



PATENTS ACT 1977

APPLICANT Robert Bosch GmbH

ISSUE Whether patent application GB1803445.4 complies with section 1(2) of the Patents Act 1977

HEARING OFFICER Phil Thorpe

DECISION

Introduction

- 1 Patent application GB1803445.4 was filed on 2nd March 2018 claiming a priority date of 2nd March 2017 from German application number 10 2017 203396.7. The application was published as GB 2261699 A on 24th October 2018.
- 2 The search examiner determined that a search of the application would perform no useful purpose and reported as such on 8th August 2018. They reported the application to be excluded as a mental act, a method for doing business, or as a program for a computer as such. An abbreviated examination report was issued on 15th March 2022, raising the same objections. Amendments to the application were filed on 15th July 2022 along with a letter containing supporting arguments, however this did not satisfy the examiner that the application met the requirements of the Act.
- 3 Further amendments and supporting arguments were filed with a letter on 5th January 2023. The letter requested a hearing based on the papers should the examiner not consider what was presented to be patentable. The examiner remained of the opinion that the application did not meet the requirements of the Act. In particular, they considered the claims to relate to excluded subject matter as a method for doing business and/or as a program for a computer as such. They also noted that the contribution of the claim involves aspects of the presentation of information. The case was then sent for a decision on the basis of the papers.

The Invention

- 4 The application notes that increased use of private motor vehicles means that towns and cities are challenged with providing sufficient parking spaces. Motor vehicles searching for a parking space can contribute to the total traffic in a town.
- 5 The invention seeks to address these problems. More particular it relates to a method, system and non-transitory computer-readable medium which aims to efficiently generate parking spaces for motor vehicles generated. This is achieved by

using at certain times and under certain conditions a region of the road which is normally available as a driving area for driving for motor vehicles for parking. The determination of whether there is a need for additional parking spaces is based on a number of factors. These include for example historical parking data, recent requests from drivers for parking and whether there is a particular event or holiday scheduled for the area that might generate additional demand for parking.

- 6 The determination also takes account of the need to keep the road free for traffic with that being determined again in a number of possible ways for example real time traffic flow information on the road or surrounding roads and or historical traffic flow information. The description notes that the determination can be based only on historical data or just on real data or on a combination of real and historical data.
- 7 The claims under consideration were filed on 5th January 2023. Method claim 1 reads as follows:

Method for generating parking space for motor vehicles, comprising the following steps:

- *determining (101, 303), by a processor, a need for a parking space for a geographic area comprising a road,*
- *determining (103, 303), by the processor, a need for a driving area for the road,*
- *determining (105, 303) whether a side region of the road should be designated for use as parking space, depending on the determination of the need for a parking space and depending on the determination of the need for a driving area,*
- *if so, designating, by the processor, (107, 305) the side region of the road for use as parking space which is normally available as road space to be travelled on by motor vehicles, and wherein it is determined for what period of time the need for a driving area will exist, and the determination as to whether a side region of the road should be designated for use as parking space is implemented depending on the determined period of time of the need for a driving area,*
- *controlling, by the processor, a device to output a signal marking the set side region as having been set for use as the parking space.*

- 8 There are also independent claims to a system (claim 9) and non-transitory computer-readable medium (claim 10). I am satisfied that these claims stand or fall with claim 1.

The Law

- 9 The examiner has raised an objection under section 1(2) of the Patents Act 1977 that the invention is not patentable because it relates to excluded matter. The relevant provisions of this section of the Act are shown with added emphasis 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...

(c) ...a scheme, rule or method for...doing business, or a program for a computer;

(d) *the presentation of information;*

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.

- 10 As explained in the notice published by the IPO on the 8th December 2008¹, the starting point for determining whether an invention falls within the exclusions of section 1(2) is the judgment of the Court of Appeal in *Aerotel/Macrossan*².
- 11 The interpretation of section 1(2) has been considered by the Court of Appeal in *Symbian*³. *Symbian* arose under the computer program exclusion, but as with its previous decision in *Aerotel* the Court gave general guidance on section 1(2). Although the Court approached the question of excluded matter primarily on the basis of whether there was a technical contribution, it nevertheless (at paragraph 59) considered its conclusion in the light of the *Aerotel* approach. The Court was quite clear (see paragraphs 8-15) that the structured four-step approach to the question in *Aerotel* was never intended to be a new departure in domestic law; that it remained bound by its previous decisions, particularly *Merrill Lynch*⁴ which rested on whether the contribution was technical; and that any differences in the two approaches should affect neither the applicable principles nor the outcome in any particular case.
- 12 Subject to the clarification provided by *Symbian*, it is therefore appropriate to proceed on the basis of the four-step approach explained at paragraphs 40–48 of *Aerotel* namely:
 - (1) Properly construe the claim.
 - (2) Identify the actual contribution (although at the application stage this might have to be the alleged contribution).
 - (3) Ask whether it falls solely within the excluded matter.
 - (4) If the third step has not covered it, check whether the actual or alleged contribution is actually technical

Excluded Matter

Applying the Aerotel test

Step 1 – Properly construe the claim

- 13 The first step requires me to construe the claims. The examiner states that claim 1 would appear clear in light of the description such that its construction poses no difficulties. I agree with this statement, however it is useful I believe to comment briefly on the requirement that requires:

¹ <http://www.ipo.gov.uk/pro-types/pro-patent/p-law/p-pn/p-pn-computer.htm>

² *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371; [2007] RPC 7

³ *Symbian Ltd v Comptroller-General of Patents*, [2009] RPC 1

⁴ *Merrill Lynch's Appn.* [1989] RPC 561

“...a device to output a signal marking the set side region as having been set for use as the parking space.”

- 14 Support for this section of the claim is provided on page 25 of the description. This provides several options for how *signalling* may be construed, including:

“...illuminating the designated area...”

... activating an optical signal transmitter, for example, in particular an electronic sign....

... sending a message to a network address via a communication ...”

- 15 The description does not provide any further detail on for example how or in what way the area is illuminated. The requirement has therefore been construed in line with its normal meaning ie that there is simply a device that can signal that the side region has indeed been set aside for parking.

Step 2 – Identify the actual or alleged contribution

- 16 Jacob LJ addressed this step in *Aerotel/Macrossan* where he noted:

“43. The second step — identify the contribution — is said to be more problematical. How do you assess the contribution? Mr Birss submits the test is workable — it is an exercise in judgment probably involving the problem said to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge perhaps best sums up the exercise.”

- 17 Jacob LJ also added in paragraph 44:

“ Mr Birss added the words "or alleged contribution" in his formulation of the second step. That will do at the application stage – where the Office must generally perforce accept what the inventor says is his contribution”

- 18 The examiner has observed that claim 1 does not describe the use of any hardware and that the hardware required to implement the method via a system or computer program is entirely conventional. In the letter of 5th January 2023, the applicant via their attorney noted that:

“...The examiner is correct in that there is nothing to suggest that any hardware used is anything other than pre-existing hardware...”

- 19 In their prehearing report of 27th February 2023, the examiner set out the contribution as:

“...a computer implemented method for designating parking spaces in side regions of roads. The method involves analysing data relating to the need for parking spaces for the geographical area of a road, data relating to the need for a driving area for the road, and time of the need for the driving area; and designating the side region as parking space if appropriate by sending an output to mark the side street as available for parking...”

20 They identified this has the advantage of conveniently providing a parking space as and when required.

21 The applicant notes in respect of the contribution that:

“...it is now defined that a processor determines, designates and controls... A device is now controlled to output a signal which marks the set side region for use as a parking space...”

22 This it is argued offers the advantage of providing a real, tangible, marked-out side region for use as a parking space.

23 I accept that the contribution as set out in the claims does include the step of actually providing, if it is appropriate, a signal that informs or alerts drivers that a set side region has been set for use as a parking space. This is however already reflected in the examiner’s assessment of contribution. Hence the contribution can be considered as:

“...a computer implemented method for designating parking spaces in side regions of roads, the method involving analysing data relating to the need for parking spaces for the geographical area of a road, data relating to the need for a driving area for the road, and designating the side region as parking space if appropriate by sending an output to mark the side street as available for parking

Step 3 - Ask whether the actual or alleged contribution falls solely within the excluded matter.

24 The examiner argues that the invention is excluded as a program for a computer and a method of doing business. A previous objection that it would be excluded as a mental act has rightly been dropped especially after the claims have been amended to clearly relate to a computer implemented method. In his latest report the examiner also suggests that the contribution may fall within to the presentation of information exclusion. I am conscious that this latter objection has not been raised before and that therefore the applicant has not had an opportunity to respond. Consequently, it would not be appropriate for me to decide on that here.

Method of doing business

25 In *Merrill Lynch Fox LJ* sets out that the business method exclusion is generic. He noted:

“The fact that the method of doing business may be an improvement on previous methods of doing business does not seem to me to be material. The prohibition in section 1(2)(c) is generic; qualitative considerations do not enter into the matter. The section draws no distinction between the method by which the mode of doing business is achieved. If what is produced in the end is itself an item excluded from patentability by section 1(2), the matter can go no further.”

26 The expression “doing business” is also not restricted to financial or commercial activities, but embraces administrative, organisational and managerial activities. The

courts have for example deemed that providing instructions to couriers to allow them to optimise their routes for picking up and offloading goods was a method of doing business⁵. The examiner has argued that the contribution here relates to the “organisational task of designating a side region of a road as either a driving area or a parking area and outputting that information to road users”. I agree that such activity, absent any technical contribution, would conceivably fall within the type of activities covered by the method of doing business exclusion.

- 27 So, is there anything more here than such an organisational activity? The contribution here so far as I have identified it, includes determining the need for designating part of the road as a parking area and that the determination, could be based on real time data though the claim is not limited to that. The examiner has referred to the EPO Guidelines for Examination⁶, which are considered to be a useful, if not binding, guide to the scope of the exclusions listed in Section 1(2) or Article 52(2) EPC. Guideline G-II, 3.5.3 notes that in relation to the use or input of real-world data to a business method:

'The mere fact that the input to a business method is real-world data is not sufficient for the business method to contribute to the technical character of the claimed subject-matter, even if the data relate to physical parameters (e.g. geographic distances between sales outlets).'

- 28 Whilst as noted these guidelines are not binding on me, they do reinforce my view that the possible use of the real time data here does not take the contribution outside of the excluded area. There is for example simply nothing in the description to indicate anything technical about how that data is captured or how various scenarios eg tailbacks on nearby roads are determined. As such, even if the claim was limited to the real time data that would not provide the necessary technical contribution.
- 29 I am therefore satisfied that the contribution of the method of claim 1 clearly falls solely within a method of doing business. The fact that the method is a better method, or that it is computer implemented does not alter that.

Program for a computer

- 30 Though it is not strictly necessary, I will consider whether the invention is also excluded as a program for a computer.
- 31 Lewison J. (as he then was) set out in *AT&T/CVON*⁷ five signposts that he considered to be helpful when considering whether a computer program makes a technical contribution. In *HTC*⁸ the signposts were reformulated. The signposts are:

i. Whether the claimed technical effect has a technical effect on a process which is carried on outside the computer.

⁵ See for example *Bloomberg and Cappellini* [2007] EWHC 476 (Pat)

⁶ [Guidelines for Examination in the European Patent Office](#)

⁷ *AT&T Knowledge Venture/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat); [2009] FSR 19

⁸ *HTC v Apple* [2013] EWCA Civ 451

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.

- 32 It is important to stress that these signposts are just that. They are not barriers or hurdles that need to be individually or collectively overcome by the applicant. They are rather a non-exhaustive list of some of the factors that can indicate in some cases whether a particular contribution may be technical.
- 33 The applicant submits that the latest amended claims no longer fall solely within the excluded subject matter as, outputting a signal to mark the set side region for use as a parking space is alleged to provide a technical advantage. This seems to be an attempt to link the contribution to signpost i). Whilst the contribution may indeed signal to a driver that a part of the road is available for parking, this is not providing “a technical effect” as required by signpost i). If there was anything particularly technical about the manner of signalling, then I would expect that to be reflected in the description. It is not. Rather as the applicant admits, the device used to signal this information is entirely conventional. Signpost i) does not therefore assist.
- 34 The method being implemented on the computer is a specific application related to parking designation and sits considerably far away from the architectural level of the computer. I am also not persuaded that the computer operates in a new way other than in running a new program and that does not cause the computer to operate differently in a technical sense. Signposts ii) and iii) therefore also do not assist. The computer itself is also not made to run more efficiently or effectively. That the method may be more effective in designating parking spaces does not change the way the computer itself is running.
- 35 Signpost v) looks at the technical character of an alleged invention by means of the problem addressed. When the problem is a technical one, the alleged invention can be considered to have a technical nature leading to it falling outside the exclusion if (but only if) it solves the problem. The application here however is not concerned with a technical problem. It is concerned with the business process of designating parking spaces. As such, I am satisfied that signpost v) does not assist the applicant here.
- 36 None of the signposts suggest that the contribution is anything other than a program for a computer.

Step 4 - Check whether the actual or alleged contribution is actually technical in nature

37 This has already been considered in step 3 of the test though if I take a step back I am satisfied that there is nothing technical in the contribution over and above that it is implemented by entirely conventional technical means and that in itself is not enough. The contribution is not technical in nature.

Conclusion

38 After considering all of the papers on file, I am of the view that the invention as defined in claim 1 relates to matter excluded under section 1(2) of the Act as a method of doing business and a program for a computer, as such. Similar reasoning can be applied to independent claims 9 and 10. Further I can see nothing in the dependent claims or the application as a whole that could provide the basis for a claim that would not also be excluded.

39 I therefore refuse this application under Section 18(3) of the Act for failing to comply with section 1(2).

Appeal

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

PHIL THORPE

Deputy Director, acting for the Comptroller