

PATENTS ACT 1977

APPLICANT Sony Corporation and Sony Electronics Inc.

ISSUE Whether patent application number GB 1006801.3
 complies with section 1(2)

HEARING OFFICER Mrs S E Chalmers

DECISION**Introduction**

- 1 The patent application relates to a computer-implemented method for determining and communicating a customer service recommendation in response to problems encountered in the use of an electronic device.
- 2 The examiner argues that the invention is excluded from patentability under section 1(2) of the Act as a computer program and a business method. The applicant requested a hearing to decide the matter – this took place on 26 March 2013 and was attended by the applicant's attorney Mr Jonathan DeVile of D Young & Co LLP assisted by Mr Patrick Clarke. Mr Ben Widdows (examiner) and Mr Alex Robinson (observer) were also present.
- 3 Shortly before the hearing, the applicant filed a Main Request relating to the claims of the application currently on file and First and Second auxiliary sets of claims to be considered (in that order) if the main set were found to be unallowable. I am grateful to Mr DeVile for the skeleton arguments presented before the hearing and for the list of decisions referred to at the hearing which I have taken full account of in reaching my decision.

The invention

- 4 The invention is a computer-implemented method for determining and communicating a customer service recommendation in response to problems encountered in the use of an electronic device when interacting with other devices or services. For example, a portable music player made by one manufacturer may encounter difficulties when attempting to play songs downloaded from an Internet service provider. These difficulties are compounded when multiple devices and services interact as it may not be possible to isolate the problem because the customer care services of the manufacturer and provider only have access to their own transaction information for the device or service.

5 The solution offered by the invention is the provision of a repository infrastructure to store all transaction information to allow one manufacturer or provider – on permission of the user using secure ID – to access and review transactions that occurred with other manufacturers or service providers. In this way, the problem can be identified and the user informed of the steps needed to rectify the problem.

6 The most recent set of claims (main request) was filed on 16 January 2013 and has three independent claims: independent claim 1 is to a method for determining and communicating a customer service recommendation to a user device; and independent claims 7 and 13 are respectively to a computer program product and a computer system for carrying out the method of claim 1. All claims relate to the same inventive concept, so I need only consider one of these claims for the purposes of this decision.

7 Claim 1 reads as follows:

A method of determining and communicating a customer service recommendation to a user device for providing customer care, the method comprising:

receiving a request for customer care from the user device associated with a first business entity at a customer care device;

receiving access information from the user device at the customer care device, the access information usable to access a data repository server storing transaction information for the user device;

using the access information to access securely transaction information at the customer care device for the user device from the repository server, the transaction information including information relating to one or more transactions performed using the user device with a second business entity different from the first business entity;

determining a customer service recommendation at the customer care device based on the transaction information; and

communicating the customer service recommendation to the user device from the customer care device based on the transaction information; wherein

the step of receiving the access information includes

receiving secure information from the user device, the secure information including a customer signature, for which a public key is acquired, and

decrypting the customer signature using the public key, thereby confirming that a possessor has permission to access the transaction information,

the secure information further including a transaction ID, the transaction ID being usable to determine the transaction information; and

the step of using the access information to access securely the transaction information includes communicating the transaction ID to the repository server to indicate to the repository server that permission has been granted to access the transaction information.

8 The First and Second auxiliary claim sets filed on 19 March 2013 relate to a method of assisting fault diagnosis for a user device together with independent claims to apparatus and a computer program product for carrying out this method.

The law

- 9 The section of the Act concerning inventions that are excluded from patentability 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.*
- 10 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 question of whether the invention reveals a technical contribution to the state of the art (cf *Aerotel*¹ and *Symbian*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.
- 11 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. Paragraph 47 adds that a contribution which consists solely of excluded matter will not count as a technical contribution.
- 12 In *Symbian Ltd's Application*³, the court made it clear that in deciding whether an invention is excluded, one must ask does it make a technical contribution? It does not matter whether it is asked at step 3 or step 4. If it does, then the invention is not excluded.

Arguments and analysis

Step 1: construe the claim

¹ *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371

² *Symbian Ltd v Comptroller-General of Patents* [2008] EWCA Civ 1066

³ *Symbian Ltd's Application* [2008] EWCA Civ 1066

- 13 I do not think the claims present any difficulties in construction. It is clear from the language used that the claim relates to a computer-implemented method although it does not say so. Mr DeVile submitted that the term “determining and communicating a customer service recommendation” should be read as “solving a problem experienced by the user device” (see page 2 lines 4-6 of the description as filed). I do not agree. I am not convinced that the two expressions are equivalent in that it does not necessarily follow that a “recommendation” to do something results in the problem being solved. I therefore see no reason to depart from the plain language of the claims. For avoidance of doubt and in line with the description as filed eg at paragraphs [18] and [23] to [31], I have construed the expression “transaction information” broadly and not restricted it to financial transactions.

Step 2: identify the actual (or alleged) contribution

- 14 Mr DeVile accepts that providing customer care recommendations is a business method but argues that the arrangement of hardware configured to operation in accordance with the claims is new hardware and is therefore distinguished from the prior art in a way which is not excluded from patentability. If I have understood him correctly, the applicant’s view is that the contribution resides in:

“The provision of (a) a device which is configured to communicate transaction information identifying transactions with a service or device and to transmit that transaction information in an encrypted form to a data repository in combination with (b) the data repository, using a public key corresponding to the private key in which the transaction information has been encrypted thus enabling authentication of that transaction information and assisting in the diagnosis of a problem associated with the user device.”

- 15 In the examiner’s view, what the inventor has added to the stock of human knowledge is not the hardware *itself* since the hardware used in the present application is a conventional arrangement of networked computing devices and a server. In substance, he argues that the contribution lies in the method performed using the hardware. He therefore assesses the contribution as:

“A first business entity providing improved customer care recommendations to a user device, with regard to transactions the user device has had with other third party services, by utilising a repository storing transaction information performed between the third party(s) and the user device, and a customer care device of the first business entity securely accessing particular transaction information, to provide the improved customer care recommendations.”

- 16 So what has been added to the sum of human knowledge? I do not agree with the applicant that the contribution lies in the provision of new hardware. There is no doubt in my mind that the problem addressed is a business problem and that what has been added to the sum of human knowledge is a better way of isolating and identifying a problem experienced by a user device with regard to transactions with third party services and providing customer care recommendations. Looking at the substance of the claims, I therefore assess the contribution as:

“A computer-implemented method of providing improved customer care recommendations to a user device experiencing a problem with regard to transactions the user device has had with third party service(s), where a customer care device of one device or service securely accesses a repository storing transaction information performed between the third party service(s) and the user device, to identify the problem and thus provide the customer care recommendations.”

Steps 3 and 4: ask whether it falls solely within the excluded subject matter and whether it is technical

- 17 There is no doubt that the contribution requires a computer program for its implementation. However, in considering the nature of this contribution, I am mindful of paragraph 22 of *Aerotel*, which reminds me that just because a computer is used in an invention, it does not necessarily mean that the invention is excluded from patentability. What matters is whether or not the program provides a technical contribution.
- 18 The Court of Appeal in *Symbian* gave useful guidance at paragraphs 52-58 as to when a program might make a technical contribution sufficient to avoid the exclusion. It particularly emphasised (see paragraph 56) the need to look at the practical reality of what the program achieved and to ask whether there was something more than just a “better program”. At paragraph 58 the Court stated that a technical innovation, whether within or outside the computer, would normally suffice to ensure patentability.
- 19 The Court of Appeal in *Halliburton*⁴ gave further guidance at paragraphs 33-36 on how to assess whether an invention implemented in computer software might make a technical contribution. It particularly emphasised the need to consider what task the program (or programmed computer) performed (paragraph 33). Paragraph 34 states “If the task the system performs itself falls within the excluded matter and there is no more to it, then the invention is not patentable” even though the task may have real world consequences. Specifically, paragraph 35 says:
- “The business method cases can be tricky to analyse by just asking whether the invention has a technical effect or makes a technical contribution. The reason is that computers are self evidently technical in nature. Thus when a business method is implemented on a computer, the patentee has a rich vein of arguments to deploy in seeking to contend that his invention gives rise to a technical effect or makes a technical contribution. For example the computer is said to be a faster, more efficient computerized book keeper than before and surely, says the patentee, that is a technical effect or technical advance. And so it is, in a way, but the law has resolutely sought to hold the line at excluding such things from patents. That means that some apparently technical effects do not always count. So a computer programmed to be a better computer is patentable (*Symbian*) but as Fox LJ pointed out in relation to the business method exclusion in *Merrill Lynch*, the fact that the method for doing business may be an improvement on previous methods is immaterial because the business method exclusion is generic.”
- 20 Although Mr DeVile accepts that providing customer care recommendations is a business method, he submits that how the present invention achieves this includes technical aspects by providing an arrangement for improving a facility for diagnosing or solving problems. He argues that the contribution is not just a computer programmed to perform a business method; rather the invention resides in an arrangement of technical features which solves a technical problem of improving fault diagnostics and therefore provides a technical solution. In his view, the claimed invention confers a technical contribution in a non-excluded field and drew my attention to the EPO Board of Appeal decision T 154/06 *Duns Licensing* which states that, under EPC jurisprudence, a technical problem may be formulated using an aim to achieved in a non-technical field (paragraph 5F).

⁴ Re Halliburton Energy Services Inc [2011] EWHC 2508 (Pat)

- 21 Mr DeVile argued that a device which is configured to communicate transaction information identifying transactions with service-providing devices and transmitting the transaction information in an encrypted form to a data repository in itself must define a technical contribution. In combination with a device which retrieves the transaction information using a public key corresponding to the private key with which the transaction information has been encrypted, both allows for authentication of that transaction information and assists in the diagnosis or solving of a problem associated with the user device. In support of this view he reminds me of paragraph 56 of *Aerotel* which says: "...so we think the judge mis-assessed the contribution of the inventor – he was not saying "use existing apparatus for my new method" he was saying "create a new overall combination of apparatus using known types of apparatus – and use that combination for my method."
- 22 Mr DeVile also submitted that an arrangement for securely communicating transaction information, which can be authenticated as being associated with a user device and aggregating that transaction information to form a data repository for facilitating fault diagnosis, does represent a technical solution. This is because both machines are required to generate and communicate the information and there must be a creation and transformation of data relating to the transaction information. To support this argument, he drew my attention to PKTWO⁵ judgment at paragraph 21 (quoting from the Gemstar⁶ decision) confirming that transfer of data between two entities provides a physical effect which therefore goes beyond a program for a computer as such. However, I note that paragraph 22 then goes on to say: "Thus the initiation of the movement of data, even if occurring within the computer, **may** [my emphasis] be a relevant technical effect." In other words, the issue needs to be decided on the facts of the case.
- 23 So what then is the task performed by the present computer program? In my view, the task performed (determining and communicating a customer care recommendation) is a business method and that securely accessing or restricting access to certain information within a business process cannot be said to provide a technical contribution. Indeed, controlling access to personal information is normal business practice. The encryption/decryption techniques used in the present application appear entirely conventional. Using such techniques to provide restricted access to customer information for a service recommendation cannot be said to provide a further technical effect beyond the running of computer program(s) implementing a business method. In particular, restricting information to only that which is needed to provide a customer service recommendation is simply a better, more efficient business method and – as discussed in *Halliburton* at paragraph 35 – computer systems which implement an "improved" method of doing business are not patentable. A computer-implemented method for providing customer care recommendations, albeit one that may be better than previous methods, falls solely within the business method exclusion because the business method exclusion is generic.
- 24 I do not accept Mr DeVile's argument that because data is communicated the contribution cannot relate solely to a business method or computer program. As far as I can see, the communication described in the application is entirely conventional.

⁵ Protecting Kids the World Over (PKTWO) Limited [2011] EWHC 2720 (Pat)

⁶ Gemstar [2009] EWHC 3068 (Ch)

Nor does the fact that more than one program may be used prevent the contribution from falling solely within the computer program exclusion – for example, the networked systems in *AT&T*⁷ were found to relate to a computer program as such. The communications network is therefore characterised only in that it provides customer care recommendations. In other words, the “physical interaction between hardware devices” is new only in that it implements an allegedly new method for doing business.

- 25 The invention therefore does not involve a technical contribution. As a matter of practical reality the application does not relate to a better computer or better communications network. It relates to a computer program which, when executed by a processor on a computer system, provides a method for determining and communicating a customer care recommendation (ie a business method). Therefore the claimed invention is not patentable. I find that the claimed invention is excluded under section 1(2)(c) as a computer program and a business method.

Auxiliary Requests

- 26 I shall turn now to the Auxiliary requests and my main focus will be on assessing the patentability of the claims. I will not attempt an exhaustive analysis but, as I said at the hearing, I am not convinced that they all are fully supported by the application as originally filed. I also note that some independent claims are newly introduced and have not been searched and that issues of plurality may arise. In the event that I find either of these claims sets allowable, the application will be remitted back to the examiner for further processing.

First Auxiliary request

- 27 The First Auxiliary Request has six independent claims: independent claim 1 is to a method of assisting fault diagnosis for a user device; and independent claims 6, 13 and 19 are respectively to a system, a customer care device and computer program product for carrying out the method of claim 1. Claim 18 relates to a user device and claims 20 and 21 are omnibus claims to the user device, customer care device, system and method. All claims relate to the same inventive concept, so I need only consider one of these claims for the purposes of this decision.
- 28 Claim 1 reads as follows:

A method of assisting fault diagnosis for a user device, the method comprising:

receiving a request for diagnosing a fault on a user device;

receiving access information from the user device at a customer care device, the access information usable to access a data repository server having stored therein transaction information for the user device;

using the access information to access securely transaction information at the customer care device for the user device from the repository server, the transaction information including information relating to one or more transactions performed using the user device;

⁷ AT&T Knowledge Ventures LP, Re [2009] EWHC 343 (Pat)

using the securely accessed transaction information to assist in diagnosis of a fault;
and

communicating and indication of the diagnosed fault to the user device from the customer care device based on the transaction information; wherein

the step of receiving the access information includes

receiving secure information from the user device, the secure information including a customer signature, for which a public key is acquired, and

decrypting the customer signature using the public key,

the secure information further including a transaction ID, the transaction ID being usable to determine the transaction information; and

the step of using the access information to access securely the transaction information includes communicating the transaction ID to the repository server to indicate to the repository server that permission has been granted to access the transaction information.

Analysis

Step 1: construe the claim

- 29 It is clear from the language used that the claim relates to a computer-implemented method although it does not say so. The only issue of construction arises in relation to the meaning of the words “fault diagnosis” which are newly introduced into the claims and do not explicitly appear in the application as filed. In support of this amendment, Mr DeVile argues that the amendment was supported by page 2 lines 4-6 which – he says – expresses a technical problem of being able to solve a problem experienced by a user using a user device which is otherwise known as fault diagnosis. From a reading of the specification as a whole, it is clear that the method is concerned with isolating a problem from a range of possible problems (for example with financial transactions, file permissions, software versions) which can occur anywhere in the course of the user device interacting with third party devices or services by enabling a customer care device to access a repository of transactions for that user device to analyse those transactions to identify the problem. It does not necessarily follow that the problem is caused by a fault on the user device, in the sense that there is something wrong with it, which is what I believe would be generally understood by “fault diagnosis”. For avoidance of doubt and in line with the description as filed eg at paragraphs [18] and [23] to [31], I have construed the expression “transaction information” broadly and not restricted it to financial transactions.

Step 2: identify the actual (or alleged) contribution

- 30 Despite Mr DeVile’s attempts to persuade me otherwise, I do not think that the revised wording of the claims changes the contribution from that of the Main Request. The contribution resides in using a repository server to store transaction information performed between all third party services and the user device where, in response to a request from the user device, a customer care device of one device or service securely accesses all the transaction information to analyse the transactions that have occurred. In this way, the problem can be identified and the user device informed of the steps to take.

Steps 3 and 4: ask whether it falls solely within the excluded subject matter and whether it is technical

- 31 Although the claims no longer include a reference to “determining and communicating a customer service recommendation” which Mr DeVile accepts relates to a business method, I do not think the revised wording of the claims changes anything and the contribution falls squarely within excluded matter. Although, in the broadest sense of the word, computers are “technical”, the task performed is a computer-implemented method for doing business.

Second Auxiliary Request

- 32 The Second Auxiliary Request has six independent claims: independent claim 1 is to a method of assisting fault diagnosis for a user device; and independent claims 6, 13 and 19 are respectively to a system, a customer care device and computer program product for carrying out the method of claim 1. Claim 18 relates to a user device and claims 20 and 21 are omnibus claims to the user device, customer care device, system and method. All claims relate to the same inventive concept, so I need only consider one of these claims for the purposes of this decision.
- 33 Claim 1 reads as follows:

A method of assisting fault diagnosis for a user device, the method comprising:

receiving a request for diagnosing a fault on a user device from the user device;

receiving access information from the user device at a customer care device, the access information usable to access a data repository server having stored therein transaction information for the user device;

using the access information to access securely transaction information at the customer care device for the user device from the repository server, the transaction information including information relating to one or more transactions performed using the user device;

using the securely accessed transaction information to assist in diagnosis of a fault; wherein

the step of receiving the access information includes

receiving secure information from the user device, the secure information including a customer signature, for which a public key is acquired, and

decrypting the customer signature using the public key,

the secure information further including a transaction ID, the transaction ID being usable to determine the transaction information; and

the step of using the access information to access securely the transaction information includes communicating the transaction ID to the repository server to indicate to the repository server that permission has been granted to access the transaction information.

Analysis

Step 1: construe the claim

34 It is clear from the language used that the claim relates to a computer-implemented method although it does not say so as such. The only issue of construction arises in relation to the meaning of the words “fault diagnosis” which are newly introduced into the claims and do not explicitly appear in the application as filed. In support of this amendment, Mr DeVile argues that the amendment was supported by page 2 lines 4-6 which – he says – expresses a technical problem of being able to solve a problem experienced by a user using a user device which is otherwise known as fault diagnosis. From a reading of the specification as a whole, it is clear that the method is concerned with isolating a problem from a range of possible problems (for example with financial transactions, file permissions, software versions) which can occur anywhere in the course of the user device interacting with third party devices or services by enabling a customer care device to access a repository of transactions for that user device to analyse those transactions to identify the problem. It does not necessarily follow that the problem is caused by a fault on the user device, in the sense that there is something wrong with it, which is what I believe would be generally understood by “fault diagnosis”. For avoidance of doubt and in line with the description as filed eg at paragraphs [18] and [23] to [31], I have construed the expression “transaction information” broadly and not restricted it to financial transactions.

Step 2: identify the actual (or alleged) contribution

35 Despite Mr DeVile’s attempts to persuade me otherwise, I do not think that the revised wording of the claims changes the contribution from that of the Main Request. The contribution resides in using a repository server to store transaction information performed between all third party services and the user device where, in response to a request from the user device, a customer care device of one device or service securely accesses all the transaction information to analyse the transactions that have occurred. In this way, the problem can be identified.

Steps 3 and 4: ask whether it falls solely within the excluded subject matter and whether it is technical

36 Although the claims no longer include a reference to “determining and communicating a customer service recommendation” which Mr DeVile accepts relates to a business method, I do not think the revised wording of the claims changes anything and the contribution falls squarely within excluded matter. Although, in the broadest sense of the word, computers are “technical”, the task performed is a computer-implemented method for doing business.

Conclusion

37 I find that the invention as set out in the Main Request and in the First and Second Auxiliary Requests is excluded under section 1(2)(c) as a computer program and a business method. 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

38 Any appeal must be lodged within 28 days.

MRS S E CHALMERS
Deputy Director, acting for the Comptroller