



## PATENTS ACT 1977

APPLICANT Avaya Inc.

ISSUE Whether patent application number GB1102439.5  
complies with section 1(2)

HEARING OFFICER J E Porter

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### DECISION

#### Introduction

- 1 Patent application GB1102439.5 was filed on 11 February 2011 and is entitled "Timeminder for professionals". It claims priority from three US applications (61303800, 61316026 and 12837815). The application was published on 17 August 2011 as GB 2 477 861 A.
- 2 Following three rounds of amendments of the claims and correspondence between the examiner, Stuart Purdy, and the applicant's attorneys, the examiner remains of the view that the claimed invention is excluded from patentability under section 1(2).
- 3 With the position unresolved, the applicant asked on 13 July 2017 to be heard but on 14 August 2017 said they no longer wished to attend a hearing and asked me to make a decision based on the papers on the file. The applicant is represented by patent attorneys Page White and Farrer.
- 4 At the date of the request of the hearing, the compliance date for the application stood at 13 June 2017. It has been extended to 13 October 2017 following one extension as-of-right, under rule 108(2) of the Patents Rules 2007 (as amended), and one with the Comptroller's discretion under rule 108(3).

#### The invention

- 5 The invention is concerned with a method and system of monitoring work activities for bill completion. This could be used by anyone but is likely to be used by providers of professional services such as lawyers and accountants in order to obtain some of the information needed to complete a bill. The method is arranged such that it uses a profile to determine a trusted relationship between the person that needs to be billed (for ease of reference I shall refer to them as a "client" of the user), and a third party. It then finds the third party's electronic address to request information about the client. It also determines a subject identifier associated with certain actions by the user. The subject identifier, actions and information provided about the client are used to generate at least part of a billing entry.

- 6 The latest claims were filed on 8 June 2017. There are 19 claims, of which 2 are independent. Claim 1 is a method claim which reads as follows:

*A method, comprising:*

*monitoring, by a processor executable virtual assistant module and in substantial real time, a collection of actions by a user, wherein at least one of the collection of actions is a search, via a network, for another person, wherein the network comprises an internal network and an external network;*

*determining, from a profile, a trusted relationship between a third party and the other person;*

*searching, via the network, for an electronic address of a communication device of the third party, wherein the search is a hierarchical search that starts on the internal network and progresses to the external network;*

*receiving, via the network, the electronic address of the communication device of the third party;*

*in response to determining the trusted relationship, automatically contacting, using the electronic address of the communication device of the third party, via the network, the communication device of the third party to request information about the other person;*

*receiving, from the communication device of the third party, a response containing the information about the other person;*

*based on the monitoring step, determining, by the processor executable virtual assistant module, a subject identifier associated with the monitored collection of actions by the user; and*

*generating, by the processor executable virtual assistant, at least part of a billing entry based on the subject identifier the information about the other person, and the monitored collection of actions.*

- 7 Independent claim 10 is directed to a computer system for monitoring and collecting information to compile a bill and reads:

*A system, comprising:*

*a processor executable virtual assistant module operable to:*

*monitor, in substantial real time, a collection of actions by a user, wherein at least one of the collection of actions is a search, via a network, for another person, where the network comprises an internal network and an external network;*

*determine, from a profile, a trusted relationship between a third party and the other person;*

*search, via the network, for an electronic address of a communication device of the third party, wherein the search is a hierarchical search that starts on the internal network and progresses to the external network;*

*receive, via the network, the electronic address of the communication device of the third party;*

*in response to determining the trusted relationship, automatically contact, using the electronic address of the communication device of the third party, the communication device of the third party to request information about the other person;*

*receive, from the communication device of the third party, a response containing the information about the other person;*

*based on the monitoring step, determine a subject identifier associated with the monitored collection of actions; and*

*generate at least part of a billing entry based on the subject identifier, the information about the other person, and the monitored collection of actions.*

## The Law

- 8 Section 1(2) declares that certain things are not inventions for the purposes of the Act, as follows:

*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.*

- 9 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>.

- 10 In *Aerotel*, the court reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of what is often called “excluded matter”, as follows:

*Step one: properly construe the claim*

*Step two: identify the actual contribution (although at the application stage this might have to be the alleged contribution)*

*Step three: ask whether it falls solely within the excluded matter*

*Step four: check whether the actual or alleged contribution is actually technical in nature.*

- 11 Subsequently, the Court of Appeal in *Symbian* made clear that the *Aerotel* test is not intended to provide a departure from the previous requirement set out in case law, namely that the invention must provide a “technical contribution” if it is not to fall within excluded matter. The *Aerotel* test has subsequently been endorsed by the Court of Appeal in its decisions in both *HTC*<sup>3</sup> and *Lantana*<sup>4</sup>.

- 12 Lewison J (as he then was) in *AT&T/CVON*<sup>5</sup> set out five signposts that he considered to be helpful when considering whether a computer program makes a

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

<sup>2</sup> *Symbian Ltd’s Application* [2008] EWCA Civ 1066; [2009] RPC 1

<sup>3</sup> *HTC Europe Co Ltd v Apple Inc* [2013] EWCA Civ 451; [2013] RPC 30

<sup>4</sup> *Lantana Limited and The Comptroller General of Patents, Designs and Trade Marks* [2014] EWCA Civ 1463; [2015] RPC 16

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

technical contribution. In *HTC* the signposts were reformulated slightly in light of the decision in *Gemstar*<sup>6</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.*

- 13 The attorney's submissions in response to the examination reports, whilst not referring directly to the judgments mentioned above (or other case-law) do allude to them by reference to wording from the *Aerotel* four-step test and the *AT&T/CVON* signposts. Thus, the attorney appears to agree with the examiner that the approach to determining patentability under section 1(2) is governed by these judgments. I will consider the attorney's submissions as part of my analysis below.

### **Arguments and Analysis**

- 14 The examiner maintains that the claims define an invention which consists of a scheme, rule or method for doing business and/or a program for a computer. His position is set out most recently in his pre-hearing report dated 29 June 2017. Detailed arguments against the examiner's position are contained in the applicant's responses to the examination reports, through their attorneys, but in particular are set out in detail in their letter of 8 June 2017, when they filed the current set of claims and responded to the examiner's last examination report dated 1 June 2017.
- 15 Taking all these arguments into account, I must determine whether the claimed invention relates solely to excluded subject matter under section 1(2).

### Construing the Claims

- 16 The first step in deciding whether the invention is excluded from patentability is to construe the claims.
- 17 In his pre-hearing report the examiner notes that the context of this invention is time tracking for billing in professional environments. He sets out that "The method, which culminates in the generation of a billing entry, is carried out by a computing module and involves monitoring a search on a network for another person carried out by [a] user, and then determining a trusted relationship between the a [*sic*] third party and the person searched for. A subsequent search for the address of the third party is made, using a hierarchical search. The hierarchical search starts on an internal network and, if necessary, extends to an external network, the address of the third party is received and the third person is contacted to request information

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<sup>6</sup> *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2009] EWHC 3068 (Pat); [2010] RPC 10

about the other person. Information is then received, a subject identifier for the task is applied, and a billing entry is generated”.

- 18 The attorney in the letter of 8 June 2017 emphasised the search aspects of the amended claims such that claim 1 “allows the system to gather information about another person by using a hierarchical search of an internal network that progresses to an external network to find an electronic address of a communication device of a trusted third party. The electronic address of the communication device of the third party is received via the network(s). This allows the system to automatically contact the communication device of [the] third party that may have the necessary information. The information is then used to automatically update a billing entry based on the information captured via the network”. This does not differ greatly from the examiner’s construction, and I do not think that any difficult issues of claim construction arise.
- 19 Claim 1 concerns a computer-implemented method to generate at least part of a billing entry. The method involves using a processor executable virtual assistant module to monitor, in real time, actions by a user – where those actions include a search, via a network comprising an internal and external network, for another person. A profile is then used to determine a trusted relationship between the other person and a third party. The electronic address of a communication device of the third party is then found using a hierarchical search which first searches the internal network and then the external network. This electronic address is used automatically to contact the third party’s device via the network to request information about the other person, and a response containing the information is received. Also, based on the monitored user actions, a subject identifier is determined. All of this information is used by the processor executable virtual assistant to generate at least part of the billing entry.
- 20 Independent claim 10 is directed to a computer system for generating at least part of a billing entry. The system comprises a processor executable virtual assistant module which operates in substantially identical terms to that set out in the method of claim 1. One minor difference is that claim 10 does not explicitly state that the step of using the electronic address automatically to contact the third party’s device, to request information, is done “via the network”. I do not consider this to be a material difference between the claims for the purposes of what I must decide. The other minor difference is that the penultimate step of claim 10 does not state explicitly that the monitored collection of actions (used to determine a subject identifier) are actions done “by the user”. However, it is clear from earlier steps that the “monitored collection of actions” are user actions. Nothing turns on these minor differences, and the following analysis applies equally to both independent claims.

#### Identifying the contribution

- 21 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 claim (as construed in step one). However, the court in *Aerotel* acknowledged that, for a patent application (as opposed to a granted patent), it may only be possible to identify the alleged, and not the actual, contribution.

- 22 The examiner's view of the contribution is set out in his pre-hearing report of 29 June 2017, but by way of reference back to his examination report of 1 June 2017. That earlier report was based upon an earlier claims set which did not feature a hierarchical search starting on the internal network and progressing to the external network.
- 23 I could not see it said explicitly that the examiner's view of the contribution was unaffected by the amendments made to the claims on 8 June 2017, but that is the implication of his report. Certainly the examiner does say in his pre-hearing report that "No specific detail is provided regarding the hierarchical search method however it is considered that the search is conventional, see page 14 line 26-27 and page 20 line 29".
- 24 Thus the examiner's view is that "the invention automates, in a conventional technical manner, the process of information searching and retrieval which would normally be carried out as part of normal administration of a billing process". He says that the invention "uses a conventional arrangement of networked computing hardware" and thus in substance "relates to a method of generating a billing entry".
- 25 Looking at it by asking what the problem solved by the invention was, the examiner sets out that it is "the lack of information available on the network for completing a billing entry" and so the contribution involves "collecting the missing information by automatically contacting the communication device of an established associate of the third party and requesting it".
- 26 The attorney's assessment of the contribution is different and, to an extent, turns upon the wording of the amended claims filed on 8 June 2017. The attorney summarises the contribution as being that "a hierarchical search of multiple networks is performed to identify an electronic address of a third party communication device based on a trusted relationship to automatically initiate a communication to the third party communication device for billing purposes". The attorney says that the technical contribution is "how the hierarchical search is accomplished to identify and automatically contact the communication device of the third party".
- 27 The attorney's view is that the problem being solved "is that electronic addressing information for automatically contacting a third party's communication device on a network is not always available to a user on their own communication device". Thus at a high level, the attorney and the examiner agree that the problem being solved concerns, to an extent, the finding of missing information of some type. But there is no agreement on the contribution beyond that high-level point.
- 28 It is important that I consider the contribution in terms of the whole of the invention and that I do not cut the claim into pieces. In particular, it does not necessarily follow that, because a particular element of a system is known, any contribution made by that element can be dismissed. What is required is to assess the contribution made by the claimed invention as a whole, and so the interaction between the various elements (known or otherwise) needs to be borne in mind when making that assessment.
- 29 So what has really been added to the sum of human knowledge? The description sets out that this invention is "directed generally to an intelligent communication

system that monitors users actions and performs operations responsive to the monitored actions”. The invention at a high level is clearly directed to an automated real-time billing method and system which monitors user actions and generates billing information. However, the attorney does not suggest that the contribution made by the invention lies at this high level. I think that must be right – not least in light of the prior art billing systems cited by the examiner at an earlier stage in proceedings, which concern systems for the automatic real-time monitoring and recording of billable actions.

- 30 The description also says that a weakness in the prior art in this field is “a failure to consider the complexities of multi-media/modal communications and related Internet and paid provider search sessions”. I agree with the examiner that the invention tackles, in that context, the problem of a lack of information available on the network for completing a billing entry. Thus I think it follows that the contribution lies in the way in which the invention addresses this problem – that is to say, by identifying and obtaining the information required from a trusted third party who is associated with the client for whom the billable work is being done, and by using that information as part of the bill generating process.
- 31 It may well be the case that the particular feature of searching in the hierarchical way which is claimed (whereby internal sources are searched before external sources) is not, in itself, new. Nevertheless, it seems to me that there is sufficient synergy between this particular searching step and the other steps involved in solving the problem identified above that the attorney is right to say that it forms a part of the contribution made by the invention.
- 32 In my view, the invention has the advantage of identifying trusted relationships and then searching internal and then external sources for the electronic address of a communication device of the third party. This address is then used to contact the communication device of the third party to obtain information and generate a billing entry. It is this series of steps together which has been added to human knowledge.
- 33 The contribution made by the invention is an improved way of generating a billing entry by identifying a trusted relationship between a client and a third party, and searching internal and then external sources to find an electronic address which is used to contact the communication device of the third party, in order to obtain information which is used to generate part of a bill.

Does the contribution fall solely within excluded matter?

- 34 What I must now decide is whether the contribution identified above relates solely to a program for a computer or a scheme, rule or method for doing business. This corresponds to step three of the *Aerotel* test.
- 35 The examiner’s contention is that the contribution is a method of doing business and also a computer program. He says that the invention is substantially the automation of administrative actions as part of a billing process.
- 36 I will deal first with the examiner’s argument that this is excluded as a method of doing business. The attorney argues that the examiner is incorrect and that the invention concerns more than merely automating a billing process because of the

technical aspect of the hierarchical search, which identifies and automatically contacts the communication device of the third party. He argues that the invention addresses the technical problem of allowing the system to find the necessary electronic address in order automatically to initiate a communication.

- 37 In my view, the correct answer to these points lies in looking at the contribution as I have found it to be. It seems clear to me that the contribution, being an improved way of generating a billing entry by identifying a trusted relationship between a client and a third party, is by its very nature one which concerns a better way of conducting an administrative or organisational task. It involves identifying and contacting particular people, obtaining particular information from them, and completing an administrative objective (a billing entry).
- 38 My finding in relation to the contribution does include the searching of internal and then external sources in order to find the desired electronic address, which is undertaken automatically by a computer. Nevertheless it seems clear to me that the task of searching for an address in one location followed by a search in further locations is still in essence a task which is administrative in nature – and forms part of the administrative steps necessary to obtain the information required for the bill under the method of the invention. And I think it is clear that the process of searching to find an address and contacting a third party to complete a bill entry is still administrative irrespective of that fact that it is being undertaken in relation to electronic addresses or by computer software.
- 39 Although not binding on me, I note that paragraph 1.33.2 of the *Manual of Patent Practice* says that the expression “doing business” is “not restricted to financial or commercial activities, but embraces administrative, organisational and managerial activities”.
- 40 The examiner also contends that the contribution is no more than a program for a computer as such. Having read the specification, it seems clear to me that the contribution identified is delivered through a program for a computer. The monitoring, determination of trusted relationships, searching for addresses, passing of information and billing are all steps which are carried out in software.
- 41 Therefore, it would appear that the contribution fails step 3 of *Aerotel* as it is both a method of doing business and a program for a computer. However, the attorney’s arguments are focussed on whether the contribution is technical in nature. I shall therefore go on to consider these points.

Is the contribution technical in nature?

- 42 The fourth step of the test is to check whether the contribution is technical in nature. In paragraph 46 of *Aerotel* it is stated that applying this fourth step may not be necessary because the third step should have covered the question. This is because a contribution which consists solely of excluded matter will not count as being a “technical contribution” and thus will not, as the fourth step puts it, be “technical in nature”. Similarly a contribution which consists of more than excluded matter will be a “technical contribution” and so will be “technical in nature”.

- 43 In this case, however, the arguments concerning exclusion are focussed more towards this fourth step, and so I have considered it separately.
- 44 First, the attorney says that there is a technical contribution in how the hierarchical search is accomplished to identify and automatically contact the communication device of the third party.
- 45 I note firstly that the contribution is at the level of an improved way of generating a billing entry, which combines known searching, communication and information transfer steps in a particular way. In particular, the hierarchical search feature of the contribution is a general concept of searching internal and then external networks. Although this searching step forms a part of the steps taken which together make up the contribution, as already noted above the specification provides no specific or technical detail of this hierarchical search feature, and there is no suggestion that it differs from conventional search techniques. This does not point towards that search step bestowing a technical contribution upon the invention. The fact that it involves electronic communications (and, indeed, a computer network) to make automatic contact with a device similarly does not mean that it must be considered technical in nature, particularly when those communications or networks are not operating in some new way.
- 46 The examiner in his pre-hearing report referred to the Macrossan patent discussed in *Aerotel*. He pointed out that Macrossan's patent concerned a computer program which collected information for creating a legal document (in fact, company formation documents), and this was held by the Court of Appeal in *Aerotel* to be non-technical.
- 47 There was no explicit reference in the attorney's correspondence to the *AT&T/CVON* signposts. However, he argues that the initiation of a call or other communication to the third party's device, following the network search for a communication address, is a technical effect outside the computer. As noted above, he also argues that the invention addresses the technical problem of allowing the system to find the necessary electronic address in order automatically to initiate a communication. It seems to me that referring to a technical effect outside the computer is relevant to the first signpost, and the reference to solving a technical problem is relevant to the fifth signpost.
- 48 I do not agree that the first *AT&T/CVON* signpost points to patentability when applied to the contribution as identified. The aspect which concerns searching for electronic communication addresses is carried out wholly within a computer or across computer networks. More widely, as already noted, the contribution is at the level of an improved way of generating a billing entry, which combines known searching, communication and information transfer between devices in a particular way. There is no specific technical aspect to those steps, including in the manner of communication between devices which may be outside the user's computer, which points to a technical contribution being made by the invention in this respect.
- 49 For completeness, while I agree that the information will used to generate a bill, which may then exist outside of the computer, I do not consider this aspect – generating a bill to tell someone how much they owe – is technical in its nature at all. It also does not point towards a technical effect outside the computer.

- 50 Turning to the fifth signpost, the attorney reiterates throughout the correspondence that a technical problem is being addressed and solved – namely, the technical problem of getting the system to find the necessary electronic addresses in order automatically to initiate a communication.
- 51 I do not agree. This in essence goes back to the nature of the search. As already held, the hierarchical search and the communications which result do not solve a technical problem concerning the finding of information. Neither do they solve a technical problem concerning the initiation of a communication. They are a particular way of taking steps (albeit within a computer) for dealing with the administrative problem of finding the desired information, so that a technically-conventional communication may then be sent and particular information received. The fifth signpost does not point towards patentability.
- 52 Finally, I do not think the other signposts assist greatly in this case. Nevertheless, for completeness: I can see no suggestion that the claimed technical effect operates at a level of computer architecture (in terms of the way a computer runs), nor that it makes the computer operate in a new way, nor makes the computer a better computer in the sense of running more efficiently or effectively as a computer.
- 53 I cannot see that the contribution made by the invention is technical in nature. Applying step four of the test confirms that the contribution made by the invention falls solely within the category of a rule, scheme or method for doing business and a program for a computer, and is not “technical in nature”.

### **Conclusion**

- 54 I conclude that the claimed invention is excluded from patentability under section 1(2)(c) because it is no more than a scheme, rule or method for doing business and a program for a computer.
- 55 I can find no other disclosure in the specification upon which patentable claims might be based. I therefore refuse the application under section 18(3) for failure to comply with section 1(2)(c).

### **Appeal**

- 56 Any appeal must be lodged within 28 days after the date of this decision. Under section 20(2), the compliance period (which was due to expire on 13 October 2017) will automatically be extended to the end of the period for lodging an appeal.

**Dr J E PORTER**

Deputy Director, acting for the Comptroller