Intellectual Property Office

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27th March 2018

PATENTS ACT 1977

APPLICANT	Lenovo (Singapore) Pte. Ltd
ISSUE	Whether patent application GB1421397.9 complies with section 1(2)
HEARING OFFICER	H Jones

DECISION

Introduction

1 This decision is concerned with the question of whether patent application GB1421397.9 relates to excluded matter. The examiner has maintained throughout the examination of this application that the claimed invention is excluded from patentability under section 1(2) of the Patents Act 1977 as a program for a computer as such. Despite several rounds of argument and amendment, the applicant has not been able to overcome this objection, and a hearing was offered in order to resolve the matter. The hearing took place on 13 March 2018 via telephone. The applicant was represented by Mr Benjamin Echterhoff and Mr Thomas Leffers, both of Schweiger & Partners.

The invention

2 The invention is concerned with improvements in searching objects, such as documents, pictures, etc. The inventors have identified that users tend to remember what they were doing or what the environment was like when they were using/interacting with the object. As such, when users search for something, it is often through these alternative associations that users find what they are looking for. Thus the invention provides a device that collects ephemeral data, such as location data, environmental data, etc., and records this data in association with object events, such as the creation or accessing of an object, to represent the context associated with the object event. A user can subsequently search for a file based on where they were when a document was created, or who the document was shared with during a meeting, or the temperature of the room when they accessed the document.

3 Claim 1 is the only independent claim of the amended set filed on 11 January 2018, which reads as follows:

> 1. An information handling device, comprising:
>
> one or more sensors that collect ephemeral data;
> a processor: and
> a memory device that stores instructions executable by the processor to:

detect a user object event on the information handling device, wherein the user object event is associated with creation of an object, editing an object or transferring an object;
collect, through the one or more sensors, ephemeral data associated with the user object event;
collect user object event data;
create an association between the ephemeral data and the user object event data; and
store, on a storage medium, the association in a data structure accessible to a user object searching application, wherein the user object event data is selected from the group of data consisting of user object creation event data, user object access event data, user object storage event data, user object transmission event data, and user object content data, wherein the ephemeral data is selected from the group of data consisting of environmental data, biometric data, light data, audio data, device motion data, device orientation data, location data, hardware connection data, co-located device data, virtual connection data, device application data, and device state data, wherein the object is a picture, a document, or a music file, wherein the ephemeral data is derived from sensor inputs, hardware connection information, virtual connection information, or device state information, and wherein the object event is utilized as a trigger for collecting the ephemeral data.

The Law

4 Section 1(2) lists certain categories of subject-matter which are not considered to be inventions. These categories of subject-matter are conventionally known as excluded subject matter:

> *1(2). 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) a discovery, scientific theory or mathematical method;*
> *(b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;*
> *(c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;*
> *(d) the presentation of information;*
>
> *but the foregoing 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*.

5 The Court of Appeal in *Symbian*[1] stated that the question of whether a computer-implemented invention is patentable has to be resolved by answering the question whether it reveals a technical contribution to the state of the art. It proceeded to answer the question with the aid of the four-step test set out in its earlier judgment in *Aerotel*[2], namely:

> (1) construe the claim;

[1] Symbian Ltd. v Comptroller-General of Patents [2008] EWCA Civ 1066
[2] Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application [2006] EWCA Civ 1371

(2) identify the actual (or alleged) 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.

6 The fourth step of the test is to check whether the contribution is technical in nature. In paragraph 46 of *Aerotel* it is stated that applying this fourth step may not be necessary because the third step should have covered the question. This is because a contribution which consists solely of excluded matter will not count as being a "technical contribution" and thus will not, as the fourth step puts it, be "technical in nature". Similarly, a contribution which consists of more than excluded matter will be a "technical contribution" and so will be "technical in nature". In the present case, which concerns a computer-implemented invention, I shall consider whether the contribution is excluded alongside the question of whether the contribution is technical in nature, i.e. I will consider the third and fourth steps of *Aerotel* together.

Argument & analysis

7 There is no particular difficulty construing the meaning of the claims: they define an information handling device for creating an association between ephemeral data and user object event data.

8 The examiner and the applicant are in agreement with regard to the contribution, which is said to lie in improved user object searching, or augmented searching, through the collection, recording and further manipulation of ephemeral data in association with user object event data. This has the advantage that the associations to a user's content are extremely rich and supports low and high order correlations useful in various device applications, in particular searching applications. I also agree with this assessment of the contribution.

9 While claim 1 is a claim to a device, there is no doubt in my mind that the contribution is implemented through use of a computer program. Lewison J in *AT&T/CVON*[3] set out five signposts ("the AT&T signposts") that he considered to be helpful when considering whether a computer program makes a technical contribution. He reconsidered the signposts in *HTC/Apple*[4] in the light of the decision in *Gemstar*[5]. The signposts 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 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.

[3] AT&T Knowledge Venture/CVON Innovations v Comptroller General o Patents [2009] EWHC 343 (Pat)
[4] HTC Europe Co Ltd v Apple Inc [2013] EWCA Civ 451
[5] Gemstar-TV Guide International Inc v Virgin Media Ltd [2010] RPC 10

10 The applicant has submitted that the contribution is technical based on signposts (i)-(iv) and concluded that that the subject matter of claim 1 is not a computer program as such. Signpost (v) was not considered. I will consider signposts (i)-(iv) in turn.

Signpost (i)

11 The applicant has argued that by collecting ephemeral data from sensors, i.e. collecting data from outside the computer, and associating this data with user object event data, it follows that there is a technical effect on a process carried on outside the computer. Put simply, by collecting real world data, circumstances outside of the computer are taken into account. However computer programs typically utilise real world or sensor data, and I do not consider the mere use of sensor data as having a technical effect on a process outside the computer. I also note that while the contribution utilises real world data and that this real world data is collected based on an object event, there is no direct influence on the real world in any way. Furthermore, associating the sensor data with object event data and making it accessible to a searching application is an effect which occurs wholly within the computer. Thus I do not consider the contribution to have a technical effect on a process which is carried on outside the computer.

Signpost (ii)

12 At the hearing Mr Echterhoff identified that the rich and natural associations can be used by a variety of applications and not just one. However, while I accept that the stored associations can be used by different search applications, it is clear that the effect is not produced irrespective of the data being processed or the applications being run because any effect is limited to searching objects and/or ephemeral data. Mr Leffers also suggested that the triggering process of collecting ephemeral data is done irrespective of the application or data being processed. While the collection of ephemeral data is not reliant on the particular data in the object, it is limited to collecting ephemeral data based on a picture, document or music file event, and thus is clearly not an effect which operates at the level of architecture of the computer.

Signposts (iii) & (iv)

13 As identified at the hearing, signposts (iii) and (iv) can be considered together. Mr Echterhoff argued that the contribution provided a better computer, in the sense of running more efficiently and effectively as a computer. In particular, a search can be performed faster, more precisely and more accurately through the collection and association of ephemeral data with user object event data, and the rich association this provides to a user's content. While the contribution may allow a search of user objects to be performed more effectively, any increase in speed or reliability is limited to search based applications and for searching user objects. Consequently the contribution is a better computer program, not a better computer operating in a new way.

14 Mr Leffers also suggested that the computer itself was operating differently as each time there is an object event, e.g. object creation, the collection of ephemeral data, using sensors, is triggered. However, such functionality does not point towards some generally applicable way of operating a computer, rather it is a way of collecting particular ephemeral information upon each occasion a user manipulates or acts upon a picture, document or music file. Such a process clearly operates under

specific circumstances and using particular types of data. For completeness, I also do not accept Mr Echterhoff's argument that because the claim is new and directed to a device that there is necessarily a computer operating in a new way. The claimed invention is new due to the program running on the device, it is not a new or different computer.

15 Having considered signposts (i)-(iv), I conclude that the contribution provided by the claimed invention is not technical in nature and falls solely within the computer program exclusion.

Conclusion

16 I find that the claimed invention is excluded by section 1(2)(c) as a program for a computer as 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 the application under section 18(3).

Appeal

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

H JONES
Deputy Director, acting for the Comptroller