



## PATENTS ACT 1977

APPLICANT Motorola Solutions, Inc.

ISSUE Whether patent application GB1502844.2 complies with the requirements of section 1(2)

HEARING OFFICER P Mason

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### DECISION

#### Introduction

- 1 The decision relates to patent application GB1502844.2 (“the application”) entitled “*Method and apparatus for identifying a suspect through multiple correlated device identities*”. The application is derived from a PCT application published as WO 2014/039240. This was filed on 20 August 2013 and claims an earlier priority date of 5 September 2012 from US application 13/603589. The application entered the GB national phase on 20 February 2015 and was subsequently re-published as GB2519707.
- 2 Despite several rounds of amendment and correspondence, the applicant has been unable to convince the examiner that the invention defined in the claims is patentable under Section 1(2) of the Patents Act 1977 (“the Act”). In particular the examiner maintains the invention relates to a computer program and a method for doing business as such. The matter came before me at a hearing by telephone on 13 May 2019. The applicant was represented by Mrs. Pippa Tolfts of Optimus Patents Limited.
- 3 Apart from a few outstanding clarity issues, all other matters have been resolved. The only issue for me to decide here is whether the claimed invention is excluded from being patented under Section 1(2) of the Act.
- 4 An amended set of claims was filed on 2 May 2019. It was agreed that these claims should be the ones considered at the hearing and therefore in this decision. I am grateful for the applicant’s skeleton arguments that were filed before the hearing, also on 2 May 2019.

#### The invention

- 5 The invention is concerned with identifying a suspect at a crime scene. In particular the invention involves taking information from a large number of mobile devices (e.g. mobile phones); identifying a subset of devices common to two separate criminal

events; determining route information for this subset of devices; and activating cameras along a predicted path.

- 6 The application currently has 11 claims including an independent method claim (claim 1) and a corresponding apparatus claim (claim 6). Claim 1 and claim 6 are of very similar scope and will stand or fall together. In the discussion that follows I will consider claim 1 which reads as follows:

*A method for identifying suspect devices across multiple criminal events at different locations, the method comprising the steps of:*

*continuously or periodically receiving, at an electronic server from a plurality of distinctly different over-the-air networks, sets of device identification (ID) information identifying devices, access point ID information identifying access points to which the devices are associated, and access point association/dis-association information identifying windows of time during which the devices are associated with the respective access point before dis-associating with the respective access point, and storing each set of device ID information, access point ID information, and access point association/dis-association as an entry in a device association database;*

*receiving, via a graphical user interface at the electronic server, a first location and first time of a first criminal event;*

*determining, by the electronic server, a first window of time associated with the first criminal event within a predetermined time period before and after the first time of the first criminal event;*

*determining, by the electronic server via location information provided accompanying the information identifying access points or via accessing an access point location database, the plurality of first access points that are located within a first predetermined threshold distance from the first location;*

*determining, by the electronic server by accessing the device association database, a first group of devices consisting of every device that associated with any one of the plurality of first access points at any time during the first window of time via electronic device identifiers associated with the first group of devices, the electronic device identifiers selected from one or more of a media access 802.11x(MAC) address, an International Mobile Subscriber Identity (IMSI), a Temporary Mobile Subscriber Identity (TMSI), or an International Mobile Equipment Identifier (IMEI),*

*receiving, via the graphical user interface at the electronic server, a second location and a second time of a second criminal event;*

*determining, by the electronic server, a second window of time associated with the second criminal event within the predetermined time period before and after the second time of the second criminal event;*

*determining, by the electronic server via the location information provided accompanying the information identifying access points or via accessing the access point location database, the plurality of second access points that are located within a second predetermined threshold distance from the second location;*

*determining, by the electronic server by accessing the device association database, a second group of devices consisting of every device that associated with any one of the plurality of second access points at any time during the*

*second window of time via electronic device identifiers associated with the second group of devices; and*

*determining, by the electronic server, potential suspect(s) by determining a subset of devices common to the first group of devices and the second group of devices, and responsively outputting, by the electronic server via a graphical user interface, the identified subset of devices common to the first group of devices and the second group of devices as suspect devices in the first and second criminal events;*

*determining, by the electronic server via the access point association/disassociation information in the device association database, route information for the subset of devices; using the determined route to activate cameras searching for vehicles along a predicted path.*

## The law

- 7 The examiner raised an objection under Section 1(2) of the Act 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:

*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*

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*(c) a scheme, rule, or **method for performing a mental act, playing a game or doing business, or a program for a computer;***

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*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.*

- 8 The assessment of patentability under Section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel*<sup>1</sup>, as further interpreted by the Court of Appeal in *Symbian*<sup>2</sup>. In *Aerotel* the court reviewed the case law on the interpretation of Section 1(2) and set out a four-step test to decide whether a claimed invention is patentable:

*(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 subject matter;*

*(4) check whether the actual or alleged contribution is actually technical in nature.*

- 9 The Court of Appeal in *Symbian* made it clear that the four-step test in *Aerotel* was not intended to be a new departure in domestic law; it was confirmed that the test is consistent with the previous requirement set out in case law that the invention must provide a “technical contribution”. Paragraph 46 of *Aerotel* states that applying the fourth step of the test may not be necessary because the third step should have covered the question of whether the contribution is technical in nature. It was further

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<sup>1</sup> *Aerotel Ltd v Telco Holdings Ltd & Ors* Rev 1 [2007] RPC 7

<sup>2</sup> *Symbian Ltd v Comptroller General of Patents* [2009] RPC 1

confirmed in *Symbian* that the question of whether the invention makes a technical contribution can take place at step 3 or 4.

- 10 Lewison J (as he then was) in *AT&T/CVON*<sup>3</sup> set out five signposts that he considered to be helpful when considering whether a computer program makes a technical contribution. In *HTC/Apple*<sup>4</sup> the signposts were reformulated slightly in light of the decision in *Gemstar*<sup>5</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*

## **Application of the *Aerotel* approach**

### Step (1): Properly construe the claim

- 11 It was agreed at the hearing that there is no difficulty in construing claim 1.
- 12 The examiner, in his most recent report of 20 March 2019, provided a useful summary of the first part of claim 1 as follows.

*The invention relates to the identification of suspect devices (i.e. communication devices such as mobile phones) across multiple criminal events at different locations, wherein a server receives, continuously or periodically, data from a plurality of different networks comprising information identifying devices, access points to which the devices attached and the times at which the devices associated and disassociated with the access points, all of which is stored in a database. An input to the server is then received relating to a location and time of a first criminal event. The server then determines a first window of time around the first criminal event and identifies a first group of access points located within a threshold distance of the first location, and determines a first group of devices that associated with these access points in the first time window. The exercise is then repeated for a second location and time of a second criminal event to determine a second group of devices. The two groups of devices are then compared to determine a subset of devices*

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<sup>3</sup> *AT&T Knowledge Ventures/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

<sup>4</sup> *HTC v Apple* [2013] EWCA Civ 451

<sup>5</sup> *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

*common to both groups which are regarded as suspect devices owing to their presence at both criminal events.*

- 13 Since the latest examiner's report, claim 1 has been amended to include the additional feature defined in the final clause of claim 1 namely determining route information for the subset of devices; and using the determined route to activate cameras along a predicted path.
- 14 Determining route information is mentioned in several places in the description of the application. It is clear that this is an automatic process whereby the processor of the electronic server accesses the device association database and searches for other access points the suspect device associated with over time. From this information a route may be derived. Using the route to activate cameras is only mentioned in a single sentence in paragraph [0050] that states: "If this can be done quickly enough after an event, the route can be used to activate cameras searching for vehicles related to owner of device along predicted path.*[Sic]*" At the hearing I asked Mrs. Tolfts to comment on her understanding of the term 'activate' and how this term would be construed by the skilled person. Mrs. Tolfts explained that 'activate' means switching on the cameras to look for what is passing in the area of the cameras. She asserted that from the description as a whole the skilled person would understand that the activation would most likely be carried out automatically by the server that processes the information to determine the route. However, she agreed that the statement in paragraph [0050] also allows the camera activating process to be carried out manually once the route has been determined. I agree that the skilled person would understand this statement in this way. Although the description only provides a single sentence regarding the activation of cameras, I consider it sufficient to allow the invention to be performed without undue burden.

Step (2): Identify the actual (or alleged) contribution

- 15 The invention works by assuming that devices which are in the vicinity of more than one crime event are more likely to be of interest. This reduces the number of suspect devices to consider, which would otherwise be very large. The invention is firstly implemented by accessing mobile device data stored in a database relating to two separate locations and time periods of interest to determine the identity of suspect devices appearing in both. Once this subset of devices is determined the invention obtains route information for the suspect devices by querying the database to obtain access points which the suspect devices were associated with previously; cameras searching for vehicles related to the owners of the devices are then activated along a predicted path. This allows further information regarding the devices and their owners to be obtained.
- 16 The application was searched during the international phase. The search was subsequently completed by the examiner at the IPO. Three documents were cited to support objections that the claims were either not novel or did not involve an inventive step. Following amendment of the claims the examiner was satisfied that the invention as defined by the claims is both new and inventive. In particular, although it is known to identify and track mobile devices in relation to criminal activities, none of the cited documents discloses identifying suspect devices by determining a subset of devices common to two different criminal events.

17 At the hearing, Mrs. Tolfts identified the contribution as:

*the identification of the subset of devices common to the first and second group; the determination of the predicted route for that subset of devices; and the activation of cameras along that route.*

18 It is clear that the device and access point data is received, stored and accessed using conventional means. Similarly, the process of determining a subset of devices and subsequently determining route information for these devices is computer-implemented using conventional hardware. Finally, activating cameras along a predicted path, either manually or more likely automatically, would also be via conventional means.

19 I consider the contribution to be a computer implemented method for identifying a subset of devices common to a first and second event by accessing and manipulating stored device and access point data and determining route information for the subset of devices using this data; and subsequently using the route to activate cameras along a predicted path.

Steps (3) & (4): Does the contribution fall solely within the excluded subject matter; check if the contribution is actually technical.

20 I will consider steps 3 and 4 together. In other words, I must now decide whether the contribution is technical or whether it falls solely within excluded subject matter. The examiner asserts that the invention is excluded from patentability as it relates to no more than a program for a computer. He also submits that the invention may also relate to a method for doing business.

21 Mrs. Tolfts argues that the amended claims of this application are clearly technical and should not be considered as merely a program for a computer. In her skeleton arguments Mrs. Tolfts referred to several UKIPO decisions to support her arguments. At the hearing Mrs. Tolfts declined to discuss these decisions further. I do not consider it necessary to discuss these decisions here. Mrs. Tolfts instead referred to the *AT&T* signposts listed above and submitted that the contribution meets both signposts (i) and (v).

22 Mrs. Tolfts argued that the invention requires a multitude of devices, and related number of associations and disassociations, number of access points, and number of possible time windows, so there is simply not enough manpower in the world to analyse all of the provided data. In response to this point, simply enabling a task to be done that otherwise would require prohibitive manpower to accomplish, does not on its own confer a technical effect.

23 Mrs. Tolfts also argued that the invention allows a variety of different types of information about devices located at a plurality of locations of interest during times of interest to be identified across disparate and separate networks. Once identified the information can also be stored. This she asserted results in a technical contribution. Again, I disagree. Here, the storing of data from various networks is entirely conventional. Moreover, using the data to determine a subset of devices is simply manipulating the data once stored. This also cannot provide a technical effect.

- 24 Mrs. Tolfts went on to submit that using this information to determine a route and subsequently activating cameras along the route to search for vehicles, is more than a manpower problem but instead a technical process. In particular she argued that the cameras are at different positions along the route and are obviously in the 'real world' outside the computer. She concluded that signpost 1 has been satisfied.
- 25 I have more sympathy with this argument. Once the processor has determined route information for the subset of suspect devices, cameras are activated along a predicted path. I agree that the cameras are clearly located outside the computer system. Moreover, switching on a camera is a technical process whether performed manually or automatically. In other words, the method of the invention allows cameras to be controlled along a route determined from an identified subset of devices. I agree that the contribution seen in this way has a technical effect on a process carried on outside the computer system and is sufficient to meet signpost (i).
- 26 I have found that the invention meets the terms of signpost (i). There is no need for me to consider the remaining signposts. I consider the contribution to be technical in nature and to fall outside the excluded matter of a computer program.
- 27 The examiner has also suggested that the contribution may also lie within the excluded field of a business method. The technical effect discussed above is also sufficient to move the contribution outside this excluded field.
- 28 I have considered the invention as defined by independent claim 1, I reach the same conclusion for independent claim 6.

### **Decision**

- 29 I have found that the contribution made by the invention defined by the claims is not excluded under Section 1(2). I therefore remit the case to the examiner so that the outstanding clarity issues can be resolved and the description can be brought into conformity with the claims.

### **P Mason**

Deputy Director, acting for the Comptroller