



## PATENTS ACT 1977

APPLICANT Apple Inc

ISSUE Whether patent application GB 1212453.3 complies with section 1(2)

HEARING OFFICER B Micklewright

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### DECISION

#### Introduction

- 1 This decision relates to patent application GB 1212453.3 entitled “System and method for linking pre-installed software to a user” in the name of Apple Inc. The application was filed on 12 July 2012 with an earliest priority claim of 12 July 2011. It was published on 6 February 2013 as GB 2493423 A.
- 2 The examiner objected to the claims on the basis that they are excluded from patentability under Section 1(2) of the Patents Act 1977 (“the Act”), both as a computer program and a method for doing business. This objection was maintained through several rounds of amendment. The matter therefore came before me at a hearing on 10 November 2015. The applicant was represented by Mr Guenther Schmalz of Withers and Rogers. I was assisted at the hearing by Dr Matthew Jefferson.
- 3 It became apparent at the hearing that some of the applicant’s arguments, particularly in relation to the technical contribution, relied upon a feature which had been removed from the independent claims in the previous round of amendments, namely sending an application to a second client device associated with a user account. There was a degree of confusion in the correspondence in relation to this matter and I therefore gave Mr Schmalz an opportunity to file an auxiliary request in relation to this feature. An auxiliary set of claims and associated arguments were received on 24 November 2015. The applicant did not however reintroduce the deleted feature of sending the application to a second device. I have nevertheless considered the auxiliary request and the accompanying arguments towards the end of this decision.

#### The invention

- 4 The invention relates to a system and method for associating (or “linking”) a software application that is pre-installed on a client device with a user account, thereby

enabling certain acts to be carried out in relation to that application such as updating the application or installing it on another client device associated with the user account. A verification step is included whereby a check is made that the application can be linked to the user account and has not previously been linked. Unique identifiers are used in this verification step.

5 Following amendments submitted on 20 July 2015 there are 11 claims, two of which are independent. The independent claims relate separately to a method and system but are otherwise essentially identical. Nothing rests on the differences and these claims will stand or fall together. Therefore, for the purposes of this decision I need only consider claim 1 as reproduced below.

1. *A method comprising:*

*verifying, by a server, that an application that has been installed on a first client device can be linked to a user account by determining that the installed application on the first client device is configured for distribution by the server;*

*verifying, by the server, that the application has not been previously linked including:*

*automatically retrieving a unique identifier that uniquely identifies an individual copy of the installed application from metadata associated with the installed application, wherein the metadata is stored in a uniqueness table at the server, and*

*verifying that the unique identifier has not been associated with any user account; and*

*delivering, from the server, a notification to the first client device that the installed application can be linked to a user account,*

*linking, by the server the application to a user account, wherein the linking configures the user account to download, re-download and update, with respect to the linked application to one or more client devices associated with the user account.*

## **The Law**

6 Section 1(2) of the Act states (emphasis mine):

*1(2) It is hereby declared that the following (amongst other things) are not inventions for the purposes of the Act, that is to say, anything which consists of –*

- (a) a discovery, scientific theory or mathematical method;*
- (b) a literary, 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 a program for a 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.*

- 7 The provisions of Section 1(2) were considered by the Court of Appeal in *Aerotel*<sup>1</sup> when a four-step test was laid down 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.*
- 8 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 previous UK case law. Kitchen LJ noted in *HTC v Apple*<sup>2</sup> 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”.
- 9 The Court of Appeal in *Symbian* ruled that the question of whether the invention makes a technical contribution has to be addressed when considering the computer program exclusion, although it does not matter whether that takes place at step 3 or step 4.
- 10 Mr Schmalz suggested that as EPO Board of Appeal decisions relating to exclusions were now sufficiently settled, UK case-law, in particular the test set out in *Aerotel*, should no longer be followed. Nevertheless he agreed that the Office was bound to follow the decisions of the UK courts and his following arguments were made on that basis.
- 11 In *Aerotel* the Court of Appeal analysed decisions made by the Boards of Appeal of the European Patent Office (EPO) on the question of excluded matter. The court concluded that EPO practice was not yet sufficiently settled to enable the Court to depart from precedent UK case-law. This point was reiterated in *Symbian*<sup>3</sup> (paragraphs 44 and 46) and *HTC v Apple* (paragraph 44), and must remain the position until the UK courts conclude otherwise. I am therefore bound by decisions made in the UK courts and I am bound to follow *Aerotel*.
- 12 Lewison J in *AT&T/CVON*<sup>4</sup> 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*<sup>5</sup>. The signposts are:

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

<sup>2</sup> *HTC Europe Co Ltd v Apple Inc* [2013] EWCA Civ 451

<sup>3</sup> *Symbian Ltd v Comptroller-General of Patents* [2009] RPC 1

<sup>4</sup> *AT&T Knowledge Venture/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

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

- 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.*

## **Assessment**

### **Step (1): Properly construe the claims**

- 13 The construction of claim 1 is not disputed. Claim 1 relates to a computer method for linking an application installed on a client device to a user account. The method entails a server verifying that the installed application is distributable by the server and verifying that the application has not been previously linked. The latter step is carried out by retrieving a unique identifier from metadata associated with the installed application, the metadata being stored at the server, and verifying that the unique identifier has not been associated with any user account. Following verification, the application is linked to a user account which configures downloads, re-downloads and updates to one or more client devices associated with the user account.
- 14 It is apparent that if any of the verification steps fail then the final step is not carried out and the application is not linked to the user account. Moreover, the “one or more client devices” to which the linked application is downloaded, re-downloaded or updated can include the “first client device” mentioned at the beginning of the claim, a construction confirmed by Mr Schmalz at the hearing. Thus claim 1, in its current form, covers the situation where there is only a single client device involved, unlike earlier versions of the claim.

### **Step (2): Identify the actual contribution**

- 15 In *Aerotel* the Court of Appeal provided useful guidance in relation to determining the contribution. In paragraph 43 of this judgment Jacob LJ said:

*“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 invention works by retrieving a unique identifier which identifies a unique copy of an installed application based on metadata associated with the application. The metadata is stored in a uniqueness table at the server. This unique identifier forms the basis of determining if the application has already been linked with a user account.
- 17 Mr Schmalz argued that the contribution should include references to the uniqueness table, to the communication system and to the degree of automation enabled by the claimed invention. I agree that the uniqueness table is an important part of the claimed invention and forms part of the contribution. The communication system itself is part of a conventional computer network and does not in itself form part of the contribution. In relation to automation, aside from “automatically retrieving a unique identifier” in claim 1, there is no other explicit mention of anything happening automatically.
- 18 According to the specification the problem to be solved relates to improving the way software updates are carried out. According to paragraph [0004] this process is “time consuming and sometimes confusing”. This paragraph also highlights problems when applications need to be re-installed, for example following a reformatting of the storage of the device. Such reinstallation may require various compact discs (CDs) or other media containing the pre-installed software which could be misplaced and could make the reinstallation procedure quite cumbersome.
- 19 I am not convinced that prior art methods are always as cumbersome, time consuming and confusing as is indicated in this paragraph. For some years now individual applications have often handled updates very efficiently, in some cases automatically installing a new version of the application in the background. That said it is certainly the case that installation and update processes can sometimes vary from one application to another which could cause a degree of confusion, although at least in the field of smartphone devices this problem has already been resolved by the introduction of application stores which centrally handle downloads, installations, updates and re-installations.
- 20 It seems to me that the problem to be solved is more specific, namely about managing updates and installations of applications which have been pre-installed on a device. The invention achieves this by:

A method which, when executed on a computer, performs the following steps:

- (a) checks that an application that has been installed on a client device is configured for distribution by the server;
- (b) verifies that the application has not been linked to a user account by retrieving a unique identifier that identifies the application from metadata, the metadata being stored in a uniqueness table;
- (c) notifies the user/client that the application can be linked to their account; and
- (d) links the application to the account to allow download, re-download and update to devices associated with (registered to) the account.

I will take this to be the contribution made by the invention of claim 1.

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

- 21 It is convenient when considering the exclusions to deal with steps (3) and (4) together. In other words I must now decide whether the contribution is technical in nature or whether it falls solely within excluded subject matter.
- 22 Mr Schmalz argued that the invention is technical because the contribution includes technical features, namely a database (i.e. the uniqueness table), a hardware identifier (i.e. unique identifier) stored in the database, user account data and link data. He also emphasised that this is an automated process. I have already commented on the latter point and would add that although the invention may make it easier for a user to install and update applications it is not in itself necessarily an automated process. For example it may prompt the user before carrying out the update or installation. At best it could be said to provide a process which makes it easier to provide more automation in the installation or updating of pre-installed applications. Moreover the inclusion of the uniqueness table and unique identifier (the claim is not limited to a hardware identifier) do not in themselves impart a technical contribution. The uniqueness table is merely a database and the use of such a database does not in itself impart a technical contribution. The unique identifier identifies an individual copy of an application and is not in and of itself technical. Moreover there is a danger in considering the features of the contribution in a piecemeal fashion. What I must do is consider whether the claimed invention in substance, when considered as a whole, makes a technical contribution.
- 23 In relation to the computer program exclusion, it is important to note that an invention is not excluded merely because it is implemented as a program for a computer. What is important is whether such an invention involves a technical contribution which amounts to more than a program for a computer as such. The *AT&T/Cvon* signposts referred to above are helpful in determining whether the invention relates to a program for a computer as such. In the present case for the purposes of the first signpost I consider the "computer" to be a number of linked computers, namely the first client device, the server and possibly further client devices, forming a computer arrangement.
- 24 At the hearing Mr Schmalz focussed on the first and fifth signposts. In relation to the first signpost Mr Schmalz argued that in essence the invention involved a switch used to allow the download of an application. It could either allow the download of an application or inhibit such a download depending on whether the application is linked to the user account. This, Mr Schmalz submitted, had a technical effect on a process carried on outside a computer.
- 25 These arguments bring me to the key question in this case: Does the application make a technical improvement in the installation and updating of applications, or is it rather an administrative improvement in the way the installation and updating of applications is managed? After careful consideration of this matter and of Mr Schmalz' submissions, in my view it is the latter. The invention does not in itself provide any technical improvements to the way applications are installed or updated. The key advantage of the invention seems to me to be that linking pre-installed applications to a user account allows updates, installations and re-installations to be

managed in a centralised, consistent manner across applications and devices. It does not operate as a switch to either allow or inhibit installation or updating. Rather if an application is not linked to the user account then its updates and installations have to be managed in another manner. Moreover this process takes place within the overall computer system. I am not therefore convinced that this is a technical effect taking place outside the computer. Rather it is an administrative action taking places within the computer. This argument would still apply even if the claim were limited to the downloading or installation of the application onto a second client device.

- 26 Mr Schmalz did not consider the second, third and fourth signposts to be relevant. I agree with him on this matter. The invention does not operate at the architecture level of the computer but rather at the “application” level. As I understand it, each application that wishes to link to a user account according to the method of the invention must be appropriately programmed. It does not happen automatically for all applications based on changes to the architecture. Moreover, as I have concluded above, the claimed process is an administrative process rather than a technical process and the various computer devices all operate in a standard way. Neither the second signpost nor the third signpost therefore applies. Nor is the program a better computer in the sense of running more efficiently and effectively as a computer.
- 27 In relation to the fifth signpost, Mr Schmalz argued that the problem of improved usability had been overcome in a technical manner. I am not convinced that this is the case. Rather the technical problem of improving usability with a new technical way of updating, installing and re-installing software has been circumvented by using an administrative process which links pre-installed applications to a user account.
- 28 I therefore conclude that there is nothing technical in the contribution to take the invention outside of the computer program exclusion. The claimed invention therefore relates to a program for a computer as such.
- 29 The examiner also argued that the claimed invention related to a method of doing business as such. Mr Schmalz submitted that the invention has a technical contribution, involves technical considerations, and provides an easier process for the user. I have already found that the contribution lies in an administrative field rather than in a technical field. It is this administrative process which improves usability for the user by improving the way updates and installations of pre-installed applications on a client device are managed. Moreover a claim does not avoid the exclusions merely because it includes technical elements such as servers and a communication system. In the present case these elements are entirely standard and are not in substance part of the contribution. I therefore conclude that the invention is also excluded from patentability as a method of doing business as such.

### **The Auxiliary request**

- 30 Claim 1 as amended in the auxiliary request reads as follows (the main additions over claim 1 as originally filed being shown in bold):

*A method comprising:*

**configuring an application database (220) to store associations pre-installed applications and user accounts;**

**configuring a uniqueness server (211) to store associations between a unique hardware identifier and pre-installed applications;**

*verifying by a server, that an application that has been installed on a first client device is eligible for association with a user account by determining that the installed application on the first client device is configured for distribution by a server;*

*verifying, by the server, that the application has not been previously associated with a user account including;*

*automatically retrieving a unique identifier that uniquely identified an individual copy of the installed application from metadata associated with the installed application, and*

*verifying that the unique identifier has not been associated with any user account; and*

*delivering, from the server, a notification to the first client device that the installed application is eligible for association with a user account and*

***automatically begin the process of downloading a software package or an update to the software package to the first client device.***

- 31 Claim 12, relating to a system, has been amended in a similar way, such that, as before, I only need to consider claim 1 when deciding whether or not the exclusions apply.
- 32 Key amendments to the claim are:
- Explicit inclusion of a database to store associations between pre-installed applications and user accounts.
  - Storing associations between a unique hardware identifier and pre-installed applications in a uniqueness server.
  - Removal of reference to a uniqueness table for storing metadata associated with the installed application.
  - Removal of the step of linking the application to a user account.
  - Addition of a step of automatically beginning the process of downloading a software package or an update to the software package to the first client device.
  - Removing the possibility of installing or updating applications on further client devices.
- 33 It is apparent that the scope of the claim has been altered in a number of manners. If I were to find that this claim was not excluded from patentability I would need to refer



the application back to the examiner for consideration of other matters such as novelty, inventive step, clarity and support.

- 34 Some claim construction issues arise in relation to claim 1 of the auxiliary request. In particular the last step (automatically downloading/updating) does not seem to link to any of the other steps, nor is it dependent on the outcome of any of the other steps. Moreover there is now no longer a step of actually doing the association of the installed application with the user account. It is not clear to me if the last step only takes place if the application has not already been associated, and if so whether it makes that association as part of that step, or whether the final step would also be applied to applications which have already been associated. These will need clarification if I decide to allow the case on the substance, but in the meantime I will construe the claim based on the support in paragraph 41. It seems that the updating/downloading step is dependent on the outcome of the notification step. I therefore construe the claim as carrying out the updating/downloading step if either the application has already been associated with the account, or, if it has not been but is eligible for association, carrying out that association and then carrying out the updating/downloading step. This step is not carried out if the application is not eligible for association.
- 35 Based on this construction the contribution seems to me to be:
1. Verifying that a pre-installed application on a client device can be associated with a user account and that it has not already been associated by comparing a unique hardware identifier of the client device and a unique identifier that uniquely identifies an installed copy of an application from metadata associated with that application; and
  2. If either the application is eligible for association and has not already been associated or is not eligible because it has already been associated, updating/installing the application (which would include associating it).
- 36 The amendments made to the start of the claim make explicit the various data which must be stored in the databases in order for the invention to work. Mr Schmalz considered this a technical feature but I am not convinced this is the case. There is nothing technical about a database storing associations, pre-installed applications and user accounts. It is merely a database and adds nothing of substance to the claimed invention.
- 37 In his letter accompanying the amendments Mr Schmalz draws an analogy between a taxi which comprises technical elements (the engine) and non-technical elements (transporting people as a business), and a computer comprising technical elements in the form of hardware and non-technical elements. He observes that as long as there is a genuine technical purpose, or technical contribution, all non-technical elements should be disregarded. I certainly agree that if the invention makes a technical contribution which does not lie solely in the excluded fields then it is not excluded from patentability. The question is whether the claimed invention makes a technical contribution. Beyond this I'm not sure the analogy suggested by Mr Schmalz is particularly helpful. Whereas it is relatively straightforward to distinguish the technical and non-technical aspects of a taxi, it is more complex for a computer where hardware elements and software elements interact in a complex manner.

- 38 There are two features forming part of the contribution which warrant further consideration. These are the addition of the associations between a unique hardware identifier and pre-installed applications, and the final step of automatically beginning the process of downloading a software package or an update to the software package to the first client device.
- 39 Mr Schmalz claims that, although the unique identifier may be used as providing a proof of entitlement or ownership of an application, this is not its only purpose. It is also a means to identify user devices which are preselected for interacting with the application database to perform software updates automatically, without user intervention. The associations stored in the uniqueness server are not mere administrative data or proof of ownership data, but data reflecting rights of starting a technical procedure. To further his engine analogy referred to above he claims that it is analogous to a key for starting the engine. Mr Schmalz' view is that the association between a unique hardware identifier and pre-installed applications, and the use of the unique hardware identifier to identify user devices is a technical contribution.
- 40 I am not convinced that the addition of the unique hardware identifier has a material impact on my arguments made in relation to the main set of claims. The hardware identifier, although being derived in some manner from the hardware configuration of a device, is used for an administrative function, namely as a way of determining which pre-installed applications are associated with a particular device. Similar to the "unique identifier" in the main set of claims, its purpose is administrative rather than technical.
- 41 In relation to the final step of automatically beginning the process of downloading a software package or an update to the software package to the first client device, Mr Schmalz argues in the context of the *AT&T/Cvon* signposts that the technical effect results in a more efficient client device, enabling an automation of software updates and rendering the procedure for software updates more efficient as they are performed in the background unnoticed by the user of the device.
- 42 The key difference between the feature of beginning the process of downloading a software package or an update to the software package and the main version of the claim considered earlier in the decision is that rather than merely linking the application to the user account so as to *allow* downloads or updates of software packages, the method now entails automatically beginning the process of downloading or updating a software package. I would however add that it is not entirely clear what is meant by "automatically" in this context. For example it is not clear whether the user could be prompted to confirm they want the download to begin, or to confirm their agreement to some terms and conditions. Moreover it is only *beginning* the process of downloading which is automated. The claim says nothing as to the level of automation further downstream in the downloading or installing process.
- 43 The inclusion of this feature does not in my view affect my arguments made in relation to the main set of claims. The process of automatically beginning the download of a software package or an update to a software package again relates to the administrative process of managing such downloads and installations. It is not apparent that the installation or updating process is entirely automated or transparent to the user, and neither is it clear that this is an improvement over

alternative approaches. Any efficiency or usability improvements are improvements in the administrative process of managing installations and updates of applications which have been pre-installed on a client device rather than technical improvements to the way applications are installed or updated. There is therefore no technical improvement in the way the process is automated.

- 44 I therefore conclude that neither of these additions change the fact that what has been invented in substance is a better way of administering or managing installations and updates of applications which have been pre-installed on a client device rather than any technical improvement to the way applications are installed or updated. Claim 1 of the auxiliary request therefore also lies solely in the excluded field of a program for a computer as such and a method of doing business as such for the same reasons as I have set out for the main set of claims.

### **Conclusion**

- 45 I conclude that the contribution made by the invention in both the main set of claims and in the auxiliary request lies solely in the excluded fields as a program for a computer as such and a business method as such. I therefore refuse the application.

### **Appeal**

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

B Micklewright  
Deputy Director, acting for the Comptroller