Invention

4. The invention relates to dispatching different types of law enforcement patrols in order to achieve a desired deterrent effect on patrol routes. The invention receives information from a law enforcement patrol relating to the nature of the patrol, for example whether it is on foot or by vehicle, and the route that is being taken by that patrol. The invention determines an achieved deterrence effect of that patrol. Historical and/or real-time crime information is used by the invention to then determine a difference between a desired threshold level of deterrence and the achieved level of deterrence for a particular patrol route. The invention will then identify an available type of law enforcement patrol that will compensate for the difference and then cause an available law enforcement patrol to be dispatched to the particular patrol route.
5. The latest claims were filed on 3<sup>rd</sup> July 2018. Claim 1 reads as follows:

*A method of improving dispatch of different types of law enforcement patrols for achieving a desired deterrent effect, the method comprising:  
receiving, at a computing device, patrol route information indicating patrol routes taken by first law enforcement patrols out of a plurality of patrol routes in a patrollable geographic area;*

*determining, by the computing device, a type of law enforcement patrol for each of the first law enforcement patrols via one of a local or remotely stored first look-up table and patrol type information transmitted by and received from the respective first law enforcement patrols;*

*determining, by the computing device, a deterrent effect parameter associated with each type of the law enforcement patrols for each of the first law enforcement patrols, via one of a local or remotely stored second look-up table and deterrent effect parameter information transmitted by and received from the respective first law enforcement patrols;*

*determining, at the computing device and as a function of the determined deterrent effect parameter associated with each of the first law enforcement patrols, a threshold level of deterrence reached for each of the plurality of patrol routes taken in the patrollable geographic area;*

*determining, at the computing device and as a function of historical and/or real-time crime information associated with the patrollable geographic area, a threshold level of deterrence desired for each of the plurality of patrol routes;  
identifying, at the computing device, a first patrol route of the plurality of patrol routes having a first associated threshold level of deterrence reached that is less than a first associated threshold level of deterrence desired;*

*identifying, at the computing device and as a function of a difference between the first associated threshold level of deterrence reached and the first associated threshold level of deterrence desired, a particular type of second law enforcement patrol having a sufficient associated deterrent effect factor to compensate for the difference;*

*identifying, at the computing device, an available responding second law enforcement patrol of the particular type for dispatch to the first patrol route;  
and one of (i) transmitting, by the computing device, a dispatch instruction instructing the available responding second law enforcement patrol to proceed to the first patrol route and (ii) transmitting a dispatch instruction to a dispatcher identifying the available responding second law enforcement patrol and the first patrol route.*

6. There is another independent claim, claim 18. This has a very similar scope to claim 1 and will stand or fall with claim 1.

## **The Law**

7. The examiner has raised an objection under section 1(2) of the Patents Act 1977 that the invention is not patentable because it relates to one or more categories

of excluded matter. The relevant provisions of this section of the Act are shown with added emphasis below:

*1(2) It is hereby declared that the following (amongst other things) are not inventions for the purpose of the Act, that is to say, anything which consists of*

...

*(c) a scheme, rule, or method for...**doing business, or a program for a computer;***

*—  
but the foregoing provisions shall prevent anything from being treated as an invention for the purposes of the Act only to the extent that a patent or application for a patent relates to that thing as such.*

8. As explained in the notice published by the UK Intellectual Property Office (IPO) on the 8<sup>th</sup> December 2008<sup>1</sup>, the starting point for determining whether an invention falls within the exclusions of section 1(2) is the judgment of the Court of Appeal in *Aerotel/Macrossan*<sup>2</sup>.
9. The interpretation of section 1(2) has been considered by the Court of Appeal in *Symbian*<sup>3</sup>. *Symbian* arose under the computer program exclusion, but as with its previous decision in *Aerotel* the Court gave general guidance 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 nevertheless (at paragraph 59) considered its conclusion in the light of the *Aerotel* approach. The Court was quite clear (see paragraphs 8-15) 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, particularly *Merrill Lynch*<sup>4</sup> 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.
10. Subject to the clarification provided by *Symbian*, it is therefore appropriate to proceed on the basis of the four-step approach explained at paragraphs 40–48 of *Aerotel* namely:
  - (1) *Properly construe the claim.*
  - (2) *Identify the actual contribution (although at the application stage this might have to be the alleged contribution).*
  - (3) *Ask whether it falls solely within the excluded matter.*
  - (4) *If the third step has not covered it, check whether the actual or alleged contribution is actually technical.*

## **Applying the Aerotel test**

### *Step 1 - Properly construe the claim*

11. There does not seem to be any problem with how the claims should be construed. Dr Tolfts' letter states that she agrees with the way that the examiner

---

<sup>1</sup> <http://www.ipo.gov.uk/pro-types/pro-patent/p-law/p-pn/p-pn-computer.htm>

<sup>2</sup> *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371; [2007] RPC 7

<sup>3</sup> *Symbian Ltd v Comptroller-General of Patents*, [2009] RPC 1

<sup>4</sup> *Merrill Lynch's Appn.* [1989] RPC 561

has construed the claims (in the exam report of 11<sup>th</sup> October 2019) as being the wording of claim 1 (set out above), with claim 18 having essentially the same scope.

*Step 2 – Identify the actual contribution*

12. I would note that no search has been performed for the invention in this application however the corresponding US application has been searched and granted. The claims of the granted US patent are similar in scope to the claims in issue here hence I am content to accept the invention is for the purpose of this decision novel and inventive. On that basis and taking into account Dr Tolfts' submission and the claims in context I accept the contribution essentially as suggested by Dr Tolfts namely:

*a computer implemented method of transmitting dispatch information to different types of law enforcement patrols (foot patrols, vehicle patrols, air patrols for example) for a range of geographic areas of different size and potential different terrains based on an assessment of the deterrent effect provided by a recent patrol and the required deterrent effect.*

*Steps 3 and 4 Ask whether it falls solely within the excluded matter and check whether the actual or alleged contribution is actually technical.*

13. I will consider steps 3 and 4 together.

*Program for a computer*

14. The examiner considered that the invention was excluded as a computer program. During the examination of the application the relevance of the signposts in *AT&T/CVON*<sup>5</sup> were therefore considered. Lewison J. (as he then was) set out five signposts that he considered to be helpful when considering whether a computer program makes a technical contribution. In *HTC*<sup>6</sup> the signposts were reformulated slightly in light of the decision in *Gemstar*<sup>7</sup>. The signposts 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 the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer.*
- v) Whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.*

---

<sup>5</sup> *AT&T Knowledge Venture/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat); [2009] FSR 19

<sup>6</sup> *HTC v Apple* [2013] EWCA Civ 451,

<sup>7</sup> *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2009] EWHC 3068 (Pat); [2010] RPC 10

15. It is important to stress that these signposts are just guidelines. They are not gateposts or hurdles that need to be individually or collectively overcome by the applicant. Rather they are a non-exhaustive list of some of the factors that can indicate whether a contribution may be technical. Dr Tolfts, in her letter of 9<sup>th</sup> March 2020, suggests that signposts i), iii) and v) demonstrate that the invention here does involve a technical contribution.
16. Dr Tolfts argues that the application meets the criteria of signpost i) because a dispatch instruction is transmitted from a computer device to be received by a second law enforcement patrol. Dr Tolfts argues that this is a technical effect outside the computer because it involves the display of relevant dispatch instructions based on real-time geographic information and resource allocation information.
17. Dr Tolfts relies on a similar argument in respect of signpost v). She contends that the invention solves a technical problem of how to improve the dispatch of different types of law enforcement patrols for achieving a desired deterrent effect. It does so by taking account of real time information about events, namely patrols, occurring in geographical locations as well as historic geographical information to determine what resources should be allocated and then transmitting dispatch instructions.
18. Simply providing an output from one computing device to another device does not in itself satisfy signpost i). In *Lantana*<sup>8</sup> the sending data across a network was part of the prior art and was not considered to provide a relevant technical contribution. Here it is not argued that the idea of sending commands or dispatch instructions for receipt by a remote device was not already known at the earliest date of the invention and hence following similar reasoning to *Lantana* there is no technical contribution merely in the transmission of the dispatch instruction to another device. In fairness to Dr Tolfts I do not believe that she is simply arguing this but rather it is also the nature of the information that is being transmitted that brings the invention within signpost i). In particular it is that the dispatch instructions are based on real-time geographic information and resource allocation information. This does I believe strengthen the argument however it is still not enough.
19. I considered the relevance of using real time data in inventions relating to the efficient deployment of law enforcement assets in several recent decisions<sup>9</sup> where Dr Tolfts represented the same applicant as here. In those decisions I referenced the Patent Court's decision in *Capellini*<sup>10</sup>. The invention there related to a system for planning and varying the route(s) that carriers should take when delivering packages. More specifically, it was a computer implemented method of enabling a carrier to describe a path (or route) that he plans to take, and also establishing the extent to which an individual carrier can deviate from the planned route. By allowing each carrier to deviate from the originally planned route, added flexibility is built into the system because for example two carriers can be diverted

---

<sup>8</sup> *Lantana Ltd v The Comptroller General of Patents, Design and Trade Marks* [2014] EWCA Civ 1463

<sup>9</sup> See O/800/18, O/030/20, O/236/20 and O/560/20.

<sup>10</sup> *Bloomberg LLP and Cappellini's Applications* [2007] EWHC 476 (Pat)

from their route by a short distance to enable them to meet at a new “node” or “relay point” and exchange one or more packages.

20. In O/800/18 I addressed the issue of the use real time data as follows:

“19. Dr Tolfts noted that in Cappellini, the judge stated that the invention did not have any real-world effect. She then argued that the invention claimed in the current application did have a real-world effect, as it directed the pursuit assets in a more efficient and effective manner. I am not convinced that Dr Tolfts characterisation of Cappellini is entirely accurate since the invention there does have a real-world effect as it too directs assets, ie carriers in a way that results in a more efficient parcel delivery service.

20. Dr Tolfts also argued that the use of real time information distinguished the invention here from that in Cappellini as well as the fact that the starting and end points in Cappellini are fixed whereas here they can change. I accept that the invention here does use real time information for example information obtained from video cameras, however the sources of that information appear entirely conventional. Whilst it is not clear whether the invention in Cappellini provided for use with real time data, I do not believe that would have saved that application. The contribution here and in Cappellini relates to how the data, whether it be real time or not, is used. In both cases it is to provide routing instructions for assets. That was not considered to be a relevant technical contribution in Cappellini and I believe it is also not a relevant technical contribution in this case. I do not believe that the question of whether the start and end points are fixed or variable alters this.”

21. I would add that there is nothing before me to suggest that how the real time data, that is the location and type of patrol, is obtained here uses anything other than conventional equipment. Hence in line with these earlier decisions, I am not persuaded that the use of real time data here provides a relevant technical contribution.

22. The examiner here has also referenced the office decision in *GE Aviation Systems LLC*<sup>11</sup>. The invention there was concerned with managing a maintenance routine for an aircraft with a maintenance system comprising multiple mobile communication terminals such as laptops located about the aircraft in data communication with each other. A controller executes a maintenance software program comprising maintenance tests corresponding to components of the aircraft. A maintenance test is assigned to the terminal located closest to a component under test. In doing so it makes use of real time data relating to the location of terminals in order to determine where tasks are sent. This was however not considered enough to provide the necessary technical contribution.

23. Whilst the facts of this previous cases differ from those here, it does lend some further support to my finding that the invention here does not provide a technical effect on a process outside of the computer as suggested by Dr Tolfts and as envisaged by signpost i).

24. I am also not persuaded that signpost v) points to the invention here being allowable. Further I do not believe it demonstrates that a technical problem has been solved by the invention. As I have noted, the application does not suggest that there is any technical problem to be overcome in obtaining and processing the data and then transmitting the instructions to the

---

<sup>11</sup> *GE Aviation Systems LLC* BL O/421/19

patrol. Indeed, entirely conventional apparatus is used to perform these steps. Rather the real problem that is being addressed by the invention is how to use that data to allocate patrol resources to achieve a desired deterrent effect. That is not a technical problem in the sense envisaged by signpost v) and further, the solution provided by the invention is not a technical solution.

25. Dr Tolfts also argues that signpost iii) is relevant here. She notes that the invention here is, on the basis of the grant of the corresponding US patent, novel and inventive and that therefore a computer running the invention will be operating in a new way. That may be true however the logical extension of what Dr Tolfts is arguing would be that all new and inventive computer programs would be patentable. That is not what the legislation, underpinned by a considerable weight of case law provides for nor is it what signpost iii) relates to. Rather what the signpost is referring to is whether the computer itself is made to operate in a new way. Here the computer is operating in a conventional way albeit that it is running a new piece of software.
26. Signposts ii) and iv) were not discussed by Dr Tofts, and I agree that they are not relevant to the application.
27. Hence none of the signposts point to any technical contribution. Further taking a step back and considering the invention as a whole then I can see no technical contribution. I therefore consider that the invention is excluded as a computer program.

#### *Method of doing business*

28. Dr Tolfts states in her letter of 9<sup>th</sup> March 2020 that the application does not relate to financial or commercial activities, or to administrative, organisational or managerial activities so is not a business method.

29. I addressed a similar argument from Dr Tolfts in O/800/18 where I noted:

“21. Dr Tolfts also argued that the business method exclusion was relevant in Cappellini because the invention was concerned with a clearly commercial operation namely the delivery of parcels. The allocation of resources such as the police to capture fugitives is however she contended not a commercial activity and hence an invention directed to that purpose could not be considered a business method.

22. The Courts and the IPO have however not restricted the expression “doing business” to just financial or commercial activities, but have considered that it also embraces administrative, organisational and managerial activities. This is borne out in guidance provided in the IPO’s Manual of Patent Practice which Dr Tolfts was clearly familiar with. That guidance refers for example to decisions such as *Aerotel/Macrossan* where the invention related to the idea of having three document trays - “in”, “out” and “too difficult” and *Wills’ Application* which related to the provision of cards to be held by a school and the parents or grandparents of a child so as to provide an immediate source of accurate, up-to-date information in the event that the child goes missing. The provision of directions to enable a fugitive to be captured is in my view an administrative or organisational activity within the meaning of a method of doing business.”

30. The provision of patrol instructions to provide a required level of deterrence is likewise is likewise an administrative or organisational activity within the meaning of a method of doing business.

## **Conclusion**

31. Having carefully considered the arguments, I am of the view that the problem addressed by the claimed invention is purely administrative, with no technical content. That the invention is implemented by a computer which in itself is technical does not confer a technical contribution to an invention which would be otherwise lacking in that respect.
32. I therefore find that the invention claimed in GB1710518.0 falls solely within matter excluded under section 1(2) as a program for a computer as such and a method of doing business as such.

## **Appeal**

33. Any appeal must be lodged within 28 days after the date of this decision.

**PHIL THORPE**

Deputy Director, acting for the Comptroller