Intellectual Property Office

BL O/670/18
22 October 2018

PATENTS ACT 1977

APPLICANT	General Electric Company
ISSUE	Whether patent application GB1210896.5 is excluded under section 1(2)
HEARING OFFICER	H Jones

DECISION

Introduction

1 This decision is concerned with the question of whether patent application GB1210896.5 relates to excluded matter. The application was filed on 20 June 2012 in the name of General Electric Company, with a claim to priority from a US patent application filed on 24 June 2011. It was published on 26 December 2012 as GB2492222. The examiner has maintained throughout the examination of this application that the claimed invention is excluded from patentability under section 1(2) of the Act as a method of doing business and a program for a computer as such. As the examiner could not identify any matter in the application which was not excluded, he suggested that the applicant request to be heard. The applicant requested that a hearing decision be made based on the papers on file.

The invention

2 The invention is concerned with analysing electrical generation data, in particular electrical microgeneration data. Local electricity produced by a non-utility microgeneration device, such as a solar panel(s) or a diesel turbine generator, is connected to an electrical grid and can offset the electricity consumed by the microgenerating user. Any excess electric power may be used by other customers of the electric grid. The invention lies in collecting electrical generation data and time usage data for the microgeneration device, and then identifying times that the microgeneration device outputs power to the grid. Furthermore, by analysing peak load times for the electrical grid and the identified output times for the microgeneration device, a preferred time that the microgeneration device can be used is determined. The user is then notified of the preferred time to enable them to increase generation output by the microgeneration device and/or adjust net generation by reducing consumption during the preferred time.

3 An amended set of claims was filed on 13 August 2018, having an independent method claim (claim 1) and corresponding system claim (claim 9). For the purpose of this decision I need only set out the wording of claim 1:

> 1. A method for controlling microgeneration power output to an electrical grid comprising:

receiving data associated with a generating device at a metered location and storing the data associated with the generating device in a database;

receiving data associated with time periods that the generating device is used at the metered location and storing the data in the database;

associating the received data associated with a generating device with the data associated with time periods that the generating device is used at the metered location;

processing the received data associated with a generating device and the data associated and the time periods that the generating device is used at the metered location to identify time periods that the generating device outputs electrical power to an electrical grid;

receiving grid loading data indicative of peak loading time periods;

identifying a preferred time period that the generating device may be used to output power to the grid, wherein identifying the preferred time period includes correlating the time periods that the generating device outputs electrical power to the electrical grid with the peak loading time periods; and

sending a notification message to a user at the metered location indicating the preferred time period that the generating device may be used to output electrical power to the grid based on the time periods identified that the generating device outputs electrical power to an electrical grid, thereby to enable a user to adjust net generation output to the grid by reducing electrical consumption during the preferred times and/or increasing generation output to increase the net power output to the grid at the location.

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;
> (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 in construing the various features of the claim. However, the phrase "A method for controlling microgeneration power output to an electrical grid…" needs consideration. In particular it is clear from the description, and the subsequently defined features of the claim, that there is no direct control of microgeneration power output to an electrical grid. The method and system of the invention identify a preferred time period for a generating device to output power to the grid and notify a user of this preferred time. The user may, or may not, then reduce consumption and/or increase generation output.

8 With regards to the contribution, the examiner has set out what he regards to be the contribution in his letter dated 18 September 2018 as:

> "a computer implemented recommendation method which involves determining preferred timings for an individual user's net energy generation based on network users' ability to provide energy to a network and peak loading information and then sending a message to the user informing them of the preferring timings. The method is more sophisticated than current recommendation methods since it involves considering recorded microgeneration data rather than conventional registration schemes which do not use this data."

9 The applicant does not appear to dispute this assessment. I am also content to proceed to the third and fourth steps of *Aerotel* on the basis of this contribution.

---

[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

10 The examiner and applicant are in disagreement as to whether the contribution falls solely within excluded subject matter and whether the contribution is technical in nature. In his letter dated 18 September 2018, the examiner argues that the contribution is a method of making recommendations to customers based on the analysis of performance data, and therefore relates to a method of doing business. Furthermore, the examiner has applied the signposts from *AT&T/CVON*[3] (as modified in *HTC/Apple*[4]) and concluded that the contribution also lies solely in excluded matter as a computer program. From their letter dated 15 June 2018, the applicant considers the method of claim 1 to explicitly require the net generation output to the grid to be changed - this being a clear effect on a process carried on outside the computer, and that the efficient management of electrical power in the grid is a technical consideration associated with a technical effect. In their letter dated 13 August 2018 the applicant notes that, although the method may rely on a user to implement the adjustment of net generation output, the data displayed to prompt the user to do so is inherently technical since it arises from a technical analysis of technical equipment (e.g. the generating device and the grid), and it enables a wide range of future technical activities to be performed that were not ready to be performed prior to the carrying out of the claimed method (i.e. the adjustment of electrical power output).

11 It is readily apparent that the contribution is implemented through use of a computer program. 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.

12 What the contribution achieves, as a matter of practical reality, is a notification to a user of a preferred time period for a generating device to output power, based on the analysis of received generating device and electrical grid data. The user may or may not act upon this notification. In my opinion this is not a technical contribution, but lies in a particular software application for analysing electrical production data and outputting a result. Furthermore, I do not see anything in the analysis itself of the device and grid data which points towards a technical contribution.

13 For completeness I shall consider the contribution in light of the five signposts ("the AT&T signposts") that Lewison J considered to be helpful when considering whether a computer program makes a technical contribution. He reconsidered the signposts in *HTC/Apple* in 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 of 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

14 The applicant has limited their assessment of the contribution to signposts (i) and (v). I also consider that signposts (ii)-(iv) are not relevant here, and thus I will only consider signposts (i) and (v).

Signpost (i)

15 The applicant has argued in their letter dated 15 June 2018 that the claim requires adjusting of generation output based on the notification - which is a clear effect on a process which is carried on outside the computer. However, there is no effect external to the computer in simply notifying a user of preferred times for the generating device. Any action the user takes based on the times presented to them is their prerogative. The applicant has also noted in their letter dated 13 August 2018 that the data displayed in the notification message is inherently technical, and enables a range of technical activities to be performed. However, the analysis of the grid and generation device data, and subsequent display of the result of the analysis, is an effect which occurs wholly within the computer arrangement.

Signpost (v)

16 In their letter dated 15 June 2018 the applicant submits that the problem lies in the management of electrical load in the grid. However, analysing device/grid data and notifying a user of preferred times for a generation device does not actually overcome the problem of electrical load on a grid. Nor does the invention provide any management of power in the grid in any technical sense. Thus, in my view, the invention does not solve a technical problem.

17 On the basis of the above, I have been unable to identify a technical contribution and I therefore conclude that the invention falls within the meaning of a computer program.

18 Having found that the contribution falls wholly within excluded matter as a computer program, I have no need to consider whether the invention would also be excluded as a method of doing business. All I say in relation to this objection is that a way of recommending to a user when they operate their generating device and/or consume electricity appears to provide nothing more than a way of conducting business. A preferred embodiment of the invention, whereby the notification informs a user of an offer or incentive for generating electricity during preferred output times, further illustrates how the invention is concerned with modifying the fundamental business model of the utility company as opposed to any technical management or control of the grid during peak and off-peak loading times.

Added Matter

19 In his most recent communication the examiner objected to claims 1&9 containing added matter. Having decided that the claimed invention is excluded from patentability under section 1(2) of the Act, I do not need to consider this issue.

Conclusion

20 I find that the claimed invention is excluded under section 1(2) because it relates to a computer program 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

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

H JONES
Deputy Director, acting for the Comptroller