



PATENTS ACT 1977

APPLICANT	Innoplexus AG
ISSUE	Whether GB 1804894.2 complies with Section 1(2) of the Act.
HEARING OFFICER	Stephen Brown

DECISION

Introduction

- 1 This decision covers GB1804894.2 which was published as GB 2572540A on 9th October 2019.

Examination History

- 2 The application was filed on 27th March 2018 with the applicant requesting Combined Search and Examination. In response the Examiner issued a Search report under Section 17(5)(b) stating that the “search would serve no useful purpose” accompanied by an Abbreviated Examination Report (AER) on 17th October 2018.
- 3 The AER set out an objection under Section 1(2)(c) that the application was considered to be a computer program as such. The applicant responded on 26th March 2020 respectfully disagreeing with the view of the Examiner. No amendment to the claims was filed.
- 4 In response, the examiner issued a further examination report on 2nd June 2021 reiterating the Section 1(2) objection and offering the applicant a hearing before a senior officer at the IPO.
- 5 The applicant responded on 2nd August 2021 stating that “the applicant did not wish to offer further amendments or arguments in reply to the Examiner’s communication”. Furthermore, they requested “a decision in the present case on the basis of the current status of the application and upon the basis of supporting arguments advanced in the prosecution so far” and waived the offer of a hearing at the IPO.
- 6 In response, the Examiner issued a “pre hearing report” confirming that they noted the request for a hearing and setting out the main issue of the Section 1(2) objection. Given the applicant did not provide any further argument or amendment they attached a copy of their earlier examination report.

7 The matter has thus come before me for a decision on the papers.

Section 101 – An observation

8 I would first like to make an observation on the approach taken in the prosecution of this case and Section 101 of the Act.

9 Quite rightly, Section 101 expressly allows that:

“Without prejudice to any rule of law, the comptroller shall give any party to a proceeding before him an opportunity of being heard before exercising adversely to that party any discretion vested in the comptroller by this Act or rules.”

10 In this application, the applicant having requested a decision by a hearing officer has provided no further argument or any other information as to why they believe the comptroller has “adversely” exercised their discretion. The only response is that received in response to the original AER. No response has been made to the most recent examination report save the request for a decision.

11 The Manual of Patent Practice at Section 18(3) rightly affords the applicant great liberty with the form of amendments. It does, however, require that “a full response should be made to each and every objection raised in the examination report”.

12 This raises an important issue in my mind – Should the request for a decision, given they have not addressed the latest examination report, be considered an appropriate response?

13 In this application I believe it does, although I do not for one moment consider it a fully satisfactory one. Specifically, the Examiner has made the applicant an offer of a hearing. The applicant has accepted that offer and that is why this decision is being made.

14 I would not, in my opinion, have been so obliged had the applicant not been offered a hearing. In the absence of any response from the applicant, I would have taken the view that it was not an appropriate amendment. If that had been the case, then this decision would be much shorter and would effectively have been a reissue of the Examiner’s last report refusing the application.

The Issue

15 The issue is whether this application complies with Section 1(2) of the Act,

The Law

16 The section of the Act concerning inventions excluded from patentability is Section 1(2), which reads:

“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)...

(b)...

(c) **a scheme, rule or method for performing a mental act, playing a game or doing business or a program for a computer;**

(d) ...

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.**”

17 In order to decide whether an invention relates to subject matter excluded by Section 1(2), the Court of Appeal has said that the issue must be decided by answering the question of whether the invention reveals a technical contribution to the state of the art. The Court of Appeal in *Aerotel/Macrossan*¹ set out the following four-step approach to help decide the issue:

- 1) Properly 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.

18 The operation of the approach 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.

19 The case law on computer implemented inventions has been further elaborated in *AT&T/CVON*² which provided five helpful signposts to apply when considering whether a computer program makes a relevant technical contribution. In *HTC v Apple*³, Lewison LJ reconsidered the fourth of these signposts and felt that it had been expressed too restrictively. The signposts are:

¹ *Aerotel Ltd v Telco Holdings Ltd (and others) and Macrossan's Application* [2006] EWCA Civ 1371

² *AT&T Knowledge Ventures LP and CVON Innovations Limited v Comptroller General of Patents* [2009] EWHC 343

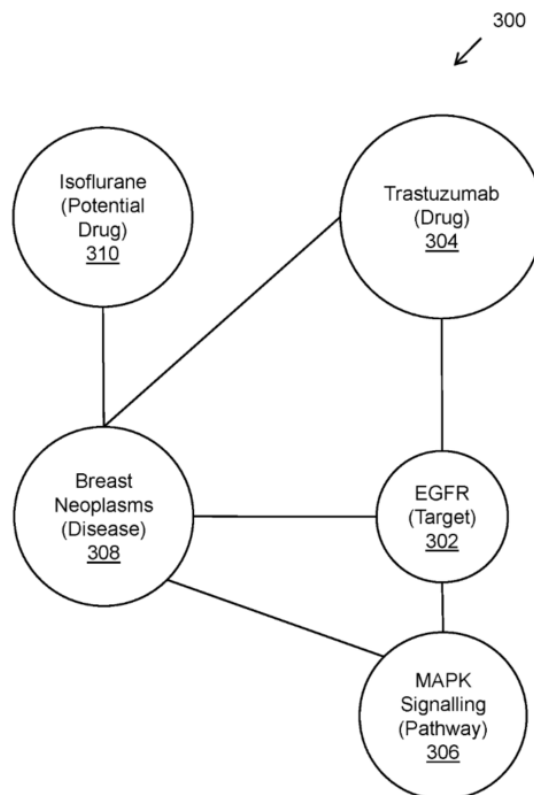
³ *HTC v Apple* [2013] EWCA Civ 451

- 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 make the computer a better computer in the sense of running more efficiently and effectively as a computer; and
- v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.

The Application

20 The application has 3 independent claims. These are the original claims filed on 27th March 2018. Claim 1 is to a system, Claim 7 to a method and Claim 13 to a program for implementing the method. I have attached a copy of these claims at Annex A.

21 I have also found it helpful to refer to Fig 3 of the application:



22 The application is concerned with mapping biomedical entities using a database arrangement. In use, the user enters a “biological entity” that belongs to a particular class (302). That class will be one of a target, disease, pathway or drug. The database will then be searched for related entities that have one of the other classes.(304, 306, 308). It will then further identify additional classes (310) related to a first related entity (308). A map of these relationships will then be output to the user.

Analysis

23 I would normally complete a full analysis of this application using the steps set out in *Aerotel*¹. However, in this instance I believe I can “cut to the chase” without the need for an extensive analysis involving claim construction. The claims are straightforward to construe, they clearly relate to a database and a method of searching it. This is also what they contribute to human knowledge. Equally clearly, they are without doubt enacted by a computer program. The only question is whether they make a non-excluded technical contribution.

24 The applicants, in their one reply, have argued that the contribution lies in reducing the time it takes to retrieve biomedical data. This comes about as a result of the system “traversing unorganized and dispersed data” even though this does not appear to be in the claims. I would observe that, if anything, the claims themselves appear to relate to the opposite as the data appears to be highly organised by class.

25 At this point, I would normally go on to consider the guidance offered by the AT&T signposts³ in some detail. Again, in this case I don’t believe I need to. I can see no effect on anything outside of the computer. Neither is the computer itself more efficient or operating in a new way. The application is simply a database which in response to an input provides an output. That is, I enter data into a database, it whirrs away and produces some data for me related to my initial entry. At best it undertakes an element of “tree walking” but that in itself is not enough to make it technical beyond it being a ‘better’ program.

26 Does the data being “biological data” make a difference? I don’t believe that it does. Despite being limited to such data in the claims, the system would work equally well with any type of data. By way of example, I could ask a database of cars using the class “electric”. That might produce an entry with the class “maker” and then go onto map that information to the class “price”. The contribution is simply a database and a method of searching it. The type of data being processed makes no difference to any assessment of whether the application is allowable or not. This has been covered in several decisions before this Office, most recently in *Personalis*⁴.

27 I thus conclude that the contribution is excluded as no more than a program for a computer as such.

⁴ *Personalis* (BL 0/813/21)

Conclusion

- 28 I have decided that the invention defined in the independent claims falls solely within matter excluded under Section 1(2) as a program for a computer as such. Having reviewed the application, I do not consider that any saving amendments are possible. I therefore refuse the application under section 18(3).

Appeal

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

Stephen Brown

Deputy Director acting for the Comptroller

Annex A

Claim 1.

A system that maps biomedical entities, wherein each of the biomedical entities belongs to one of a predefined class: target, disease, pathway, and drug, wherein the system includes a computer system, characterized in that the system comprises:

- a database arrangement operable to store existing data sources; and
- a processing module communicably coupled to the database arrangement, the processing module operable to:
 - receive a user-input of a biomedical entity belonging to one of the predefined classes, wherein the predefined class of the biomedical entity defines an input class;
 - extract a plurality of biomedical entities related to the biomedical entity of the user-input from existing data sources, wherein the plurality of biomedical entities belong to predefined classes except the input class;
 - identify at least one pair of biomedical entities, from the plurality of extracted biomedical entities, having an association therebetween, wherein each biomedical entity of the at least one pair of biomedical entities belongs to different predefined classes; and
 - map the plurality of biomedical entities to the biomedical entity of the user-input.

Claim 7

A method of mapping biomedical entities, wherein each of the biomedical entities belong to one of a predefined class: target, disease, pathway, and drug, wherein the method includes using a computer system, characterized in that the method comprises:

- providing a user-input of a biomedical entity belonging to one of the predefined classes, wherein the predefined class of the biomedical entity defines an input class;
- extracting a plurality of biomedical entities related to the biomedical entity of the user-input from existing data sources, wherein the plurality of biomedical entities belong to predefined classes except the input class;

- identifying at least one pair of biomedical entities, from the plurality of extracted biomedical entities, having an association therebetween, wherein each biomedical entity of the at least one pair of biomedical entities belongs to different predefined classes; and
- mapping the plurality of biomedical entities to the biomedical entity of the user-input.

Claim 13

A computer readable medium containing program instructions for execution on a computer system, which when executed by a computer, cause the computer to perform method steps for mapping biomedical entities, wherein each of the biomedical entities belongs to one of a predefined class: target, disease, pathway, and drug, the method comprising the steps of.

- providing a user-input of a biomedical entity belonging to one of the predefined classes, wherein the predefined class of the biomedical entity defines an input class;
- extracting a plurality of biomedical entities related to the biomedical entity of the user-input from existing data sources, wherein the plurality of biomedical entities belong to predefined classes except the input class;
- identifying at least one pair of biomedical entities, from the plurality of extracted biomedical entities, having an association therebetween, wherein each biomedical entity of the at least one pair of biomedical entities belongs to different predefined classes; and
- mapping the plurality of biomedical entities to the biomedical entity of the user-input.