



PATENTS ACT 1977

APPLICANT	Intuit Inc
ISSUE	Whether patent application GB1118123.7 complies with section 1(2) of the Act
HEARING OFFICER	Dr J Houlihan

DECISION

- 1 The application was filed on 20 October 2011 and published as GB2483380 on 7 March 2012. It derives from a PCT application, published as WO2010/151615 on 29 December 2010 which claims priority from a US application, 12/492,049 dated 25 June 2009.
- 2 The examiner had raised an objection that the claims were not patentable as they relate entirely to a computer program, as such. As the examiner had maintained this objection in two rounds of correspondence with the applicant, the applicant requested a decision on the papers to resolve the issue.

The invention

- 3 The application is entitled "*Creating a composite program in a computing ecosystem*". The alleged invention (for convenience hereinafter referred to simply as "the invention") lies in the field of "cloud computing" which means that data and information is held on servers connected to the Internet and not on a user's computer device. Therefore the use of that data is not limited to applications on a user's device. The application describes the "ecosystem" as comprising the "*physical and/or virtual computing resources of a company, department or other organisation*". The invention is aimed at enabling the user to group certain computer programs, or "modules", with related functionality so that they can be used as a package and/or shared with other users for the same purpose. Once a package is created the user can reopen all the modules together without having to activate them individually and make the links between them.
- 4 Various examples of the invention are described. One example given is of scheduling work in an automotive repair shop. Here, the invention may be used to merge a calendar or scheduling module with a mechanic module that reflects a mechanic's aptitude for different tasks and a delivery module that indicates when various parts will be delivered to the repair shop.

Claims

- 5 The current set of claims was filed on 10 April 2015 and consists of 18 claims. Claim 1 reads:

A method of assembling a composite program module within a computing ecosystem hosting multiple program modules, wherein the computing ecosystem comprises a cloud-based environment in which users operate individual computing devices configured to execute remotely located program modules which are stored on one or more central computers, the method comprising:
executing a plurality of the multiple program modules within a first user's workspace within the ecosystem in response to the first user's activation of icons corresponding to the plurality of program modules;
observing a pattern of activity of the first user with the plurality of program modules;
alerting the first user to one or more suggested program modules different from the plurality of program modules, wherein each suggested program module is designed to perform an operation compatible with the observed pattern of activity;
and after the first user accepts a first suggested program module;
displaying a control for creating the composite program module to comprise the first suggested program module and the plurality of program modules;
and if the first user activates the control, creating the composite program module.

- 6 There are two independent claims further to claim 1, claim 11 and claim 18. The examiner did not raise an objection of plurality against these claims and having considered them I consider that they relate to the same inventive concept as claim 1.

- 7 As the wording of Claim 11 differs considerably from claim 1, I have chosen to detail it here in full:

A method of assembling a composite program module within a computing ecosystem hosting program modules for execution within user workspaces, wherein the computing ecosystem comprises cloud-based environment in which users operate individual computing devices configured to execute remotely located program modules which are stored on one or more central computers, the method comprising:
within a first user's workspace within the ecosystem, receiving the first user's activation of icons corresponding to one or more of the ecosystem program modules;
hosting execution of the one or more ecosystem program modules;
observing a pattern of activity by the first user with one or more ecosystem program modules;
announcing to the first user availability of one or more complementary program modules compatible with the observed pattern of activity;
executing a first complementary program module selected by the first user from the one or more complementary program modules;
displaying an actuable control in the first user's workspace; and
in response to actuation of the control by the first user:

creating in the first user's workspace a new icon corresponding to a program module encompassing the one or more ecosystem program modules and the first complementary program module; and enabling the first user to share the composite program module with other users; wherein activation of the new icon automatically triggers execution of the one or more ecosystem program modules and the first complementary program module with the same spatial arrangement exhibited at said actuation of the control.

- 8 Claim 18 refers to a computer executable program for performing the method of claim 11.

The law

- 9 This decision concerns section 1(2)(c) of the Patents Act. It reads:

"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 –

(a).....;

(b).....;

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

(d).....;

but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such."

- 10 There is a large volume of case law on the subject of excluded inventions. In *Aerotel/Macrossan*¹ the Court of Appeal set out a four step test to approach the issue of excluded matter. In *Aerotel* the issue was a computer program; *Macrossan* concerned a method of doing business.

- 11 The four step test proposed in *Aerotel* is as follows:

- I. Properly construe the claims
- II. Identify the actual (or alleged) contribution
- III. Ask whether it falls solely within the excluded subject matter

¹ *Aerotel Ltd v Telco Holdings Ltd; Macrossan's Application*, Court of Appeal [2007] RPC 7 (hereinafter referred to as "*Aerotel*")

IV. Check whether the actual or alleged contribution is actually technical in nature

- 12 In *Symbian*² the Court of Appeal confirmed that the *Aerotel* test is equivalent to the previous case law test of “technical contribution”. The same court confirmed this approach in *HTC v Apple*³ and also, with some modification, the five signposts established in *AT&T*⁴ for interpreting whether a computer program makes a technical contribution. *Aerotel* thus codifies the approach to the law on excluded matter but does not depart from the principles in domestic law which were established before it.

Step 1 - construe the claims

- 13 I note the term “control” is used in claim 1 which requires consideration as this word is quite broad and could be interpreted in different ways. “Control” is explained in the description, for example in paragraph 57, as something which generates a composite program module. I take “control” to mean an action or mechanism which enables a composite module to be created.
- 14 As mentioned, I consider that claim 11 is linked by same inventive concept to claim 1. However, I consider that it additionally provides for enabling the first user to share the composite program module with other users and that the activation of an icon which corresponds to a plurality of program modules automatically triggers execution of one or more of those modules and the first complementary module which has the same spatial arrangement as the actuation of the control.
- 15 Subject to my comments about the term “control” I consider that claim 1 is clear. I will deal with the additional features in claim 11 under step 3 below.

Step 2 - identify the actual contribution

- 16 The approach to identify the actual contribution an invention makes was laid out by Jacob J in *Aerotel* (paragraph 44) and is now firmly established as the approach to this step in the consideration of excluded matter. In a nutshell, one has to ask the question as matter of substance, not form: “*what has the inventor really added to human knowledge*”.
- 17 In this case the examiner and applicant disagree on the point of the actual contribution.
- 18 The examiner says in his report of 24 February 2015 at paragraph 10 that “*all that has actually been achieved (by the invention) is the automation of a process that would previously have been accomplished manually, i.e. determine a program module that is complementary to present activities and group (composite) it with*

²*Symbian Ltd v Comptroller-General of Patents*, Court of Appeal, [2008] EWCA Civ 1066, [2009] RPC 1 (hereinafter referred to as “Symbian”)

³ *HTC Europe CO Ltd v Apple Inc* [2013] EWCA Civ 451

⁴ *AT&T Knowledge Ventures LP Application and CVON Innovations Ltd’s Application v Comptroller-General of Patents* [2009] EWHC 343 (Pat) High Court (hereinafter referred to as “AT&T”)

other program modules in a way that facilitates access to it and other program modules that are compatible with said activities”.

- 19 The examiner sums up his view of the actual contribution in the following paragraph of the same report as “*a computer-implemented method of assembling a composite program module*”.
- 20 In return, the applicant says in their letter of 10 April 2015, paragraph 2.5 “*The manual process of selecting an additional program might be performed (for example) by browsing program modules which are grouped by functionality. This is clearly different from an automated process of selecting a program module on the basis of a pattern of activity from monitored user operations. Accordingly, the manual process and the automated process can easily select different (applicant’s emphasis) additional programs (for a given task) since the selections are based on different inputs and processes. Hence, once again, the end result is not (applicant’s emphasis) the same between the automated and manual processes.*
- 21 In the next paragraph of the same letter, the applicant sums up their view on this point as “*Rather, we think the contribution is better defined as: a computer-implemented method of providing additional program modules to a user to help a user optimise (i.e. prevent sub-optimal) usage of a computer according to the actual operations that are being performed on the computer by the user*”.
- 22 Where does this leave me? I think the applicant’s submission that the provision of additional modules optimises the usage of a computer is too broad. Necessarily, a computer is a device which allows the manipulation or arrangement of programs to happen.
- 23 Taking both the applicant’s and examiner’s views into account I think what has been added to the stock of human knowledge is: an automated method that enables a user to identify additional program(s) that may be relevant to a module of existing programs and to generate a composite of the existing program module and the additional program(s).
- 24 Do the additional features I have identified in claim 11 add anything to the actual contribution I have identified for claim 1?
- 25 Claim 11 details the activation of icons corresponding to one or more ecosystem program modules and that activation triggering the execution of one or more of the modules. I do not think this adds anything to the stock of human knowledge; programs are commonly identified by icons and triggered into operation by the activation of them.
- 26 Claim 11 also makes provision for the user to share the composite module with other users. Again, I do not think this adds anything to the stock of human knowledge. Computer programs can easily be shared.
- 27 Thus, I am of the view that the actual contribution of claims 11 and claim 18 is the same as the actual contribution of claim 1 which I have detailed in paragraph 23 above. I note that the applicant has not argued specifically about the features of claims 11 or 18, nor any of the dependant claims.

Step 3 - does the actual contribution fall solely within an excluded field

28 It is common ground between the examiner and applicant that merely because the invention is implemented by a computer that does not necessarily exclude it from patentability.

29 The question of how the actual contribution of an invention in the field of computer programs should be considered can be found in the oft quoted phrase in *Symbian* which reads:

“[37] What is decisive is the technical contribution which the invention described in the claim when considered as a whole makes to the known art”.

30 A central thrust of the applicant’s argument is found in their first letter of 10 April 2015, paragraph 4.1, which reads:

“...following Symbian, the fact that the invention of the present application is implemented (applicant’s emphasis) by a computer is not enough, in itself, to make the contribution a computer program as such. Rather, we must see if the invention, in effect, provides us with a better computer. This is discussed in sections 14 and 15 of the examination report (of 24 February 2015). For example, the Examiner states ‘I can see no evidence that the computer works any better, e.g. faster or more reliably. The computer executes or runs the program in its normal way, but the program does not improve the functioning of the computer itself’. We respectfully disagree with this analysis. Overall, as a matter of practical reality, we think that the present application does (applicant’s emphasis) lead to a “computer working better”, as Symbian intends this concept to be applied.

31 The applicant argues that the distinction between a computer’s ability to improve human (user’s) efficiency against a computer’s efficiency as drawn by the examiner is wrong and does not provide a basis for determining the contribution. The applicant discusses some analogies of inventions that solve human failings and argues that such inventions would be patentable.

32 The applicant continues with this line of argument in their second letter of 13 August 2015, paragraph 5.4, where they say *“from the perspective of the user, the efficiency of such a person using a computer is improved by the approach set out this in the present application”.*

33 The applicant’s central argument then is that their invention makes a computer work better from the user’s point of view. The issue of a “better computer” is the subject of the fourth *AT&T* signpost which was modified by Lewison LJ in *HTC v Apple*. This signpost was highlighted by the applicant in their letter of 13 August 2015, paragraph 5.5.

34 I think it is useful at this juncture to consider Lewison LJ’s remarks in *HTC v Apple* (paragraphs 150-152) in connection with the fourth *AT&T* signpost. These are as follows:

In *Gemstar Mann J* said at [42]:

"It would be a relevant technical effect if the program made the computer a better computer in the sense of running more efficiently and effectively as a computer."

*I think that this is a better signpost than an improvement confined to the speed or reliability of the computer. As HHJ Birss QC pointed out in *Halliburton Energy Services Inc's Patent Application* [\[2011\] EWHC 2508 \(Pat\)](#) [\[2012\] RPC 12](#) at [37]:*

*"The "better computer" cases - of which *Symbian* is paradigm example - have always been tricky however one approaches this area. The task the program is performing is defined in such a way that everything is going on inside the computer. The task being carried out does not represent something specific and external to the computer and so in a sense there is nothing else going on than the running of a computer program. But when the program solves a technical problem relating to the running of computers generally, one can see that there is scope for a patent. Making computers work better is not excluded by s 1(2)."*

35 Applying this to the present case I think the question I must answer is whether the automated method that enables a user to identify additional program(s) and to generate a composite of the existing program module and the additional program(s) makes the computer run more efficiently and effectively in a technical sense.

36 In my view the answer to this question is "No, it does not". To my mind, the automated method is an application and does not influence the technical running of the computer.

37 I will now consider each of the other five AT&T signposts.

Signpost 1. Does the claimed technical effect have a technical effect on a process which is carried on outside of the computer?

38 No. There is no process outside the computer. It is clear from the specification that the invention functions within the computer.

Signpost 2. Does the claimed technical effect operate at the level of the architecture of the computer; that is to say is the effect produced irrespective of the data being processed or the application being run?

39 The applicant's comments in their letter of 10 April 2015, paragraph 2.6 are relevant to this point. They say "*However, a computer-implemented method of assembling a composite program module is defined at such a high level that it seems to potentially cover many well-known existing techniques, such as loading Java class files into a virtual machine to produce a Java application*".

40 In response, the examiner says in his report of 5 June 2015, paragraph 11 "*that assembling a composite program module is necessarily defined in context; i.e. it should be construed in the context of the application as a whole...loading Java class*

files onto a virtual machine operates at an entirely different level from that of the present application - more architectural than application”.

- 41 I agree with the examiner’s view here. In my opinion, the composite module is an application rather than an architectural or infrastructural process and is necessarily dependent on the programs it contains. The answer to signpost 2 is therefore “No”.

Signpost 3. Does the claimed technical effect result in the computer being made to operate in a new way?

- 42 No. The computer itself functions in the same way to run programs which is what computers do.

Signpost 5. Is the perceived problem overcome by the claimed invention as opposed to merely being circumvented?

- 43 I agree with the examiner’s remarks in his report of 5 June 2015, paragraph 17 where he says this signpost is not particularly relevant to the invention in question. As I have discussed above, the problem the invention solves is a user’s problem, not a technical one. The applicant themselves admit the problem the invention solves is a “human” one (which seems to me in this context to be analogous to a “business” problem). In short, the invention enables users to utilise programs more effectively.

Step 4 - check whether the alleged contribution is technical

- 44 I have already considered the issue of technical contribution under step 3 and found there is none.

Conclusions

- 45 Applying the four point *Aerotel test* and the *AT&T* signposts, as modified in *HTC v Apple*, I cannot see that the actual contribution the invention makes to the art involves a technical contribution. I therefore hold that the invention claimed in claim 1 relates to a computer program, as such.
- 46 As I consider that the further independent claims, claims 11 and claim 18, do not add anything to the actual contribution as I have identified it, it follows that these claims also relate to a computer program, as such.
- 47 I consider that none of the dependant claims 2-10, or 12-17, nor the description provide subject matter which could form the basis of any saving amendments. I note that the applicant has not made any submissions to this effect.
- 48 I note that the examiner did not raise the issue of a business method exclusion which is often closely related to the computer program exclusion and raised with it. As the applicant has not had the opportunity to comment on the business method exclusion I have not addressed that issue in this decision.

49 I refuse the application under section 18(3) of the Act as it relates entirely to subject matter which is excluded by section 1(2).

Appeal

50 Any appeal must be lodged within 28 days.

Jim Houlihan
Deputy Director acting for the Comptroller