Intellectual Property Office

BL O/174/14

16 April 2014

PATENTS ACT 1977

APPLICANT Sainsbury's Supermarkets Ltd

ISSUE Whether patent application GB1112905.3 complies with section 1(2)(c) of the Act

HEARING OFFICER Dr Jim Houlihan

DECISION

Introduction

1. The application is entitled "*A computer system for processing product data*" and has been published as GB2493336A on 6 February 2013 in the name of Sainsbury's Supermarkets Ltd. It was filed on 27 July 2011 and has the application number GB1112905.3.

2. The examiner had pursued an objection in several rounds of correspondence that the claims were not patentable as they related to a business method and a computer program, as such. While the examiner had objected on the grounds of inventive step in earlier reports, no objection was raised on these grounds in his final report. However, in reiterating his patentability objection in his final report he cited four documents (US2002/0198772, WO99/12117, US6292786 and WO2010/016778) to illustrate his point that various components of the hardware referred to in the claims were conventional.

3. The offer of a hearing was accepted by the applicant and, after some delays, the hearing took place on 14 February 2014. The applicant was represented by Mrs Virginia Driver of Page White and Farrer. I was assisted by Mr Peter Gardiner. Also attending were the examiner Mr Ben Widdows and two observers for training purposes.

4. Prior to the hearing Mrs Driver submitted skeleton arguments but, for an unknown reason (despite investigations both in the IPO and in Page, White and Farrer), these were not received in this Office. Therefore, I considered the skeleton at the beginning of the hearing and take it into full account in coming to this decision. Also prior to the hearing I identified some authorities, further to those which had been cited in the proceedings (*Merrill Lynch*[1]*,*

[1] Merrill Lynch's application [1989] RPC 19

AT&T[2]*, HTC v Apple*[3]*, Lantana*[4]*),* which I considered might be relevant and notified Mrs Driver that I may refer to these cases during the course of forming my decision.

The application

5. The alleged invention relates to a computer system and method for executing a point of sale transaction. In particular, the invention provides a point of sale terminal which is capable of receiving first price data from at least one item purchased by a customer and a server which receives both transaction data from the point of sale terminal and second price data pertaining to comparable competitor items from an update server so that the first and second price data can be compared and a voucher issued based on the comparison. For convenience, throughout this decision I use the term "invention" as shorthand for "alleged invention".

6. The present set of claims was filed on 06 March 2013 and consists of two independent claims. Claim 1 relates to a computer system for executing a point of sale transaction while claim 7 relates to a method of executing a point of sale transaction in a computer system. Claim 1 reads:

> *A computer system for executing a point of sale transaction comprising:*
>
> *a point of sale terminal having an interface for receiving product data from at least one product purchased by a customer, the product data including a first price for the product;*
>
> *a server connected to receive transaction data from transactions conducted by the customer at the point of sale terminal, including the product data, the server having a processor arranged to execute a computer program which:*
>
> *(i) receives from the point of sale terminal first price data including at least said first price for multiple items in a basket of a customer transaction, and second price data pertaining to each product, the second price data being received from an update server operable to obtain second prices for a plurality of products and to provide said second prices to the processor;*
>
> *(ii) on receipt of a transaction complete message from the point of sale terminal, compares the first price data with the second price data; and*
>
> *(iii) issues a voucher request based on the comparison of the first and second price data; and*

[2] AT&T Knowledge Ventures LP Application and CVON Innovations Ltd's Application v Comptroller-General of Patents [2009] EWHC 343 (Pat) (hereinafter referred to as "AT&T")
[3] HTC Europe Co Ltd. v Apple Inc. [2013] EWCA (Civ) 451 (hereinafter referred to as "HTC v Apple ")
[4] Lantana Ltd. v Comptroller-General of Patents [2009] EWHC 2673 (Pat)

a voucher issuing unit comprising a printer located at the point of sale arranged to receive the voucher request and to automatically print a voucher for the customer responsive to the voucher request, wherein the printer prints a discount voucher; a negative voucher; or an equal voucher depending on the comparison.

7. Claim 7 reads:

A method of executing a point of sale transaction in a computer system, comprising:

receiving product data at a point of sale terminal of the computer system, the product data from at least one product purchase by a customer and including a first price for the product;

receiving at a server transaction data from transactions conducted by the customer at the point of sale terminal, including the product data;

a processor executing a computer program which:

(i) receives from the point of sale terminal first price data including at least said first price for multiple items in a basket of a customer transaction, and second price data pertaining to each product, the second price data being received from an update server operable to obtain second prices for a plurality of products and to provide said second prices to the processor;

(ii) on receipt of a transaction complete message from the point of sale terminal, compares the first price data with the second price data; and

(iii) issues a voucher request based on the comparison of the first and second price data; and

receiving the voucher request at a voucher issuing unit comprising a printer located at the point of sale and automatically printing a voucher for the customer responsive to the voucher request, wherein the printer prints a discount voucher; a negative voucher; or an equal voucher depending on the comparison.

The Law

8. This matter concerns section 1(2)(c) of the Patents Act. It reads:

"*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 of 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."

9. There is a large volume of case law on the subject of excluded inventions. In *Aerotel/Macrossan*[5] the Court of Appeal set out a four step test to approach the issue of excluded matter. In *Aerotel* the issue was a computer program; *Macrossan* concerned a method of doing business.

10. The four step test proposed in *Aerotel* is as follows:

I. Properly construe the claims

II. Identify the actual (or alleged) contribution

III. Ask whether it falls solely within the excluded subject matter

IV. Check whether the actual or alleged contribution is actually technical in nature

11. In *Symbian*[6] the Court of Appeal confirmed that the *Aerotel* test is equivalent to the previous case law test of "technical contribution". More recently, the same court confirmed this approach in *HTC v Appl*e and also, with some modification, the five signposts established in *AT&T* for interpreting whether a computer program makes a technical contribution. *Aerotel* thus codifies the approach to the law on excluded matter but does not depart from the principles in domestic law which were established before it. In particular, the law regarding the business method exclusion established in Merrill Lynch in 1989 remains relevant. I will now apply the four step *Aerotel* approach.

Analysis

Step 1 - Properly construe the claim

12. I consider for the most part the claims are clear in scope but raised a small concern about the clarity in two areas of the independent claims. Firstly, the

[5] Aerotel Ltd v Telco Holdings Ltd; Macrossan's Application, Court of Appeal [2007] RPC 7 (hereinafter referred to as "Aerotel")

[6] Symbian Ltd v Comptroller-General of Patents, Court of Appeal, [2008] EWCA CIB 1066, [2009] RPC 1 (hereinafter referred to as "Symbian")

"*plurality* of products" in reference to the second price data has no formal antecedent. I assumed that this is intended to refer to the "multiple items" in the basket for which the first price data is provided; that is that the products are comparable. Mrs Driver confirmed that this is the case and referred me to page 2 line 28 of the specification which says the second price data must be for comparable products to those in the basket for which first price data has been received. Secondly, for the avoidance of doubt Mrs Driver confirmed that the reference to "*transaction complete message*" means a message saying that the transaction is complete.

13. Thus, it is clear to me that claim 1 relates to a computer system which comprises: a terminal operating at a point of sale for a customer; a server comprising a processor which receives first price data for multiple items in a basket and second price data on comparable products from a separate update server. When the program receives a message indicating that the transaction is complete the processor compares the first price data with the second price data and issues a voucher request based on that comparison (Mrs Driver emphasised that this comparison does not take place before the transaction is complete but simultaneously or afterwards). A voucher issuing unit comprising a printer is arranged to receive the voucher request and then prints a voucher for the customer when such a request is made. Mrs Driver pointed out that it is a feature of the claim that a voucher is issued every time a voucher request is made, i.e. either a discount voucher, negative voucher, or an equal voucher depending on the results of the comparison. I shall deal with this particular point in paragraph 22 below.

14. Mrs Driver stated that there was meant to be "*no significant difference in intended scope*" between the two independent claims, i.e. the computer system of claim 1 and the method of claim 7. I therefore construe the steps of claim 7, a method claim, in the same way as I construe claim 1.

15. Mrs Driver also drew my attention to claim 5 and emphasised that a feature of this claim is that the data stream is supplied *from* the processor to the voucher issuing unit.

Step 2 - Identify the actual (or alleged) contribution

16. The starting point for assessing step 2 can be found in the well known statement of Jacob LJ in *Aerotel* who said:

> *"It is an exercise in judgment probably involving the problem said to be solved, how the invention works, what it 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" [43]*

17. Mrs Driver emphasised at the outset that in *Aerotel* the Court of Appeal found that a computer system comprising known components connected in different ways made a new contribution that was technical and added that this was also

found to be the case in *Hitachi*[7] *(*which had been raised by the examiner albeit in the context of inventive step). I would not disagree with Mrs Driver here but would add that while the authorities make it clear that systems involving a computer *can* constitute a technical contribution that does not necessarily mean that they *will* in every case. Birss J made this point recently in *Lantana* where he said:

> "*Simply because it is possible to construct a generalised category which includes both the claimed invention in this case and a previous decision in which a claim was held to be patentable, does not help. It shows that such things can be patentable in some cases but does not show that the invention in this case is patentable*" [17]

18. In the context of step 2, four prior art documents which had been cited in relation to inventive step at various stages earlier in the case were discussed. These are: WO99/12117 (Catalina), US6292786 (Deaton) and WO2010/016778 (Duckworth) and US2002/0198772 (Bates). While, the question of inventive step is not before me, Mrs Driver was nonetheless keen to provide her views on these documents in respect of her submissions of where the alleged contribution lays. I think this was a useful approach in the circumstances. I am content to accept Mrs Driver's submission that none of these documents either alone or in combination suggest configuring the system with the arrangement as claimed in suit. Mrs Driver did concede that these documents do show similar pieces of hardware to those referred to in claim 1, namely a system which could represent a point of sale (POS) terminal, a server, a processor and a printer which could be used to print vouchers. She also said that price comparison systems and vouchers were known.

19. In his report of 7 May 2013 the examiner said he considered the alleged contribution to be "*in the way of automatically generating a voucher based upon a price comparison of a user's transaction to competitor price data, which indicates to a consumer how much they have saved or how much their voucher is worth".*

20. Mrs Driver disagreed. She explained very clearly her view of the alleged contribution. She said it was a computer system, not present in the prior art, which can deliver a basket-based price comparison, point-of-sale voucher system. Mrs Driver reinforced this by saying that it "*provides a system to allow retailers to implement a price match system which is local, in-store, without the need for display technologies for changing prices, but more importantly....but in a non-obvious way to generate a voucher each time a transaction is complete to very elegantly flag issues that could arise (in the voucher issuing system)"*.

21. Mrs Driver highlighted the apparent advantage provided by a system in which a voucher is printed every time a transaction is completed. She said this provides a reliable means of ascertaining whether or not the system is

[7] Hitachi (T258/03) [2004] EPOR 55

working, for example in order to comply with legal "price match" obligations and also from a customer service viewpoint. If only discount vouchers were issued then faults in the system might not be detected. But because a voucher is issued on every transaction, this alerts the retailer to investigate faults if a voucher is not issued.

22. I have no problem in accepting that the contribution lies in a new arrangement of hardware, a new connectivity, to create a new voucher issuing system at a point of sale based on price comparison of products in a point-of-sale basket with comparable products elsewhere. I do, however, have a problem with the alleged quality control, or self-checking aspect of the "every time a voucher" issuance. I can find no reference to this concept in the specification nor did Mrs Driver make any reference to any passages in the description in support of this point. In fact, several passages in the description indicate the voucher is not issued every time. For example, lines 1-3 of page 9 read "*The system can include an ability to set a limit on the number and/or value of difference vouchers that are issued to customers in a given store within a certain time period.*" Lines 1-7 of page 10 say "*If there is a failure to print a voucher in real time at the point of sale transaction for any reason, a next time solution is available....The next time solution keeps a record of all transactions for a given time period, for example, for two years, although it is possible that vouchers will only be issued to customers with a certain period (for example 28 days) after their original transaction."* To my mind the application contemplates options other than immediate issuance of a voucher. I acknowledge, however, that these passages could be construed as relating to preferred, not essential features, of the claims at issue and I have to take into account that it is possible to amend a patent application to remove matter that is inconsistent with the claims. Having re-read the specification, I do not find an explicit disclosure of the concept "print a voucher every time". However, I appreciate that the three options outlined in claim 1, a discount (positive) voucher, a negative voucher or an equal voucher, cover all the possible scenarios for printing a voucher and therefore it could be said that printing a voucher every time is implicit in the claim.

23. Thus, for the purposes of identifying the alleged contribution I will give Mrs Driver the benefit of the doubt on the point that a "voucher is printed every time". If I find the claims to be patentable on this basis I may have to revisit the issue. If I do not, then the issue becomes irrelevant. In all, having carefully considered Mrs Driver's skeleton arguments and listened to her arguments and considering the specification as a whole I am prepared to construe the alleged contribution as "a *point of sale price comparison system facilitated by a computer system in which a voucher displaying information depending on a price comparison between items in a customer's basket and comparable competitor items is issued every time to a customer*, *where the information on the voucher indicates whether the customer has saved money, receives a discount or has items of equal value when compared with the comparable competitor items.*

Step 3 - Ask whether the actual contribution falls solely within the excluded subject matter

24. There are two questions - (i) is the invention a computer program and/or (ii) is it a business method? I take the latter point first, cognisant that these days business systems are more often than not digital. In *Re. Halliburton* Birss HHJ (as he then was) provided apposite guidance regarding this interplay of business methods and computer programs. He said:

> *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 of doing business may be an improvement on previous methods is immaterial because the business method exclusion is generic. [35]*
>
> *The Aerotel approach is a useful way of cutting through the cases like Merrill Lynch, Macrossan and Gale in which more than one exclusion is engaged. Take a patent claim consisting of a claim to a computer programmed to perform a business method. What has the inventor contributed? If the answer is a computer program and method of doing business and there is nothing more present, then the contribution falls solely within the excluded subject matter. It can be seen not to be patentable at step 3, before one gets bogged down in the argument that about whether a book keeping system running more efficiently on a computer is a technical effect. Following Aerotel the question has answered itself"* [36]

25. When asked to address step 3 of the Aerotel/Macrossan test Mrs Driver said that she would probably have to agree with me that making a price comparison and acknowledging that comparison by issuing a voucher would be a business method, although she made a point of saying that this was not in her view where the contribution lay. Mrs Driver was very clear in her submissions that the technical contribution lay in "*the overall architecture of the computer system with technical components which in themselves are known but connected in a different way*" and that "*the computer program depends on architecture around it in order for it to work....to deliver an in-store basket-based voucher system*". An important feature of Mrs Driver's submissions was that because the computer program is not the totality of the invention it cannot be excluded because the invention includes things other than the computer program. In this vein of argument Mrs Driver also submitted that the organisation of the components is novel. On that point, I note that in *HTC v Apple* the Court of Appeal affirmed the principle established in

Symbian that novel or inventive purely excluded subject matter does not count as a technical contribution.

26. I have to say I disagree with Mrs Driver's arguments here. I have some sympathies with her in making these strenuous submissions under step 3 but the issue really revolves around what I consider to be the accurate construction of the actual contribution. As I have formulated my view of the actual contribution under step 2, as detailed in paragraph 23 above, albeit different to Mrs Driver's formulation of the actual contribution, I will go on to consider it under step 3.

27. I am firmly of the view that the actual contribution relates entirely to a way of conducting business. It is about: (i) comparing prices, which manifestly is a business issue, and (ii) issuing a voucher with "value" information on it, which is also wholly a business issue. If the contribution is a business method then it is excluded - the exclusion is generic, as the Court of Appeal says in *Merrill Lynch*. True, the process is facilitated by technical things but they are known. I do not find that the aspect of a "voucher every time", on the basis of the disclosure of the application, affords a technical contribution in terms of a quality assurance process. To my mind, the fact that a voucher is issued every time is not a technical solution to the problem of ascertaining whether the system is working as it should. Rather, it addresses a different "problem" of allowing a variety of information to be communicated to customers to inform them of the relative value of the items they have purchased when compared with comparable competitor items. As accepted by Mrs Driver voucher schemes are not new. The information is new, not the technical characteristics of voucher production and, crucially, that information is business information. I hold, therefore, that claim 1 is excluded insofar as it relates solely to a method of doing business.

28. Throughout the examination process the examiner also maintained that the invention was excluded as it relates to a computer program, as such. Although I have already held that the invention relates to a business method, for completeness I will now consider the computer program exclusion.

29. I think among Mrs Driver's submissions under step 3, which I have discussed above, her point about connectivity is particularly relevant to the issue of the computer program exclusion. She said that it is the connectivity of the components of hardware that creates the overall architecture of the invention and that the computer program "*lies in the middle of the system*" but does not make up the whole system. These arguments were initially quite persuasive, especially when considering *Aerotel*. However, on further deliberations, it seems to me that the connectivity is necessarily brought about by a computer program - the software makes the connections of price data, conducts the comparison and enables the voucher to be issued. The connectivity therefore lies entirely in the programming itself. I cannot see a new technical aspect here. On this basis, I believe that the invention also relates to a computer program as such.

30. Nonetheless, I think it is worthwhile exploring this point further using the well known *"AT&T"* signposts. Mrs Driver made the point that when considering the signposts the overall effect of the system is as she defined it under step 2, which I have reiterated in paragraph 20 above. I will bear this in mind as I run through , but as I have mentioned I have construed the contribution as stated in paragraph 23 above.

31. I apply the *AT&T* signposts, with the fourth signpost as modified by Lewison LJ in *HTC v Apple* as follows:

(i) *whether the claimed technical effect has a technical effect on a process which is carried on outside of the computer.*
Mrs Driver said the system is necessarily going on outside the computer and submitted I was extending the signpost by saying that the "system" was the computer. She said the point of sale terminal, providing product data and the voucher issuing unit were going on "outside" the computer. I do not find that persuasive. To me, the contribution is the comparison of price data which takes place within the computer system and then issues an instruction to print a voucher using a conventional printer. I cannot see a technical effect outside the system. The "effect" outside the system is a voucher which can contain different information.

(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 application being run.*
Mrs Driver did not think this signpost was material to her case. For the avoidance of doubt my view is that the effect is dependent upon the data being processed, i.e. the various prices being compared, and operates at the application level of the system. There is no indication of a new technical effect within the infrastructure of the computer system; the new "effect" is the connectivity of data and issuance of a voucher in response to that data processing.

(iii) *whether the claimed technical effect results in the computer being made to operate in a new way.*
Mrs Driver said the system operates in a new way, although she did acknowledge that what goes on in the computer itself is not material to her case. In my view, the computer merely carries out a known calculation and issues a print instruction in a conventional manner. The components of the computer hardware are the same, there is no change in the way they technically operate. The output, a voucher containing business information every time, does not amount to making the computer system itself operate in a new way.

(iv) *whether the program made the computer a better computer in the sense of running more efficiently and effectively as a computer.*
Again Mrs Driver did not think this was relevant in her case but commented that the output of the system was different. To me, there is

no indication at all that the computer or printer operates in any other way than would be expected, neither did Mrs Driver make any comments in this regard.

(v) *whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.*
Mrs Driver submitted strongly that the perceived problem overcome by the invention is in ascertaining that the system is working correctly, particularly that the user is instantly aware of a problem if a voucher is not issued. I do not think the issuance of a price comparison voucher by the computer overcomes a problem of quality assurance. It is not directed to a quality assurance problem; rather it concerns a business information "problem".

Step 4 - check whether the alleged contribution is technical

32. I do not need to consider step four as I have answered step three in the negative and, moreover, have considered the issue of technical contribution under that step.

Conclusion

33. I find that the subject matter of claim 1 is excluded from patentability as it relates entirely to both a business method and a computer program, as such. I find that claim 7, an independent method claim, also relates to both a business method and computer program as such. As I have said earlier in this decision, at the beginning of the hearing Mrs Driver said that there was no significant difference in the scope of claims 1 and 7.

34. I have considered the dependant claims and the description and can find no saving amendments. Claim 5 was referred to in particular during the hearing. The characterising feature of claim 5 is a "*data stream supplied from the processor to the voucher issuing unit, the data stream including transaction data representing transactions conducted by the customer.....*". I do not consider this affords a technical contribution to claim 1.

35. I therefore refuse the application under section 18 (3) as it does not comply with section 1(2) (c) of the Act.

Appeal

36. Any appeal must be lodged within 28 days.

J Houlihan
Deputy Director, acting for the Comptroller