



PATENTS ACT 1977

APPLICANT	Innoplexus AG
ISSUE	Whether patent application GB1722304.1 complies with section 1(2) of the Patents Act 1977
HEARING OFFICER	Phil Thorpe

DECISION

Introduction

1. Patent application GB1722304.1 was filed on 30th December 2017 and published as GB2569951A on 10th July 2019.
2. The examiner deferred search of the application and issued an Abbreviated Examination Report raising objections to excluded subject matter. Following a response to the report from the applicant, a further examination report was issued, and a further response received. The applicant has been unable to satisfy the examiner that the application meets the requirements of the Act, with the examiner remaining of the opinion that the claimed invention is excluded from patentability.
3. The further response from the applicant includes a request for a hearing should the examiner be considering refusing the application. A letter issued by the examiner on 28th January 2021 offered a hearing and the applicant subsequently requested that a decision be made based on the papers on file.

The Invention

4. The invention relates to gaining knowledge about how connections between users ("field-specific entity records") of professional web-based networking platforms affect the professional benefit afforded a user of the networking platforms. More specifically, it involves determining how closely pairs of users within a specific area of expertise (a "field segment") are connected (a "weightage score") and the level of influence of one of the users of a pair based on their attributes and/or their relations with other users (an "importance score"). The weightage and importance scores are combined to obtain a "net score" for each user. Information about users is updated based on changes to their weightage score and/or their importance score.

5. The invention can be better understood using a non-limiting example provided in the application. In this instance, entity records are provided for Julia and Jessica. Both may work in the field of paediatrics and hence the structured database will have a field segment "paediatrics" attributed to their entity records. Each entry record, eg Julia and Jessica, will have an "importance score" as well as a weighting representing the relationship between the two. If Julia gains additional qualifications, then her importance score will increase as will the weighting score with anyone with who she has a relationship. Similarly, if Julia and Jessica co-author several research papers then each of their importance scores will go up as would the weighting score reflecting their relationship. Julia may also have a relationship with Bob and that relationship will also have a weighting score which will increase or decrease dependent on their respective importance scores.
6. The invention aims to enable a user to improve how they control their network by understanding how the connections they form affect their overall success when using the network for professional benefit. The invention also aims to overcome other drawbacks associated with prior art professional web-based networking platforms, such as the requirement for a user to expend a substantial amount of effort to identify connections that could have a positive impact on their professional status and the lack of information about how changes in their connections affect their professional status.
7. The invention is represented in the following figures.

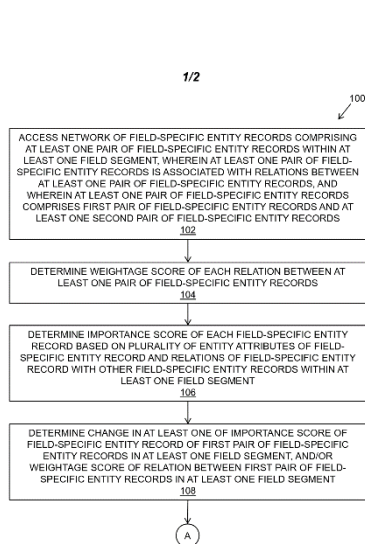


FIG. 1A

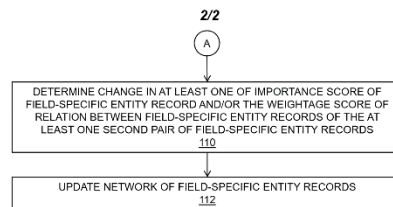


FIG. 1B

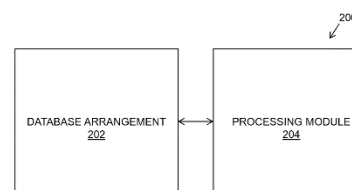


FIG. 2

8. The claims under consideration were filed on 13th July 2020. Claim 1 reads as follows:

A method of updating a network of field-specific entity records in a database arrangement, characterized in that the method comprises:

a) accessing the network of field-specific entity records from the database arrangement comprising at least one pair of field-specific entity records within at least one field segment, wherein the at least one pair of field-specific entity records is associated with relations between the at least one pair of field-specific entity records, and wherein the at least one pair of field-specific entity records comprises a first pair of field-specific entity records and at least one second pair of field-specific entity records;

b) determining a weightage score of each of the relations between the at least one pair of field-specific entity records;

c) determining an importance score of each field-specific entity record based on a plurality of entity attributes of the field-specific entity record and relations of the field-specific entity record with other field-specific entity records within at least one field segment;

d) determining a change in at least one of:

- the importance score of a field-specific entity record of the first pair of field-specific entity records in the at least one field segment;

- the weightage score of a relation between the first pair of field-specific entity records in the at least one field segment;

e) determining a change in at least one of the importance score of a field-specific entity record and/or the weightage score of a relation between field-specific entity records of the at least one second pair of field-specific entity records, based on the determined change in at least one of the importance score of the field-specific entity record and/or the weightage score of the relation between the field-specific entity records of the first pair of field-specific entity records;

f) determining a net score of each field-specific entity record of the at least one pair of field-specific entity records based on:

- the importance score of each field-specific entity record of the at least one pair of field-specific entity records; and

- the weightage score of each of the relations between the at least one pair of field-specific entity records;

g) determining a change in the net score of each field-specific entity record of the at least one pair of field-specific entity records; and

h) updating the network of field-specific entity records in the database arrangement based on the determined change in:

- at least one of the importance score of the field-specific entity record and/or the weightage score of the relation between field-specific entity records of the first pair of field specific entity records; and

- at least one of the importance score of the field-specific entity record and/or the weightage score of the relation between field-specific entity records of the at least one second pair of field-specific entity records.

9. There are also independent claims to a system and computer readable medium which include much of the wording of claim 1 and I am satisfied that they stand or fall with claim 1.

The Law

10. The examiner has raised an objection under section 1(2) of the Patents Act 1977 that the invention is not patentable because it relates a category of 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;

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.

11. 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.
12. 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.
13. 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.*

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

Applying the Aerotel test

Step 1 – Properly construe the claim

14. No issues of construction arise. The claim is clear. The claimed invention defines a method of updating a network of field-specific entity records in a database arrangement by updating, for each of a first and a second pair of field-specific entity records, at least one of the importance score of a field-specific entity record of the pair or the weightage score of the relation between the pair.

Step 2 – Identify the actual contribution

15. 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.”

Jacob LJ goes on to say that:

'44. ...at the application stage – ...the Office must generally perforce accept what the inventor says is his contribution'

16. As the application has not been searched, I will consider the contribution identified in the applicant's letter of 25th November 2020, in which it is stated that the contribution of the present invention is:

'a method of updating a network of field-specific entity records in a database arrangement that includes the steps defined by pending independent Claim 1 of the present application (which are not repeated here for the sake of brevity)'

17. The applicant also stated in their letter of 30th December 2019 that:

'The contribution of the claim can be thought of, for example, as a system for managing networks of field-specific entity records, which helps a user of the professional web-based networking platforms to understand how their importance is being perceived by other people of their network. The system also helps the user to know how each connection that they form with other people affects them and their network.'

18. The examiner, in their pre-hearing report dated 28th January 2021, identified the contribution as:

'a computer implemented method of updating a network of field-specific entity records in a database arrangement and allowing a user to know how the connections that they form affect them and their network. The method comprising the steps defined in claim 1 (which are not repeated here for the sake of brevity) which may provide the advantage

of enabling the user to enhance their network by enhancing/forming relations with influential field-specific entity records'

19. There is I believe no difference between the applicant and the examiner on this now and I am content to accept the contribution as identified by the examiner above.

Steps 3 and 4 – Ask whether it falls solely within the excluded matter and check whether the actual or alleged contribution is actually technical

20. I will consider steps 3 and 4 together.

21. Lewison J (as he then was) set out five signposts *AT&T/CVON*⁵ that he considered to be helpful when considering whether a computer program makes a technical contribution. In *HTC*⁶ the signposts were reformulated slightly in light of the decision in *Gemstar*⁷. 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.

22. 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.

23. The applicant addresses the first signpost in their letter of 25th November 2020, stating that:

'the method of the present invention eliminates substantial human intervention for management of the network, thereby reducing chances of inaccurate operation due to human error (and/or misleading results due to outdated results). Human interaction with a computer is a process which is carried on outside of the computer itself, and reducing or eliminating the need for human intervention is considered a technical effect on such a process carried on outside of the computer itself.'

⁵ *AT&T Knowledge Venture/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat); [2009] FSR 19

⁶ *HTC v Apple* [2013] EWCA Civ 451

⁷ *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2009] EWHC 3068 (Pat); [2010] RPC 10

24. The applicant seeks support for their assertion from the recent judgement in *Lenovo (Singapore) Pte Ltd v Comptroller General of Patents*.⁸ There Birss J. held that an invention that automatically chooses, at the point of sale, which of a multiple of payment cards to use or to split the payment between the cards, was not excluded as a computer program or business method. He noted that the invention had a different physical interaction with the world outside the computer and this provided an effect which “is of the right character to satisfy the law”.

25. It is important however to fully understand the reasoning for the decision in *Lenovo* which is best set out in paragraph 36 of the judgement which reads:

“36. The key question in this case is whether the invention involves a different physical interaction with the world outside the computer, as compared to what had gone before. As I have said already, I would agree with the reasoning at the end of paragraph 26 if the technical effect relied on resided in pressing a button in a computer system because that is a conventional feature of using conventional computer systems. Those features may be technical in a sense, but they cannot add technical character to make a computer program as such patentable. However, again as explained above, the point of this invention is the opposite. It is in US 438 that the user has to press a button to choose which card to use or to split the payment between two cards. In the Lenovo invention, this is handled automatically at the point of sale because the user's preferences have already been acquired and stored elsewhere. The automatic nature of the process is recognised in the formulation of contribution identified in the decision at paragraph 21. As a result of this automatic feature, the card clash problem experienced with contactless payment cards is solved without the user having to take any extra physical step at the point they use their contactless cards. In my judgment that difference is an effect of the invention which is neither a computer program as such nor a method of doing business as such nor a combination of the two. That difference is technical in character and, in the context of the invention as a whole, it is not just one of the normal incidents of a conventional computer system.”

26. It is clear from this passage that it is not the automation of previous manual step on its own that was decisive in *Lenovo* but rather that that automation solved a problem with card clash. It was this latter aspect that provided the necessary technical character to the problem being solved.

27. In this case there is no such comparable technical problem to be overcome. The automation of the management of a database may have advantages to the user but it is not solving a technical problem nor is it having a technical effect on a process carried on outside of the computer. Hence signpost i) is of no assistance.

28. In earlier exchanges with the examiner the applicant has sought to rely on some of the other signposts notably ii) and v). These arguments have not been pursued in the last correspondence from the applicant and they were I believe right not to do so. For completeness I would note that I am satisfied for the reasons already provided by the examiner that these signposts are of no assistance here.

⁸ *Lenovo (Singapore) Pte Ltd v Comptroller General of Patents* [2020] EWHC 1706 (Pat)

29. The applicant makes a general argument under step 4 of *Aerotel* that the invention may eliminate substantial human intervention thus reducing the chances of inaccurate operation due to human error. This it is claimed is a technical advance on the prior art. Whilst I accept it may be advance, I am not persuaded it is a technical advance in the way envisaged under the relevant case law. I would refer to *Fujitsu Limited's Application*⁹ which the examiner has highlighted in his examination reports where Aldous LJ stated (lines 38-44, page 618):

“Mr Birss is right that a computer set up according to the teaching in the patent application provides a new "tool".....which avoids labour and error. But those are just the sort of advantages that are obtained by the use of a computer program. Thus the fact that the patent application provides a new tool does not solve the question of whether the application consists of a program for a computer as such or whether it is a program for a computer with a technical contribution.” [emphasis added]

30. Here too any reduction in error stems simply from the use of a computer program.

31. I would add finally that the invention in issue is concerned with the management of a database of records and, notwithstanding that the claims are not limited to the records relating to people and their relationships with other people, I am satisfied that the claimed invention also relates to a method of doing business.

Conclusion

32. Having carefully considered the arguments, I am of the view that the contribution falls solely within the matter excluded under section 1(2) as a program for a computer as such and as a method of doing business. I can see nothing in the specification that could be reasonably be expected to form the basis of a valid claim. I therefore refuse this application under section 18(3).

Appeal

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

Phil Thorpe

Deputy Director, acting for the Comptroller

⁹ *Fujitsu Limited's Application* [1997] RPC 608