Intellectual Property Office

BL O/107/18

16 February 2018

PATENTS ACT 1977

APPLICANT	AVAYA INC.
ISSUE	Whether patent application numbers GB 1311099.4 and GB 1418792.6 comply with Sections 1(1)(d) and 1(2) of The Act.
HEARING OFFICER	Peter Mason

DECISION

Introduction

1 This decision concerns the question of whether the inventions set out in each of the patent applications GB 1311099.4 and GB 1418792.6 relates to excluded subject matter under section 1(2) of The Act.

2 Application GB 1311099.4 entitled “Downloadable Pluggable Services” was filed at the IPO on 21st June 2013 claiming priority from a US application, US 13/624928, and was subsequently published as GB 2506232.

3 Processing as a Combined Search and Examination was requested and following several rounds of correspondence the applicant filed the current set of claims on 22nd May 2017 and in the accompanying letter requested a hearing should the Examiner disagree. The Examiner subsequently prepared a report on 13th July 2017 for the applicant setting outing in full an objection that the application was excluded under Section 1(2)(c) of The Act and a computer program and method of doing business.

4 Patent Application GB 1418792.6 also entitled “Downloadable Pluggable Services” is a divisional application of GB 1311099.4 and was published as GB 2518535.

5 As is the case with divisional applications it was processed as a Combined Search and Examination and, as with the parent, following several rounds of correspondence the applicant filed amended claims on 22nd May 2017 with a request for a hearing should the Examiner disagree. The Examiner issued a report on 13th July 2017 and as in the parent application reiterated an objection that the application was excluded under Section 1(2)(c) of the Act.

6 I am grateful to the applicant for agreeing that the applications should be considered together and have asked for a decision on the Papers.

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The Law

8 The examiner raised objections under section 1(2) of the Act stating that the invention is not patentable because it relates *inter-alia* to one or more categories of excluded matter. The most 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.*

These provisions are designated in Section 130(7) as being so framed as to have, as nearly as practicable, the same effect as Article 52 of the European Patent Convention, to which they correspond. I must therefore also have regard to the decisions of the European Patent Office Boards of Appeal that have been issued under this Article in deciding whether the present invention is patentable although I am not bound to follow them. I am bound to follow the decisions of the UK Courts however.

9 There is a large amount of case law in relation to the provisions of section 1(2). The most significant recent judgments of the Court of Appeal on the matter are *Aerotel/Macrossan*[1] and *Symbian Ltd's Application*[2]. Following the guidance in *Symbian* I will use the four-step approach explained at paragraphs 40-48 of *Aerotel* and ensure in my consideration of steps (3) and (4) that I determine whether the invention makes a technical contribution. The steps are :

> *(1) Properly construe the claim;*
>
> *(2) Identify the actual contribution;*
>
> *(3) Ask whether it falls solely within the excluded subject matter;*
>
> *(4) Check whether the actual or alleged contribution is actually technical in nature.*

10 The Court said in *Symbian* (see paragraphs 8-15) that the structured four-step approach to the question in *Aerotel* was not a new departure in domestic law and

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[1] *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371; [2007]
[2] *Symbian Ltd v Comptroller-General of Patents* [2009] RPC 1

that it remained bound by its previous decisions, particularly *Merrill Lynch*[3]. The *Aerotel* test is intended to be equivalent to the prior case law test of "technical contribution".

11 When considering the computer programme exclusion, it can be helpful to consider the 'signposts' set out in paragraph 40 of *AT&T/CVON*[4] which provide guidelines when considering whether a computer program makes a relevant technical contribution beyond the exclusion. The fourth signpost was subsequently reworded by the court of appeal in paragraphs 50-51 of *HTC v Apple*[5] following *Gemstar*[6]; The five reworded signposts are as follows:

> *(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.*

The Inventions

12 I will apply the Symbian approach firstly to the GB 1311099.4 application, and then the GB1418792.6 application

13 Before applying the above approach I should note that the applications contain a number of common features and terms and I feel it is best her to consider these alongside each other to avoid any confusion or doubt before considering the individual inventions.

Customer

14 The customer in these applications is considered to be the owner of the servers on which the communication system is installed. The specifications refers in several places to an administrator who is responsible for downloading a new service or new version of an existing service and can assign users or groups of users to that service. Allocation of services is done by a template (See Fig 7 and paragraphs 0091-0099). Paragraph 0016 refers to the customer or system administrator specifying customization of a pluggable service at ordering time.

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[3] *Merrill Lynch's Application* [1989] RPC 561
[4] *AT&T Knowledge Ventures/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)
[5] HTC v Apple [2013] EWCA Civ 451
[6] *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

15 Paragraph 0049 also makes clear that customers “ultimately purchase services” from a service warehouse. In other instances the customer is also referred to as the first enterprise user.

16 For the benefit of this analysis I will treat the customer and system administrator as one person who is responsible for preparing the requirements and the purchase of the service they intend to run and are external to the service warehouse of Fig 2.

Downloadable pluggable service

17 The application refers to the advantages to be gained by updating components of a service to be updated individually, without the need for taking the whole service down for an upgrade. The mechanism by which this is achieved is to provide a single object (see below) for download.

Communication system

18 The communication system comprises a number of components of which paragraph 0054 provides some examples, which include inter alia voice mail, speech to text service and call forwarding.

Hot-deployable

19 Hot-Deployable is well understood term in the art of computing and allows software to be installed without requiring downtime or the software to be taken offline. Paragraph 0009 provides an example of a user being in ‘mid call’ while a hot deployable service is deployed without affecting them. Once the call is finished the user will then be given access to the new service.

Sub-components

20 In the context of the applications, sub components are those individual elements that make up a service. As stated in paragraph 0014 this allows the customer to choose only those that they need giving the example of language personalisation.

Individual users on the first and second servers are included or excluded

21 Users are located within a ‘customer’. Using a template provided by the customer/system, administrator access or otherwise to the updated service or component can be incorporated into the package being prepared. I note that this is customer definable and as such the service warehouse only interprets the customer’s instructions when preparing the downloadable pluggable service. As it states in para 0096 “an administrator … may define which user will initially be allowed to use the service at the time of purchase”.

Obtaining the one or more versions of the hot-deployable first and second sub components

22 The service warehouse identifies the components that make up a service that fulfils the request of the customer. In effect, these are the elements required to implement the services.

Packaged into a single object

23 Referring again to Fig 6 an object will include the necessary software components and deployment instructions in one file. These may be packages as an Enterprise Archive File (EAR) or a Web Application Archive (WAR) File.

Instructions for operating the ….server of the customer's communication system

24 Deployment instructions are a set of instructions that are included and therefore part of the single object. Paragraph 0088 makes it clear that these include documentation, user manuals, administration manuals and configuration guidelines.

25 The claims to GB1418792.6 add two further terms which I think are worthy of discussion.

Object Unpacker

26 Fig 6 and the associated paragraphs at 0088-0090 make clear what is meant by an object. The job of the object unpacker is simple, it unpacks the components from the object into its parts.

Object Distributor

27 The distributor receives the objects from the unpacker and places them in an appropriate location whereupon the deployment instructions determine how the installation proceeds.

GB 1311099.4

28 The invention provides a method and system for providing updates to a customer's communication system from a server. In response to a request that sets out the customer's requirement a package, the "downloadable pluggable service" is generated, combined with deployment instructions and transmitted to the customer. It is in effect a portal for receiving a request from a customer, processing the request and returning software to the customer for installation.

(1) *Properly construe the claims*

The two independent claims 1 and 10 are given below:

1 A method comprising receiving at a microprocessor, a request from a customer to obtain a downloadable pluggable service for communication system of the customer, where in the request identifies one or more versions of hot-deployable first and second sub-components and a plurality of individual users on first and second servers of the customers communication system, and wherein the request identifies which of plurality of the individual users on the first and second servers are included or excluded from using the one or more versions of the hot-deployable first and second sub-components;

In response to receiving the request, preparing, by the microprocessor, the downloadable pluggable service, wherein preparing the downloadable pluggable service comprises obtaining the one or more versions of the hot-deployable first and second sub-components that are packaged into a single object, wherein the first sub-component comprises instructions for operating the first server of the customer's communication system, wherein the second sub-component comprises instructions for

operating the second server of the customer's communication system wherein the downloadable pluggable service further comprises deployment instructions that provide instructions for installing the one or more versions of the hot-deployable first and second sub-components on the first and second servers of the customer's communication system, respectively, and wherein the first and second sub-components are different sub-components; and transmitting, by the processer, the single object, wherein transmitting the single object causes the first sub-component to be installed on the first server and causes the second sub-component to be installed on the second server, based on the deployment instructions and without any downtime.

10 A system comprising a microprocessor, and

A computer readable medium, coupled with the microprocessor and comprising microprocessor readable and executable instructions that cause the microprocessor to execute:

An object generator that receives a request from a customer to obtain a downloadable pluggable service for a communication system of the customer, wherein the request identifies one or more versions of hot-deployable first and second sub-components and plurality of individual users on the first and second servers of the customer's communication system, and wherein the request identifies which of the plurality of the individual users on the first and second servers are included or excluded from using the one or more versions of the hot-deployable first and second sub-components and, in response to receiving the request, prepares the downloadable pluggable service, wherein preparing the downloadable pluggable service comprises obtaining the one or more versions of the hot-deployable first and second sub-components that are packaged into a single object, wherein the first sub-component comprises instructions for operating the first server of the customer's communication system so that the downloadable pluggable service is performed, wherein the second sub-component comprises instructions for operating the second server of the customer's communication system such that the downloadable pluggable service is performed, wherein the downloadable pluggable service further comprises deployment instructions that provide instructions for installing the one or more versions of the hot-deployable first and second sub-components on the first and second servers of the customer's communication system, respectively , and wherein the first and second sub-components are different sub-components; and

An object delivery interface that transmits the single object via a communication network, wherein transmitting the single object via the communication network causes the first sub-component to be installed on the first server and causes the second sub-component to be installed on the second server, based on the deployment instructions and without any downtime.

29 The application sets out a method and system for receiving a request from a customer of a communication system service for a software file. Within the request the customer specifies some parameters that determine which users can and cannot use the service. The service provider on receipt of the request prepares a downloadable package made up of the components required for the service and deployment instructions for installing the packages on the customer's server network. Once prepared the file is then transmitted to the customer where it is then installed.

(2) *Identify the actual contribution*

30 The Examiner has said that the contribution lies in a program designed to carry out a particular order/request deployment of communications software wherein the request identifies users who are allowed to use the service. The request is fulfilled by

bringing together components and deployment instructions into a single file for transmission to the customer.

31 The applicant in their attorney's letters dated 6/10/2016 and 02/02/2017 set out a contribution that is linked to the concept of the single object file which in their words ensures "versioning can be correctly monitored". It is also suggested that the proposed method will handle incompatibility between versions of software which improves the efficiency of the servers. Additionally, they identify the reduction in bandwidth required as only one file is transmitted rather than having to accommodate multiple downloads.

32 Having carefully considered the claim and both the Examiners and Attorney's view, I find that the Examiners to be nearer the contribution of the application. Specifically, the Examiner deals with what the application actually does whereas the attorneys view has concentrated on some perceived advantages of the claimed invention. These may be effects but I need to consider what the relevant *technical* effects are.

33 There is no suggestion that any new hardware is involved so no contribution can be attributed to that. I feel I must also take into account common practice in this area of computing. It is without doubt well known to obtain updates for software from a central source and for an administrator to unpack these and install them on a server network.

34 To my mind the actual contribution can be summed up as a system where a customer can specify in terms of user rights and order software for their communication system, the order being fulfilled by an application that collects the required components into a single file for transmission to the customer and subsequent installation on their server network.

(3) Does the contribution fall solely within the excluded matter?

35 The Examiners has said that the GB1311099.4 application falls within the methods of doing business and computer program exclusion. Let me first deal with the business method objection. I can sympathise with the Examiners view that on the face of it, this is an order and fulfilment system where the customer specifies what they want and the supplier provides a files to meet those requirements. However, in this instance I disagree for the following reasons.

36 The key to dealing with inventions of this type is to consider what the program does. Indeed this I think is the crux of the issue that Birss QC faced in *Halliburton*[7] *[2011]* when considering business methods implemented on a computer. In that instance he remarked that

> *"a computer programmed to be a better computer is patentable but as Fox LJ pointed out in relation to the business method exclusion in Merrill Lynch, the f act that the method of doing business may be an improvement on previous methods is immaterial because the business method exclusion is generic."*

[7] Halliburton [2011] EWHC 2508 (Pat)

37 I take as my starting point the purpose of the application. The specification makes clear that this is about enabling upgrades to software in a system and providing an environment where this can happen. If it had simply been about ordering software and receiving it then I may have a taken a different view, but I think the application here is more than that. Collecting a specification, collecting the components required and the instructions for deploying them and then providing them to the customer in this instance goes beyond a business method. The application is concerned with the process by which software is specified, created and delivered; as such the appropriate objection in this case is one that it is a computer program which I shall turn to now.

38 I will consider the 'signposts' noted above set out in paragraph 40 of *AT&T/CVON*.

(i) whether the claimed technical effect has a technical effect on a process which is carried on outside the computer;

39 It is now commonly accepted that a server network is considered to be a computer as emphasised by Birss J in paragraph 30 of *Lantana [2013]*[8]. As a result the entire system here is self-contained and I can see no discernable effect outside the system

(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;

40 I am on safe ground here when I say that it clearly does not operate at the architecture level since the services specified in the specification all relate to applications running on the customer's servers such as voicemail etc. To a greater or lesser extent it is also clear that the data being passed by the system is specific to these applications and in that regard I doubt whether it would operate irrespective of it since it specifies communications services and contains details of user access rights.

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

41 There is no suggestion that the computer operates in a new way here. The underlying hardware is no different and is merely programmed.

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

42 This step requires a little more consideration. The attorney has set out that he believes the computer is more efficient because of better version control and this in turn provides for more efficient servers. I have little doubt that the proposed system will assist the system administrator. I am not sure how this make the computer more efficient – yes the 'program' may be more efficient but what effect does this have on the underlying computer. I am not sure there is one and as a result I do not believe this signpost provides any help to the applicant.

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[8] Lantana v Comptroller-General of Patents [2013][8] EWHC 2673 (Pat)

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

43 This step also requires some consideration. The attorney has asked the examiner to consider the implication on bandwidth; suggesting that by collecting updates into a single file and downloading it once there is an effect on bandwidth. Superficially, this appears to be a valid argument, but that is not the problem this application has set out to resolve. Had it been so I am sure the claim and the specification would provide details of how this was to be done in a technical sense. Unfortunately, the application is somewhat silent on this and in reality the idea of sending less data to improve bandwidth has long since been considered by the courts as a prima facie example of a circumvention (CFPH [2007][9]).

(4) *Check if the contribution is actually technical*

44 I have in effect already done this step, but for the avoidance of doubt I am content that there is no relevant technical contribution in the invention of application GB 1311099.4

GB 1418792.6

45 The claimed invention of GB 1418792.6 is complimentary to the parent application and deals with the process at the customer for handling the received package. This involves unpacking the package and distributing the contents to the appropriate servers in the customer's network.

(1) Properly construe the claims

46 The independent claim 1 is recited below:

1 A system comprising

A communication server including a processor and memory, the memory including instructions configured to be executed by the processor, the instructions including:

An object unpacker that receives, via a network, a single object from a service warehouse, the single object comprising a plurality of hot-deployable sub-components that, when distributed among first and second servers in the network, cause the first and second servers to provide different services to users of the first and second servers, wherein the plurality of hot-deployable sub-components include a first sub-component and second sub-component that are packaged into a single object, wherein the single object identifies one or more versions of the first and second sub-components and plurality of individual users on the first and second servers of a communication system, wherein the single object identifies which of the plurality of the individual users on the first and second servers are included or excluded from using the one or more versions of the first and second sub-components; and an object distributer that distributes the first sub-component to the first and second servers, via the network, in accordance with the deployment instruction contained in the single object, wherein distribution of the first sub-component and the second sub-component cause the first sub-component to be installed on the first server without any downtime and cause the second sub-component to be installed on the second server without any downtime.

[9] CFPH L.L.C. [2005] EWHC 1589 (Pat)

47 This application is based on the customer's network. It receives the package, unpacks into its individual components and then distributes to the server network for installation.

(2) Identify the actual contribution

48 In this application the software all functions at the customer end. The Examiner has suggested that the contribution is the unpacking of files from a single download and the subsequent distribution and installation onto the customer's network such that it avoids downtime. For his part the attorney has relied on the same arguments as for the parent application above.

49 To my mind, the Examiners assessment of the contribution is the correct assessment. The software object is received, it is unpacked, distributed and installed.

(3) Does the contribution fall solely within the excluded matter?

50 I will once again consider the 'signposts' noted above set out in paragraph 40 of *AT&T/CVON.*

(i) whether the claimed technical effect has a technical effect on a process which is carried on outside the computer;

51 The server system of GB 1418792.6 is totally self-contained in that the object is received on a communications server where the object is unpacked and then passed to the distributor. I do not see any effect external to the server and as such the first signpost would not help the applicant.

(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;

52 I do not believe it does in this case in that the software being run is about the applications rather than operating anything in the underlying system. As such any effect of the software is not produced irrespective of the application 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;

53 I can take the third and fourth signposts together. The underlying computer does not change and would not operate in a new way. As an update to an application the software itself may well be operating differently but that does not follow through to the computer – it works as before. By the same reasoning whilst the software may be more effective or operate efficiently there is no effect on the underlying computer.

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

54 The final signpost asks whether the perceived problem is overcome. In this particular application the applicant has again claimed that the method set out provides more bandwidth. As in the parent application I cannot accept this – simply sending less data does not solve the problem of bandwidth it merely circumvents it.

55 In conclusion I see no support from the signposts for the computer program of GB 1418792.6 making a technical contribution and hence being allowable.

Decision

56 For each of the applications GB 1311099.4 and GB 1418792.6, I have found that the actual or alleged contribution defined by the claims falls solely in matter excluded from patentability by virtue of Section 1(2) of The Act, namely a program for a computer as such. I therefore refuse these applications under Section 18(3).

Appeal

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

Peter Mason

Deputy Director, acting for the Comptroller