Intellectual Property Office

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PATENTS ACT 1977

APPLICANT The Boeing Company

ISSUE Whether patent application number GB1110373.6 complies with section 1(2)

HEARING OFFICER Dr. Stephen Brown

DECISION

Introduction

1 This decision concerns the issue of whether the invention claimed in patent application GB1110373.6 relates to non-excluded subject matter, as required by section 1(2) of the Act. It is entitled "Methods and collective reasoning framework for complex decision making", and was filed with a priority date of 28th June 2010. The application was published on 4th January 2012 as GB2481684.

2 The examiner has maintained throughout that the invention claimed in this application is excluded from patentability as a combination of a program for a computer and as a business method as such. Despite several rounds of amendment the applicant and the examiner have been unable to agree.

3 A Hearing was thus held before me on 12th February 2014 to decide the matter. The Applicant was represented by Mr James Short of Boult Wade Tennant.

The Invention

4 The most recent set of claims were filed on 4th June 2013. There are 12 claims, two of which are independent. Claim 1 relates to a method for enabling collaborative decision making, and claim relates 7 to a communications system for enabling collaborative decision making.

5 While these independent claims have some minor variations in scope they both express the same underlying inventive concept and thus will stand or fall subject to the conclusions reached in respect of either of them. For simplicity therefore, the following discussion will deal primarily with claim 1, the wording of which is as follows:

A method for enabling collaborative decision making related to a topic of interest within a community of interest, said method utilising a communications system comprising:

a network of geographically distributed and networked computer terminals;
a memory arranged to store data relating to a plurality of topics of interest, templates of argumentation trees relating to corresponding topics of interest, and user profiles indicating for each of the individuals within the community of interest their topics of interest and expertise;
and a plurality of data sources external to the network of computer terminals and arranged to store domain specific data, said method comprising the steps of:
automatically initiating a topic of interest for collaboration within a community of interest based on an event occurrence or received information from an external data source;
automatically selecting a plurality of individuals from the community of interest to be involved in the collaborative decision regarding the topic of interest based on the stored user profiles;
using at least one computer-based collaboration methodology to display real time discussion and deliberation on the topic of interest to the selected plurality of individuals using the network of computer terminals;
generating an argumentation tree based on the stored templates;
receiving domain specific data from the external data sources and using the domain specific data to populate the argumentation tree; and
iteratively refining the argumentation tree based on the discussion and deliberation within the community of interest until the argumentation tree describes a consensus decision related to the topic of interest.

The law and its interpretation

6 Section 1(2) of the Patents Act 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:*
>
> *…*
> *(c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;*
> *...*
> *but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.*

7 In addition to the above, there is also the case law established in the UK in Aerotel/Macrossan[1], and further elaborated in Symbian[2] and AT&T/CVON[3], which I am bound to follow. In Aerotel/Macrossan the Court of Appeal reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of patentability, namely:

[1] Aerotel Ltd v Telco Holdings Ltd (and others) and Macrossan's Application [2006] EWCA Civ 1371
[2] Symbian Limited's Application [2008] EWCA Civ 1066
[3] AT&T Knowledge Ventures LP and CVON Innovations Limited [2009] EWHC 343

1) Properly construe the claim

2) Identify the actual (or alleged) contribution

3) Ask whether it falls solely within the excluded matter

4) Check whether the contribution is actually technical in nature.

The operation of the test is explained at paragraphs 40-48 of the judgment. 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 47 adds that a contribution which consists solely of excluded matter will not count as a technical contribution.

Application of the *Aerotel* test

Properly construe the claim

8 I do not think that this step poses any problems. The claims concern collaborative decision making related to a topic of interest within a community, which takes place over a network of computer terminals. To achieve this, a topic of interest for collaboration is automatically initiated, and a number of individuals are automatically selected from the community of interest based on their user profiles. Computer based collaboration methodology is used to display real-time deliberation of the topic to the selected individuals, and an argumentation tree is generated, which is iteratively refined based on that deliberation.

Identify the actual contribution

9 From the description as a whole I have no doubt that the invention is implemented on standard computing devices connected by a standard communication network. Furthermore, it is clear that the contribution requires a computer program for its implementation. Although the invention is effected as a computer program, this does not of course mean that it is automatically excluded as that thing as such. What matters is whether or not the invention provides a technical contribution beyond that of a mere program running on a conventional computer.

10 The prior art systems identified by the examiner utilise web-based argumentation maps for use by a networked community. At the hearing, Mr Short argued that these prior art systems were different from the one of the current application because they concerned the facilitation of collaboration from the point of view of the user rather than from the perspective of the person setting up the system. He further argued that the contribution in this case is a system for enabling collaborative decision making that can automatically initiate a topic of interest and then automatically select and commence communication with relevant individuals. I am content to accept this formulation of the contribution.

Ask whether the contribution falls solely within excluded matter

11 Mr Short argued that the contribution identified above was not excluded as it resided in the way the computer processor interacted with the memory of the system which stored user profiles based on the topic of interest and expertise of the users. This, he argued, was clearly technical in nature.

12 To reinforce this point Mr Short took me through the *AT&T* signposts. These were first laid out in paragraphs 39-41 of the decision[3], where *Lewison J.* stated:

> *It seems to me, therefore, that Lord Neuberger's reconciliation of the approach in Aerotel (by which the Court of Appeal in Symbian held itself bound, and by which I am undoubtedly bound) continues to require our courts to exclude as an irrelevant "technical effect" a technical effect that lies solely in excluded matter.*
>
> *As Lord Neuberger pointed out, it is impossible to define the meaning of "technical effect" in this context, but it seems to me that useful signposts to a relevant technical effect are:*
>
> > *i) whether the claimed technical effect has a technical effect on a process which is carried on outside the computer;*
> >
> > *ii) whether the claimed technical effect operates at the level of the architecture of the computer; that is to say whether the effect is produced irrespective of the data being processed or the applications being run;*
> >
> > *iii) whether the claimed technical effect results in the computer being made to operate in a new way;*
> >
> > *iv) whether there is an increase in the speed or reliability of the computer;*
> >
> > *v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.*
>
> *If there is a technical effect in this sense, it is still necessary to consider whether the claimed technical effect lies solely in excluded matter.*

13 In respect of the first signpost, Mr Short argued that the invention does have a technical effect on a process taking place outside the computer since it solves a problem of communication. I am afraid that I do not agree with this. The contribution identified above concerns the automatic selection of individuals and the decision to initiate communication with them. This takes place entirely within the computer. Once the selection and decision have been made, the external communication is entirely conventional.

14 With regard to the second signpost, it was put forward by Mr Short at the hearing that the invention does operate at the level of the computer's architecture as the computer memory is set up to be automatically accessed by a selected group of individuals. That is, that the contribution concerns the use of a computer memory in

a particular way. I asked Mr Short if the memories are different at a hardware level, or are standard memories used in a new way, to which he replied that it was down to the way in which the memory is used: prior art systems do not have the same functionality, and so, he submitted, the hardware is being used in a new way since communication is initiated based on how the data stored in the memory is considered. He also submitted that the contribution is nothing to do with the data being processed, for instance the argumentation trees themselves. In his view it is independent of that and is a question of how to find the right people.

15 While I can accept that the invention may use a computer memory in a different way to prior art systems, as the prior art doesn't allow for the selection of individuals based on stored user profiles, I am not persuaded that this means that it is at the level of computer architecture. Additionally, I can find nothing to suggest that use of the invention produces an effect irrespective of the data being processed or the application being run. The interaction between the computer processor and the computer memory is, to my mind, no more than what one would expect to take place as a result of running any software program. All computer programs require some form of memory in order to function. To accept that storing user profiles in a memory forms the basis of a non-excluded contribution would be, in my view, to accept that virtually all computer programs are allowable. This is clearly not the intention of section 1(2) of the Act.

16 On the third signpost, Mr Short suggested that the invention constitutes a communication system that operates in a new way, by finding the relevant people and commencing communication automatically whereas prior art systems require users to volunteer. While I agree that this is what distinguishes the current invention from the prior art, I cannot conclude that this difference amounts to the computer system *itself* operating in a new way. What is new is the way in which the software automatically selects users based on their stored profiles. While the communication system may be being used in a new way, the underlying system itself and the computers it links remain entirely conventional.

17 Regarding the fourth signpost, I can find no suggestion that the invention improves the speed or reliability of the computers themselves. I note that no such assertion has been made in any of the correspondence from the applicant during the examination rounds, or by their attorney at the hearing.

18 On the fifth signpost, Mr Short submitted that the invention identified a technical problem not previously recognised and provided a new way of using computer hardware to solve it. I agree with Mr Short that the invention is based on the recognition of a problem not addressed by the prior art, i.e. how to identify and communicate with a suitable group of people to collaborate on a particular topic. However, I do not think that this is a *technical* problem. It is a social or business related issue. Thus the fifth signpost is not relevant in this case.

19 At the hearing, Mr Short also pointed out that the invention is not a result of the mere automation of prior art collaboration systems, as none of the prior art systems are concerned with the selection of experts on a particular topic. While I accept this point, I do not see how it highlights anything that could be considered a non-excluded contribution.

20 To summarise: the contribution is a system for enabling collaborative decision making that can automatically initiate a topic of interest and then automatically select and commence communication with relevant individuals. I can see no technical effects outside of the computers and the communication system being used. Neither is any computer or the communication system operating in a new way. I am therefore forced to conclude that the contribution is excluded as a program for a computer as such.

21 Given this conclusion, there is nothing to be gained by considering any of the other excluded categories in any detail. There are business related aspects to the claimed invention, such as the fact that it is directed towards enabling a collaborative decision making process. However, in my opinion, none of these aspects could result in a non-excluded contribution.

22 Finally, although not put forward at the hearing, in their letter of 3rd June 2013, the attorneys for the applicant directed the examiner's attention to paragraphs 56 to 58 of the decision in HTC v Apple[4]. In this decision, it was held that an invention relating to a multi-touch device was technical. In particular, it was held that a method of dividing up the screen of such a device into views, and configuring each view as a multi-touch view or a single-touch view using flags, concerned the basic internal operation of the device. It was held that the device presented a new and improved interface to application programmers making it easier for them to write software for the device.

23 The attorneys argued that the contribution in this case was similar to that in HTC v Apple[4] as the communication system manages input information in a new and improved way. Further that it relates to the physical operation of the communications system upon receipt of this information. I am afraid that I do not agree that such an analogy can be drawn in this instance. Unlike the invention in HTC v Apple[4] the contribution identified above does not result in an improved device. Rather, as already reasoned, it results in a conventional computer and communications system running a new program.

Check whether the contribution is actually technical in nature

24 As reasoned above, the contribution does not have a relevant technical effect. Thus the application fails the fourth Aerotel step.

Decision

25 I have found that the contribution made by the invention defined in the independent claims falls solely in subject matter excluded under section 1(2) as a program for a computer such. I have read the specification carefully and I can see nothing that could be reasonably expected to form the basis of a valid claim. I therefore refuse this application under section 18(3).

[4] HTC Europe Co. Ltd. v Apple Inc. (Rev 1) [2013] EWCA Civ 451

Appeal

26 Any appeal must be lodged within 28 days.

Dr. Stephen Brown

Deputy Director, acting for the Comptroller