



21 November 2019

## PATENTS ACT 1977

APPLICANT	Intuit Inc
ISSUE	Whether patent application GB1420980.3 complies with section 1(2) of the Patents Act 1977
HEARING OFFICER	Phil Thorpe

---

### DECISION

- 1 Patent application GB1420980.3 was filed with WIPO on 26<sup>th</sup> November 2012, claiming priority from US application 13/528,109. It was published as WO 2013/191722 A1 on 27<sup>th</sup> December 2013. It entered the national phase on 26<sup>th</sup> November 2014 and was republished as GB 2519448 A on 22<sup>nd</sup> April 2015.
- 2 A search was carried out in the international phase. This identified two documents to be combined to support an objection that all the claims lacked an inventive step.
- 3 The examiner has issued three examination reports. In all three reports, she has objected that the application is excluded from patentability, under section 1(2)(c) of the Patents Act 1977, as being a method of doing business and a computer program, as such. In addition, the examiner drew the applicant's attention to the documents cited in the international phase and to documents cited against the applicant's equivalent applications in other jurisdictions. However, no formal objection against lack of novelty or invent step has been made. These issues have been deferred in the light of the objection to excluded subject matter.
- 4 Despite several rounds of correspondence between the examiner and the applicant, the examiner was not persuaded that the invention claimed was not excluded. The examiner therefore suggested that the applicant request a hearing before a senior officer. Although the applicant was of the opinion that there was no need for a hearing, the examiner considered that no further progress could be made on the subject of excluded subject matter. As such, the matter came before me for a decision based on the papers on file. I can confirm that I have taken account of all the submissions made by the applicant including those set out in its attorney's letter of 9<sup>th</sup> September 2019.

## The invention

5 The invention is a method of conducting a financial transaction using a point of sales terminal and a customer's portable electronic device. The device displays a bar code on its screen corresponding to a one-time payment credential token. This is read by a bar code reader attached to the point of sale terminal. The terminal then converts the token to the data necessary for a financial transaction before sending the data to the customer's financial institution.

6 In order to distinguish the invention from the cited prior art, the claims were amended to include the feature that the token is generated in a trusted execution environment on the customer's device. This is one of the three methods of generating the token set out in the description of the application.

7 The latest claims were filed on 5<sup>th</sup> June 2019. Independent claim 1 reads as follows:

A point-of-sale-terminal-implemented method for conducting a financial transaction, the method comprising:

receiving an identifier associated with a customer from a portable electronic device via a peripheral device coupled to the point-of-sale terminal, wherein the identifier corresponds to a one-time payment credential token that includes financial information of the customer, and wherein a service object executes on the point-of-sale terminal to act as a driver for the peripheral device;

wherein receiving the identifier comprises reading a barcode having 11 digits with a barcode scanner included in the peripheral device, the barcode being displayed as an image to the peripheral device by the portable electronic device;

wherein the one-time payment credential token is generated by a trusted execution environment executing a technique known to a third party on the portable electronic device, and wherein said technique does not need to connect to the third party prior to the financial transaction;

the service object converting the identifier to the one-time payment credential token to obtain the financial information including a 6-digit bank identification number, a virtual account number, an expiration date, and a card verification value;

using the point-of-sale terminal, providing the financial information and transaction information associated with the financial transaction to a financial institution specified in the financial information; and

receiving a confirmation that the financial transaction has been completed.

8 Claim 8 is a corresponding apparatus claim to a point of sale terminal.

## The Law

9 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 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.

- 10 As explained in the notice published by the UK Intellectual Property Office (IPO) on the 8th 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>.
- 11 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.
- 12 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*

- 13 As noted in paragraph 5 above, the invention is a method of conducting a financial transaction. That method is implemented using a portable electronic device belonging to a customer and a point of sale terminal with a bar code reader. In addition, there is software executing on the two devices to carry out the method. The portable electronic device also has a trusted execution environment to generate the token.
- 14 The technique for generating the token is not explicitly stated in the claims or described in the application as a whole. As such, it is assumed to be a well-known technique.

---

<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

*Step 2—Identify the actual contribution*

- 15 In the attorney's letter dated 9<sup>th</sup> September 2019, the contribution is identified as no less than the:

Generation of a one-time payment credential token by a trusted execution environment executing a technique known to a third party on the portable electronic device, and wherein said technique does not need to connect to the third party prior to the financial transaction.

- 16 I am content to accept this as the contribution with the one caveat that it is put in the proper context of being used with a point of sale terminal. Hence, I consider the contribution to be:

A point-of-sale-terminal-implemented method for conducting a financial transaction, including the generation of a one-time payment credential token by a trusted execution environment executing a technique known to a third party on a portable electronic device and wherein said technique does not need to connect to the third party prior to the financial transaction.

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

- 17 The attorney in its letter of 9<sup>th</sup> September 2019 has focussed primarily on the *AT&T/CVON*<sup>5</sup> signposts to argue that the contribution made by the invention is technical and consequently I will start my consideration there. In these arguments the attorney refers to two possible interpretations it suggests have been proposed by the examiner as to what the “computer” of the invention is in relation to the signposts. One interpretation is that the computer is the whole apparatus for performing the financial transaction which would include the point of sale terminal, the portable electronic device and any servers with which these communicate. The second interpretation would be that the “computer” comprises part of this apparatus for example just the portable electronic device.
- 18 As I have discussed above when considering the contribution, I believe the way in which the invention has been claimed means it is necessary to consider the interaction of the portable electronic device with the point of sale terminal in any consideration of whether the invention provides a technical contribution. Hence the “computer” for the purposes of the signposts includes at least the combination of the portable electronic device and point of sale terminal.
- 19 The attorney suggests that the requirements of signpost 1 are met if the computer is viewed as anything other than the whole system. It suggests that in that case there would be an interaction with “external elements in the form of peripheral devices to cause those devices to act in a particular manner outside their normal functionality”. I would note that causing something to behave or act in a different manner is not the test set out in signpost 1. Rather it is whether the claimed contribution has a technical effect on a process which is carried on outside the computer. Irrespective of how the “computer” is defined here, I cannot see any technical effect outside of

---

<sup>5</sup> *AT&T Knowledge Ventures/Cvon Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

the computer. For example, the combination of the portable electronic device and the point of sale terminal do not have any technical effect on the how the financial institution operates.

- 20 Further if the “computer” is just the portable electronic device, then the generation of the bar code within a trusted execution environment of that device would not have a technical effect on the point of sale terminal. The terminal will be operating in a technical sense in just the same way as it does when it reads any other barcode. Hence signpost 1 is of no assistance here.
- 21 The attorney suggests that if a broad interpretation of computer is adopted, then an architecture “is necessarily created” to achieve a technical effect in relation to security of transactions carried out within the computer. This is in line with signpost 2. I do not agree. The architecture that the attorney appears to be alluding to here is simply a reflection of how the computer operates to give effect to the underlying business method. This is not the sort of architecture that signpost 2 relates to which is the way the computer works in a technical way at the architectural level.
- 22 For the third and fourth signposts the attorney contends that the computer, irrespective of how it is defined, operates in a new way in that it can perform the task of generating the one-time payment credential token by a trusted execution environment executing without having to connect to the third party prior to the financial transaction. This it is claimed means the computer runs faster and more reliably. That is, not needing to communicate with a third party makes the performance of the financial transaction more reliable, because there is no reliance on the communication with the third party. That may be the case but that is simply again the result of implementing the particular business method. None of the systems within the “computer”, for example the portable electronic device or the point of sale terminal are operating in a new way that is technical. Hence neither signposts 3 nor 4 is of any assistance.
- 23 The attorney further contends that in being able to generate the one-time credential token without having to contact the third party prior to the financial transactions overcomes the problems that can arise if contact with a third party is required. However, for this to be a technical contribution, it must solve a technical problem and not merely avoid or circumvent it. The invention does not improve reliability by providing a technically better way of communicating with the third party. Rather, it avoids the need to communicate in the first place. Removing the need to communicate has been considered in *Hitachi*<sup>6</sup>, which formed the basis of signpost 5. In that case it was decided that avoiding sending data over a communication link does not solve a technical problem and, as such, does not make a technical contribution. As stated in *Hitachi* at paragraph 5.7:

Method steps consisting of modifications to a business scheme and aimed at circumventing a technical problem rather than solving it by technical means cannot contribute to the technical character of the subject-matter claimed.

---

<sup>6</sup> European Patent Office Board of Appeal decision T 0258/03 (Auction method/HITACHI) of 21.4.2004

- 24 As such, avoiding the difficulties of communication by simply removing the need to communicate cannot be considered to provide a technical contribution. Hence none of the *AT&T* signposts assist the applicant.
- 25 Further stepping back I can not see anything that would persuade me that the claimed invention is not excluded as a computer program as such.
- 26 For completeness I will also consider whether the claimed invention is excluded as a method of doing business. In *Halliburton Energy Services Inc's Applications*<sup>7</sup>, HHJ Birss QC noted that the use of a computer to implement a better business method did not confer patentability. He went on to note:

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.

- 27 It is clear that the task with which the invention here is concerned is facilitating secure payment in a financial transaction. The contribution as I have discussed above lies in the way in which the one-time credential token is generated on the portable device without the need to contact a third party. That this utilises a technical feature, the trusted execution environment, of a technical device, the portable electronic device, does not in my view alter the fact that what the inventor has contributed is a method of doing business. As HHJ Birss noted above the mere use of technology to implement the business method does not save it. It is also not necessarily saved if the business method is a better business method. Hence, I am satisfied that the invention here is also excluded as a method of doing business.

### **Conclusion**

- 28 Having carefully considered the arguments, I find that the contribution made by the invention falls solely within matter excluded under section 1(2) as a program for a computer and a method for doing business as such. I therefore refuse this application under section 18(3).

### **Appeal**

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

### **Phill Thorpe**

Deputy Director, acting for the Comptroller

---

<sup>7</sup> *Halliburton Energy Services Inc's Applications* [2012] RPC 12