



PATENTS ACT 1977

APPLICANT	Walmart Apollo, LLC
ISSUE	Whether patent application number GB 1419316.3 complies with section 1(2)
HEARING OFFICER	Mr B Micklewright

DECISION

Background

- 1 Patent application number GB1419316.3 is the national phase application based on PCT application number PCT/US2013/036838, filed on 16 April 2013 and with a declared priority date of 16 April 2012. It was filed in the name of Wal-Mart Stores, Inc. and is now proceeding under the name of Walmart Apollo, LLC. The international application was published as WO 2013/158681 A1 and was assigned the UK publication number GB 2527153 A.
- 2 This decision addresses whether the claimed invention is excluded from patentability under section 1(2)(c) of the Patents Act 1977 (“the Act”) as a method of doing business and as a computer program as such.
- 3 The examiner argued that the invention falls solely into the excluded categories specified in section 1(2) of the Act. Following several rounds of correspondence, the applicant was invited to request a hearing and subsequently requested that the hearing officer makes a decision based on the papers on file and particularly the response dated 28 April 2020.
- 4 The examiner has not formally considered other matters, so an assessment of novelty, inventiveness or clarity has yet to be made on the invention as amended. If the application were to be allowed on the excluded matter point it would need to be remitted back to the examiner for further processing, updating of the search and formal examination of the remaining substantive issues.

The Invention

- 5 The invention relates to making payments for items purchased by online orders, specifically to making such payments as in-store point-of-sale (“POS”) payments. This enables customers without credit or debit cards, or who do not want to use such cards online, to purchase items online. The claimed invention specifically provides for reducing abuse in such systems. It does this in two main ways. Firstly, it restricts which items are eligible for in-store POS payments. Each item is assigned a classification in a product hierarchy, whereby descendent nodes inherit eligibility for an in-store POS payment from their ancestors. For example, the class “power tools” could have a subclass “lawn equipment”. It is possible to define an override to this eligibility. Eligibility for such a payment is also based on the quantity of the items requested, evaluated with respect to a quantity threshold, and the cost of the item, evaluated with respect to a cost threshold. In the claimed invention an item is eligible for in-store POS payment only if both the eligibility of the ancestor node or the override of this eligibility indicate the item is eligible, and at least one of the quantity or cost of the item indicates the item is eligible.
- 6 Secondly, in situations where a refund is requested, the invention evaluates whether there could be abuse by selecting both a refund method and a POS location in accordance with the evaluation of the refund activity of the customer for abuse. If it is determined that the refund activity of the customer indicates abusive activity, the POS location for payment of a cash refund will be limited to stores within a threshold proximity from the store from which the acknowledgment of payment at the POS was received. Other restrictions may be applied such as preventing the customer from ordering online and paying in-store. The purpose of evaluating customer activity is to prevent abuse and fraud.
- 7 The latest claims were filed on 28 April 2020 and comprise 21 claims. There are three independent claims, claim 1, 7 and 13, directed towards a method, system, and a computer program product respectively. All include similar features and it will be sufficient to consider claim 1 here, which reads:
 1. A method for managing online transactions comprising:
 - receiving, by a server, an online order from a customer for an item having a purchase price associated therewith, the item corresponding to an item record for a product offered for sale, and the item record including an item identifier and pricing information;
 - evaluating, by the server, an eligibility of the item for in-store point-of-sale (POS) payment by:
 - evaluating an eligibility for the in-store POS payment of an ancestor node of the item record in a product hierarchy, the item record being a node in the product hierarchy and having a plurality of ancestor nodes each representing a respective classification of the product, the ancestor node being one of the plurality of ancestor nodes, and the eligibility for the in-store POS payment of the ancestor node applicable to descendent nodes of the ancestor node;
 - evaluating an override of the eligibility of the item;
 - evaluating at least one of a quantity of the item in the online order with respect to a quantity threshold or a cost of the item with respect to a cost threshold; and

determining the item to be eligible for the in-store POS payment only if both: (a) at least one of evaluating the eligibility for the in-store POS payment of the ancestor node or evaluating the override of the eligibility of the item indicate the item is eligible, and (b) evaluating the at least one of the quantity of the item or the cost of the item indicate the item is eligible;

transmitting, by the server, for display to the customer, payment options including an in-store POS payment option in response to determining the item to be eligible for the in-store POS payment;

receiving, by the server, acknowledgment of payment at a POS of a store for the online order only if the payment options include the in-store POS payment option;

receiving, by the server, a request for a refund for the online order;

evaluating, by the server, refund activity of the customer for abuse;

selecting, by the server, both of a refund method and a POS location according to evaluating the refund activity of the customer for the abuse;

determining that the refund activity of the customer indicates abusive activity;

and

in response to determining that the refund activity of the customer indicates the abusive activity, limiting the POS location for payment of a cash refund to stores within a threshold proximity from the store from which the acknowledgment of payment at the POS was received.

The Law

8 Section 1(2) of the Act states:

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-

- (a) a discovery, scientific theory or mathematical method;
- (b) a literary, a 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 program for computer**;
- (d) the presentation of information;

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.

9 The provisions of Section 1(2) were considered by the Court of Appeal in *Aerotel*¹, where a four-step test was laid down to decide whether a claimed invention is excluded from patent protection:

- (1) *Properly construe the claim;*
- (2) *Identify the actual 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.*

10 It was stated by Jacob LJ in *Aerotel* that the test is a re-formulation of and is consistent with the previous “technical effect approach with rider” test established in

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

previous UK case law. Kitchen LJ noted in *HTC v Apple*² that the *Aerotel* test is followed in order to address whether the invention makes a technical contribution to the art, with the rider that novel or inventive purely excluded matter does not count as a “technical contribution”.

11 Lewison J (as he then was) in *AT&T/CVON*³ set out five signposts that he considered to be helpful when considering whether a computer program makes a technical contribution. Lewison LJ reformulated the signposts in *HTC v Apple* in light of the decision in *Gemstar*⁴. The 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 the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer.

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

Arguments and analysis

12 I will consider each of the *Aerotel* steps in turn in my analysis.

(1) Properly construe the claim

13 Particular attention is given to the following features: “...determining that the refund activity of the customer indicates abusive activity”. Examples of abusive activity are provided in paragraphs [00164] and [00184] and include someone maliciously ordering a large number of items and then not paying for them, or unpaid orders tying up inventory. It may also include potentially fraudulent activity, such as using the system to transfer funds from one party to another. The invention takes into account historical refund activity of the customer.

14 The “in-store point of sale (POS)” is a computer device connected to other computing devices via a network. It may be associated with a physical store and has the capacity to communicate with one or more merchant systems such as servers. It may take the form of an automated system in the guise of an automated teller machine (ATM) that is capable of receiving electronic and/or cash payments. The POS is capable of communicating with a customer via the customer’s electronic device such as a mobile phone, tablet computer or any other electronic device.

² *HTC Europe Co Ltd v Apple Inc* [2013] EWCA Civ 451

³ *AT&T Knowledge Venture/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

⁴ *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

(2) Identify the actual contribution

- 15 Identifying the contribution in the second step of this test is critical and I refer to the following paragraphs in Aerotel for guidance:

“43. The second step – identify the contribution - is said to be more problematical. How do you assess the contribution? Mr Birss submits the test is workable – it is 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.”

- 16 The attorney has not provided a definitive statement setting out the contribution, but I take from the comments and amendments filed that the attorney appears to have identified the contribution as follows:

“A system which prevents abuse and fraud wherein an option is provided to order items online and make a payment at an in-store point-of-sale (POS), abuse and fraud being prevented by limiting the POS location for payment of a cash refund to stores within a threshold proximity from the store from which the acknowledgement of payment at the POS was received.”

- 17 Similarly, the examiner considered the proposed contribution of the invention to be:

“A computer implemented system of reducing fraud and abuse of systems of POS refunds which is achieved by through limiting the POS location for payment of a cash refund to stores within a threshold proximity from the store, from which the acknowledgement of payment at the POS was received.”

- 18 I agree that the invention is aimed at reducing potential abuse and/or fraud. The claimed invention does this in two ways. Firstly, it restricts which items are eligible for in-store POS payments. Each item is assigned a classification in a product hierarchy, whereby descendent nodes inherit eligibility for an in-store POS payment from their ancestors. It is possible to override this eligibility. Eligibility for such a payment could also be based on the quantity of the items requested, evaluated with respect to a quantity threshold, and the cost of the item, evaluated with respect to a cost threshold. In the claimed invention an item is eligible for in-store POS payment only if both the eligibility of the ancestor node or the override of this eligibility indicate the item is eligible, and at least one of the quantity or cost of the item indicates the item is eligible. Secondly, in situations where a refund is requested, the invention evaluates whether there could be abuse by selecting both a refund method and a POS location in accordance with the evaluation of the refund activity of the customer for abuse. If it is determined that the refund activity of the customer indicates abusive activity, the POS location for payment of a cash refund will be limited to stores within a threshold proximity from the store from which the acknowledgment of payment at the POS was received. I therefore identify the contribution as:

“A computing arrangement for reducing abuse and fraud which provides an option to order an item online and make a payment at an in-store POS, whereby eligibility for an in-store payment for a particular item is evaluated based on a classification in a product hierarchy, an override of this eligibility of the item, as well as an evaluation of the quantity of the item and the cost of

the item with respect to a quantity threshold and a cost threshold respectively, and whereby, based on a determination of the refund activity of the customer indicating abusive activity, a cash refund is limited to stores within a threshold proximity from the store from which the acknowledgement of payment at the POS was received.”

Steps (3) and (4): Ask whether the contribution falls solely within the excluded subject matter; check it is actually technical in nature.

19 For convenience I will consider steps (3) and (4) together. The Court of Appeal in *Symbian*⁵ ruled that the question of whether the invention makes a technical contribution must be addressed when considering the computer program exclusion, although it does not matter whether that takes place at step 3 or step 4. For computer-implemented inventions the *AT&T/Cvon* signposts set out above provide helpful pointers in determining whether such inventions make a technical contribution.

20 The attorney suggests that the first signpost is most pertinent to the present invention. There are no arguments from the attorney to suggest that signposts ii)-v) have been satisfied. I will firstly consider signposts ii) to iv) and v) for completeness of the assessment of technical contribution before addressing the main argument around signpost i).

Signpost 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

Signpost iii) Whether the claimed technical effect results in the computer being made to operate in a new way

Signpost iv) Whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer

21 There is no suggestion by the attorney that the computer operates in a new way, that the architecture of the computer operates differently, independent of the data input, or that the computer is a better computer in the sense of being more efficient or processing data more quickly. Any conventional computer operating new software could be considered to make the computer operate differently. In the present case, the transactional processing system includes processing steps to instruct and route data to or retrieve data from appropriate storage locations and analyse the customer's query to purchase an item and present payment information to a customer. There is no technical contribution in the architecture or in the operation of the computer. I agree with the examiner's assessment that the invention does not claim to make the computer operate in a new manner. Any new or improved performance is within the software application, not the computer itself. Signposts ii) to iv) have not therefore been satisfied.

Signpost v) Whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented

⁵ *Symbian Ltd v Comptroller-General of Patents* [2009] RPC 1

22 The final signpost looks at the technical problem being solved by the invention and establishes whether the problem has been solved or circumvented. The problem being addressed relates to reducing potential abusive behaviour in providing POS refunds. Although this problem is potentially addressed by the invention, this is not a technical problem. Rather it seems to me to be a business or administrative problem. Nor is the problem solved in any technical manner, for example by adding new technical security features to the POS or to the system as a whole. This signpost also therefore does not point to a technical contribution.

Signpost i) Whether the claimed technical effect has a technical effect on a process which is carried on outside the computer

23 The attorney argues that the computer system includes an action beyond that of the computer arrangement which "...has a technical effect on a process which is carried on outside the computer...". They emphasise that:

"Amended claim 1 firstly refers to a "server", at which a request for a refund for the online order is received, and secondly to the "POS" used for payment of a cash refund. In the language of signpost (i) framed by Lewison LJ, the "server" of amended claim 1 might be considered to include "the computer", whilst "limiting the POS location for payment of a cash refund" might be considered to include "a process which is carried on outside the computer.""

24 Payments in person at in-store POS terminals are of course completely conventional. The present invention relates to making such payments for items ordered online. The invention seeks to reduce abuse and fraud by placing restrictions on how, when and where such payments can be made, as is set out in the contribution I have identified above. These restrictions, whether based on the classification of the item in the product hierarchy or an override to that eligibility, on the quantity of items being ordered, or on the cost of the item, are completely based on business or administrative considerations relating to reducing abuse or fraud. They are not technical in nature. Similarly, the restrictions on in-store POS cash refunds in the situation where it has been determined that the customer's activity indicates abusive activity, namely limiting such refunds to stores within a threshold proximity from the store from which the acknowledgment of payment at the POS was received, are business or administrative decisions and do not involve technical considerations. I do not therefore consider that any of these features constitute a technical effect on a technical process outside of the computer.

25 Moreover, the "computer" for the purposes of signpost i) comprises, in the present case, the computer arrangement with the servers and POS terminals. In *Lantana*⁶ Birss J said in paragraph 30 that computers connected via a network can be the computer for the purposes of signpost i). The only effects outside this computer arrangement are the business and administrative effects I have identified above. There is no technical effect on a technical process outside of the computer.

26 None of the signposts point towards the invention, implemented as a program for a computer, making a technical contribution. Taking a step back it is evident that the invention is, in substance, a business method where decisions on making in-store

⁶ *Lantana Ltd v Comptroller General of Patents, Designs and Trade Marks* [2013] EWHC 2673 (Pat)

POS payments for items ordered online, and on making in-store POS cash refunds to such payments, are based on business considerations aimed at reducing abuse and fraud. It may be a better business method, but it is still a business method, implemented as a computer program.

- 27 I therefore conclude that the contribution lies solely in the excluded fields of a program for a computer as such and a method of doing business as such.

Conclusion

- 28 In conclusion, I have found that the claimed invention falls solely in the excluded categories of a program for a computer as such and a method of doing business as such. It does not therefore comply with the requirements of sections 1(1)(d) and 1(2)(c) of the Act. I therefore refuse the application under Section 18(3).

Appeal

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

B Micklewright

Deputy Director, acting for the Comptroller