Intellectual Property Office

BL O/622/21

23 August 2021

PATENTS ACT 1977

APPLICANT	Colin Laird Higbie
ISSUE	Whether the invention is excluded from patentability under section 1(2)
HEARING OFFICER	Peter Mason

DECISION

Introduction

1 The decision relates to patent application GB 1613580.8 (the Application) entitled "Computer-based media content classification and discovery system and related methods", filled in the name of Colin Laird Higbie on the 9th February 2015. The application has an earliest priority date of the 8th February 2014. The applicant Mr. Higbie is represented by Dummett Copp LLP.

2 Following a number of rounds of amendment, the Applicant has been unable to persuade the examiner of the patentability of their invention and as such an offer to have the application considered by a higher officer was issued in a letter dated 26th April 2021. The Applicant requested a decision to be made based on the papers on file.

3 The only substantive matter before me is whether the invention is excluded from patentability under section 1(2)(c) of the Act, as a method of doing business and/or a programme for a computer as such. The issue of exclusion is the only issue that has been fully considered so far. If I find that the claimed invention is not excluded from patentability, I will return the application to the examiner to conclude the search and complete the substantive examination. I note at the date of this decision the unextended compliance date has passed (7th July 2021) however the opportunity to file for a retrospective extension to this date has not.

The Invention

4 The Application relates to a computer-based, media content classification and recovery system, wherein a large number of e-book files are stored on a central database. Each e-book file comprises a plurality of identifiers relating to author and literary content of the respective e-book file. A user can apply a filter according to the identifiers, from a remote device, and receives a ranked list of e-book files that fulfil their specific filter. The ranked list may then be saved for future consideration.

5 The claims have been amended since filing, I will consider the latest set of claims filed on the 18th January 2021. There are two independent claims, a method claim 1 and a system claim 9. The claims are substantially identical and will stand or fall together. Claim 1 is as follows;

> *1. A computer-based e-book file classification and discovery method based on*
>
> *media content of the e-book file, the computer-based method being implemented on a computing device having a processor and a non-transitory memory, the method*
>
> *comprising the steps of:*
>
> *providing a plurality of e-book files stored on a non-transitory computer database;*
>
> *associating, with the processor, a plurality of content representative identifiers with each of the e-book files, wherein each of the plurality of content representative identifiers corresponds to at least one of a plurality of author-based, content-centered literary criteria elements assigned within literary criteria categories, wherein the plurality of author-based, content-centered literary criteria elements are identified by an author of the each of the plurality of e-book files, respectively, wherein the literary criteria categories comprise: a rating factor of the e-book file; a setting of the e-book file; a style of the e-book file; a theme of the e-book file; and a main character characteristic of the e-book file;*
>
> *wherein author-based, content-centered literary criteria elements of the rating factor of the e-book file comprise: violence, language, sexual content, and target audience,*
>
> *wherein author-based, content-centered literary criteria elements of the setting of the e-book file comprise: time period, setting type, and realism,*
>
> *wherein author-based, content center literary criteria elements of at least one of the style of the e-book file and the theme of the e-book file comprise: physical action, pacing, romance, mysteries and puzzles, humor, inspiration of reader, and political and social commentary,*
>
> *wherein author-based, content centered literary criteria elements of the main character characteristic of the e-book file comprise: gender, age, race, sexual preference, and religion;*
>
> *providing at least one computerized network connection for a remote computerized device of a user to access to the non-transitory computer database with the plurality of e-book files;*
>
> *displaying, on a computerized graphical user interface (GUI) of the computerized device of the user, a nested tree menu which visually displays a plurality of selectable fields, each of the plurality of selectable fields corresponding to one of the literary criteria categories and one of the author-based, content centered literary criteria elements;*

determining a user selection of at least one of the plurality of selectable fields based on a selection of the selectable field corresponding to the literary criteria categories and the author-based, content-centered literary criteria elements thereof, using one or more of the plurality of input selectable fields of the nested tree menu displayed on the graphical user interface (GUI) of a the computerized device of the user;

filtering the author-based, content-centered literary criteria elements based on the determined user selection of one or more of the plurality of selectable fields, whereby author-based, content-centered literary criteria elements matching the determined user selection are populated in a results list and author-based, content centered literary criteria elements not matching the determined user selection are omitted from the populated results list;

filtering the e-book files based on the filtered author-based, content-centered literary criteria elements;

assigning a point value to each of the filtered author-based, content-centered literary criteria elements;

ranking, based on the point value, the plurality of e-book files having the filtered author-based, content-centered literary criteria elements within one of the assigned literary criteria categories against all other e-book files within that assigned literary criteria category, wherein e-book files in different assigned literary criteria categories are not ranked against each other;

displaying a result of the filtered plurality of selectable fields on the GUI of the computer device of the user, wherein the result has at least a portion of the plurality of e-book files keyed to the plurality of author-based, content-centered literary criteria elements; and

saving the result of the filtered plurality of selectable fields and associating a name with the saved result, enabling the user to retrieve the same result at a later point of time.

The law

6 The examiner has raised an objection that the invention is not patentable because it relates to one or more of the categories of subject-matter which are not considered to be inventions under the Act. This ‘excluded matter’ is set out in section 1(2) of the Act:

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; *[my emphasis]*

(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.

7 The Court of Appeal's judgement in Symbian[1] tells us that in order to determine whether an invention falls solely within the any of the exclusions listed in section 1(2), the four-step test set out in its earlier judgement in Aerotel[2] must be used. The four steps are:

(1) properly construe the claim(s);
(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.

8 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. I shall consider whether the contribution is excluded alongside the question of whether the contribution is technical in nature, meaning I will consider the third and fourth steps of *Aerotel* together.

9 To assist in determining whether the contribution relates solely to a program for a computer, the examiner used the signposts to technical contribution set out in AT&T/CVON[3] and by the Court of Appeal in HTC/Apple[4]. These 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;

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[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
[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

v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.

10 These signposts are guidelines only, providing a list of some of the factors that can indicate whether a contribution may be technical.

Argument and analysis

Step 1 - Properly construe the claim

11 Despite the length of claim 1 I find no difficulty in construing it. Furthermore, the examiner rationalises any potential uncertainty at paragraph 4 of the Exam Report dated 17th November 2020, which is uncontested by the Applicant. I agree with the examiner's assessment which reads;

> *4. Despite the length of independent claims 1 and 9, construing both presents no particular difficulty. They are clearly directed towards the same proposed invention. The integers in each are understandable, as is the interrelationship between the integers. It may be worth mentioning that while the feature of "assigning" and "ranking" using "a point value" included in lines 10-16 of page 23 (claim 1) and lines 25-31 of page 25 (claim 9) lacks detail as to how the points are assigned, this does not adversely affect the clarity of each independent claim too much. The method of claim 1 would necessarily be implemented by a program for a computer. The content and file filters which perform the classification and discovery of claim 9 would also necessarily be implemented by a program for a computer.*

Step 2 – Identify the actual (or alleged) contribution

12 Paragraph 43 of Aerotel suggests that the contribution can be assessed from the point of view of the problem to be solved, how the invention works and what the advantages are, stating "What has the inventor really added to human knowledge perhaps sums up the exercise". I note that the prior art search for the invention is incomplete, therefore in this application it is the alleged contribution the invention makes that I must consider.

13 The examiner, in their report dated 17th November 2020 asserts:

*"[t]he **alleged** contribution is therefore a program for a computer which uses user inputs of criteria elements to filter a plurality of e-book files for subsequent ranking and presentation of relevant or interesting e-books to the user. What has been added to human knowledge is a computer program which provides a way of searching through a collection of e-books to provide a more relevant or interesting set of results."* [my emphasis].

14 In their letter dated 18th January 2021 the Applicant asserts that examiner has over-simplified the alleged contribution considering the context of the problem that the invention is attempting to solve. The Applicant further argues that, unlike a conventional bookstore which inevitably has a limited number of books, an online bookstore contains a vast number of books, and the present problem relates to assisting a user find content-accurate digital media in a world where millions of choices are available. The Applicant argues that their invention is a tool that allows

users to find digital content specific to genres, sub-genre and additional criteria which would otherwise be impossible to find without significant effort.

15 In their identification of the alleged contribution the examiner omits the step wherein *sophisticated* content representative identifiers have been assigned to each of a plurality of e-book files stored on a database. Furthermore, the examiner omits identification of the specific categories under which the content representative identifiers are assigned, relating to; rating factor, setting, theme, and main character characteristic.

16 In considering the Applicants assertions regarding the alleged contribution, and whilst I appreciate that the inclusion of the specific identifiers may be able to distil millions of e-book files down to a manageable list, I must observe that the claim is not restricted to any particular database range and therefore the invention is equally applicable to identifying relevant content amongst a much smaller selection of e-book files. That is to say, the invention operates in exactly the same way regardless of the number of e-book files stored on the database, therefore I do not think the alleged contribution ought to be restricted to handling vast numbers of files in a database. That said, even if the claim was directed towards a specific dataset size, the size of the dataset handled would not be acknowledged as a contribution as a computer would typically handle a large dataset in a similar way as it would handle a small dataset.

17 An interaction between the database and the user GUI, wherein a user selection is input into a GUI and this input is used to interrogate a database to provide a result, is ubiquitous throughout the online retail sector and adds nothing to what was previously known. It is noted that neither the Applicant nor the examiner identify this relationship as a component of the contribution, I am of a similar opinion.

18 I tend to agree with the applicant's assertion that the examiner has perhaps over-simplified the alleged contribution, by omission of refence to the content representative identifiers, how these are applied to the e-book files and how they are relied on as user inputs to generate a result for presentation to the user. I consider the alleged contribution to be a program for a computer which uses user inputs of criteria elements to filter a plurality of e-book files, according to pre-assigned content representative identifiers relating to several distinct categories, for subsequent ranking and presentation of relevant or interesting e-books to the user.

Steps 3 & 4 - Whether the actual or alleged contribution falls solely within the excluded matter and check whether it is actually technical.

19 It is clear that the contribution is put into effect as a computer program which is run on conventional hardware. In the letter dated 15th January 2021 the Applicant acknowledges that the invention is implemented in a computing environment and includes computing hardware and software features. However, the Applicant further states that the invention has technical features that are novel and inventive over the prior art.

20 The examiner has considered each of the five AT&T signposts in turn. The applicant, however, has not specifically commented on any particular signpost and

instead has relied on an overarching argument relating to the alleged technical nature of the application where the applicant contends that the invention:

"provides a user with the ability to find digital content which is otherwise undiscoverable due to the practical inability for the user to search through thousands or millions of content items". The applicant further argues that *"the subject invention provides a technical solution to a problem which arises from computing technology and provides technical improvements in data filtering when seeking files from a computer."*

21 Under signpost (i) the examiner alleges that beyond producing a set of results, any additional effect outside the computer such as, for instance, influencing these results relative to specific content representative identifiers, is not a technical effect.

22 It seems to me the applicant's general arguments are in fact relevant to the first signpost, wherein the alleged technical effect is providing a user with the ability to find relevant content amongst a vast number of content items. However, the applicant has not provided any detailed argument setting out how this effect is technical in nature. It may be argued that displaying a search result is a process carried on outside the computer per se, however aside from influencing the content of this search result in light of processing pre-assigned data and user input data, there is no additional effect. The simple processing of data itself is not technical in nature and therefore there is no technical effect on a process carried on outside the computer.

23 Under signpost (ii) the examiner asserts that there is no effect at the level of architecture of the computer running the programme. The claimed effect lies in the programme and how that programme is used to process data, here the effect is entirely influenced by the content representative identifies applied to each e-book file and the user input. I am unable to identify anything in the applicant's arguments that relate to signpost (ii). Therefore, in agreement with the examiner, it is clear to me that the effect does not operate at the level of architecture of the computer.

24 Under signpost (iii) the examiner acknowledges that the computer is running a better search programme for discovering e-book files, asserting that the computer is not operating in a new way. The computer, which I view as the computing device comprising the database and the user computerised device, interact in an entirely conventional manner wherein the user computerised device is used, with associated inputs, to interrogate the database. I am unable to identify anything in the applicant's arguments that relate to signpost (iii). In agreement with the examiner it is clear to me that the computer does not operate in a new way.

25 Under signpost (iv) the examiner asserts that any improvement lies in the programme rather than the computer. I am unable to identify anything in the applicant's arguments that relate to signpost (iv). It seems to me that the computer, whilst running the programme, may produce a refined set of search results. however, I am unable to identify anything that would suggest that the computer is running more efficiently or effectively.

26 Under signpost (v) the examiner argues that the problem to be solved is non-technical. It seems that the applicant's arguments may be further relevant to signpost (v) and therefore I will consider them in this respect.

27 In regard to the fifth signpost *HTC/Apple* Kitchin LJ, at paragraph 49, stipulates:

> *"Fifth, and conversely, it is also helpful to consider whether the invention may be regarded as solving a problem which is essentially technical, and that is so whether that problem lies inside or outside the computer. An invention which solves a technical problem within the computer will have a relevant technical effect in that it will make the computer, as a computer, an improved device, for example by increasing its speed. An invention which solves a technical problem outside the computer will also have a relevant technical effect, for example by controlling an improved technical process. In either case it will not be excluded by Art 52 as relating to a computer program as such."*

28 Therefore, the problem must be technical in nature. The problem at hand, however, relates to inadequate classification of e-book files provided by the prior art and as a consequence, in respect to large volumes of e-book files, the prior art has insufficient finesse to be able to find relevant e-book files according to content. The problem therefore finds basis in the cataloguing or indexing of e-book files which is clearly an administrative problem and not one of a technical nature. This signpost can therefore not be relied upon by the applicant.

29 Having considered all the signposts, I am unable to identify any technical contribution. I have further considered the appended claims, but can find no additional integers that would contribute a technical contribution

Decision

30 I find the invention claimed in GB 1613580.8 falls solely within matter excluded under Section 1(2) as a program for a computer as such. I can find no amendment in the specification that will render the claims patentable. I therefore refuse the application under Section 18(3).

Appeal

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

Peter Mason

Deputy Director, acting for the Comptroller