



PATENTS ACT 1977

APPLICANT Capital One Services, LLC

ISSUE Whether patent application GB2005628.9 complies
with section 1(2) of the Patents Act 1977

HEARING OFFICER Ben Buchanan

DECISION

Background

- 1 This decision relates to whether patent application GB2005628.9 complies with section 1(2) of the Patents Act 1977 (“the Act”).
- 2 The application was filed on 17 April 2020 and published on 21 October 2020 as GB2583192A. The compliance period ends on 17 October 2023.
- 3 In his first examination report of 24 June 2020, the examiner objected to the application on the basis that it related solely to excluded subject matter, namely a program for a computer and a method for doing business as such. All other considerations were deferred and only a limited search was performed. The applicant was warned that further searching will be required at a later date.
- 4 The applicant filed amendments with their agent’s letter dated 20 April 2021, however the examiner did not find these amendments overcame the excluded matter objection and a further examination report was issued on 23 June 2021. This further examination report included giving the applicant the opportunity to request a hearing.
- 5 Further amendments were filed with the agent’s letter of 13 October 2021, however the examiner reported on 21 October 2021 that these amendments contained added subject matter so were not considered beyond this objection. The examiner repeated the offer of a hearing and stated that in the absence of requesting a hearing, further amendments or arguments may result in the application being passed to a Hearing Officer for a decision to be issued based on the papers.
- 6 The applicant filed additional amendments with their agent’s letter dated 15 December 2021, which the examiner found to overcome the added subject matter objection but not the excluded matter objection. I am slightly unsure as to the process by which the hearing was appointed. The applicant did not request a hearing in their letter, and yet the examiner issued a pre-hearing examination report dated 5 January 2022 and passed the application to the Hearings Clerk to arrange a hearing.

At some point the applicant must have requested a hearing because a date was agreed and skeleton arguments were filed with their letter dated 3 February 2022. These skeleton arguments included an auxiliary request to be considered in the event that the claims filed on 15 December 2021 were found to be excluded.

- 7 On 10 February 2022 a hearing was held where the applicant was represented by Andrew Flaxman of Haseltine Lake Kempner. I was assisted by Thomas Britland. Also in attendance were the examiner Freddy White and an observer.
- 8 The matter to be decided is whether the invention as set out in the claims filed on 15 December 2021 is excluded under section 1(2)(c) of the Act and, if I find they are excluded, whether the invention as set out in the auxiliary request is excluded under the same. To be clear, I will not formally consider whether the claims in the auxiliary request meet any further requirements such as those of support under section 14.
- 9 Should I find in favour of the applicant, the application will be returned to the examiner for further processing, including completion of the search and formal examination of the remaining substantive issues.

Subject Matter

- 10 The claimed invention relates to a method and a system for applying codes to electronic shopping carts using a browser extension, as well as a computer readable medium providing instructions to perform the method. The claimed invention works by monitoring the shopping cart of a user on an e-commerce website during a particular session, determining whether the present configuration of items in the shopping cart has been tested before; where it has, retrieving the valid codes from a memory and; where it has not, cloning the shopping cart in a shadow session and testing various codes on the cloned shopping cart to determine valid codes.
- 11 By performing these tests before the user reaches the checkout, it saves the user time which might have previously been spent manually testing various codes to get the best outcome. Further, by determining whether the present configuration of items has been tested before, the amount of processing can be reduced as known valid codes can be retrieved (from memory) without the need to perform further testing. Additionally, by performing testing in a shadow session, the user can modify the shopping cart without the risk of experiencing conflicts in the testing regime.

Prior Art

- 12 The examiner identified a single piece of prior art from their brief search, US 2017/186027 A1 ("*Hudson*"). Its disclosure is summed up in paragraph 34 as: "*a computer-implemented system can automatically and systematically apply codes in order to reduce the total price paid by the consumer for one or more items offered for sale by an electronic commerce platform without requiring the consumer manually identify or input the code(s)*". Paragraphs 74-81 discuss the system in greater detail, where multiple codes are tested automatically once the checkout page of an e-commerce website has been accessed, with the results displayed as an overlay provided by the browser plug-in or extension. This partially addresses the first problem highlighted in the present application, namely reduction of time spent by the user at checkout but is silent with regards to the other two advantages.

The Claims

13 There are three independent claims pending. They read as follows:

Claim 1:

A method for applying codes to electronic shopping carts using a browser extension, comprising:

monitoring a shopping cart associated with an e-commerce website and with a user, the shopping cart being associated with a session of the user;

in response to detecting a change to the shopping cart, testing codes with respect to a present content of the shopping cart to determine valid codes by:

determining whether the present content has been tested before;

in response to determining the present content has been tested before, retrieving the valid codes from a memory; and

in response to determining the present content has not been tested before:

generating a shadow session and cloning the shopping cart to form a cloned shopping cart in the shadow session, the shadow session being a distinct and separate session from the session of the user and being between the browser extension and the e-commerce website, the cloning the shopping cart including adding, deleting, or modifying items of the cloned shopping cart in the shadow session to correspond to the present content of the shopping cart;

obtaining the codes; and

testing the codes on the cloned shopping cart in the shadow session to determine the valid codes, the codes being associated with the e-commerce website;

selecting at least one of the valid codes as at least one selected code based on a result of the testing the codes;

determining a status of the session; and

performing an action based on the status and the at least one selected code.

Claim 11:

A system for applying codes to electronic shopping carts using a browser extension, the system comprising:

a memory storing instructions; and

a processor executing the instructions to perform a process including:

determining whether a user is viewing an e-commerce website;

in response to determining that the user is viewing the e-commerce website, setting up cart listeners;

using the cart listeners, monitoring a shopping cart associated with the e-commerce website and with the user, the shopping cart being associated with a session of the user;

in response to detecting a change to the shopping cart, testing codes with respect to a present content of the shopping cart to determine valid codes by:

determining whether the present content has been tested before;

in response to determining the present content has been tested before, retrieving the valid codes from a memory;

in response to determining the present content has not been tested before:

generating a shadow session and cloning the shopping cart to form a cloned shopping cart in the shadow session, the shadow session being a distinct and separate session from the session of the user and being between the browser extension and the e-commerce website, the cloning the shopping cart including adding, deleting, or modifying items of the cloned shopping cart in the shadow session to correspond to the present content of the shopping cart;

obtaining the codes; and

testing the codes on the cloned shopping cart in the shadow session to determine the valid codes, the codes being associated with the e-commerce website;

selecting at least one of the valid codes as at least one selected code based on a result of the testing the codes;

determining a status of the session; and

performing an action based on the status and the at least one selected code.

Claim 20:

A non-transitory computer-readable medium storing instructions that, when executed by a processor, cause the processor to perform a method for applying codes to electronic shopping carts, the method comprising:

monitoring a shopping cart associated with an e-commerce website and with a user, the shopping cart being associated with a session of the user;

in response to detecting a change to the shopping cart, testing codes with respect to a present content of the shopping cart to determine valid codes, the codes being associated with the e-commerce website, wherein the testing the codes with respect to the present content of the shopping cart includes:

determining whether the present content has been tested before;

in response to determining the present content has been tested before, retrieving the valid codes from a memory; and

in response to determining the present content has not been tested before:

generating a shadow session and cloning the shopping cart to form a cloned shopping cart in the shadow session using the present content;

obtaining the codes; and

testing the codes on the cloned shopping cart in the shadow session to determine the valid codes;

selecting at least one of the valid codes as at least one selected code based on a result of the testing the codes;

determining a status of the session; and

performing an action based on the status and the at least one selected code.

- 14 The system of claim 11 is defined by particular features which allow it to perform the method of claim 1. Similarly, the computer readable medium of claim 20 stores instructions which cause a processor to execute the method of claim 1. Strictly the scope of claim 20 may be broader as it does not specify the use of a browser extension. However, a browser extension is a conventional means for implementing such a method for use with websites, so for the purposes of this decision I do not think the point is apposite. All three claims will therefore stand or fall on similar reasoning; the following analysis applies to all three claims, however for conciseness only claim 1 will be discussed.

The law

- 15 The examiner raised an objection under section 1(2) of the Act 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 (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of

...

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

...

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 *Aerotel*¹, as further interpreted by the Court of Appeal in *Symbian*². In *Aerotel* the court reviewed the case law on the interpretation of section 1(2) and set out a four-step test to decide whether a claimed invention is patentable:
- (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.*
- 17 The Court of Appeal in *Symbian* made it clear that the four-step test in *Aerotel* was not intended to be a new departure in domestic law; it was confirmed that the test is consistent with the previous requirement set out in case law that the invention must provide a “technical contribution”. Paragraph 46 of *Aerotel* states that applying the fourth step of the test may not be necessary because the third step should have covered the question of whether the contribution is technical in nature. It was further confirmed in *Symbian* that the question of whether the invention makes a technical contribution can take place at step 3 or 4.
- 18 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. In *HTC/Apple*⁴ the signposts were reformulated slightly in light of the decision in *Gemstar*⁵. 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.*

¹ *Aerotel Ltd v Telco Holdings Ltd & Ors Rev 1* [2007] RPC 7

² *Symbian Ltd v Comptroller General of Patents* [2009] RPC 1

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

⁴ *HTC v Apple* [2013] EWCA Civ 451

⁵ *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

- 19 Mr Flaxman agreed at the hearing that the *Aerotel* assessment was the correct approach for determining patentability, and that consideration of the *AT&T* signposts was appropriate.
- 20 Both the examiner in their pre-hearing report, and Mr Flaxman, also relied on further case law while making their respective arguments, I will discuss these at the relevant points of the process.

Application of the *Aerotel* approach

Step (1): Properly construe the claim

- 21 The claims being considered here are those filed on 15 December 2021 as set out above. The examiner provided a detailed breakdown of the terms used and their meanings based on the support provided in the application:
- a) *‘Shopping cart’: a server/browser hosted software-based mechanism to select goods and/or services for eventual purchase/rental through an e-commerce website, in other words a virtual location where a user may ‘place’ items or services prior to purchase, the shopping cart being associated with a single e-commerce website and user, as defined in paragraph [029] of the description*
 - b) *‘Codes’: coupon or promotional codes specific to a given e-commerce website as defined in paragraph [022]*
 - c) *‘Change to a shopping cart’ – the addition or removal of items to/from the cart by the user, as defined in paragraph [033]*
 - d) *‘Testing’: applying one or more codes in turn to the contents of an e-commerce shopping cart and determining if the codes are valid for the cart’s current contents as defined in paragraph [046]*
 - e) *‘Content of the shopping cart’: a list of data relating goods selected by a user in an e-commerce server/browser software-based mechanism as defined in paragraph [029]*
 - f) *Determining a ‘status of the session’: determining whether a user has begun a checkout process, is currently accessing a webpage displaying the contents of the shopping cart, or whether the session has timed-out and is inactive as defined in paragraph [056]*
 - g) *‘Cloning the shopping cart to form a cloned shopping cart in a shadow session’: replicating the functionality and contents of the user’s shopping cart so that operations can be carried out without displaying any webpages or information to the user, as defined in paragraph [020].*
- 22 Mr Flaxman did not disagree with these meanings at the hearing. The examiner then provided the following interpretation of claim 1:

a method for testing and applying codes to electronic shopping carts using a browser extension, the method comprising monitoring a shopping cart associated with an e-commerce website, a user, and a user session, wherein when a change is detected in the cart, codes associated with the cart content are tested for validity by:

- i) Cloning the shopping cart in a shadow session;*
- ii) Obtaining the codes;*

- iii) *Checking whether one or more codes have been tested already;*
- iv) *If one or more codes has been tested previously, retrieving said code from a memory;*
- v) *If one or more codes have not been tested, testing them on the contents of the cloned cart;*
- vi) *Selecting at least one valid code based on the results of the testing;*
- vii) *Determining whether the user is currently looking at the shopping cart, or has begun a checkout process, or if the session is inactive; and*
- viii) *Depending on the status of the session and the selected code(s), performing one of a plurality of actions.*

23 However, in his skeleton arguments and at the hearing Mr Flaxman did disagree with this construction of the claim, pointing out that the order of the steps listed in the examiner's construction was incorrect. Mr Flaxman's construction was instead:

- i) *Checking whether a code has been tested already for the present contents of the shopping cart;*
If a code has been tested previously:
- ii) *retrieving said code from a memory;*
If a code has not been tested previously:
- iii) *Cloning the shopping cart in a shadow session;*
- iv) *Obtaining the codes;*
- v) *Testing the codes on the contents of the cloned cart;*
- vi) *Selecting at least one valid code based on the results of the testing;*
- vii) *Determining whether the user is currently looking at the shopping cart, or has begun a checkout process, or if the session is inactive; and*
- viii) *Depending on the status of the session and the selected code(s), performing one of a plurality of actions.*

24 Having consulted the claims again, I find that I agree with Mr Flaxman's construction. The configuration of the shopping cart is checked first to see if any codes need to be tested or whether previous codes can be taken from memory. It is only when testing is determined to be necessary that the shadow session is generated.

25 Having regard to the meaning of the terms of the claim provided by the description as above, and following the order of the steps explained by Mr Flaxman, the claims may be construed as read.

Step (2): Identify the actual or alleged contribution

26 Both the examiner and Mr Flaxman are agreed that the approach to how the contribution is identified is set out in paragraph 43 of *Aerotel*:

"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".

27 Mr Flaxman also referenced paragraph 8 of *AT&T*, which suggests that to determine the contribution we must have "*some notion of the state of the art*". He went on to

discuss the disclosure of *Hudson* which was the closest prior art from the examiner's brief search. Mr Flaxman then followed the approach set out in paragraph 43 of *Aerotel* summed up as "*What has the inventor really added to human knowledge*". Mr Flaxman's interpretation, as noted in the skeleton arguments, is that the contribution is "*what the inventor has contributed over what is known, but considered in the context of the invention as a whole*". That is to say, it is not a strict exercise in determining novelty, or "salami-slicing" the claim. Mr Flaxman then considered the problem solved by the invention and the advantages.

28 As such, Mr Flaxman identified the contribution to be:

A mechanism for reducing processing requirements during a user's interaction with an e-commerce website, by automatically checking if the present content of the shopping cart has been previously tested and, if so, retrieving valid codes from a memory, so the testing of codes does not need to be repeated. If the content has not been tested previously, the codes are automatically tested in a shadow session so that the user does not experience any conflicts that might arise.

29 The examiner, in his pre-hearing report discussed the relevance of the prior art when determining the contribution, referring to *Lantana*⁶ which states that:

"it is the claim as a whole which must be considered when assessing the contribution which the invention has made, and that it is not permissible simply to cut the claim into pieces and then consider those pieces separately and without regard to the way they interact with each other."

30 The examiner's contribution was formulated as:

A means of automatically checking if codes have been previously tested, testing new codes and applying valid voucher codes to an online shopping cart in order to speed up the checkout process.

31 It is clear that there are significant differences between the contribution as alleged by the examiner and by Mr Flaxman. I do agree with Mr Flaxman that the examiner's contribution lacks details regarding the problem the claimed invention actually solves and the advantages that are conferred. However, I am also minded not to follow Mr Flaxman's alleged contribution in its entirety as it does not clearly set out all three points mentioned in paragraph 43 of *Aerotel*, although Mr Flaxman has referred to these. I will also note here that the three factors mentioned in *Aerotel* are not a legal requirement but rather questions that, when answered, may help to identify the contribution.

32 Nevertheless, I will avail myself of the assistance provided by Birss LJ in considering the contribution for myself:

- i) Problem(s) to be solved: requirement to manually identify valid promotional codes at the check out of an e-commerce website; interruption of the user experience by processing conflicts; and

⁶ *Lantana v Comptroller-General of Patents* [2014] EWCA Civ 1463

unnecessary process steps of retesting a previously checked shopping cart.

- ii) How the invention works: monitoring a user's shopping cart in an e-commerce website; checking whether the configuration of items in the shopping cart has been checked before; if it has been checked before, then recovering valid codes from memory; and if it hasn't been checked before, starting a shadow session and testing codes on the shopping cart in the shadow session.
- iii) What the advantages are: user time is saved as valid codes can be identified before proceeding to check out; the user's experience is improved by the use of the shadow session avoiding processing conflicts being experienced by the user; and reduction in unnecessary retesting of codes, resulting in less processing resources being needed by the system.

33 I therefore identify the alleged contribution of the claimed invention to be:

Improving the application of codes to a user's shopping cart in a session on an e-commerce website by: checking the shopping cart to determine if the current shopping cart configuration has been tested previously; where the configuration has been previously tested, retrieving valid codes from memory, avoiding redundant processing steps on unnecessary retesting; and where the configuration has not been previously tested, generating a cloned shopping cart in a shadow session and testing codes in the shadow session to determine valid codes, such that changes to the shopping cart in the user's session do not result in processing conflicts experienced in the user's session.

Steps (3) & (4): Does the actual contribution fall solely within the excluded subject matter; check if the contribution is actually technical in nature

34 The third and fourth steps of the *Aerotel* test involve considering whether the contribution falls solely within excluded categories, and then checking whether the contribution is technical in nature. It is appropriate to consider these two steps together because whether the contribution is technical in nature will have a direct impact on whether it falls solely within excluded matter.

35 Throughout the prosecution of this application, and during the hearing, the objection that the claims are excluded as a method for doing business was considered before the computer program exclusion. I see no reason to depart from that order here.

Method for doing business

36 It is first worth noting the detailed arguments set forth in the examiner's pre-hearing report regarding a business method performed by a computer, which I will not repeat in full. That is to say that *Merrill Lynch*⁷ made it quite clear that a method for doing business on a standard computer, would be excluded as a method for doing

⁷ *Merrill Lynch's Application* [1989] RPC 561

business as such. This was reaffirmed in both *Halliburton*⁸ and *Renaissance*⁹. The main consideration therefore is whether or not the contribution relates to a method for doing business and not to get distracted by the fact that it is implemented on a computer; and that computers are by their nature technical. A better business method is not patentable merely by virtue of being implemented on a standard computer.

- 37 Mr Flaxman, in his skeleton arguments, notes that the claims in *Merrill Lynch* relate to “a data processing system for making a trading market” and while the present claims are to “a method for applying codes to electronic shopping carts”, the final step performs an action which may not necessarily result in codes applied to the cart. The argument is that other actions are possible, so it is not merely a method for doing business. At the hearing, Mr Flaxman further elaborated that the nature of the codes is not strictly tied to monetary benefits, as they could represent authorisation or authentication codes which relate to security, not just the commercial transaction. He suggested the nature of the codes is in fact irrelevant; it is the process improvement which matters.
- 38 I agree, although I should say that I am not convinced that “security codes” are supported by the application as filed, which refers to “promotional codes”, but not that I can discern to authorisation or authentication. I am prepared to admit that “promotional” might not mean financial but I am not sure the specification goes any further. In any case, in paragraph 69 of *Aerotel*, the Court of Appeal rejected the notion that a business method must involve the completion of a business transaction, and that any “purely administrative, actuarial and/or financial character” would contribute methods for doing business. Therefore, it is not necessary that the codes are applied or used, or that the transaction is ever completed. Where they provide a discount or benefit, they may be financial but were they to provide a non-financial function such as access to a membership scheme these are administrative. Although I do not believe the example is supported, I will also say that merely validating and selecting a code (or not, in either case) for security purposes is not necessarily technical. A full consideration would need to determine the manner of validation and the benefits to security. There is no such detail in the specification and I make no such finding. As I have said, the nature of the codes is in any case irrelevant, as is whether or not the codes are applied to the cart. What is in question is whether the way they are processed goes beyond a method for doing business.
- 39 The skeleton arguments refer to paragraph 35 of *Lenovo*¹⁰ which states “*It is useful to ask: what more is the Lenovo invention than a method of doing business?*”. Presently, the argument is that the contribution, while being claimed in a business context, is directed instead to improved computer performance, in the form of a reduction in conflicts for the user and a reduction in unnecessary processing steps, not to the act of doing business itself. Mr Flaxman emphasised that the advantage was about much more than just saving the user time. At the hearing, again, this was elaborated on to highlight that it isn’t merely automating a manual process but, by

⁸ *Halliburton Power Services Inc’s Applications* [2011] EWHC 2508 (Pat)

⁹ *Renaissance Technologies* [2021] EWHC 2020 (Pat)

¹⁰ *Lenovo (Singapore) PTE Ltd v Comptroller General of Patents* [2020] EWHC 1706 (Pat)

checking for pre-tested configurations, entire computer processing steps are potentially removed.

- 40 To my mind, the reduction in unnecessary processing is just that, a reduction in routine processing; it is not an improvement in processor technology, but merely a reduction in steps the processor is required to complete. I will return to this point below when considering the *AT&T* signposts, but omitting redundant steps is a process improvement and not necessarily technical. In the present case the improvement is in the process of identifying, testing and selecting codes which lies in the business method (albeit implemented by a computer). As the business method exclusion is generic, this is not enough to confer patentability. Whilst there may be a consequential benefit to the processor, it is not a technical contribution.
- 41 The reduction in conflicts experienced by a user in the user session may enhance the user experience but does not represent an actual reduction in conflicts at all. Incidences of conflict will still arise, but occur in the shadow session so as to not intrude on the user's perception. Again, this may be an improvement in the eyes of the user but it is not technical in nature.
- 42 In summary, Mr Flaxman argued that when the invention is run, the computer is improved. I have found no corresponding technical effect arising from running the improved process. Instead the invention is considered to be excluded from patentability as a method for doing business.

Program for a computer

- 43 Notwithstanding that the invention is excluded as a business method as such, I will now consider the arguments which were put before me regarding whether the claims define a program for a computer that provides a technical effect. Some of the reasoning will bear similarity to the foregoing, but as opposed to deciding whether a better process when implemented on a computer creates a better computer, I will now consider whether the programmatic operation of the computer itself provides a technical contribution.
- 44 Mr Flaxman agreed that use of the *AT&T* signposts is the correct approach to determine whether the contribution is considered technical for a computer program invention. I confirmed at hearing that the signposts are not determinative, such that only one signpost need be satisfied in order to confer a technical nature to the contribution. In the skeleton arguments, Mr Flaxman discussed signposts (iv) and (v). At the hearing he also discussed signpost (iii). I will therefore not consider signposts (i) or (ii) as I agree they are not relevant. The other three signposts are discussed below.

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

- 45 Mr Flaxman began by discussing what he believed was meant in paragraph 31 of *AT&T* when stating “a new way of operating the computer in a technical sense”, that it points towards “some generally applicable method of operating a computer rather than a way of handling particular types of information.” He asserted that the present method of operating the computer is changed by the claimed invention. The method

is performed regardless of the data or information received, e.g. the content of the shopping cart or the codes being tested. Different method steps are performed based on the data or information processed; in some cases all codes will be tested and in others some steps will be omitted. Mr Flaxman compared this to the process carried out by *Hudson*, which has differing method steps. Mr Flaxman's main point being that the computer operates in a new way "relative" to the prior art.

- 46 I queried Mr Flaxman's interpretation of the term "generally" and he explained that software has to be run on a computer to make it run in a different way. Once the present invention is run, he argued, processor and memory usage is generally different.
- 47 I do not find this argument persuasive. *AT&T*, paragraph 30, includes the relevant quote from *Gale*¹¹, which provides the basis for this signpost. The key point I believe is this:

But, as I understand it, in the present case Mr. Gale has devised an improvement in programming. What his instructions do, but it is all they do, is to prescribe for the cpu in a conventional computer a different set of calculations from those normally prescribed when the user wants a square root. I do not think that makes a claim to those instructions other than a claim to the instructions as such. The instructions do not define a new way of operating the computer in a technical sense.

- 48 There are clear parallels between this interpretation of the claim in *Gale*, and the present invention. The present invention provides a series of instructions which cause a browser extension or equivalent software to operate in a different way, but the computer itself runs conventionally under the instruction of the software regardless. The method is not "generally" applicable because it only confers advantages when used in conjunction with shopping carts and codes. This signpost does not indicate a technical effect.

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

- 49 Mr Flaxman highlighted in his skeleton arguments and elaborated at the hearing, the concept that while all known valid codes must have been tested at some point, the benefits of the claimed invention come from later iterations (when the step of testing again may be omitted). Mr Flaxman clarified that the prior tests need not have been performed in the present session but might have been saved from a prior transaction. In this way, as time goes on, the system continues to improve, at least in situations where similar item configurations are put in a shopping cart repeatedly. I am happy to accept Mr Flaxman's point here as it was countering the examiner's statement that the codes must have been tested at some point which would mean that these benefits of avoiding re-testing are cancelled out.
- 50 Mr Flaxman argued that in drawing known valid codes from memory, the amount of testing and therefore processing steps are reduced, leading to less processor usage and therefore, lower power consumption which equates to greater efficiency. From

¹¹ *Re Gale's Application* [1991] R.P.C. 305

there, he argued that cutting out a user or computer step enables the process of reducing power consumption, which leads to an overall technical effect being achieved as in *Lenovo*.

- 51 I am not convinced by this argument. The fourth signpost reflects the decision of *Symbian* where the invention changed a fundamental process of the computer which affected applications generally within the computer and reduced incompatibility issues. In this case, the claimed method does not work on all programs running on the computer, it only works in conjunction with shopping carts and codes. The method is only described as being useable in browser extensions (or equivalent software) so cannot be said to improve the computer as a whole. Further, the analogy with *Lenovo* cannot be sustained as that case involved physical interactions with the user and bank cards outside of the computer, not just the automated, in-computer processes required here. In short, the process of testing and applying codes may be more efficient and more effective but that does not extend to the computer itself.
- 52 I should also acknowledge that the power consumption argument is an attractive one in itself, but it has been dismissed on previous occasions for the same reasons that omission of processing steps does not improve the computer in a technical sense as here. To adopt a topical analogy, conditionally omitting unnecessary processing steps is akin to following consumer advice to decide whether or not you need to carry everything currently in the boot of your car, and removing anything which is unnecessary for the journey in hand. As a consequence, less power (and fuel) is consumed, but there is no technical improvement to the vehicle itself. As such, I do not believe the fourth signpost has been met.

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

- 53 The problems Mr Flaxman set out as having been overcome are: how to reduce processing during code testing; and how to reduce processing conflicts experienced by the user. I think these are fair statements, although I note that application as filed defines the problem as delays during checkout incurred by a user who is having to manually check codes. However, the application has progressed since then and the present claims perhaps reflect addressing a different, or additional problems including those above.
- 54 In terms of the first problem, Mr Flaxman discussed variously that the reduction in unnecessary processing leads to the reduction of power consumption by the processor when omitting performing these unnecessary steps. At its core, the problem may be posed in technical terms, as how to increase the efficiency of a processor. Here, though, along the lines reasoned previously, the problem is not overcome; the claimed processor is not a better processor which uses less power to perform the same number of steps, but rather a standard processor which is simply required to do less work. It therefore cannot be said to overcome the problem, but rather to circumvent it. I am confident in this assessment as it follows similar reasoning to *CFPH*¹² which was discussed by the examiner in the pre-hearing report,

¹² *CFPH LLC* [2005] EWHC 1589 (Pat)

and as reflected in previous IPO decisions *Direct TV*¹³ and *Apple*¹⁴ in which the problem of bandwidth limitation was circumvented by a reduction in transmitted data, rather than an inherent improvement in bandwidth capacity. The facts of this application are different, but similar reasoning applies.

- 55 If the problem is limited to reducing processing during code testing, and the solution is to test fewer codes overall, then the solution lies in the administration of the process and reveals that it did not solve a technical problem after all.
- 56 For the second problem, at the hearing Mr Flaxman discussed “conflicts experienced by the user” as being the computer crashing or freezing which has a negative effect on the user experience. Mr Flaxman admitted at the hearing that merely creating a smoother user experience in and of itself is not technical, but that a technical solution to a problem which affects the user experience would be. The problem to be solved then, is the potential for crashing or freezing due to conflicts, when code testing is interrupted by a change to the shopping cart. *Symbian* was found to be allowable because it solved the problem of conflicting library program calls which resulted in a tendency to crash. But there the smoother user experience of not having the computer crash is a side effect of having a technically better computer which continued to operate and did not fail to resolve conflicts. For the present invention, the generation of the shadow session does not reduce the number of conflicts, it merely moves the conflicts away from the user’s immediate awareness by incurring them in a shadow session. As the number of conflicts are not reduced, the system is not improved, only the user experience is, so in turn the problem must be said to be circumvented. The fifth signpost therefore does not assist.
- 57 Having considered the alleged contribution in light of the *AT&T* signposts, I am of the opinion that it falls within the excluded subject matter category of a program for a computer. None of the signposts I have considered suggest that the contribution provides the required technical effect and so I find it is no more than a program for a computer as such.

Auxiliary Request

- 58 Having found the main claims to be excluded, I will now consider the claims of the auxiliary request following the same approach as above. I will not reproduce all three auxiliary independent claims here, only claim 1, as the amendments made are the same across all three and as before, all three claims will stand or fall together. In essence, the amendments remove reference to “e-commerce” and a “shopping cart” in an attempt to distance their scope from an inference of a method for doing business.
- 59 Mr Flaxman discussed at the hearing how the purpose of the pared down claims is to show that the contribution is directed to reducing processing steps and that whether the codes are promotional codes or other e.g. authorisation codes does not matter, so the invention can be directed beyond e-commerce and shopping generally.

¹³ *Direct TV Pty’s Application* (BL O/150/11)

¹⁴ *Apple Inc’s Application* (BL O/244/13)

60 I should note that a claim will be excluded if it covers excluded subject matter as such. On the basis that the main claims are excluded and fall wholly within the scope of the amended auxiliary claims, the auxiliary claims would appear to be excluded on that basis. In other words, simply broadening the excluded claims cannot save them. Notwithstanding this, I will briefly consider the claims in their own right:

Claim 1:

A method comprising:

monitoring a user-selected list of items associated with a website and with a user, the list of items being associated with a session of the user;

in response to detecting a change to the, testing codes with respect to a present content of the to determine valid codes by:

determining whether the present content has been tested before;

in response to determining the present content has been tested before, retrieving the valid codes from a memory; and

in response to determining the present content has not been tested before:

generating a shadow session and cloning the list of items to form a cloned list of items in the shadow session, the shadow session being a distinct and separate session from the session of the user and being between the browser extension and the website, the cloning the list of items including adding, deleting, or modifying items of the cloned list of items in the shadow session to correspond to the present content of the list of items;

obtaining the codes; and

testing the codes on the cloned list of items in the shadow session to determine the valid codes, the codes being associated with the website;

selecting at least one of the valid codes as at least one selected code based on a result of the testing the codes;

determining a status of the session; and

performing an action based on the status and the at least one selected code.

61 At the hearing Mr Flaxman provided the basis in the description for the proposed amendments which were omitted from the skeleton arguments. I will briefly summarise them here:

Removal of “for applying codes to electronic shopping carts using a browser extension” – Paragraph 4: “general methods *suitable for* testing and applying codes to electronic shopping carts”.

“Shopping cart” replaced with “user-selected list of items” and “list of items”– Paragraph 24: “a user may view or interact ... by clicking on links or graphical

user elements to view items and place them in an electronic shopping cart” and Paragraph 29: “The shopping cart may include checkout queues, baskets, wish lists, etc.”.

“E-commerce website” to “website” – Paragraphs 20: “find valid codes for the website” and Paragraph 24: “user to access and interact with websites”,

- 62 There are one or two places in the auxiliary claims where the meaning is not entirely clear, as a result of deletion leaving the intended meaning ambiguous. For example, in the second substantive feature:

...in response to detecting a change to the, testing codes with respect to a present content of the to determine valid codes by...

it is not at all clear what manner of change is detected. Is it a change to the “testing codes” as read (without the comma)? If so, this would represent a different analogous function in comparison with the main claim; is it a general change? (In which case the scope is ambiguous); or is it a change to the list of items which has been (erroneously?) omitted? A similar question arises in respect of the “content of the...”.

- 63 For the purposes of construing the claim I will assume both references are directed towards the “list of items”, which would be consistent with the stated intention to decouple the shopping cart from the claim (and is in fact confirmed with reference to the other auxiliary independent claims). I also note that the reference to “browser extension” no longer has an antecedent (having been deleted) but I do not think that materially affects my construction of the claim.

- 64 I will not consider whether these amendments are fully supported by the application as filed here, I will only determine whether the claim would be excluded under section 1(2)(c). I will say, though, that there would seem to be a significant risk that the broadened amended claims are not supported across their full scope or that they add matter.

- 65 Based on the auxiliary claims, I would revise the alleged contribution to be:

Improving the application of codes to a user-selected list of items in a session on a website by: checking the list of items to determine if the current list/item configuration has been tested previously; where the configuration has been previously tested, retrieving valid codes from memory, avoiding redundant processing steps on unnecessary retesting; and where the configuration has not been previously tested, generating a cloned list of items in a shadow session and testing codes in the shadow session to determine valid codes, such that changes to the list in the user’s session do not result in processing conflicts experienced in the user’s session.

- 66 When assessing whether the contribution falls solely within the excluded subject matter, or is actually technical in nature, it becomes immediately clear that the reasoning in respect of the main claims applies equally here. Above, I acknowledged that the nature of the codes is not determinative to whether the contribution is technical. The key to the claimed invention, and the alleged contribution, is to omit

certain steps of the process under certain circumstances. This is an administrative method, whether or not the website is directed towards e-commerce and whether or not it is a shopping cart or other user-selected collection of items which is cloned and in response to changes in which testing is conditionally undertaken. While the method is no longer limited to an e-commerce website and a shopping cart, the improvements to the process are the same. As such, the contribution is still directed to a series of administrative steps which constitute a method for doing business. For the avoidance of doubt, and for the same reasons above, I consider the amended claims to also relate to a program for a computer as such. There is no technical effect which is now clear following amendment which would satisfy the *AT&T* signposts.

67 Therefore, I find that the auxiliary claims are also excluded from patentability.

Conclusion

68 I find that the present claimed invention and the auxiliary claims are excluded from patentability under section 1(2)(c) of the Act as both a method for doing business and a program for a computer as such.

69 Having consulted the application, I do not believe there is any matter present which may allow for a saving amendment.

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

Appeal

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

Ben Buchanan

Deputy Director, acting for the Comptroller