



PATENTS ACT 1977

APPLICANT	Mobiroo Inc.
ISSUE	Whether patent application number GB1118650.9 complies with Section 1(2)
HEARING OFFICER	Peter Slater

DECISION

- 1 Patent application GB1118650.9 entitled “Advertising system and method for digital devices running applications” was lodged on 28 October 2011, and is derived from the corresponding PCT application WO2011/022808 filed by Mobiroo Inc. on the 13 August 2010. The application claims an earliest priority date of 26 August 2009 and was re-published as GB2481943 A on 11 January 2012.
- 2 Following amendment of the claims and several rounds of correspondence between the examiner and the applicant’s attorneys, the examiner remains of the view that the claimed invention is excluded from patentability under section 1(2). With the position unresolved, the applicant asked to be heard, and the matter came before me at a hearing on 24 May 2013. The applicant was represented by Mr Andrew Bridle of Bridle Intellectual Property Limited. The examiner, Mr Stuart Purdy, was also present.

The Invention

- 3 The invention relates to a method of distributing advertisements to digital devices such as mobile phones and laptops by inserting them into software applications (“apps”) to be downloaded onto the device. Typically, the advertisements are embedded into a new or modified app, or are supplied via a remote server for display in a reserved portion of the devices display screen when the app is initiated or whilst it is running. Advertisements are provided free of charge to the user and are paid for by the advertiser. Historically, advertisements have been distributed indiscriminately to all users of the modified app. However, it is possible to target particular users based on information gleaned from their device whilst running the app. This type of approach tends to be limited by the user’s willingness to share data with the application provider and advertiser. Indeed, many users when asked to provide information may refuse or enter false information. It is also common for such apps to include information used to determine the effectiveness of the advertisements by tracking the number of times an app is run, or the number of times an advertisement

is displayed or “clicked” upon. However, tracking is again limited by the availability of information identifying the user.

- 4 The invention provides an arrangement comprising a number of “subsystems” including an order management system, an app server and an ad server which are used to insert advertisements into modified apps and to deliver those apps to a particular user based on requirements specified in advance by the advertiser. An advertiser who wishes to use the system for advertising connects to the order management system via a web browser where they are presented with a list of modified apps retrieved from the app server which they can then select, and into which their adverts will be inserted. The advertiser can then purchase authentication codes which targeted users can use to download, install and use one or more of the modified apps. Authentication codes may then be distributed by the advertiser to users, for example, in the form of business cards at trade fairs or the like. In exchange for the authentication codes, users may be required to supply the advertiser with their email address etc. Users can then access the app server where they can download modified apps using their authentication codes. The app server is also used to add tracking codes or other “user identification information (UII)” into the modified app often referred to as a “branded app”. When the user installs and runs a branded app on their device, the tracking codes and UII embedded in the app are transmitted to the ad server which uses this information to determine which advertisements to send to the user’s device for insertion into the branded app. The branded app running on the user’s device may also be used to send usage statistics to the ad server which may include information on the usage of the app, duration of advertisements displayed on the app and the extent to which a user has interacted with the advertisement e.g. by clicking on it. This information may then be supplied to the advertiser to assess the effectiveness of their advertising.
- 5 The invention therefore provides an improved means for distributing advertisements to targeted users including information which makes it potentially easier to assess the effectiveness of the advertising. The application envisages that the various subsystems could be embodied using a wide range of technologies including single computers, networked or distributed processors or firmware. Alternatively, the subsystems may be combined to share one or more processors. For example, all the described subsystems could be implemented on a single processor with sufficient storage or processing capacity (see page 6, lines 9-12).
- 6 The most recent set of claims was filed on 20 January 2012. There are 20 claims in total including two independent claims which read as follows:

1. A system for distributing advertisements to modified applications running on target digital devices, the modified applications having been modified to accept advertisements from the system over a communications network, the system comprising:

a. an order management system adapted to receive requests from advertisers and to provide authentication codes to the advertisers for distribution to users of the target digital devices;

b. an app server having a code validation module adapted to (i) receive authentication codes over the communications network from the users of the target digital devices, (ii) validate the codes to determine that the users are entitled to download modified applications selected by the users, and (iii) authorise the users to

download the modified applications and run the modified applications on the target digital devices; and

c. an ad server having an ad serving module adapted to deliver the advertisements to the modified applications running on the target digital devices over the communications network for display on the target digital devices, the advertisements being selected based on user identifying information embedded in the modified applications, wherein the user identifying information is related to the authentication code.

14. A method for distributing advertisements to a user of a target digital device using at least one computer processor which implements an app server and an ad server, the method comprising the steps of:

a. an order management system receiving a request from an advertiser and providing authentication code to the advertiser for distribution to the user of the target digital device;

b. the app server receiving the authentication code from the user of the target digital device over a communications network;

c. the app server validating the code to determine that the user is entitled to download a modified application selected by the user;

d. the app server authorising the user to download the modified application; and

e. the ad server delivering advertisements to the modified application running on the target digital device over the communications network, the advertisements being selected based on user identifying information embedded in the modified application, wherein the user identifying information is related to the authentication code.

The Law

- 7 The examiner has raised an objection under section 1(2)(c) of the Patents Act 1977 that the invention is not patentable because it relates to both a method of doing business and a program for a computer as such; the relevant provisions of this section of the Act are shown in bold below:

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

(a)

(b)

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

(d)

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.

- 8 As explained in the notice published by the UK Intellectual Property Office on 8 December 2008¹, the starting point for determining whether an invention falls within the exclusions of section 1(2) is the judgment of the Court of Appeal in *Aerotel/Macrossan*².
- 9 The interpretation of section 1(2) has been considered by the Court of Appeal in *Symbian Ltd's Application*³. *Symbian* arose under the computer program exclusion, but as with its previous decision in *Aerotel*, the Court gave general guidance on section 1(2). Although the Court approached the question of excluded matter primarily on the basis of whether there was a technical contribution, it nevertheless (at paragraph 59) considered its conclusion in the light of the *Aerotel* approach. The Court was quite clear (see paragraphs 8-15) that the structured four-step approach to the question in *Aerotel* was never intended to be a new departure in domestic law; that it remained bound by its previous decisions, particularly *Merrill Lynch*⁴ which rested on whether the contribution was technical; and that any differences in the two approaches should affect neither the applicable principles nor the outcome in any particular case. But the *Symbian* judgment does make it clear, that in deciding whether an invention is excluded, one must ask does it make a technical contribution? If it does then it is not excluded.
- 10 Subject to the clarification provided by *Symbian*, it is therefore still appropriate for me, to proceed on the basis of the four-step approach explained at paragraphs 40-48 of *Aerotel/Macrossan* namely:
- 1) Properly construe the claim
 - 2) Identify the actual contribution (although at the application stage this might have to be the alleged contribution).
 - 3) Ask whether it falls solely within the excluded matter, which (see paragraph 45) is merely an expression of the “as such” qualification of section 1(2).
 - 4) If the third step has not covered it, check whether the actual or alleged contribution is actually technical.
- 11 The operation of this test is explained at paragraphs 40-48 of the decision. Paragraph 43 confirms that identification of the contribution is essentially a matter of determining what it is the inventor has really added to human knowledge, and involves looking at substance, not form. Paragraph 46 explains that the fourth step of checking whether the contribution is technical may not be necessary because the third step should have covered the point.
- 12 Mr Bridle accepted that this was the right approach to take.

¹ <http://www.ipo.gov.uk/pro-types/pro-patent/p-law/p-pn/p-pn-computer.htm>

² *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371; [2007] RPC 7

³ *Symbian Ltd v Comptroller-General of Patents*, [2009] RPC 1

⁴ *Merrill Lynch's Application* [1989] RPC 561

Arguments and analysis

- 13 The examiner maintains that the invention as claimed is excluded under section 1(2)(c) of the Act as it relates to a program for a computer and a business method. His position is set-out most recently in his pre-hearing report of 25 April 2013. The applicant's arguments to the contrary are contained in their letters of 20 January 2012, 6 June 2012 and 11 December 2012 respectively. I am also grateful to Mr Bridle for having supplied me with a copy of his "skeleton arguments" prior to the hearing which provide a useful summary of the main points which were discussed during the hearing. I do not intend to repeat all the arguments here in full but will summarise them appropriately in the paragraphs which follow.

Construing the claims

- 14 The first step of the test is to construe the claims. Whilst I do not think this presents any real problems there does seem to be some argument as to whether the various subsystems defined in claim 1 are implemented using conventional hardware and/or software. The examiner is of the opinion that the order management system, app server and ad server could be implemented in software on at least one computer processor and/or network and that the hardware used is entirely conventional.
- 15 Mr Bridle, on the other hand, considers each of the components to constitute a separate piece of hardware having a data input port, a processor, a memory storage unit and a data output port similar to that of the "special exchange" at the heart of the case in *Aerotel*. In support of his arguments, he referred me to paragraph [0026] of the PCT specification which he alleges makes it clear that the "ad server, or other computer-based sub-systems described herein" (i.e. the order management system and app server) are in fact separate hardware components.
- 16 However, as I have already noted above, the specification goes on to say that "all the described subsystems could be implemented on a single processor with sufficient storage or processing capacity (see paragraph [0026] page 6, lines 9-12)".
- 17 I think therefore that I would have to say that the claims in their broadest sense relate to an arrangement for distributing advertisements to target devices wherein a combination of an order management system, app server and ad server are used to control the download of modified applications to a user's digital device based upon authentication codes supplied to them by advertisers, and that advertisements are then delivered to the modified applications for display on the user's device based on user identification information embedded in the modified applications which is related to the authentication code. Whilst the application envisages that the various subsystems could be embodied using a wide range of technologies including single computers, networked or distributed processors or firmware, it is clear that they could also be implemented on a single processor using conventional hardware.

Identify the actual contribution

- 18 For the second step, it is necessary to identify the contribution made by the invention. Paragraph 43 of *Aerotel/Macrossan* explains that this is to be determined by asking what it is - as a matter of substance not form - that the invention has really

added to human knowledge having regard to the problem to be solved, how the invention works and what its advantages are.

- 19 The examiner's view is that the contribution is "a computer implemented method, using a system comprising an order management system, app server, and an ad server, for distributing adverts to modified applications on targeted digital devices wherein, in response to a request for an advert to be distributed, an authentication code is provided to the advertiser. The authentication code is then distributed to users of the digital devices who may then provide the code in exchange for the modified application into which the advert is inserted. The invention seeks to address problems associated with the supply of free applications as an incentive for receiving advertising and in particular enables an application provider to sell targeted advertising to an advertiser and then link their advert to the application given to the targeted recipient."
- 20 Before I turn to Mr Bridle's main arguments in relation to the contribution, it is worth noting at this stage that the he does not dispute the fact that the invention requires computer software for its implementation and that the individual components which make up the system as a whole could be made up of conventional hardware. However, the Mr Bridle's view is that the contribution relates to a new combination of hardware components (whether conventional or not) which are combined to create an entirely new system as a whole.
- 21 Mr Bridle argues that each of the component subsystems include hardware components which have one or more specific technical effects. Together these form a system as a whole which is new, and that none of the prior art documents cited by the examiner discloses such a combination of components. He therefore appears to be saying that the contribution includes a system which enables advertisers to associate their advertising content with specific modified applications; to allow users to download the applications onto a digital device and for the delivery of specific messages to be made to selected devices. This he considers to be more than a general advertising method, it is a system for and a method of distributing advertising messages to specific devices which have had downloaded onto them a specific modified app associated with the advertising message. The invention allows specific adverts to be associated with specific apps. The system generates authentication codes that allow pre-determined apps to be downloaded by a user; it validates the authentication code to determine if a modified app can be downloaded; it then identifies the device to which the app has been downloaded and transmits a specific message to the target device. The system as a whole is concerned with an apparatus for and the method of transmitting the correct message to the target device running a modified app associated with the message. Mr Bridle alleges that the invention solves the technical problem of delivering a specific message to a target device running a selected modified app.
- 22 At the hearing, Mr Bridle drew an analogy between the current application and that which was disclosed in *Aerotel*, referring me specifically to paragraphs 50 to 57 of the judgment. He argues that, as in *Aerotel*, the actual contribution is a completely new combination of physical hardware, which in itself is new, not merely because it is to be used in the business of advertising. The contribution is a new system which although it could be implemented using conventional computers is more than just a

computer program as such or a business method, and is clearly technical in nature as was the “special exchange” in *Aerotel*.

- 23 So what is the contribution? In my opinion, the contribution resides in a new arrangement for distributing advertisements to target devices wherein a combination of an order management system, app server and ad server are used to control the download of modified applications to a user’s digital device based upon authentication codes supplied to them by advertisers, and that advertisements are then delivered to the modified applications for display on the user’s device based on user identification information embedded in the modified applications which is related to the authentication code. The invention therefore provides an improved means for distributing advertisements to targeted users including information which makes it potentially easier to assess the effectiveness of the advertising.
- 24 I do not think the contribution extends as far as to include a new arrangement of physical hardware as was the case in *Aerotel*. It is well known in the art to use conventional computers or servers to distribute targeted advertising to digital devices such as mobile phones and laptops by inserting advertisements into software applications for download onto specific user devices, and there is nothing to suggest in the specification that the hardware being used here is anything other than conventional. Indeed, as I have already said the application envisages the possibility that all the described subsystems could be implemented on a single conventional processor. However, where the contribution differs from the prior art is in what the processor is programmed to do i.e. the functions which the servers etc. carry out in order to deliver the advertisements.

Does the contribution fall solely within excluded subject matter? Is the contribution technical in nature?

- 25 In his pre-hearing report of 25 April 2013, the examiner alleges that the contribution lies solely in a method of doing business and/or a program for a computer. He argues that a generic interpretation of the business method exclusion must be applied, and that the proposed invention is merely a better method for enabling an advertiser to incentivise the receipt of adverts which uses entirely conventional technology to implement the steps of the method. He makes reference to both the judgments in *Merrill Lynch* and *Halliburton*⁵ which he says support this approach. Using new software in a conventional computer to implement the business method of your invention he says is “insufficient to place the contribution of your invention outside the scope of the exclusion. Most modern businesses employ some form of computer implemented automation to carry out their methods of doing business.”
- 26 Furthermore, the examiner argues that in the *Aerotel* case (at least in the Court of Appeal) the contribution was held not to relate solely to the business of selling phone calls rather it provided a new hardware link in the physical process of making a phone call, the system itself required a new arrangement of hardware which enabled a phone call to be made, and this was sufficient to avoid the business method exclusion. However, in the present application, the invention provides a new method of distributing adverts, no new hardware link is added to the means used to distribute the adverts rather conventional advertisement distribution means are used

⁵ *Halliburton* [2011] EWHC 2508 (Pat)

in a new method of associating the application with an ad provider. He goes on to say that ad servers which distribute advertising content to mobile phone applications are entirely conventional, as demonstrated in the prior-art cited in the international Search Report dated 12 October 2010. The examiner also makes reference to the hearing officer's decision in *Claria Corporation's Application*⁶ where the substance of a claim to an ad server per se was considered to give a contribution which was nothing more than a business method and/or a computer program and was therefore excluded.

- 27 The examiner concludes that the provision of codes to users for subsequent linking to advertising content is a purely administrative function and is a non-technical solution to the problem of linking advertising content to applications, and that the contribution is in substance nothing more than a new method of doing business. He also argues that there is no technical contribution in the software and no technical effect on any process going on outside of the computer which would otherwise save the invention from exclusion as a computer program.
- 28 Mr Bridle maintains that the system as a whole comprises a new arrangement of hardware. He argues that the provision of authentication codes to advertisers by the order management system, the validation and download of modified apps by the app server and the subsequent delivery of selected advertisements by the ad server to specific devices provides a technical effect sufficient to avoid exclusion. At the hearing Mr Bridle referred me to paragraph 49 of the judgment in *HTC v Apple* where Kitchin LJ states:

"An invention which solves a technical problem outside the computer will also have a relevant technical effect, for example by controlling an improved technical process. In either case it will not be excluded by Art 52 as relating to a computer program as such."

- 29 Mr Bridle argues that the transmission of a specific message to a specific device running a modified app is considered to be a technical problem lying outside the computer, as the device and the modified app must be identified, the message associated with the modified app must be determined and the selected message must be transmitted to the correct device. As the invention uses technical means in the form of a new arrangement of hardware to solve this problem, then according to the reasoning of Kitchin LJ in *HTC v Apple*⁷, the invention as claimed should not be excluded as a computer program.

Business method

- 30 In my opinion, the distribution of targeted advertising embedded within modified software applications constitutes a step in a business process, and not a technical one. It has been established that the invention as claimed was designed to improve the way in which adverts are distributed to specific devices using authentication codes and associated user identification information embedded within the modified applications. Furthermore, the modified applications can be used to assemble statistics which may include information on the usage of the applications, duration of

⁶ *Claria Corporation's Application* BL 0/049/11

⁷ *HTC v Apple* [2013] EWCA Civ 451

advertisements displayed on the applications and the extent to which a user has interacted with the advertisements. This information may then be supplied to the advertiser to assess the effectiveness of their advertising. The invention therefore provides certain business advantages to the advertiser which I do not consider to be technical in nature. I therefore consider the contribution to fall squarely within the business method exclusion.

Computer program

- 31 There is no doubt in my mind that the contribution requires a computer program for its implementation. However, the mere fact that the invention is effected in software does not mean that it should be immediately excluded as a computer program as such. What matters is whether or not the program provides a technical contribution.
- 32 As I have already said, I do not think the contribution extends as far as to include a new arrangement of physical hardware as was the case in *Aerotel*. It is well known in the art to use conventional computers or servers to distribute targeted advertising to digital devices such as mobile phones and laptops by inserting advertisements into software applications for download onto specific user devices, and there is nothing to suggest in the specification that the hardware being used here is anything other than conventional. However, where the contribution differs from the prior art is in what the hardware is programmed to do i.e. the functions which the servers etc. carry out in order to associate advertisements with modified apps and to deliver them to specific devices. The fact that computers are used to facilitate this process does not convey the necessary technical contribution.
- 33 Whilst the invention as claimed does improve the way in which adverts are distributed to users, and the tracking of advertisements is also enhanced to enable advertisers to assess the effectiveness of their advertising campaigns, I do not think the improvements are of a technical nature nor do I think that there is any evidence to suggest that a technical problem outside of the computer is being solved by the invention which might otherwise provide the technical contribution necessary to avoid exclusion. I therefore also consider the contribution to fall within the computer program exclusion.

Conclusion

- 34 What the applicant has done is to create a new computer program, albeit a very clever one, which is capable of distributing targeted advertising in modified software applications to specific users. The contribution lies in the functions which the system has been programmed to carry out. In essence, the applicant has created a new business process implemented in software using conventional hardware which does not provide a relevant technical contribution and as such would seem to fall squarely within the business method and computer program exemptions of section 1(2)(c)
- 35 In the light of my findings above, I conclude that the invention as claimed is excluded under section 1(2) because it relates to a business method and a computer program as such. Having read the specification I do not think that any saving amendment is possible. I therefore refuse the application under section 18(3).

Appeal

36 Any appeal must be lodged within 28 days

P R SLATER

Deputy Director, acting for the Comptroller