



13 February 2012

PATENTS ACT 1977

APPLICANT Net 1 Ueps Technologies, Inc.

ISSUE Whether patent application number
GB 0910301.1 complies with sections
1(1) and 1(2)

HEARING OFFICER Mrs S E Chalmers

DECISION

Introduction

- 1 Patent application GB 0910301.1 entitled “Verification of a transactor’s identity” was filed on 15 June 2009. It is derived from an international application published as WO 2008/059458 and was re-published on 5 August 2009 as GB 2457002A.
- 2 Despite amendment of the claims during the examination process, the applicant has been unable to persuade the examiner that the invention is new as required by section 1(1)(a). The examiner also maintains that the invention claimed is excluded from patentability under section 1(2) on the grounds that it relates to a method for doing business and a computer program as such. The applicant disagreed and a hearing was held before me on 1 February 2012 via a video link to resolve the issues. The applicant was represented by Mr Peter Thorniley of Gill Jennings & Every LLP. Dr Sarah Whitehead, the examiner, also attended.
- 3 At the hearing, I noted that the compliance period as extended under rule 108(2) ended on 5 December 2011 (the actual calendar date of 3 December for the end of the extended compliance period falling on a Saturday). I indicated that I would accept a request under rule 108(3) for a discretionary extension of that period to keep the application alive should the applicant be so minded to make such a request. A further F52 was filed on 3 February 2012, together with an amended claim 1 as discussed at the hearing. Hence the compliance date is now 3 February 2012. I confirm that my decision takes into account the amended claim.

The application

- 4 The application is concerned with avoiding identity fraud when conducting electronic financial transactions using magnetic strip or smart cards such as a credit or debit card. According to the invention, verification of the card user's identity and account(s) is carried out by an independent third party rather than directly with the relevant bank or other financial institution. In use, the user will sign up to the verification service by having his cards read to provide his account details and having his fingerprint scanned to provide an identifier. Following checking of his identity and his accounts, his name, account numbers and fingerprint are then encrypted and stored. When the user wishes to buy something, he will swipe his card through a card reader and scan his fingerprint. These are then encrypted, sent to the verification service and compared with the stored account and fingerprint to confirm his identity before the transaction can go ahead.

Claims

- 5 The claims filed on 26 January 2011 were considered at the hearing. These comprise 2 independent claims to a system and method respectively as follows:

Claim 1: A system for facilitating a financial transaction between a prospective transactor and a transactee, which includes

an identity and account verifying facility for verifying the identity of the prospective transactor and an account that the prospective transactor has with a financial institution, the identity and account verifying facility being operated by an independent verifier, the identity and account verifying facility having

a storage means in which is stored an identifier of the prospective transactor and details of at least one account held by the transactor at the financial institution, the details of the or each account having been checked with the financial institution;

a receiving means for receiving an identifier and account details of a prospective transactor from a transactee and

in which the received identifier is verified by comparison with the corresponding stored identifier stored against the account details.

Claim 7: A method of facilitating a financial transaction between a prospective transactor and a transactee, which includes

verifying the identity of the prospective transactor and an account that he has with a financial institution, prior to the transactor conducting an electronic financial transaction, by an independent verifier, characterized thereby that

the independent verifier has an identifier of the prospective transactor and details of a least one account held by the transactor at the financial institution stored on a stored means, the details of the or each account

having been checked with the financial institution;

the independent verifier receives an identifier and account details of the prospective transactor from a transactee, and

the received identifier is verified by comparison with the corresponding stored identifier stored against the account details.

The law

Claim construction

- 6 Before I begin to discuss the issues on which I must decide, I shall first explain how claim 1 to the system should, in my view, be construed. At the hearing, I observed that the scope of claim 1 was obscured by the use of functional language in a number of places and I questioned what limitations this placed on the system claimed. In response, Mr Thorniley agreed that the phrases “the identity and account verifying facility being operated by an independent verifier” and “the details of the or each account having been checked with the financial institution” did not limit the claim. He also agreed that the phrase “a receiving means *in which the received identifier is verified by comparison with the corresponding stored identifier stored against the account details*” lacked clarity. He suggested a possible amendment to the italicized wording which I accepted. Mr Thorniley subsequently filed an amended claim 1 in which the final clause was re-cast to say “in which the system is arranged to verify the received identifier by comparison with the corresponding stored identifier stored against the account details” as agreed.
- 7 Stripping out the functional language, we are therefore left with a claimed system that includes an identity and verifying facility having (i) a storage means in which is stored an identifier of the prospective transactor and details of at least one account held by the transactor and (ii) a receiving means for receiving an identifier and account details of a prospective transactor from a transactee in which the system is arranged to verify the received identifier by comparison with the corresponding stored identifier stored against the account details.

Novelty and Inventive Step

- 8 Section 1(1) of the Patents Act sets out the requirement that an invention protected by a patent must be both novel and involve an inventive step, as follows:

1(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say -

- (a) the invention is new;*
- (b) it involves an inventive step; ...*

Novelty

- 9 The examiner has objected that claims 1 and 7 lack novelty in the light of WO0045320 (D1) which also relates to a method and device for authorization of an electronic payment using a third party verification system. As a first step,

pages 22-23 describe how a prospective transactor must first register with a data processing centre (DPC) by submitting a biometric sample and account details eg by scanning a magnetic stripe card through a card reader which are then stored by the DPC. In particular, Figure 4 and page 15 disclose a DPC (22) which includes an identification module (30) linked to a database of biometric identifiers and an account selector (32) that is linked to a database of account details. In use, when a transactor wishes to make an electronic payment, as described on pages 24-25, he will submit a biometric sample to the system which uses it to identify the transactor and retrieve the account details.

- 10 Mr Thorniley emphasized that the claimed invention differed from the prior art in two essential respects. Firstly, the prospective transactor was required to provide a biometric identifier and account details eg by swiping his debit or credit card to a verifying facility when seeking to make a purchase; and secondly, the verifying facility used the account details to verify the identity of the transactor. In contrast, he said that in the system described by D1, only the identifier (ie the biometric sample) was provided during a transaction and this – and not the account details - was used to verify the identity of the transactor.
- 11 I accept Mr Thorniley's arguments and find that claim 1 (as amended) and claim 7 are novel over D1. The appendent claims are therefore novel.

Inventive step

- 12 Although the examiner has not considered the inventiveness of the claims in view of the outstanding novelty issue, Mr Thorniley nevertheless addressed me on this issue. He emphasised that the thrust of D1 was to obviate the need for a prospective transactor to supply account details in addition to the biometric data required to identify him. Specifically, D1 was based on the premise that tokens such as credit or debit cards are inefficient, expensive, unreliable and are open to fraud. D1 therefore went out of its way to avoid using such tokens and, instead, a "biometric-based authorization" occurs without a token, with the transactor providing only a biometric sample such as a fingerprint. There was nothing in the cited prior art to suggest it would be obvious to modify the teaching of D1 so as to arrive at the present invention. In his submission, D1 expressly taught away from the present invention.
- 13 Mr Thorniley argued that the present invention offered a number of advantages over the prior art. For example, the approach suggested by D1 required extremely powerful computing equipment to compare a fingerprint that has been supplied by a prospective transactor with a database of stored records. As a result, it would become increasingly difficult technically to implement the method of D1 in real time as the number of records increased. A further advantage of the approach suggested by the present invention was that potential transactors could record their account details with a number of different financial institutions, without having to record their identifier (such as a fingerprint) with each one of these institutions. Instead, the transactor recorded his identifier with a single independent verifier together with the account details, which were associated in the database with the relevant identifier. Another advantage was that the present invention provided for circumstances in which a particular transactor held a number of bank accounts.

- 14 I am conscious that the priority date of the application is 16 November 2006, and that neither the examiner nor the applicant has provided evidence as to the common general knowledge at that date to assist me. In the absence of such evidence, I decline to make a finding on whether the claims involve an inventive step and, should I find in the applicant's favour on the other issues, I shall remit the application to the examiner for further investigation and consideration.

Patentability

- 15 The examiner raised an objection under section 1(2)(c) that the invention is not patentable because it relates to a computer program and a method of doing business as such. The relevant parts of section 1(2) read 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) ...;

(b) ...;

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

(d) ...;

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

- 16 The assessment of patentability under section 1(2) is governed by the judgment of the Court of Appeal in its judgment in *Aerotel*¹. In this case the court reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of patentability, namely:

- 1) Properly construe the claim;
- 2) Identify the actual contribution;
- 3) Ask whether it falls solely within the excluded matter;
- 4) Check whether the contribution is actually technical in nature.

- 17 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.

- 18 The interpretation of section 1(2) has been considered by the Court of Appeal in *Symbian Ltd's Application*². *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

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

² *Symbian Ltd's Application* [2008] EWCA Civ 1066

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*³ 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. But the *Symbian* judgment does make 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.

Application of the Aerotel test

Step 1: Properly construe the claims

- 19 I note that the system and its constituent parts are defined in terms of their intended use or function and not limited to a computer-implemented system (although this is clearly what is intended). For example, the means for verifying the identity of a transactor is not limited to a processor module as embodied in the description but may also include an employee who receives the details over the telephone; said details may then be verified by the employee checking them against details stored in a paper file. However, nothing turns on this.
- 20 I have already construed claim 1. Turning to Claim 7, the examiner questioned the meaning of the phrase “the received identifier is verified by comparison with the corresponding stored identifier stored against the account details”. In her view, the verifying step compared the received identifier with the stored identifier before looking at the account details. In the applicant’s view, it is intended to claim that the received identifier is verified by comparing received account details with a database of stored account details, thereby establishing the stored identifier and then comparing the stored identifier with the received identifier. The application as filed gives me no assistance as the description eg at page 6 lines 19-20 merely duplicates the wording of this phrase. However, after careful consideration of the specification as a whole, I accept the applicant’s view.

Step 2: Identify the actual contribution

- 21 Paragraph 43 of the *Aerotel* judgment states that identifying the contribution should involve looking at substance, not form, and is probably best summed up by asking “*What has the inventor really added to human knowledge?*”.
- 22 There is disagreement between the examiner and the applicant on the answer to this question. In the examiner’s view, even if the claims are taken to relate to the specific hardware embodied in the description, the hardware itself cannot be considered to add to the stock of human knowledge as the verifying facility and its component parts are entirely conventional. The actual contribution provided by the claims therefore lies in the method in which the components of the verifying facility are used. She identifies the contribution as being the use of an independent verifier to verify the identity and accounts of a prospective transactor

³ *Merrill Lynch’s Application* [1989] R.P.C. 561

by checking account details with a financial institution, storing said details alongside an identifier, receiving an identifier and account details from a transactee and verifying them by comparison with the stored identifier.

- 23 At the hearing, Mr Thorniley argued that this was too narrow a view of the contribution as it did not encompass the advantages of the invention. In particular, it improved security as the user was required to provide both biometric and account details. It also brought improved flexibility over the prior art by allowing transactors to record their account details with a number of financial institutions while recording their identifier only once. Finally, the invention offered reduced processing power over the prior art since the account details were used to obtain the corresponding stored identifier against which the received identifier is compared rather than comparing identifiers. Mr Thorniley summarized the contribution as a new electronic financial transaction system and method which offers improved security, reliability and efficiency.
- 24 So what has the inventor really added to human knowledge – having regard to the problem to be solved, how the invention works and what its advantages are? I consider that Mr Thorniley’s summary is too broad and I agree with the examiner that the actual contribution lies in the method in which the components of the verifying facility are used. In my view, the contribution is the use of an independent verifier to verify the identity and accounts of a prospective transactor by checking account details with a financial institution, storing said details alongside an identifier, receiving an identifier and account details from a transactee and verifying them by comparison with the stored identifier stored against the account details.
- 25 Steps 3 and 4: Ask whether the contribution relates solely to excluded matter and check whether it is technical
- 26 So, does the contribution fall solely within the excluded subject matter? In so doing, I am conscious of the warning given in paragraph 22 of *Aerotel* that just because a computer was used in an invention, it did not mean that the invention is excluded as a computer program *as such*. 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.
- 27 It is clear, although this limitation is not in the claims, that the invention is implemented by a computer program, and that the program requires only a conventional computing device in order to run. There appears to be no suggestion in the application that there is anything unusual in the hardware being used, and none of the applicant’s arguments suggest as much.
- 28 Mr Thorniley argued that the reduced processing load in verifying the received identifier by using the stored account details to obtain the corresponding stored identifier was of a technical character and offered technical advantages over the prior art which compared the received and stored identifiers. This more efficient

use of hardware providing technical benefits equivalent to improving the hardware itself and was neither a business method nor a computer program as *such*.

- 29 Whilst I agree that the invention is technical in the broadest sense in that it involves a computer, the enquiry is whether the contribution relates solely to excluded matter and whether it is technical or not. On this occasion however, I am clear that the contribution made by the invention does relate to excluded matter as such and does not have a relevant technical effect. Furthermore, I do not believe that the present invention provides a technical contribution of the type found in *Symbian*. In particular, a computer with the program of the present application does not provide, as a matter of practical reality, a “faster and more reliable computer”.
- 30 Having reached this conclusion I derive further reassurance from looking at the five “signposts” that may indicate that there is a relevant technical contribution, as set out by Lewison J in *AT&T/CVON*⁴ :

It seems to me, therefore, that Lord Neuberger's reconciliation of the approach in Aerotel (by which the Court of Appeal in Symbian held itself bound, and by which I am undoubtedly bound) continues to require our courts to exclude as an irrelevant "technical effect" a technical effect that lies solely in excluded matter.

As Lord Neuberger pointed out, it is impossible to define the meaning of "technical effect" in this context, but it seems to me that useful signposts to a relevant technical effect 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 there is an increase in the speed or reliability of the computer;

(v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.

- 31 It was suggested by Mr Thorniley that the contribution of the invention is a more efficient use of hardware and reduced processing load (which result from the method by which a transactor's identity and account details are verified). This point is similar to the fourth of the ‘signposts’ which may indicate that a computer program makes a relevant technical contribution. While the method of the present invention may require less processing power than prior art solutions and

⁴ AT&T Knowledge Ventures LP and CVON Innovations Limited [2009] EWHC 343

may therefore be more efficient and faster, the overall system which carries out the method has the same processing capability. The processing power and speed of the hardware/system is fixed at an architectural level. The reduction in processing power required to carry out the method of the invention and the increased speed result from a more efficient use of the hardware. However, the hardware itself is not actually improved as a matter of practical reality and the invention therefore relates to a computer program *as such*.

- 32 Turning to the business method objection, it is clear to me that the verification, provision and procurement of information such as transactor identity and account details are normal administrative tasks in the context of facilitating a financial transaction between a prospective transactor and a transactee. In my view, the invention therefore relates to a method for doing business *as such*.

Conclusion

- 33 Taking into account the amendment to claim 1, I find the claims are novel. I make no finding on whether the claimed invention involves an inventive step.
- 34 I find that the invention is excluded under section 1(2) because it relates to a computer program and a method for doing business *as such*. I have carefully reviewed the specification and do not think that any saving amendment is possible. I therefore refuse the application under section 18(3).

Appeal

- 35 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

Mrs S E Chalmers

Deputy Director acting for the Comptroller