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Datasheet for the decision of 1 February 2017

Case Number: T 1627/11 - 3.5.07

Application Number: 04811984.6

Publication Number: 1700236

IPC: G06F17/30

Language of the proceedings: EN

Title of invention:
Systems and methods for unification of search results

Applicant:
Google Inc.

Headword:
Unification of search results/GOOGLE

Relevant legal provisions:
EPC Art. 56, 123(2)

Keyword:
Inventive step - all requests (no)

Decisions cited:

Catchword:

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Case Number: T 1627/11 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 1 February 2017

Appellant: (Applicant)	Google Inc. 1600 Amphitheatre Parkway Mountain View, CA 94043 (US)
Representative:	Kennedy, Richard E. Venner Shipley LLP 200 Aldersgate London EC1A 4HD (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 21 February 2011 refusing European patent application No. 04811984.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	R. Moufang
Members:	M. Jaedicke
	P. San-Bento Furtado

Summary of Facts and Submissions

I. The applicant (appellant) appealed against the decision of the Examining Division refusing European patent application No. 04811984.6, which was originally filed as international application PCT/US2004/039366 and published as WO 2005/066842. The application claims a priority date of 31 December 2003.

II. The Examining Division decided that the subject-matter of the independent claims of the main request, and of the first and second auxiliary requests, lacked inventive step (Articles 52(1) and 56 EPC) over the prior art disclosed in the following document:

D1: WO 03/036520, published on 1 May 2003.

In the written proceedings the Examining Division cited additional prior-art documents including:

D5: US 2002/147704, published on 10 October 2002.

III. With the statement of grounds of appeal, the appellant requested that the decision be set aside and that a patent be granted on the basis of one of the main and first auxiliary requests, both filed on 2 December 2010. The appellant further submitted that these requests had been considered at the oral proceedings and refused in the appealed decision.

IV. In a communication under Article 15(1) RPBA accompanying a summons to oral proceedings, the Board noted that the appellant had replaced its main request filed on 2 December 2010 with a new main request filed during oral proceedings before the Examining Division. The Board understood the appellant's requests to be

that the decision be set aside and that a patent be granted on the basis of one of the main and first auxiliary requests considered in the contested decision. The Board expressed *inter alia* the provisional opinion that claim 2 of the main request and claim 1 of the auxiliary request contained added subject-matter (Article 123(2) EPC) and that the subject-matter of claim 1 of both requests lacked inventive step (Article 52(1) EPC in combination with Article 56 EPC) in view of document D1 or alternatively in view of the newly cited prior-art document:

D6: Pogue, D.: "Finding Files and Web Sites with Sherlock 2", Chapter 15 of "MAC OS 9: THE MISSING MANUAL", pages 257 to 278, published on 30 March 2000.

Moreover, with respect to features of the dependent claims, the Board cited *inter alia* the following additional prior-art document:

D8: Hollaar, L. A.: "A Testbed for Information Retrieval Research: The Utah Retrieval System Architecture", Research and development in information retrieval, pages 227-232, ACM, USA, published in 1985.

V. With a letter dated 28 December 2016, the appellant replaced its main request with a new main request and maintained the main and first auxiliary requests considered in the contested decision as auxiliary requests (hereinafter referred to as first and second auxiliary requests).

VI. In the course of the oral proceedings, which were held as scheduled on 1 February 2017, the appellant replaced

the main request with a new main request. At the end of the oral proceedings, the chairman pronounced the Board's decision.

VII. The appellant requests that the decision under appeal be set aside and that a patent be granted on the basis of the main request filed in the oral proceedings or alternatively on the basis of the first auxiliary request corresponding to the request filed at the oral proceedings before the Examining Division as the then main request or the second auxiliary request submitted with letter dated 2 December 2010 as the then first auxiliary request.

VIII. Claim 1 of the main request reads as follows:

"A method of operating a client device to search for articles, the method comprising:

storing a local index of client articles comprising articles of a plurality of different types previously accessed or referenced by a user in a local data store (140);

outputting a first search query (204) for web search over a network to a remote web search engine (170) for querying a global index of network articles, said articles available on the World Wide Web, said first search query (204) being an HTTP GET request;

intercepting said first search query and generating a second search query (206) to search said local data store (140), wherein intercepting said first search query comprises recognising, at a network monitor, an HTTP GET request for a web search,

receiving a first result set (210) as a result of the querying of said global index;

receiving a second result set (208) as a result of the querying of said local index; and

displaying (216) the first and second results in combination."

IX. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that the following features were deleted:

"said first search query (204) being an HTTP GET request", and

"wherein intercepting said first search query comprises recognising, at a network monitor, an HTTP GET request for a web search".

X. Claim 1 of the second auxiliary request differs from claim 1 of the first auxiliary request in that it adds the feature "wherein said first search query comprises an HTTP GET request" at the end of the outputting step, in that the word "generating" is replaced by "modifying said first search query to generate" and in that it replaces "web search" with "internet search" and "remote web search engine" with "remote search engine".

The wording of the further claims of all requests is not relevant to the present decision.

XI. The essential arguments of the appellant relevant to this decision may be summarised as follows:

(a) Document D1 was not directed to web searches at all. Moreover, since D1 emphasised synchronisation it was not clear how the technology of D1 could work with a web search engine. D1 was silent on an interception as clarified in claim 1 of the main request. Hence, D1 was not a suitable starting

point for the assessment of inventive step.

(b) Document D6 was probably a better starting point for assessing inventive step than D1. However, D6 neither disclosed a browser-based system nor a combined local and global search. Moreover, there was no incentive in D6 motivating the skilled person to provide a combined local and global search. Even if a skilled person were to try to provide a combined search, he would still need to provide the queries for the local and global search. D6 did not disclose an interception of a search request. As it was possible to search multiple search engines in parallel, it was not clear how to monitor search requests. According to D6, searches for different types of data were separated out, whereas the claimed invention proposed a local index of different types of article. Hence, when there was a need to search locally and globally, both would be performed separately with different search options, but not in parallel. The combined search possibility of the invention was also more efficient for retrieving local and global data than the use of separate user interfaces.

Starting from D6, the skilled person would not arrive at the claimed solution, even if he tried to provide a combined search.

(c) Document D8 disclosed an old information retrieval system with a client/server architecture without any HTTP request. D8 did not support web searches, but instead was based on the LEXIS query language (D8, page 230, right column, first line). There was no disclosure of an interception of a request as

claimed in order to trigger a combined search. It disclosed only reformulating or delaying a query that is intercepted. The interception did not specifically pick out search requests and hence D8 did not teach to selectively monitor messages.

A skilled person would not consult D8 when starting from D6, as D8 predated the web. Moreover, D8 neither disclosed nor suggested the claimed solution.

(d) The appellant submitted that the network monitor of claim 1 was disclosed as an individual module which monitored the traffic on the network. The appellant referred to the original application, which contained a general disclosure of monitoring with different interception means such as a proxy server, a browser plug-in, a firewall or a network monitor (claims 9 to 12; page 7, last paragraph; page 8, lines 1 to 3; page 9, line 27).

(e) The claimed invention provided the advantage that no client-side script working with different web browsers was needed. Moreover, the invention was suitable for supporting a URL input box in a browser where the input could be either a web search request or a URL. However, the network monitoring needed some extra processing.

(f) With respect to the second auxiliary request, the appellant argued that no prior-art document disclosed the interception of the first query to a global index and the modification of this intercepted query to generate a second search query to search the local data store.

Reasons for the Decision

1. The appeal complies with the provisions referred to in Rule 101 EPC and is therefore admissible.

The invention

2. The application relates to a method for operating a client device to search for articles, a corresponding client device and a corresponding computer program. Articles "include, for example, word processor, spreadsheet, presentation, e-mail, instant messenger, database, and other client application program content files or groups of files, web pages of various formats, such as HTML, XML, XHTML, Portable Document Format (PDF) files, and audio files, video files, or any other documents or groups of documents or information of any type whatsoever" (see page 3, line 32, to page 4, line 2, of the international publication). The aim of the invention is to provide the user with access to many types of content (available via a local and a global index) in a simple and effective manner.

According to the application, a search query is sent from the client device over a network to a remote web search engine for querying a global index of articles available on the world wide web. The search query is intercepted at the client and a second search query is generated (see page 8, lines 4 to 16) to search a local data store storing a local index of client articles accessed or referenced by a user (for example emails of the user or results of prior web searches). The results of both queries are received at the client device and displayed in combination as shown for example in

Figure 3 of the application.

Main request - admission

3. Since the current main request was a response to (i) the preliminary opinion of the Board and (ii) a discussion of the clarity of the claims during the oral proceedings, and as it could be dealt with without adjournment of the oral proceedings, the Board admits it into the appeal proceedings.

Main request - inventive step

4. The Board agrees with the appellant that document D6 is a better starting point for assessing inventive step than document D1. D1 is not directed to searches using a web search engine and does not make use of an HTTP GET request.

5. The closest prior-art document D6 discloses the Sherlock 2 software, which runs on a client computer and allows a user to search for files and web sites (D6, page 257, first to last paragraph). Hence, D6 discloses a method of operating a client device to search for articles.

In order to support efficient searching in the file system, Sherlock 2 indexes the files on the local hard drive of the computer (D6, page 267, section titled "Finding Text in Your Files", to page 269, last paragraph). There are various types of files, such as word processing files, text files, HTML documents and email messages (D6, page 269, first paragraph). The files may comprise articles of a plurality of different types previously accessed or referenced by a user in a local data store. For example, D6 refers on page 267,

last paragraph, to "new documents you've written", which implies that those documents have been previously accessed by a user. As a further example, it has to be assumed that at least some of the emails and web pages mentioned on page 269, first paragraph, were either referenced or accessed.

In order to search the local file system, the user can input a file search query in Sherlock 2. This query is then performed using the local index, and the result set is received and displayed to the user (see D6, page 270, lines 1 to 9; Figure 15-6).

Sherlock 2 provides not only a search in the local file system, but also a search in the internet for available web pages by sending a search query via the internet to one or more remote web search engines such as Altavista.com, Yahoo.com, Excite or Lycos (D6, page 271, line 5, to page 275, line 4, and in particular page 272, lines 3 to 7). It was well known at the priority date that web search engines have a global index of indexed web pages. This is also acknowledged in the application itself on page 1, lines 14 and 15, and was not contested by the appellant. Hence, such a global index is implicitly disclosed in document D6.

According to document D6, Sherlock 2 displays the results received from several web search engines in combination to the user (D6, page 272, lines 3 to 7, page 273, last paragraph and Figure 15-8).

5.1 The subject-matter of claim 1 differs from the teaching disclosed in D6 in that:

(a) the web search query is intercepted at a network monitor by recognition of an HTTP GET request for a web search and is used to generate the second search query for querying the local index; and

(b) the results of the queries for the search in the file system and in the web are displayed "in combination".

5.2 The effect of these differences is that a user is able to perform a combined search in the local file system and the web and that the system displays the results of these searches in combination.

5.3 According to the established case law, all features contributing to the solution of a technical problem have to be considered for the assessment of inventive step. Features which do not contribute to the solution of a technical problem do not enter into the assessment of inventive step. Hence, it needs first to be determined whether the problem solved by the differences over the closest prior art is technical.

D6 already supports separate user interfaces for a web search and for a local search. Viewed from the perspective of a user, the effect of a combined search is that the user does not need to search with these different interfaces, but may search using a single interface based on a single query and obtain a display with a combined result.

The question whether data sources should be searched in combination or via separate searches is, at least in the present case, not a technical question that falls within the responsibility of a technically skilled person. The answer is determined by the preferences and needs of the end user. For example, Sherlock 2 offers many search options for searching the local file system which are not appropriate for a web search (D6, page 263, Figure 15-3). If these search options are important, a separate search is preferable. As a further example, Sherlock 2 already allows the user to select according to his own preferences which web search engines are to be searched in combination (D6, page 271, Figure 15-7). The responsibility of the technically skilled person is then to provide an implementation supporting a combined search for the data sources selected by the user.

In the Board's opinion, it follows that the combined search as such does not solve a technical problem over document D6. Hence, performing a combined search for web pages available on the internet and for files in the local file system of the client computer is a non-technical aim.

5.4 From the above reasoning, and taking into account that according to the established case law a non-technical aim may legitimately appear in the formulation of the technical problem, the Board concludes that the distinguishing features solve the technical problem of how to implement in the client-side search application of D6 a combined search for web pages and local files.

5.5 As the implementation of such a combined search in a computer is a technical activity which may contribute to an inventive step, the Board will now assess whether

the claimed implementation involved the exercise of inventive skills.

5.6 As the system of D6 already offers a simultaneous search of several web search engines via the internet channel (D6, page 272, lines 3-7) and as the user interface for the search in the file system offers many search options that are not relevant for a web search, such as searching for invisible or locked files (D6, page 263, Figure 15-3), the skilled person facing the problem identified above would immediately consider adding the local search in the file system to the internet channel. This allows the user to select one or more web search engines in addition to a search in the local file system using the same interface for entering search queries. Moreover, as D6 already displays the results received from several web search engines in combination (D6, page 273, Figure 15-8), a skilled person would simply extend this design to display the results of the local search in combination with the results of the web search.

As document D6 discloses that a single search query is sent from Sherlock 2 to several web search engines (D6, page 273, last paragraph and Figure 15-8), it is straightforward to use the web search request for querying the local index in order to implement a combined search. Consequently, the skilled person when faced with the technical problem identified above would use the web search query to generate a search query for the local index.

The application discloses that receiving the search query can be implemented in the following alternative components: a proxy server, a browser plug-in, a firewall, or a network monitor (original claims 9

to 12; page 7, line 31, to page 8, line 3). The application does not describe in detail how these alternatives are implemented, nor does it describe their advantages. Hence, it has to be assumed that the applicant regarded the implementation of these alternatives as a routine development.

The skilled person would be aware of several alternative possibilities for obtaining the web search request. In particular, he would understand that the web search query can be obtained at each processing stage between input from the user and execution by the web search engine. Consequently, the skilled person would consider, as one obvious alternative, having the web search query intercepted by a component monitoring the network when it is sent to a web search engine.

The claimed solution specifies that the search query is an HTTP GET request and that this request is then recognised by a network monitor. The Board agrees with the Examining Division that the use of an HTTP GET request was one of several obvious implementation possibilities for accessing a web search engine. Hence, using an HTTP GET request has no inventive merit.

The Board accepts that D6 does not disclose the interception of a search request or a network monitor. However, these features are obvious implementation options which a skilled person faced with the objective problem would consider. A skilled person would select one of the available implementation options also considering constraints such as the impossibility of modifying certain system components due to lack of access to the program code. For example, if the component comprising the user interface cannot be modified, the skilled person is forced by this

constraint to select a different implementation option involving a different component such as a network monitor.

The appellant's argument that D6 did not disclose a browser-based system is not convincing, as claim 1 is not limited to a browser-based system. As the alleged advantages of the claimed method (see section XI (e) above) are related to a browser-based system, they cannot support an inventive step of claim 1.

5.7 Furthermore, document D8 discloses an information retrieval architecture which provides a message-based structure to connect the modules of the system as clients and servers. Any module in the system can be replaced by a new module using a different algorithm as long as the new module complies with the message formats for that function (D8, abstract and Figure 1). The system described by D8 comprises a network monitor which is used *inter alia* to provide information regarding query complexity (D8, abstract, Figure 1, and page 231, left column, last paragraph). Moreover, one module intercepts a query message between the user interface and the backend functions, alters the query to improve either precision or recall, and sends the query to the backend servers (D8, page 231, left column, paragraph 4). Another module intercepts a query message between a client and a server in order to delay the message for simulation purposes (D8, page 231, right-hand column, second full paragraph).

Document D8 shows that the interception of queries for various purposes by components monitoring the network between clients (such as the user interface) and the servers (executing the queries) was known long before the priority date. Hence, D8 confirms that a skilled

person would consider the claimed implementation as a possible solution.

The appellant argued that D8 predated the world wide web and was not relevant as it did not concern web searches.

D8 proposes an architecture for a distributed, client/server-based information retrieval system. D8 allows different databases and other information retrieval systems to be queried (D8, page 229, Figure 1, and page 231, left-hand column, third paragraph) and is in this respect similar to D6. Hence, D8 is in the Board's opinion relevant.

The Board agrees with the appellant that D8 does not disclose the interception of a query triggering a second search. However, D8 shows that the interception of a query in a particular message format in order to obtain the query for further processing was known in the field of information retrieval.

6. It follows that the subject-matter of claim 1 of the main request lacks inventive step (Articles 52(1) and 56 EPC).

First auxiliary request - inventive step

7. Claim 1 of the first auxiliary request differs from claim 1 of the main request only in that certain features have been deleted (see section IX above). Consequently, the subject-matter of claim 1 of the first auxiliary request is more general than that of claim 1 of the main request and lacks inventive step (Articles 52(1) and 56 EPC) for the same reasons.

Second auxiliary request - added subject-matter

8. Claim 1 specifies that the "first search query comprises an HTTP GET request" (emphasis added). The appellant referred to page 8, lines 4 to 6, of the description as a basis. This passage reads: "In one embodiment, a network monitor recognizes search requests as they are sent to a global search index, for example recognizing a HTTP GET request for a search on a web search engine."

8.1 The Board understands this passage as stating that a search query can be transmitted as part of an HTTP GET request to a web search engine. By amending claim 1 of the second auxiliary request, the appellant has added the aspect that the HTTP GET request could be part of the search query. The Board is not aware of any basis for such a search query in the original application, and the appellant has not provided any further arguments supporting the amendment.

8.2 Consequently, the Board has serious doubts that claim 1 of the second auxiliary request does not extend beyond the content of the application as originally filed. However, the decision with respect to the second auxiliary request is based only on inventive step.

Second auxiliary request - inventive step

9. The Board considers it appropriate in the present case to assess inventive step, as the objection as to added subject-matter could have been overcome in a straightforward manner, namely by replacing the feature by "said first search query being an HTTP request" (emphasis added) as in claim 1 of the main request. The Board interprets claim 1 of the second

auxiliary request in this sense, which is also consistent with the description, for the following assessment of inventive step.

10. Claim 1 of the second auxiliary request is broader than claim 1 of the main request as it does not contain the network monitoring aspect. Moreover, it broadens the expression "web search" to "internet search" and the expression "remote web search engine" to "remote search engine". Finally, claim 1 of the second auxiliary request adds that the internet search query is modified to generate the search query for the local index. This has the effect of adapting the search query for querying the local index.

11. In the Board's opinion, modifying a query in order to generate a second query adapted to a different retrieval system is usually a mere necessity, because each query must be in a proper format to allow its execution. Such changes of search query formats were well known at the priority date (see for example D5, abstract). The Board concludes that the claimed query modification is a routine development. Consequently, claim 1 of the second auxiliary request does not involve an inventive step.

Conclusion

12. Since none of the requests can form the basis for the grant of a patent, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

P. Cremona R. Moufang

Decision electronically authenticated