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**Datasheet for the decision
of 8 March 2021**

Case Number: T 1971/18 - 3.5.07

Application Number: 11758903.6

Publication Number: 2550611

IPC: G06F17/30, H04L12/58,
G06Q30/02, G06Q10/10

Language of the proceedings: EN

Title of invention:

Method and apparatus for determining an analysis chronicle

Applicant:

Nokia Technologies Oy

Headword:

Determining an analysis chronicle/NOKIA TECHNOLOGIES OY

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - all requests (no) - mixture of technical and non-technical features

Decisions cited:

T 0049/99, T 0244/00, T 1023/06, T 1358/09, T 2230/10,
T 0697/17



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Case Number: T 1971/18 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 8 March 2021

Appellant: Nokia Technologies Oy
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Representative: Swindell & Pearson Limited
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 2 March 2018
refusing European patent application
No. 11758903.6 pursuant to Article 97(2) EPC**

Composition of the Board:

Chair J. Geschwind
Members: P. San-Bento Furtado
M. Jaedicke

Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division to refuse European patent application No. 11758903.6, which was filed as international application PCT/IB2011/051242 published as WO 2011/117833, for lack of inventive step in the subject-matter of the claims of a main request and first to fourth auxiliary requests. The closest prior art was considered to be a well-known "user device suited to receive information from external information sources comprising a memory and a processor which can be programmed to process information content according to cognitive rules".

The examining division cited the following documents:
D1: US 2009/0271778 A1, published on 29 October 2009;
D2: US 7 305 381 B1, published on 4 December 2007;
D3: WO 2009/065045 A1, published on 22 May 2009.

The examining division cited document D1 as exemplifying the prior-art device taken as starting point and expressed the opinion that documents D2 and D3 were equally suitable to be used as closest prior art to take away inventive activity.

- II. In the statement of grounds of appeal, the appellant maintained the requests considered in the appealed decision and annexed copies of the respective claims to the grounds of appeal. Furthermore, the appellant requested reimbursement of the appeal fee due to an alleged substantial procedural violation.

III. In a communication annexed to the summons to oral proceedings, the board introduced the following document into the proceedings:

D4: "News aggregator", Wikipedia, published online on 16 February 2010, https://en.wikipedia.org/w/index.php?title=News_aggregator&oldid=344390626.

The board expressed the view that at the priority date of the present application news or media aggregators were well known. Document D4 described such systems. The subject-matter of claim 1 of each of the requests was not inventive over a well-known apparatus configured with an aggregator as known at the priority date of the application. Most of the distinguishing features did not make a technical contribution.

With regard to the request for reimbursement of the appeal fee, the board informed the appellant that it intended to decide on allowability first in accordance with the appellant's requests.

IV. With a letter of response, the appellant filed amended second, third and fourth auxiliary requests to replace the previous corresponding auxiliary requests conditionally on the new requests being admitted.

V. Oral proceedings were held as scheduled, at the end of which the Chair announced the board's decision.

VI. The appellant's final requests were that the decision under appeal be set aside and that a patent be granted on the basis of one of the main request or the first auxiliary request, both requests as considered in the contested decision, or one of the amended second, third or fourth auxiliary requests. The appellant further requested reimbursement of the appeal fee.

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

"An apparatus (10), comprising:

a processor (20);

memory (42) including computer program code, the memory (42) and the computer program code configured to, working with the processor (20), cause the apparatus (10) to perform at least the following:

receiving a first set of information associated with a first information source (101);

performing a first analysis of, at least part of, the first set of information based, at least in part, on an analysis criteria (200), the analysis criteria comprising a root node (230) and a plurality of nodes (201-210) associated with the root node, the plurality of nodes comprising a plurality of nodes relating to a condition and one or more nodes relating to a directive that associates two or more of the nodes relating to a condition;

determining that the first set of information complies with the analysis criteria (200) at least by virtue of the root node (230) of the analysis criteria being determined positively by the first set of information;

determining an analysis chronicle (220) based, at least in part, on the first analysis wherein the analysis chronicle (220) is determined if the first set of information complies with the analysis criteria (200), wherein the analysis chronicle (220) is a record that indicates which nodes (201-210, 230) of the analysis criteria (200) are positively determined by the first set of information;

determining that the analysis chronicle (220) has changed by determining that a difference between the analysis chronicle (220) and another analysis chronicle (240) is significant, the another analysis chronicle being associated with a previously received set of

information, wherein the previously received set of information complies with the analysis criteria at least by virtue of the root node of the analysis criteria being positively determined by the previously received set of information, wherein determining that the difference between the analysis chronicle (220) and the another analysis chronicle (240) is significant comprises determining that the difference between the analysis chronicle (220) and the another analysis chronicle (240) is within a particular number of nodes from the root node (230); and

performing at least one operation for causing a user to be presented with information in response to determining that the analysis chronicle (220) has changed."

VIII. Claim 1 of the first auxiliary request differs from that of the main request in that the text "wherein the at least a part of the first set of information on which the first analysis is performed comprises one or more of text data, photo data, video data, voice data," has been inserted after "at least in part, on an analysis criteria (200)," and in that the text ", and wherein if the difference is not significant the at least one operation is not performed" has been added at the end of the claim.

IX. Claim 1 of the amended second auxiliary request differs from claim 1 of the main request in that the text starting with "performing at least one operation" at the end of the claim has been replaced with the following:

"performing at least one operation for causing a user to be graphically presented with historical analysis chronicle information relating to one or more analysis chronicles (220, 240) in response to determining that

the analysis chronicle (220) has changed, unless it is determined that such graphical representation would interfere with another operation, wherein the another operation comprises a phone call."

- X. Claim 1 of the amended third auxiliary request differs from the main request in that the following text has been inserted after "are positively determined by the first set of information;":

"determining a significance based, at least in part, on an evaluation of whether available resources of the apparatus are adequate or limited, the available resources of the apparatus comprising at least one of memory, processor utilization, or power, wherein the significance comprises a particular number of nodes from the root node;".

- XI. Claim 1 of the amended fourth auxiliary request differs from claim 1 of the first auxiliary request in that the text starting with "performing at least one operation [...]" at the end of the claim was replaced with the following text:

"performing at least one operation for causing a user to be graphically presented with historical analysis chronicle information relating to one or more analysis chronicles (220, 240) in response to determining that the analysis chronicle (220) has changed, unless it is determined that such graphical representation would interfere with another operation, wherein the another operation comprises a phone call, and wherein if the difference is not significant the at least one operation is not performed."

- XII. The appellant's arguments, where relevant to this decision, are addressed in detail below.

Reasons for the Decision

Application

1. The application concerns an apparatus and method for automatically monitoring information sources for a user and presenting information to the user without superfluous content such as a similar news story from a plurality of information sources (see the international publication, page 3, first five lines).
- 1.1 The invention relies on "analysis criteria" to express rules for filtering information, for example for filtering messages to be stored or deleted, on the basis of conditions such as the presence or absence of a word, structure, trend or context. The analysis criteria is represented by a graph, such as a graph in which each leaf node corresponds to a condition and each intermediate node corresponds to a "directive" associating the conditions to which it is connected. A directive may relate, for example, to a Boolean operator such as "or" and "and", or to a "spatial operation" such as "is within 6 words of" (page 5, lines 1 to 18, Figure 2A).
- 1.2 In the method according to the invention, "analysis chronicles" are determined, where an analysis chronicle indicates which nodes of the analysis criteria are positively determined by a set of information. An analysis chronicle is associated with analysis criteria and one or more information sources, e.g. an email account or RSS feeds, and is determined on the basis of the analysis criteria and the information associated with the information sources (page 3, lines 6 to 26, Figure 1). An analysis chronicle is represented by an

"activity detection graph" derived from the analysis-criteria graph. Each node is determined negatively (e.g. "false" or null value) or positively (e.g. "true" or a non-null value) (page 5, line 19, to page 6, line 25).

- 1.3 The method according to the invention determines whether a change occurred between two analysis chronicles. Change determination may be based, at least in part, on the presence of a significant difference between the analysis chronicles. If a change occurred, an operation is performed, e.g. providing indication of at least part of the analysis chronicle (page 6, line 26, to page 8, line 4, Figure 3).

Main request

2. *Inventive step - claim 1*

- 2.1 At the priority date of the present application news or media aggregators were well known. Document D4 describes such systems and respective features which were already common general knowledge at the time.

The board finds it appropriate to assess inventive step starting from a well-known apparatus configured with such an aggregator which continuously receives sets of information from different information sources filtered according to the user's informational preferences, and presents the filtered and aggregated information to the user (D4: page 1, second paragraph; page 2, section "Functions", page 3, "Client software"). The user's informational preferences were often represented in terms of conditional expressions involving keywords (page 3, "Feed filtering").

2.2 The subject-matter of claim 1 differs from the well-known apparatus configured with an aggregator in that (using an itemisation corresponding to that used in the grounds of appeal):

- (e to g) the analysis criteria comprises a root node and a plurality of nodes associated with the root node, the plurality of nodes comprising a plurality of nodes relating to a condition and one or more nodes relating to a directive that associates two or more of the nodes relating to a condition;
- (h) a set of information is determined to comply with the analysis criteria at least by virtue of the root node of the analysis criteria being determined positively by the set of information;
- (i) and (j) if the set of information complies with the analysis criteria, the analysis chronicle is determined as a record that indicates which nodes of the analysis criteria are positively determined by the set of information;
- (k to n, o') information is presented to the user if the analysis chronicle is determined to have changed by determining that a difference between the analysis chronicle and another analysis chronicle associated with a previously received set of information is significant, wherein the difference between the analysis chronicle and the another analysis chronicle is significant if it is within a particular number of nodes from the root node.

2.3 The appellant conceded that the algorithm of the distinguishing features per se represented a mathematical method, but argued that it contributed to a technical effect. The invention served the technical purpose of conditionally reducing use of the energy-

consuming presentation device when information was received. This distinguished the present case from that underlying decision T 1358/09 of 21 November 2014.

The appellant further argued that the technical effect was the reduction of the operations being performed, as was disclosed in the application on page 7, lines 13 to 15. The distinguishing features were independent of the type of data and were not about presentation of information as such. They were based on technical considerations. Document D4 was about aggregating; it did not disclose feed filtering and did not disclose reducing frequency of the operations for presenting information to the user.

- 2.4 The board is not convinced by these arguments. Document D4 describes filtering, in that it discloses on page 2, first paragraph, that the aggregator checks for new content, and in the sixth paragraph that the "users can choose what items can be shown in their RSS readers, like title, author or others". Filtering is also disclosed on page 3, section "Feed filtering".

Even though the passage on page 7 cited by the appellant refers to the purpose of reducing the likelihood of operations being performed, the application also mentions the purposes of the invention (see also page 3, lines 1 to 5, of the international publication) of deciding which information to present to the user and avoiding distracting the user with repeated information. Presentation of information as such is excluded from patentability under Article 52(2) (d) and (3) EPC. In the context of the present invention, the reduction of user distraction or disruption by selectively presenting information to the user has an effect on the cognitive burden since it avoids that the user is distracted from analysing

cognitive data presented to him/her. Presentation of information also fulfils the cognitive interests or needs of the user. However, none of these is a technical purpose or is based on technical considerations.

- 2.5 Only the purposive use of non-technical features in the context of a solution to a technical problem may contribute to the technical character of an invention (see T 49/99 of 5 March 2002, Reasons 7) and a bonus effect which is at best incidental to a non-technical solution is not a technical effect on which an inventive step can be based (T 1023/06, 7 December 2006, Reasons 3.7.2, T 2230/10 of 3 July 2015, Reasons 3.4 to 3.8). The purposive use can be established if technical considerations are present for the adoption of non-technical features with the view to achieve a technical effect or solve a technical problem (T 697/17 of 17 October 2019, Reasons 5.2.3 and 5.2.4, T 244/00 of 15 November 2001, Reasons 12 and 13).

In the prior-art aggregator, filter criteria (corresponding to the analysis criteria of the invention) are used and updates are presented to the user. Compared to that, the distinguishing features serve the purpose of presenting to the user information only if it significantly differs from previously displayed information. Within the context of the claimed apparatus, the distinguishing features are not concerned primarily with the reduction of operations, which only occurs if the information does not change significantly. Therefore, the purpose of the distinguishing features is not technical.

A technical contribution could reside on the implementation of the apparatus. The distinguishing features provide details of the software implementation, including the data model used to represent the analysis criteria and analysis chronicle as graphs, and details of how they are used to determine significant changes of an information set. However, these features are not based on technical considerations as they concern only the abstract data model and mathematical algorithms used, which are computer-program features as such excluded from patentability (Articles 52(2)(c) and (3) EPC).

- 2.6 Therefore, none of the distinguishing features contributes to solve a technical problem. Since such non-technical features cannot support the presence of an inventive step, the subject-matter of claim 1 of the main request is not inventive (Article 56 EPC).

First auxiliary request

3. Claim 1 of the first auxiliary request differs from that of the main request in that the following features were added:

- (p) at least a part of the first set of information on which the first analysis is performed comprises one or more of text data, photo data, video data, voice data;
- (q) wherein if the difference is not significant the at least one operation is not performed.

4. *Inventive step - claim 1*

- 4.1 The appellant argued that features (p) and (q) of the first auxiliary request contributed further to the reduction of energy consumption. However, the board is not convinced that these distinguishing features

contribute to solving such a technical problem, for the reasons given above. Furthermore, feature (p) is disclosed in document D4 (page 2, section "Functions", last paragraph) and feature (q) has already been taken into account in the inventive-step assessment of the main request as the board considered that the operation of presenting information is performed only if the difference between the analysis chronicles is significant.

- 4.2 Therefore, claim 1 of the first auxiliary request does not meet the requirements of Article 56 EPC and is therefore not allowable.

Amended second to fourth auxiliary requests

5. Claim 1 of the amended second auxiliary request differs from claim 1 of the main request in that it further specifies that in the last step of presenting information,
- (r) the user is graphically presented with historical analysis chronicle information relating to one or more analysis chronicles,
 - (r1) unless it is determined that such graphical representation would interfere with another operation,
 - (r2) wherein the another operation comprises a phone call.
6. Claim 1 of the amended third auxiliary request differs from that of the main request in that it includes the following step:
- (s) determining a significance based, at least in part, on an evaluation of whether available resources of the apparatus are adequate or limited, the available resources of the apparatus comprising at least one of memory, processor

utilization, or power, wherein the significance comprises a particular number of nodes from the root node.

7. Claim 1 of the amended fourth auxiliary request differs from claim 1 of the amended second auxiliary request in that it includes features (p) and (q).

Admission into the proceedings - amended requests

8. The amended second, third and fourth auxiliary requests represent genuine attempts by the appellant to overcome the board's inventive-step objection which was based on a starting point different from that of the decision under appeal and illustrated by document D4 introduced by the board for the first time into the proceedings. These are exceptional circumstances which justify admitting the amended auxiliary requests under Article 13(2) RPBA 2020. Therefore, the board admits the amended second, third and fourth auxiliary requests into the appeal proceedings.

9. *Inventive step - claim 1 of amended second auxiliary request*

- 9.1 With regard to the amended second auxiliary request, the appellant argued that displaying a graphical representation was a high energy-consuming operation. The feature "another operation" related to a phone call, which required resources. Features (r1) and (r2) were purposively directed to the management of computer resources. The additional features of the amended second auxiliary request resolved conflicts by giving the operation of presenting the information a lower priority than other operations. Managing required computer resources was a technical problem.

The board agrees that the purposive management of computer resources based on technical considerations is a technical problem. However, delaying an operation if it interferes with computer resources used by another operation is an obvious way of managing scarce resources in a computer system. Consequently, features (r1) and (r2) do not make an inventive contribution.

The board is of the opinion that there is no technical reason for graphically presenting historical analysis chronicle information and therefore feature (r) of the amended second auxiliary request concerns presentation of information as such.

9.2 From the above, the board concludes that the subject-matter of claim 1 of the amended second auxiliary request does not involve an inventive step (Article 56 EPC).

10. *Inventive step - claim 1 of amended third auxiliary request*

10.1 The appellant argued that the additional feature of claim 1 of the amended third auxiliary request solved the objective technical problem of modifying the prior art disclosed in document D4 for automatically downloading information updates in a manner that better managed computing resources of the apparatus. The technical effect was that the information was presented depending on the available resources. The approach claimed went beyond basic computer resource management. There was no hint at such a feature in the cited prior art.

10.2 Claim 1 specifies that an information update is presented in response to a determination which is based (through the significance and change) at least in part

on an evaluation of whether available resources of the apparatus are "adequate or limited". The board agrees that these resources, which are specified as comprising at least one of memory, processor utilization or power, are technical. However, the claim only vaguely refers to the significance being based on an evaluation of whether available resources are "adequate or limited", without specifying how the significance is affected based on the evaluation. The board is therefore not convinced that a "better management of computing resources" is achieved, nor that the resource management of claim 1 expressed in such broad terms goes beyond basic computer resource management.

10.3 Furthermore, as the board explained in its preliminary opinion, the skilled person faced with the technical problem of meeting the non-technical requirement of fulfilling the user's needs to obtain new information in a computer with limited computer resources would have considered limiting the display of new information to information which changed significantly from previously displayed information. Implementing this by means of a significance value would have been a matter of standard programming skills.

10.4 Therefore, the subject-matter of claim 1 of the amended third auxiliary request is not inventive (Article 56 EPC).

11. *Inventive step - claim 1 of amended fourth auxiliary request*

11.1 The features of claim 1 of the amended fourth auxiliary request were already assessed with regard to the first auxiliary request (features (p) and (q)) and amended second auxiliary request. As explained with regard to the first auxiliary request, feature (p) is not a

distinguishing feature. Feature (q) has already been taken into account in the inventive-step assessment of the main request and amended second auxiliary request.

- 11.2 Therefore, for the same reasons as given for the main request, first auxiliary request and amended second auxiliary request, claim 1 of the amended fourth auxiliary request does not meet the requirements of Article 56 EPC.

Concluding remarks and reimbursement of the appeal fee

12. Since none of the requests is allowable, the appeal is to be dismissed.
13. In the grounds of appeal, the appellant alleged that the examining division had incorrectly applied the approach described in the Guidelines for Examination for assessing inventive step of mixed-type inventions and, with regard to the second auxiliary request, had formulated a technical problem containing pointers to the technical solution. In addition, for the main request the appellant claimed that the examining division had not properly considered arguments by the appellant which were clearly central to its case, in violation of Article 113 EPC.
- 13.1 In its communication pursuant to Article 15(1) RPBA 2020, the board announced that it intended to decide first on the allowability of the appeal in accordance with the appellant's requests.

Since the appeal is not allowable, the appeal fee cannot be reimbursed (Rule 103(a) EPC) and the board does not have to decide on whether a substantial procedural violation occurred.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



S. Lichtenvort

J. Geschwind

Decision electronically authenticated