Intellectual Property Office

BL O/096/20

14 February 2020

PATENTS ACT 1977

APPLICANT	Indix Corporation
ISSUE	Whether patent application GB1500830.3 complies with Section 1(2) of the Patents Act 1977
HEARING OFFICER	J. Pullen

DECISION

Introduction

1 Patent application GB1500830.3, entitled 'Adaptive gathering of structured and unstructured data system and method' entered the national phase 19th January 2015, derived from WO 2014/018780 A1, with 25th July 2012 as its the priority date. It was republished as GB 2518117 A on 11th March 2015.

2 The examiner, Mr David Kirwin issued his first examination report on 21st December 2018. He objected to the claimed invention being. excluded as relating to computer program and also as a business method There followed several rounds of correspondence between the examiner and the agent for the applicant, Dr Carrie-Anne Johnson. Amendments have been filed, but no agreement has been reached in relation to the excluded subject matter objections.

3 The matter came before me at a hearing 19th November 2019, at which the applicant was represented by Dr Johnson, accompanied by her colleague Dr Adam Gilbertson.

4 I am grateful to Dr Johnson for providing her skeleton arguments in good time before the hearing. I confirm that in reaching my decision I have taken into account all documents on file, particularly the amended claims filed 23rd April 2019 and the skeleton arguments.

5 I note that the compliance period has been extended and is now due to expire 21st February 2020.

6 I also note that the examiner has deferred update of the and completion of the examination. The matter before me is whether the claimed invention is excluded as a program for a computer as such and/or a method for doing business. If I find the claimed invention allowable then it will be necessary for me to remit the application to the examiner for update of the search and completion of the examination.

The invention

7 The invention provides efficient means for obtaining updated price and product information from web pages. It relates to search engines, which search and index data from a multitude of web pages using web crawlers (sometimes referred to as spiders) which follow uniform resource indicators (URIs) to obtain content. Users are then able to search the indexed content, and to access cached content or the original webpage. Acknowledged prior art search engines do not give any priority to price and product information in the content, since it may comprise a very small proportion of the overall webpage content in terms of data, although it may be the most significant information to the user.

8 The current claim set, as amended 23rd April 2019, comprises four independent claims: claims 1, 11 and 12 to a computer implemented method, and claim 13 to a computer apparatus. These claims relate to different aspects of the invention, but the underlying inventive concept is the same. I see no material distinction between the invention defined in each, and they will therefore stand or fall together (as Dr Johnson agreed that they should at the hearing).

9 The independent claims are:

> *Claim 1.*
> *A computer implement method of obtaining information from a webserver, the method comprising:*
> *obtaining a first URI from a prioritized URI queue;*
> *utilizing the first URI at a first URI access time to request first content from the webserver;*
> *parsing the first content a first time for first price and product information and saving the result as a first parse result;*
> *utilizing the first URI at a second URI access time to request second content from the webserver;*
> *parsing the second content for second price and product information, and saving the result as a second parse result; and*
> *determining that the first parse result is different than the second parse result and setting a time for accessing the first URI in the prioritized URI queue based on the difference.*
>
> *Claim 11.*
> *A computer implemented method of obtaining information from a webserver, the method comprising:*
> *obtaining a first URI from a prioritized URI queue;*
> *utilizing the first URI at a first URI access time to request first content from the webserver;*
> *parsing the first content a first time for first price and product information and saving the result as a first parse result; and*
> *determining that the first parse result does not contain price and product information and removing the first URI from the prioritized URI queue.*
>
> *Claim 12.*
> *A computer implemented method of obtaining information from a webserver, the method comprising:*

obtaining a first URI from a prioritized URI queue;
utilizing the first URI at a first URI access time to request first content from the webserver;
parsing the first content a first time for first price and product information and saving the result as a first parse result; and
determining whether the first parse result contains a listing webpage or a product webpage; and
if the first parse result contains a listing webpage, reducing the time to the next URI check of the first URI in the prioritized URI queue; else
increasing the time to the next URI check of the first URI in the prioritized URI queue.

Claim 13.
A computing apparatus for obtaining information from a webserver, the apparatus comprising a processor and a memory storing instructions that, when executed by the processor, configure the apparatus to:
obtain a first URI from a prioritized URI queue;
utilize the first URI at a first URI access time to request first content from the webserver;
parse the first content a first time for first price and product information and save the result as a first parse result;
utilize the first URI at a second URI access time to request second content from the web server;
parse the second content for second price and product information, and save the result as a second parse result; and
determine that the first parse result is different than the second parse result and set a
time for accessing the first URI in the prioritized URI queue based on the difference.

The law

10 The examiner has objected that the invention is excluded from being patented as a program for a computer and a method for doing business. The relevant section of the Act is s.1(2), the most relevant provisions of which are shown below with my emphasis added:

> *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… **method for... 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.***

11 The Court of Appeal has said that the issue of whether an invention relates to subject matter excluded by Section 1(2) 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 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.*

12 The operation of the approach is explained at paragraphs 40-48 of the judgment. Paragraph 43 confirms that identification of the contribution is an exercise in judgment involving the problem said to be solved, how the invention works and what its advantages are; essentially, what it is the inventor has really added to human knowledge, looking at substance, not form. Paragraph 47 adds that a contribution which consists solely of excluded matter will not count as a technical contribution.

13 In *Symbian*[2] the Court of Appeal reaffirmed the Aerotel approach while considering a question of "technical contribution" as it related to computer programs emphasising the need to look at the practical reality of what the program achieved, and to ask whether there was something more than just a "better program".

14 The case law on computer implemented inventions was further elaborated in *AT&T/CVON*[3] which provided five helpful signposts to apply when considering whether a computer program makes a relevant technical contribution. In *HTC v Apple*[4], Lewison LJ reconsidered the fourth of these signposts and felt that it expressed too restrictively. 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.*

---

[1] *Aerotel Ltd v Telco Holdings Ltd & Ors Rev 1* [2007] RPC 7
[2] *Symbian Ltd's Application* [2009] RPC 1
[3] *AT&T Knowledge Ventures/Cvon Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat) (*AT&T/CVON*)
[4] *HTC v Apple* [2013] EWCA Civ 451

Assessment

(1) Properly construe the claim

15 The examiner and the agent agreed that there was no particular difficulty in construing the claims. In her skeleton arguments Dr Johnson provided some helpful additional explanations, but these did not have any effect on how the claims are construed as all of the terms have their usual and expected meaning.

(2) Identify the actual contribution

16 In his pre-hearing report the examiner acknowledged that the invention "might advantageously minimise redundant checks of web content" and therefore "can be said to make better use of the limited computing resource".

17 The examiner identified the contribution as:

> *A computer-implemented method of managing a prioritized URI queue for parsing web content (either by setting the time at which a particular URI is checked or by removing a particular URI from the queue) in dependence on the price and product information parsed from the associated web content.*

18 He noted that "this makes more efficient use of limited computing resources and better accounts for changes in web content which relate to price and product information."

19 Dr Johnson argued that the contribution is wider, and that it is not restricted by the "specific example" of the type of data referred to in the claims, *i.e.* "price and product information". Dr Johnson also correctly pointed out that *Aerotel* directs us to consider "the substance of the claim not the form". She suggested that "the substance of the claim is not limited to parsing price and product information", but that it should be construed more broadly as "the parsing of a subset of information (*i.e*. content of interest) from the overall content".

20 Dr Johnson identified the actual contribution as:

> *In a network-based system for obtaining information from third-party sources on the internet, the invention provides a method of crawling and maintaining a prioritised URI queue based on the presence of and/or changes in specific information parsed from the associated webpage content, such that redundant checks for content updates are minimised and the limited computing resources available are better and more efficiently utilised to keep stored parsed content up to date.*

21 While it is clear from the application itself that prioritised queues are known, Dr Johnson noted that the International Searching Authority found all the claims to be novel and inventive over the cited prior art. She submitted that the contribution is not known in the prior art: it is "searching for specific information and prioritising a URI queue in a new way".

22 The fundamental distinction between the contributions identified by the examiner and the applicant is whether it is restricted to the specific application of "price and product

information", or whether it encompasses other, more general "specific information parsed from the associated webpage content".

23 Dr Johnson pointed out that the opening paragraph of the description refers to parsing information into "price, product and other information".

24 To address this, I note that there is no further explanation in the description as to what this 'other information' might be. The phrase in the opening paragraph of the description could just as easily be construed to mean the price and product information are split from the other information. I do not think this phrase alone provides unambiguous support for Dr Johnson's interpretation of the contribution.

25 Dr Johnson also noted that the dependent claims define features unrelated to the price and product information. Again, that is true, however, whilst they define additional, optional means whereby the data may be obtained or processed, they do not suggest any other type of information.

26 The information contained in paragraphs 3 and 4 of the description are most relevant to the problem to be addressed, explaining that it is because '*traditional crawlers (or the queue manager) will not prioritize the webpage position in the queue, generally because the price is a tiny fraction of the overall content and the change is not labelled.'* It goes on to explain the converse situation where a webpage is prioritised if the price and/or product information stays the same but other parts of the webpage are changed. This points me towards the change in price and/or product information being significant to the problem. The solution, as set out in the description, is also focussed towards the price and product information.

27 As step (1) of the *Aerotel* test requires that the claims be construed the contribution must in some way be determined by the scope of the claims. In this application the claims are limited to price and product information in a quite deliberate way. I do not think I can ignore any purposeful limitation the applicant has chosen to place on them, particularly in light of the lack of clear support for alternatives given in the specification as a whole.

28 Since no other type of information is defined in the description, I must conclude that the contribution is not as broad as Dr Johnson suggests and it relates to the specific type of information which is defined, *i.e.* the price and product information.

(3) Ask whether it falls solely within the excluded subject matter and (4) Check whether the actual or alleged contribution is actually technical in nature

29 I will consider steps (3) and (4) together.

30 As emphasised by Dr Johnson at the hearing, the question here is whether the contribution falls solely within the excluded subject matter. With particular reference to claim 1, she argued that looking at the features of the independent claim as a whole it cannot be said to fall solely within the excluded category of a program for a computer or method for doing business. But I note that in step (3) we are not considering the features of the independent claims, we are looking at the actual or alleged contribution identified in step (2) and determining whether that falls solely within an excluded category.

31 Dr Johnson suggested that three of the *AT&T* signposts are satisfied by the invention: the first, fourth and fifth. I agree that the second and third signposts are not relevant, so I will not consider them further.

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

32 Dr Johnson suggested that this is met, in that the invention reduces the amount of data being transferred across the network, thus providing increased bandwidth for other processes. She noted that the effect will be seen across the network, and that it will result in faster interactions for the user and referenced *HTC v Apple*[5], paragraphs 149-154, to support this. However, I do not see the given situation to be analogous to the situation here.

33 Dr Johnson also said that there is a beneficial effect on the user, in providing faster interactions and more efficient, more immediate access to product and pricing information, which she suggested constitutes an effect outside of the computer. But I note that the benefit to the user is in facilitating an administrative or financial process, rather than anything which could be considered technical.

34 It is true that reducing the amount of data transferred across a network will leave more resource available for other uses. So, reducing (or eliminating) the data transfer from any one process could potentially have an incidental beneficial effect on other processes performed across the same network. But there is no direct benefit to those other processes; and leaving more resource available, by not using it, is not the same as creating additional resource. I do not consider there to be a "technical effect" here.

(iv) Whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer

35 In support of his objection the examiner had referred to *Autonomy*[6]. Dr Johnson pointed out that this decision predates both *AT&T* and *HTC*. She noted that at that time an increase in speed or reliability was required to meet this signpost. She pointed out that the revised signpost is less restrictive in requiring improved efficiency or effectiveness, and that this has led to broader interpretation as to what qualifies as making a better computer.

36 Dr Johnson drew my attention to EPO guidelines G-II 3.6.1, relating to technical effects in computer programs. As she acknowledged, assessment of potentially excluded subject matter is not the same at the EPO as at the IPO; but we should expect the outcome to be the same, and the guidelines are therefore helpful.

37 She noted that management of computer resources is considered to comprise a technical effect. The relevant portion of the guidelines says:

---

[5] *HTC Europe Co Ltd v Apple Inc* [2013] RPC 30

[6] *Autonomy Corporation Ltd v The Comptroller General of Patents, Trade Marks & Designs* [2008] EWHC 146 (Pat)

Similarly, computer programs controlling the internal functioning or operation of a computer, such as processor load balancing or memory allocation, normally produce a further technical effect.

38 However, I am not convinced that this is what is happening here. As already noted above, simply using less resource, by prioritising one type of information, and thereby leaving more resources available for other unconnected processes, does not in itself constitute management of resources. The computer, or the network, does not select what information to prioritise, or in what circumstances. Nor is there any automated allocation of resource.

39 The computer is not more efficient or effective in a general sense, any efficiency is limited to the specific task of obtaining price and product information.

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

40 Dr Johnson said that the invention addresses the problem of how to prioritise a URI queue, taking account of changes in specific information which might be overlooked by acknowledged prior art web crawlers. She described this as a technical problem, involving searching and indexing a large amount of data. She argued that the invention addresses this problem directly, rather than avoiding it.

41 However, as already discussed above, I am not convinced that the contribution is as broad as this. The problem relates to timely and efficient obtaining of price and product information to facilitate financial transactions, this is not technical. The solution is administrative, in prioritising searching, indexing and updating that specific type of information.

Business Method

42 Dr Johnson also directly addressed the examiner's objection that the invention relates to a method for doing business. She argued that the independent claims define a number of steps having inherent technical character, and that in only one of these is reference made to "price and product information".

43 She also argued that the inventive aspect of the claims is not dependent on the type of data being obtained. She said that the applicants had chosen to define the invention with reference to price and product information for commercial reasons, to ensure protection for that aspect of their invention.

44 However, whatever the reason for drafting the claims and the description in terms of price and product information, and without debating whether the invention could have been defined and described with reference to any other type of information, it remains the case that the claims are restricted to that application and that there is no support in the specification for any other.

Conclusion

45 Dr Johnson drew my attention to a recent Office decision, *Landmark Graphics*[7], in which the hearing officer noted that the applicant should be given the benefit of the doubt where this is any doubt as to whether or not an invention is excluded. For the reasons set out above, I am not in any doubt that the identified contribution is excluded and not technical in character.

46 I find the application to be excluded from being patented under Section 1(2) as a program for a computer and a method for doing business as such. I therefore refuse the application under Section 18(3).

Appeal

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

J. PULLEN

Deputy Director, acting for the Comptroller

[7] *Landmark Graphics Corporation* [2018] BL O/112/8