



## The claims

5 I have made my decision on the basis of the amended claims filed on 2 July 2012. These comprise 3 independent claims relating to a document processing system (claim 1) and methods of processing documents using this system (claims 37 and 70). For the purposes of this decision, I only need to recite claim 1:

1. A document processing system, comprising:

An input receptacle configured to receive a plurality of documents associated with a deposit transaction, the plurality of documents including currency bills;

An image scanner configured to obtain a document image of at least a portion of at least one side of each of the plurality of documents;

A transport mechanism configured to transport each of the plurality of documents one at a time from the input receptacle past the image scanner and to at least one output receptacle;

A memory coupled to the image scanner and being configured to store the document image of each of the documents;

A communications link configured to receive a deposit amount for the deposit transaction;

A display device configured to display the received deposit amount; and

A processor configured to:

(1) denominate each of the currency bills,

(2) calculate a bank deposit amount for the plurality of documents associated with the deposit transaction, and

(3) perform a blind balancing of the plurality of documents associated with the deposit transaction by comparing the calculated bank deposit amount with the received deposit amount for the deposit transaction, and then

(4) cause the received deposit amount to be displayed on the display device only in response to the calculated bank deposit amount balancing with the received deposit amount.

## The law

6 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*

- 7 The assessment of patentability under section 1(2) is governed by the judgment of the Court of Appeal in its judgment in *Aerotel*<sup>1</sup>. 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.
- 8 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. As Mr Kenrick reminded me at the hearing, the contribution should be assessed “in the round” and not by on the basis of “what has been added to what is old?” (paragraphs 26 and 79).
- 9 The interpretation of section 1(2) has been considered by the Court of Appeal in *Symbian Ltd’s Application*<sup>2</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>3</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. 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**

- 10 I do not think this presents any problems. There are no difficulties of construction: the claims are clear and there has been no dispute regarding their meaning.

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

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

<sup>3</sup> *Merrill Lynch’s Application* [1989] R.P.C. 561

## Step 2: Identify the actual contribution

- 11 There is no suggestion by either the examiner or the applicant that the contribution is, or should be, different for each of the respective independent claims set out above. The claims therefore stand or fall together.
- 12 In identifying the contribution, Mr Kenrick urged me to follow the broad, succinct approach adopted by the Court of Appeal in decisions on patentability such as *Symbian*. In his view, the contribution was “a better document processing system” or, more specifically,

“A better document processing system having a display device which is conditionally operated based upon an amount received over a communications link and an amount calculated from the document receiving input receptacle.”

- 13 So what has been added to the sum of human knowledge? *Aerotel* summarises step 2 as:

*“...an exercise in judgment probably involving the problem said to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge perhaps best sums up the exercise. The formulation involves looking at substance not form – which is surely what the legislator intended.” [Para. 43]*

- 14 I think it would be helpful to answer this question by considering each of the three aspects of this “exercise in judgment” in turn. Turning first to the problem said to be solved: this is set out in paragraph [00184] of the application as filed. This states that prior document processing systems allow tellers or cashiers to steal or embezzle over-payments that a customer has unintentionally made because the teller is aware of the amount that the customer thinks they have deposited. The claimed document processing system/method does not reveal the deposit amount received from the customer to the cashier and can therefore undertake “blind balancing”. The invention works by determining a calculated bank deposit amount by processing and denominating a plurality of documents, receiving the deposit amount and undertaking a comparison of the received deposit amount and the calculated bank deposit amount without revealing the received deposit amount to the teller. The received deposit amount is only displayed when there is match between the received deposit amount and the calculated bank deposit amount balance. Thus the teller cannot steal any additional funds which have been accidentally deposited since the received deposit amount is not displayed if the calculated bank deposit amount is different from the received deposit amount. The advantage of the invention is to prevent a dishonest cashier or teller from stealing excess funds.

- 15 Despite Mr Kenrick’s valiant attempts to persuade me otherwise, there is no doubt in my mind that the problem being addressed is a business or administrative problem and that what has been added to the sum of human knowledge is a better way of stopping cashiers or tellers stealing excess deposits by carrying out a blind balancing operation. Looking at the substance of the claims, I therefore believe the actual contribution is:

“In a document processing system, performing blind balancing of a plurality of

documents associated with a deposit transaction by comparing the calculated bank deposit amount with the received deposit amount for the deposit transaction and then cause the deposit amount to be displayed on the display device only in response to the calculated bank deposit amount balancing with the received deposit amount.”

Steps 3 & 4: Ask whether the contribution relates solely to excluded matter and whether it is technical

- 16 It is clear 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.
- 17 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.
- 18 The Court of Appeal in *Halliburton*<sup>4</sup> 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 and, at paragraph 35, the Court makes clear that “the fact that the method of doing business may be an improvement on previous methods is immaterial because the business method exclusion is generic”.
- 19 Although Mr Kenrick acknowledged that blind balancing might be considered a business method as such, and whilst some computer program is necessary for its implementation in a computerized banking or other financial system distributed over a network, he argued that the claimed invention goes beyond these aspects and confers a technical contribution in a non-excluded field.
- 20 He pointed out that the invention requires a physical document processing system with a communications link that is configured to receive numerical information, such as, for example, a deposit amount for a deposit transaction, as a signal over a network that is compared with a number ie the calculated deposit amount. The invention also requires a display device for displaying financial information, that is, the extent that the two numerical amounts (ie the received deposit amount and the calculated deposit amount) are balanced, and only after this balancing check has been performed. In his view, this conditional requirement for display was technical and took the invention beyond a computer program as such and into the real world.

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<sup>4</sup> Re *Halliburton Energy Services Inc* [2011] EWHC 2508 (Pat)

21 He submitted that this situation was analogous to paragraphs 71 and 72 of *Halliburton* which stated that "... data on which the mathematics is performed has been specified in the claim in such a way as to represent something concrete ..." [paragraph 72]. He also drew my attention to *AT&T*<sup>5</sup>, in which Lewison J reviewed case law to seek guidance on what was meant by the word "technical". In particular, Mr Kenrick highlighted paragraph 25 where, in relation to an EPO Board of Appeal case, the Judge comments that:

"The point that the Board is making is that the computer output results in something happening the real world, namely the **giving of visual indications** [Mr Kenrick's emphasis]. The claim related to things going on inside the workings of the computer, rather than any form of data processing. It was that, I think, that led the Board to describe the claim as directed to use in the solution of a technical problem."

22 I am not persuaded by these arguments. In my view, conducting blind balancing on documents associated with a deposit transaction and displaying the deposit only if the received and calculated amounts match, is nothing more than an administrative process. The fact that the invention may dissuade dishonest cashiers from stealing deposited money, particularly over-deposits that the user is not aware that they have made, is not technical. I therefore find that the claimed invention is excluded as a scheme, rule or method for doing business.

23 Further, given that the contribution is related to the functioning of a processor, the contribution would also appear to relate to a computer program. It is considered that none of the *AT&T* signposts to an allowable technical effect (as set out in paragraph 40 of the judgment) are met by the present contribution. These 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 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.

24 I shall address these signposts in order. Firstly, the present claimed technical effect has no technical effect on a process which is carried on outside of the computer: the invention merely conducts blind balancing. Secondly, there is obviously no change in the level of the architecture of the computer. Thirdly, the claimed technical effect does not result in the computer operating in a new way beyond that which is found in any computer operating a new program. Fourthly, there is no increase in computer

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<sup>5</sup> *AT&T Knowledge Ventures LP, Re* [2009] EWHC 343 (Pat)

speed or reliability given by the claimed technical effect. Finally, the problem (which is a business rather than a technical problem) is not so much solved as makes it less likely that the teller is tempted to steal. I therefore find that the claimed invention is excluded as a computer program as such.

25 The same reasoning applies to the method claims 37 and 70.

### **Conclusion**

26 I find that the invention as claimed in claims 1, 37 and 70 is excluded from patentability under section 1(2) because it relates to a computer program as such and a method of doing business as such.

27 At the hearing I asked Mr Kenrick whether the applicant had a fall-back position given the examiner had indicated in the exchange of correspondence that the application did include patentable subject matter. He indicated that there was no fall-back position and I should make my decision based on the latest claim set.

28 I therefore refuse the application under section 18(3).

### **Appeal**

29 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