



## PATENTS ACT 1977

APPLICANT	Apple Inc.
ISSUE	Whether patent application GB1912496.5 complies with Section 1(2)(c) of the Patents Act 1977 (as amended)
HEARING OFFICER	Ben Buchanan

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### DECISION

#### Background

- 1 This decision relates to whether patent application GB1912496.5 complies with Section 1(2) of the Patents Act 1977 (“the Act”).
- 2 Patent application GB1912496.5 is the GB national phase of PCT/US2018/020322 which was filed on the 28<sup>th</sup> February 2018 and claims priority from US62/472167 filed on the 16<sup>th</sup> March 2017. PCT/US2018/020322 was published as WO2018/169686 on the 20<sup>th</sup> September 2018. The application entered the national phase as GB1912496.5 on the 30<sup>th</sup> August 2019 and was republished on the 27<sup>th</sup> November 2019 as GB2574156 A. An International Preliminary Report (IPRP) was issued on the 17<sup>th</sup> September 2019 and indicated that claims 1-21 did not include an inventive step, but the IPRP indicated that the claims as filed were novel and had industrial applicability.
- 3 The first examination report at the UK IPO was issued on the 28<sup>th</sup> October 2021 and raised objections with regard to inventive step under Section 1(1)(b), excluded subject matter under Section 1(2)(c) and clarity under Section 14(5). The examiner also reported that the search for prior art had not yet been updated and so the consideration of novelty and inventive step was not complete. This remains the position, as noted in the examiner’s pre-hearing report dated 1<sup>st</sup> September 2022.
- 4 Amendments were filed on the 28<sup>th</sup> February 2022 and overcame the existing inventive step and clarity objections but a further examination report was issued on the 10<sup>th</sup> March maintaining the objection to excluded matter. Further rounds of amendments followed. The last examination report was issued on the 9<sup>th</sup> June 2022. The applicant and examiner have been unable to come to an agreement. The examiner issued a pre-hearing report on the 1<sup>st</sup> September 2022 and the applicant requested a decision on the papers in their agent’s letter of 7<sup>th</sup> October 2022. The application has been forwarded to me for that purpose. The applicant is being represented by Dr Karl Barnfather of Withers & Rogers LLP.

## The invention

- 5 The application is titled "Payment Handoff System". It relates primarily to a method which enables a user to control a payment process across multiple devices.

Claim 1 of the application reads as follows:

A method, comprising:

receiving, by a device via a first communication protocol, a payment request message from a proximate payment requesting device, wherein the payment request message comprises an attribute of a payment transaction associated with the proximate payment requesting device;

determining, based at least in part on the attribute of the payment transaction, a suitability of the device to perform the payment transaction;

providing, to the proximate payment requesting device via the first communication protocol, an indication of the suitability of the device to perform the payment transaction;

receiving, responsive to providing the indication and via a second communication protocol, a message to perform the payment transaction with an electronic payment system, the electronic payment system being separate from the payment requesting device;

displaying a user interface that provides for performing the payment transaction with the electronic payment system via the second communication protocol, and initiating, via the first communication protocol, handing the payment transaction off to another proximate device;

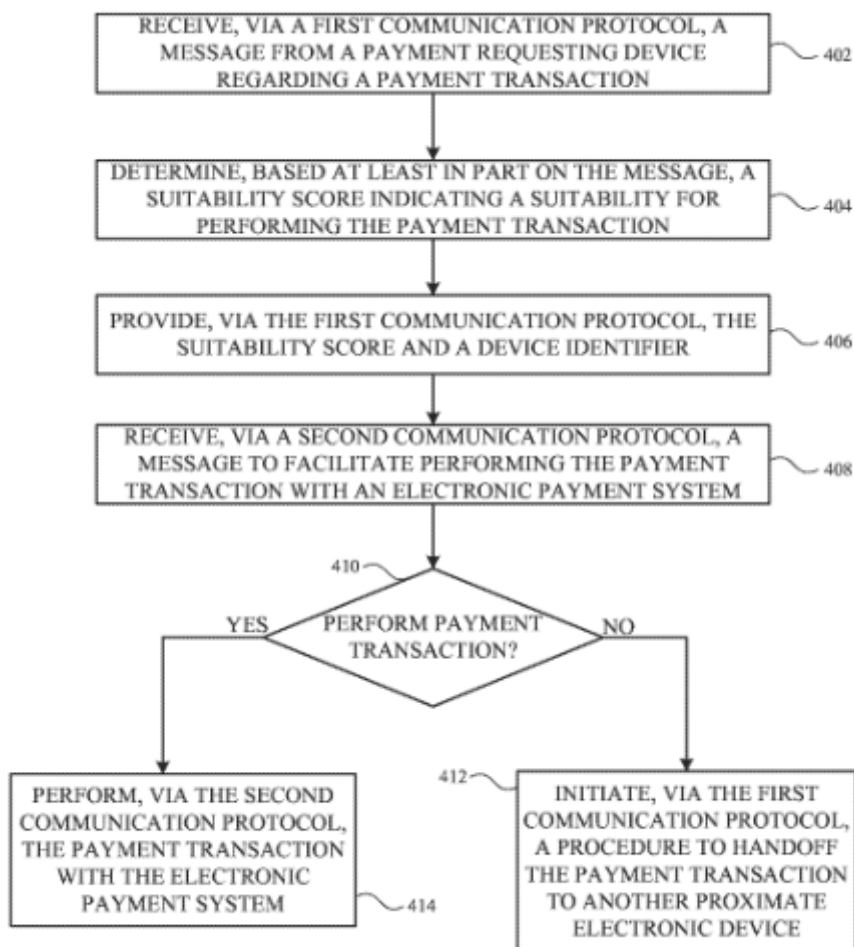
receiving, via the user interface, a user request to perform the payment transaction or to initiate, via the first communication protocol, handing the payment transaction off to the other proximate device; and

responsive to receipt of the user request, performing the payment transaction or initiating, via the first communication protocol, handing the payment transaction off to the other proximate device.

- 6 Claims 9 and 10 of the application relate to an associated computer-readable medium comprising instructions, and a device configured to carry out the method, of claim 1, respectively. Claims 9 and 10 therefore stand or fall based on claim 1 as the substance of the inventions is the same.
- 7 A good summary of the invention in practical terms is provided in the agent's letter of the 4<sup>th</sup> August 2022 and it may be helpful to repeat that summary here. The letter summarises the invention as follows:

*"A payment requesting device such as a set-top box or a smart TV can request payment by a device, such as a smart phone, via a first communication protocol and determine a suitability of the device to perform the payment transaction. An indication of the suitability is determined, and a user interface is presented on the device, i.e., the default device, to allow a user to proceed with the transaction via a second communication protocol or to hand off the payment transaction to another device which is proximate to the payment requesting device."*

8 Figure 4 of the application also demonstrates the invention and is reproduced below.



9 Of note is that the invention necessarily requires the use of different communication protocols at different points. The first communication protocol may be a short-range communication protocol such as Bluetooth (RTM), whilst the second communication protocol may be a longer range, or more robust, protocol such as WiFi (RTM).

10 I also note that the invention necessarily requires a means for determining whether or not the default device is proximate to the payment requesting device. The expression “proximate” is interpreted to mean a device that has been deemed to be within a specific range. An example is given at paragraph [0022] of the description.

11 Part of the claimed method requires that a user is given the option of paying a bill on their payment device or handing off the transaction to another payment device. The invention therefore allows a user to either make a payment on a payment device or to hand off the payment to another device.

### The law

12 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 as follows:

*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 the that thing as such.*

- 13 The assessment of patentability under Section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel*<sup>1</sup>, as further interpreted by the Court of Appeal in *Symbian*<sup>2</sup>. 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.*

- 14 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.

- 15 Lewison J (as he then was) in *AT&T/CVON*<sup>3</sup> set out five signposts that he considered to be helpful when considering whether a computer program makes a technical contribution. In *HTC/Apple*<sup>4</sup> the signposts were reformulated slightly in light of the decision in *Gemstar*<sup>5</sup>. 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*

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<sup>1</sup> *Aerotel Ltd v Telco Holdings Ltd & Ors* Rev 1 [2007] RPC 7

<sup>2</sup> *Symbian Ltd's Application* [2009] RPC 1

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

<sup>4</sup> *HTC Europe Co Ltd v Apple Inc* [2013] RPC 30

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

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

- 16 The first of these signposts was considered by Birss J in *Lenovo*<sup>6</sup> where he noted that “a different physical interaction with the world outside of the computer” would indicate that the invention may have a technical effect on a process which is carried on outside the computer

### **Application of the Aerotel approach**

#### Step (1): Properly construe the claim

- 17 The latest claims are those filed on the 10<sup>th</sup> May 2022. Of the three “independent” claims, claim 1 defines the method and gives the best definition of the required features of the invention.
- 18 Upon construing the claim, it is not always immediately clear which device is being referred to, however it may be inferred and the correspondence between the applicant and the examiner indicates that there is consensus on the meaning of the claim. For completeness I will repeat claim 1 at this point, including a note of the inferred device at each stage given in *italics* in parentheses. For the avoidance of doubt I have also clarified the function of the user interface to provide two options for selection by the user; as it stands I did not find the wording of the claim clear but my interpretation is consistent with the supporting specification:

A method, comprising:

receiving, by a (*first*) device via a first communication protocol, a payment request message from a proximate payment requesting (*second*) device, wherein the payment request message comprises an attribute of a payment transaction associated with the proximate payment requesting (*second*) device;

determining (*at the first device*), based at least in part on the attribute of the payment transaction, a suitability of the (*first*) device to perform the payment transaction;

providing, to the proximate payment requesting (*second*) device via the first communication protocol, an indication of the suitability of the (*first*) device to perform the payment transaction;

receiving (*at the first device*), responsive to providing the indication and via a second communication protocol, a message to perform the payment transaction with an electronic payment system, the electronic payment system being separate from the payment requesting (*second*) device;

displaying (*at the first device*) a user interface that provides (*a first option*) for performing the payment transaction with the electronic payment system via the second communication protocol, and (*an alternative second option for*) initiating, via the first communication protocol, handing the payment transaction off to another proximate (*third*) device;

receiving (*at the first device*), via the user interface, a user request to perform the payment transaction or to initiate, via the first communication protocol, handing the payment transaction off to the other proximate (*third*) device; and

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<sup>6</sup> *Lenovo (Singapore) PTE Ltd v Comptroller General of Patents* [2020] EWHC 1706 (Pat)

responsive to receipt of the user request (*at the first device*), performing the payment transaction or initiating, via the first communication protocol, handing the payment transaction off to the other proximate (*third*) device.

- 19 Such a reading of the claim is consistent with the correspondence between the applicant and the examiner and is in line with the description of the application and the summary of the invention noted above provided in the agent's letter of 4<sup>th</sup> August 2022. In light of this, there does not appear to be any dispute over how the claims should be construed.
- 20 I also note that the dependencies of claims 7 and 8 are incorrect. It is assumed that claim 7 should be appended to claim 6 whilst claim 8 should be appended to claim 7.
- 21 Claims 6 to 8 are new in the amended claims filed on the 10<sup>th</sup> May 2022 but, in common with claims 2-5, they are dependent on claim 1 and all of the dependent claims stand or fall based on whether or not claim 1 complies with Section 1(2) of the Act.

Step (2): identify the alleged contribution

- 22 The process of identifying the contribution was summarised in paragraph 43 of *Aerotel/Macrossan* as follows:

*... it is an exercise in judgement 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.*

- 23 In the agent's letter of 28<sup>th</sup> February 2022, the applicant asserts that:

*“... claim 1 provides an inventive solution to problems such as deficiencies and unsuitability of hardware involved in payment transactions. The contribution of the claimed invention is thus the provision of a hardware-based solution to improve the efficiency of a payment transaction by using objective criteria to hand off a transaction to a proximate device. The claimed invention does not only provide benefits in terms of more efficient processing of data but also avoids unnecessary waste of user time in repeating the transaction setup in the event of unsuitable hardware use.”*

- 24 Subsequently, in their letter of 4<sup>th</sup> August 2022, the applicant agrees with the examiner's formulation of the contribution at paragraph 4 of the examination report dated 9<sup>th</sup> June 2022 and emphasises that the hand off is *automatic*.

- 25 In their pre-hearing report of 1<sup>st</sup> September 2022, the examiner asserts that:

*“The problem addressed seems to be determining which device of the plural proximate devices to hand off the payment transaction to and herein also lies the actual contribution. The actual contribution identified is determining the suitability of a proximate device to perform a payment transaction based on an attribute of the transaction and allowing the user to hand-off a payment to a different device if the default device is unsuitable to perform the payment*

*transaction. The primary benefit being that the user will not be inconvenienced by having to start the transaction from scratch using a different device if the default device is not suitable.”*

26 In this latest formulation the examiner does not refer to the hand off being “automatic” and subsequently explains their reasoning. I have to say, despite the applicant’s previous emphasis, that I agree. Because the hand off is actioned *in response to* a user selection, it does not seem to be “automatic” to me. Referring to page 2 of the applicant’s letter, I think by “automatic”, they probably mean that the hand off can be actioned without restarting the payment transaction afresh with the selected device. That indeed is the advantage.

27 Whilst each of the above approaches reflect the problem addressed, how the invention works and some of the advantages of the invention, I think a number of important features are overlooked:

- The payment request is made over a first communication protocol and the payment transaction is made over a second communication protocol; the instruction to hand over payment is made over the first communication protocol
- The *user* chooses *each time* whether to make the payment or hand it off

28 Taking the examiner’s latest statement of the contribution and adding in these factors I am taking the following as the alleged contribution:

*Determining the suitability of a proximate device to perform a payment transaction, based on an attribute of the transaction, and enabling the user to choose each time whether to make the payment or hand-off the payment to a different device if the default device is unsuitable to perform the payment transaction. The payment request is made over a first communication protocol and the payment transaction is made over a second communication protocol; the instruction to hand over payment is made over the first communication protocol. The primary benefit being that the user will not be inconvenienced by having to start the transaction from scratch using a different device if the default device is not suitable.*

*Steps (3) & (4): Ask whether the invention is technical in nature; check whether the actual or alleged contribution is actually technical in nature*

Method for doing business

29 The applicant argues, in their agent’s letter of 4<sup>th</sup> August 2022 that:

*“... T 115/85 and BL O/128/19 are analogous to the current claims and show that the current invention should be considered technical. Reasons 7 of T 115/85 states that “giving visual indications automatically about conditions prevailing in an apparatus or system is basically a technical problem”. We submit that the same problem applies in the present case. Specifically, the claims are directed to providing visual indications automatically about a payment transaction.*

*Further, BL O/128/19 considers there to be a technical effect regarding the display as it “provides a real world technical achievement outside the information itself”. Correspondingly, the user interface of the claimed invention provides a real world technical achievement outside the display of information as it enables a user to control the payment process upon receipt of a user input.*

*The report [examination report of 9<sup>th</sup> June 2022] notes that BL O/128/19 concerned a thermostat, a technical device having a technical effect whereas the present claims relate to a non-technical process. We disagree. The status and control of a payment transaction as claimed is an inherently technical process. This is supported by *Lenovo (Singapore) PTE Ltd V Comptroller General of Patents [2020] EWHC 1706 (pat)*...”*

30 In response, the examiner states, in their pre-hearing report of 1<sup>st</sup> September 2022, that:

*“... determining the suitability of a device, as construed in method step ii) above is not a technical matter, but rather an administrative one. Since this is a purely administrative process pertaining solely to a payment transaction, automation of this step would not confer a technical effect.*

*It was also put forward in your agent’s letter dated 10<sup>th</sup> May 2022 that displaying information regarding a system is a technical feature and cited T 115/85 and BL O/128/19 as support. However, the reasoning for allowance of those cases is not analogous to your claims. The user interface defined in claim 1 of your application specifically displays information regarding the status of a payment transaction, a non-technical process, and thus the effect imparted is not technical.”*

31 I agree with the examiner’s assessment of the situation and echo their reasoning. In particular I note that in this instance the display relates to payment status and not to conditions prevailing in an apparatus or system as such. In order for such a status to confer technicality, the underlying conditions must surely *be* technical, and billing and payments are not. As I see it, whilst the determination that the default device is proximate and the use of different communication protocols are essential technical features of the method, the characterising feature of the actual contribution of the method defined in claim 1 is the ability to select whether or not to hand off payment to another device. In other words, these technical features are necessary for the operation of the invention but do not thereby confer technicality to the contribution. The same applies to the devices themselves of course. They too are inherently technical, but they are used conventionally and so do not impart a technical nature to the contribution. The contribution relates entirely to a method for doing business and is entirely non-technical in nature.

32 The suitability of the device to perform a payment transaction is determined at least in part on an attribute of the payment transaction. This feature does not impart a technical character to the determination of suitability or therefore to the invention and therefore does not indicate a technical contribution.



### Program for a computer

- 33 In their letter of 4<sup>th</sup> August 2022 the applicant considered the signposts of *AT&T* as updated by *HTC*, and I shall do so now.

The first signpost: *i) whether the claimed technical effect has a technical effect on a process which is carried on outside the computer*

- 34 In their agent's letter of 4<sup>th</sup> August 2022, the applicant cites *Lenovo* and contends that:

*"... the present invention involves a different interaction with the world outside of the computer as it provides an automatic service to allow a payment to be handed off to an alternative near by device without requiring further physical steps from a user. If this feature was not present, then if a device initiates a transaction which it is unable to complete, the user would have to restart the entire transaction from scratch using different hardware. Thus, the nature of the user interface allows the automatic and efficient change of the payment transaction to another device solving the technical problem relating to deficiencies of hardware for payment transactions."*

- 35 I do not agree with this reasoning. I noted above that the invention does not provide an *automatic* solution to the problem as such. Rather a user is given the option of handing off payment to another device and selects whether or not to do so *each and every time*. This seems to be the antithesis of the invention in *Lenovo* in which user intervention was avoided and so the analogy does not hold. Notwithstanding my disagreement with the use of the term, "automatic" and efficient change of a payment transaction would seem to fall squarely within the field of business, implemented by a computer program. "Automation" (in its most generous sense) and efficiency of processing are what computers do.
- 36 I also note that the claims contemplate two different scenarios. In the first scenario the default device is able to complete the payment following user selection and the process carries on as normal. In the second scenario, a user decides to hand off payment to another device. In the first scenario there is no "technical" problem to overcome and the claim therefore encompasses a scenario that relates entirely to a method for doing business.
- 37 I also agree with the arguments put forward by the examiner in that the invention is not analogous to that of *Lenovo*. It does not solve the card clash problem (or an equivalent) addressed in *Lenovo*, nor does it solve an analogous problem. It also does not eliminate user interaction in the same way as *Lenovo*. Indeed, as argued by the examiner and noted above, the invention explicitly relies on the user making a decision via a user interface whether or not to hand off payment every time a payment request is made. This is an administrative step to potentially alter the default payment device. As was noted in BL O/580/17, "the fact that the invention benefits the user, and the user is external to the computer, is not considered to be evidence of an external technical effect...".

- 38 The effect relates entirely to the route of progress of a payment transaction and so it can be seen that the effects occurring outside the computer are not technical in nature. Thus, signpost i) is not relevant.

The second 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*

- 39 No argument was put forward in the applicant's letter of 4<sup>th</sup> August in respect of signpost (ii). I agree with the arguments put forward by the examiner in their pre-hearing report. The software governing the user interface, and communicating with the payment requesting device, does not operate at an architectural level of the computer. The effect produced, particularly regarding handing off the transaction, where it occurs, is very much dependent on the data being processed, specifically the determination of the suitability of the device to perform a payment transaction. This determination is made, at least in part, on an attribute of the payment transaction. There is nothing to suggest the determination is made on the basis of technical capability, and so this feature, too, would appear not to confer a technical effect.
- 40 The method does not operate at the architectural level of the computer and so signpost ii) is not relevant.

The third signpost: *iii) whether the claimed technical effect results in the computer being made to operate in a new way*

- 41 The applicant argues that the computer operates in a new way, because the network may now comprise more than two devices, as opposed to only two devices at a time. Once again, I agree with the arguments put forward by the examiner. Firstly, the method defined does not necessarily require that the payment is handed off and so the claim encompasses the possibility of using a network of just two devices as is conventional. Secondly, I also agree that, where a third device is included in the network, each of the devices operate in a conventional manner. That is to say that the protocols and requirements to join and leave the network are conventional. Devices join and leave the network in a conventional way for both the first and second communication protocols. Whether the operation of the invention involves two or more devices, the computer as a whole does not operate in a new way. Signpost iii) is therefore not relevant.

The fourth signpost: *iv) whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer*

- 42 It is clear that the computer program utilised for the claimed method would not cause any of the devices utilised to operate more efficiently or effectively in themselves. The applicant argues that handing off a transaction rather than requiring restarting from scratch is indicative of the designated "better computer".
- 43 I agree with the examiner. The devices under instruction of the program would operate in a conventional manner, according to the instructions of the program, with no impact on the performance of the devices as such. The ability to hand off the transaction has no impact on the capability of the device as such, nor does not

having to restart the transaction reflect the capability of the device as such. Although it may save the user effort and inconvenience, these are benefits conferred by the process which I have found to be non-technical. Signpost iv) is therefore not relevant.

The fifth signpost: *v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented*

- 44 The applicant argues that the problem to be solved is completing a transaction (without restarting it) on an alternative device when a first device is unsuitable. Given my views already expressed above on the process by which this is achieved, and the benefits arising, I do not consider this to be a technical problem. Even if it were a technical problem, is it solved, or circumvented by handing off to an alternative device? I agree with the examiner's assertion that the invention solves no technical problems and I note that the claims relate to a method which allows a user to either make a payment on a default device or, if the device is not suitable for payment, allows a user to hand off the payment to a different device. This has no impact on the suitability of the default device for making the payment and instead circumvents the problem of the default device being unsuitable for payment by allowing a user to hand off payment to another device. Signpost v) is therefore also not relevant.
- 45 In summary, I do not find that any of the *AT&T* signposts are persuasive of technicality and, following the process set out in *Aerotel*, the invention defined in claim 1 therefore relates wholly to a program for a computer as such.

### **Summary**

- 46 As I have found claim 1 to define a method for doing business and a program for a computer as such, neither of which provides a technical contribution, the invention is excluded under Section 1(2)(c) of the Act. The dependent claims 2-8 are similarly excluded under Section 1(2)(c) of the Act. Claims 9 and 10 relate to different forms of the same invention; they are of the same substance as claim 1 and are therefore also excluded under Section 1(2)(c) of the Act.
- 47 In light of this, the application is refused under Section 18(3) of the Act.

### **Appeal**

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

Ben Buchanan

Deputy Director, acting for the Comptroller