PATENTS ACT 1977

APPLICANT	Vortaloptics Inc.
ISSUE	Whether patent application GB 0606301.0 complies with section 1(2)
HEARING OFFICER	S. Brown

DECISION

Introduction

1   This decision concerns the issue of whether the invention claimed in UK patent application GB 0606301.0 relates to non-excluded subject matter as required by section 1(2) of the Act.

2   The application derives from an application filed under the PCT by Vortaloptics Inc. on 27th August 2004 and which was published as WO 2005/022402. The application is entitled "Method, device and software for querying and presenting search results" and was re-published in the UK as GB 2424100.

3   During the examination process, the examiner reported that the invention defined in the claims is excluded as a computer program, a method of doing business and as the presentation of information.   Over a number of rounds of amendment and re-examination the claims were narrowed until only the computer program objection remained but the Applicants and the examiner were not able to resolve this final issue and a hearing was held on 14 April 2008. The Applicants were represented, via video link, by Mr. Graham Moore and Mr. Nigel Hackney of Mewburn Ellis. The examiner, Mr. Jake Collins, also attended.

The Application

4   The claims I was asked to consider at the hearing were filed on 28th January 2008. There are 10 claims in total but only claim 1 is independent, relating to a system for sorting and displaying search results. Figure 2A of the application gives a good overview of the technology:

ADMINISTRATOR
ACCESS

FIG. 2A

5   Claim 1 reads:

A data communications system including:

An indexing server for hosting a plurality of indexes, each index having an index specific search algorithm associated with it, and each index having a plurality of index entries, each index entry having an associated key field

and a plurality of computer devices each connected to the indexing server via a data communications network, thereby each providing a respective end-user interface to the indexing server; wherein

The indexing server is adapted to be responsive to an end-user query for results of a search of the plurality of indexes to:

(i) query the index entries of each of said plurality of indexes using the respective index-specific search algorithm to obtain a set of matching search results for each index, each matching search result having a quality of match specific to its index;

(ii) determine a relative priority to each of said plurality of indexes;
(iii) combine said matching search results from said plurality of indexes into a merged list of ordered search results based on said relative priority of each of said plurality of indexes, in which any search result from a lower priority index for which an associated key field is identical to the associated key field of a matching search result in a higher priority index is discarded, in favor of said matching search result from said higher priority index.

The law and its interpretation

6   Section 1(2) reads:

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;*
>
> *(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   It is not disputed that the assessment of patentability under section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel Ltd v Telco Holdings Ltd* and *Macrossan's Application* [2006] EWCA Civ 1371, [2007] RPC 7 ("*Aerotel*"). In this case the court reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of patentability, namely:

> 1)   Properly construe the claim
>
> 2)   Identify the actual (or alleged) contribution
>
> 3)   Ask whether it falls solely within the excluded matter
>
> 4)   Check whether the contribution is actually technical in nature.

8   The operation of the test 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. Paragraphs 46-47 explain that the fourth

step of checking whether the contribution is technical may not be necessary because the third step should have covered the point.

Application of the Aerotel test

<u>Properly construe the claim</u>

9   I do not think that any problems arise over the construction of the claim. What it defines is a system that in response to a query from an end-user searches a plurality of data indexes and outputs a set of results. Each index has its own search algorithm and is assigned a priority relative to the other indexes. There are also details concerning the location of the indexes, on an indexing server, and its connection to end-user devices but the key feature is step (iii), how the results from the plurality of indexes are combined.

10   Step (iii) defines that when individual search results from two, or more, indexes match, the result from the lower priority index will be discarded in favour of that from the higher priority index. I believe this is the purposive construction of the claim and what the skilled man would understand the applicant meant its language to convey.

<u>Identify the contribution</u>

11   In paragraph 43 of the Aerotel Court of Appeal judgment Jacob LJ states:

>   *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. The formulation involves looking at substance not form – which is surely what the legislator intended.*

12   Mr. Moore also referred me to paragraph 55 of *Symbian Ltd v Comptroller General of Patents* [2008] EWHC 518(pat) ('Symbian') where Patten J states:

>   *So is this invention no more than the running of the program? Having regard to the earlier authorities the answer has to be that* it depends on what the program does and not merely how it does it. *The mere fact that it involves the use of a computer program does not exclude it: see Aerotel at paragraph 22. This point was made in its clearest form in paragraph 16 of the decision in Vicom (quoted at paragraph 27 above) which underpins all of the current English authority on this point.*

13   Mr. Moore then argued that what 'the program' does in this case is reduce the bandwidth required by the search system by virtue of how it combines the results from multiple indexes.

14   Mr. Moore admitted that the application did not explicitly detail such bandwidth reduction but argued that the skilled man would appreciate that such an effect was implicit in the disclosure. Furthermore, Mr. Moore accepted that the system would not always reduce bandwidth. For example, if there were no duplicate search results then the combination step would have no effect. However, over a number of search requests, the system would, on average, require less bandwidth between the server and the end-user devices. I do not dispute these arguments but the key question is whether or not 'bandwidth reduction' is part of the contribution.

15   I am forced to conclude that it is not. Any method of eliminating duplicates would result in exactly the advantage that Mr. Moore claims. The mere concept of discarding duplicate data is well known and so that cannot be part of the contribution in this case. As explained above, the key feature of the claim is discarding the results from lower priority indexes in favour of those from higher priority indexes. The contribution cannot be more general than that and I cannot see how that feature can reduce bandwidth beyond the reduction one would expect from any method that eliminates duplication.

16   I am drawn back to the key question in paragraph 43 of Aerotel, namely "what has been added to human knowledge?" Now, systems that search data indexes and output sets of results are well known in general. This includes indexes having their own associated search algorithms and the server/ end-user-device architecture of the claim. Thus none of these aspects contributes anything to the stock of human knowledge. Rather, the contribution must lie in the detail that each index is assigned a priority and how when individual search results from different indexes match, the result from the lower priority index is discarded. In short, the contribution is a better search system by virtue of how it combines the results from multiple indexes.

Ask whether it falls solely within the excluded matter

17   From both the claim and the description the skilled man would appreciate that the technology in question is enacted in software on computers. Furthermore, there is clearly no new hardware or arrangement of hardware. Thus the next key question is "is it just a program for a computer as such?"

18   Mr. Moore again referred me to Symbian wherein at paragraphs 62 & 63 Patten J states:

>   *I doubt whether very much is to be gained by trying to make some kind of direct comparison between the invention in Autonomy and that in the present case. In paragraph 21 of his judgment Lewison J said of the claim he had to consider that:*

>>   *"What is of significance here is that the claimed invention required no new hardware or arrangement of hardware, did not fix any perceived technical shortcoming in the computer itself, and was purely concerned with the processing of data. This was done and done only by a computer program."*

> *In the present case there is a perceived technical shortcoming caused by modification to the DLL as a result of updates to the computer's functionality. This is not a case where the invention is limited to the processing of data. If an increase in the speed at which the computer works can take the program out of Art.52 (3) (see Aerotel at paragraph 92) it is difficult to see why the improved reliability of the machine brought about by the re-organisation of the DLL in its operating system does not.*

19   For completeness, paragraph 92 of Aerotel says:

> *So what Gale decided is that the computer program exclusion extends not merely to the code constituting a program, but that code as embodied on a physical medium which causes a computer to operate in accordance with that code.* More is needed before one is outside the exclusion – as for instance a change in the speed with which the computer works. *A technical effect which is no more than the running of the program is not a relevant technical effect. And Gale clearly decides that merely putting a new program on a known memory device is not enough to escape Art.52(2).*

20   Mr. Moore continued by arguing that if an increase in speed with which a computer works (Aerotel paragraph 92), or improved reliability of a computer (Symbian), is enough to grant patentability then the reduced bandwidth used by the system of claim 1 should do so too. In short, the contribution should be regarded as not excluded because it results in a search system that requires less bandwidth.

21   I am not convinced by this reasoning. Firstly, I do not accept that reduced bandwidth is a valid part of the contribution. Even if it were, the program does not result in an inherently faster or more reliable system as in the examples highlighted above. Unlike in Symbian, the contribution does not solve any technical shortcoming in the computer, server, or wider system. The effect of reduced bandwidth is merely a side-effect of the program. It is not its primary, intended, or even documented, function.

22   So, is there a contribution over and above that to be expected from the mere loading of a program onto a computer? I am forced to conclude that there is not. Searching indexes and filtering the results is to be expected from suitably programmed, and connected, computers. I thus conclude that the contribution falls wholly within the 'program for a computer' exclusion. As such it only consists of excluded subject matter and therefore fails the third Aerotel step.

23   During earlier rounds of the examination process the examiner also argued that the claims were to a method for doing business or the presentation of information. As these issues were not addressed at the hearing and since I have found the contribution to be no more than a program for a computer as such I will not consider them here.

Check whether the contribution is actually technical in nature

24   Paragraph 46 of *Aerotel* explains that the fourth step may not be necessary because the third step should have covered the point.   Paragraph 47 then goes on to add that a contribution which consists solely of excluded matter will not count as a technical contribution. Following this reasoning the contribution in this case is clearly not technical since it is wholly excluded.

25   However, in paragraph 42 of the *Symbian* judgment, Patten J stated that:

> *I stress this point particularly in relation to steps 3 and 4. The question whether the claim falls solely within the excluded subject matter (in this case a computer program) cannot be answered in isolation from the issue of whether it embodies a relevant technical contribution in the Merrill Lynch sense. The separation of this issue between steps 3 and 4 is not a problem provided that one recognises that they are as a matter of law alternatives. Where the only potential category of excluded material is a computer program then a claim based on such a program will be excluded unless it is in the relevant sense technical in nature. In paragraphs 46 and 47 Jacob LJ makes it clear that the Art. 52 (3) test is part of the step 3 question but that of course is inseparable from the issue of technical contribution in step 4 which only becomes an unnecessary inquiry if the question is included as part of step 3.*

26   While these two approaches are somewhat difficult to reconcile, in the present case they do not result in different conclusions. As explained above, there is no technical effect over and above that to be expected from a suitably programmed computer. Thus the contribution is not technical in nature.

Decision

27   I have found that the contribution made by the invention defined by claim 1 falls solely in subject matter excluded under section 1(2).

28   I have read the specification carefully and I can see nothing in any of the dependent claims or elsewhere in the specification that could be reasonably expected to form the basis of a valid claim. I therefore refuse the application under section 18(3).

Appeal

29   Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal
       must be lodged within 28 days of the date of this decision.

       S. Brown
       Deputy Director acting for the Comptroller