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Datasheet for the decision of 6 December 2017

Case Number: T 1312/13 - 3.5.07

Application Number: 00917562.1

Publication Number: 1177512

IPC: G06F17/30

Language of the proceedings: EN

Title of invention:
Method for extracting information from a database

Applicant:
Qliktech International AB

Headword:
Information extraction/QLIKTECH INTERNATIONAL

Relevant legal provisions:
EPC Art. 84, 113(2)

Keyword:
Basis of decision
Claims - clarity (no)

Decisions cited:
T 0255/05

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Boards of Appeal

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Case Number: T 1312/13 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 6 December 2017

Appellant: (Applicant)	Qliktech International AB Forskningsbyn Ideon 223 70 Lund (SE)
Representative:	Persson, Albin Hansson Thyresson Patentbyrå Box 73 201 20 Malmö (SE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 21 January 2013 refusing European patent application No. 00917562.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	R. Moufang
Members:	R. de Man
	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. 00917562.1, published as international application WO 00/55766.

II. The Examining Division decided that all claims of the sole substantive request were unclear within the meaning of Article 84 EPC and that their subject-matter was not sufficiently disclosed within the meaning of Article 83 EPC.

III. With the statement of grounds of appeal, the appellant filed a main request and an auxiliary request replacing the sole substantive request considered in the decision under appeal.

IV. In a communication accompanying a summons to oral proceedings, the Board *inter alia* expressed the preliminary view that neither request fulfilled the requirements of Article 84 EPC. Although the Examining Division's objection under Article 83 EPC appeared to be unjustified, some of the clarity objections could also be relevant for the question of sufficiency of disclosure. If the objections under Articles 83 and 84 EPC were overcome, it appeared to be appropriate to remit the case to the Examining Division for assessing inventive step.

V. By letter of 6 November 2017, the appellant filed a set of amended claims. It explained why it considered the amended claims to overcome the objections under Articles 83 and 84 EPC and requested that the case be remitted to the Examining Division for assessing inventive step.

VI. In a further communication, the Board informed the appellant that, in view of the appellant's letter as a whole, it assumed the appellant to have withdrawn the requests filed with the statement of grounds of appeal. The Board also indicated that the amended claims appeared to contain deficiencies under Articles 84 and 123(2) EPC and drew the appellant's attention to the question of sufficiency of disclosure.

VII. By a letter faxed one day before the oral proceedings, the appellant informed the Board that it would not be represented at the oral proceedings. It made no comments on the Board's communication.

VIII. Oral proceedings were held in the appellant's absence on 6 December 2017. At the end of the oral proceedings, the chairman pronounced the Board's decision.

IX. Claim 1 of the request filed with the letter of 6 November 2017 reads as follows:

"A method for extracting information from a database, which comprises a number of data tables containing values of a number of variables and forming a branching data structure in which there is only one connecting path between any two data tables, each data table consisting of at least one data record including at least two of said values, said information being extracted by evaluation of at least one mathematical function operating on one or more selected calculation variables, said extracted information being partitioned on one or more selected classification variables, said method comprising the steps of:

initially reading the data records of the database into primary memory of a computer, and for each new

variable instantiating a data structure for storing the assignment of unique binary codes to unique data values of the variable in the primary memory;

identifying all data tables containing at least one value of one of said selected calculation or classification variables, such data tables being boundary tables;

identifying among said boundary tables a first subset of boundary tables containing selected calculation variables,

identifying all data tables that have variables in common with said subset of boundary tables and connect the same, such data tables being connecting tables and such common variables being connecting variables;

electing a starting table among said first subset of boundary tables and connecting tables;

building a conversion structure that directly links the binary codes assigned to values of each selected variable in said boundary tables to the binary codes assigned to corresponding values of one or more connecting variables in said starting table by successively reading data records of each of said boundary tables and creating a link between each unique value of the connecting variable and a corresponding value of the selected calculation or classification variable, each connecting variable linking the starting table to the boundary tables; and

building said final data structure, which includes a number of data records, each of which contains a field for each selected classification variable and an aggregation field for said mathematical function, wherein said building step includes sequentially reading a data record of said starting table, creating a current combination of values of said selected variables by using said conversion structure to convert each value of each connecting variable in said data

record into a value of at least one corresponding selected variable, evaluating said mathematical function for said current combination of values, such that said evaluation yields a final data structure containing a result of said mathematical function for each unique combination of values of the classification variables, and aggregating the result of said evaluation in the appropriate aggregation field based on the current value of each selected classification variable."

X. The appellant's arguments as relevant to this decision are discussed in detail below.

Reasons for the Decision

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

2. *The appellant's requests - Article 113(2) EPC*

2.1 In its letter of 6 November 2017, the appellant did not state whether it maintained or withdrew the main request and the auxiliary request filed with the statement of grounds of appeal. The absence of an explicit statement to the effect that pending substantive requests are maintained normally cannot be taken to mean that those requests are withdrawn.

2.2 In the present case, however, the letter contains the statement that "the objections under Article 83 and 84 EPC have been overcome" and the request that "the case is remitted to the Examining Division for assessing inventive step", and it lacks any argument in support of the previously filed requests. In the Board's view,

these are indications that the appellant meant to replace its pending requests with the newly filed claims.

2.3 Moreover, if it were to be assumed that the main request and the auxiliary request were maintained, the appellant's letter would leave the Board in doubt about the order in which it was to consider the requests: the appellant referred to the newly filed claims only as "a set of amended claims", not as "a new main request" or "a second auxiliary request". Under Article 113(2) EPC, the EPO is to examine, and decide upon, the European patent application only in the text submitted to it, or agreed, by the applicant. In case of multiple substantive requests, this means that it is the responsibility of the applicant or appellant to specify the order in which its requests are to be examined (cf. decision T 255/05 of 18 October 2005, reasons 17).

2.4 In view of these considerations, the Board informed the appellant, in its further communication, that it assumed that the previously filed requests had been withdrawn and that the amended set of claims formed the basis for the appellant's sole substantive request. Since the appellant has not expressed disagreement with this observation, the Board now considers it to have been established that the main request and the auxiliary request are no longer maintained and that the appellant requests that the decision under appeal be set aside and that the case be remitted to the Examining Division for assessing inventive step on the basis of the claims filed with the letter of 6 November 2017. The Board is therefore in a position to proceed with the examination of these claims without infringing Article 113(2) EPC.

3. *The appellant's request for remittal*

Since the Examining Division based its decision on the grounds of lack of clarity and insufficiency of disclosure, the Board considers that it should not accede to the appellant's request for remittal for further prosecution without first having examined the amended claims under Articles 83 and 84 EPC.

4. *The invention*

4.1 The application relates to extracting aggregate information from a database. The database consists of a number of database tables, each table having rows and columns, where rows correspond to data records and columns to data-record fields. The application refers to fields as "variables". The aggregate information to be extracted is selected by specifying a mathematical function, one or more calculation variables on which the mathematical function operates and one or more classification variables (also referred to as dimensions). In one example, the function is "SUM(x*y)", the calculation variables are "Number" and "Price", and the classification variables are "Year" and "Client". In this case, the aggregate information consists of the product of the number of sold items ("Number") and price per item ("Price") summed over all product items, i.e. "SUM(Number*Price)", the sum being calculated for each combination of year and client. In other words: total sales per year and client.

4.2 The invention proposes extracting aggregate information essentially by selecting a "starting table" and looping over the data records of that table. Data records of the starting table are linked to records of other tables via common "connecting" variables. For each data

record, these connections are followed to retrieve the values of calculation and classification variables not present in the starting table, the mathematical function is applied to the retrieved values, and the results are aggregated to obtain a "final data structure". This process creates and employs "conversion structures" that, for each connecting variable linking the starting table to a table containing a selected variable, directly links the binary code of each value of the connecting variable to the binary code of a value of the selected variable.

4.3 To speed up the extraction process, the data records of the database are first read into the computer's primary memory. In one preferred (and claimed) embodiment, the amount of data that needs to be stored in the primary memory is reduced by assigning a "binary code" to each different value of a data variable and storing the data records in the primary memory as binary codes.

5. *Clarity - Article 84 EPC*

5.1 Independent method claim 1 includes *inter alia* the following features:

- identifying among said boundary tables a first subset of boundary tables containing selected calculation variables;
- identifying all data tables that have variables in common with said subset of boundary tables and connect the same, such data tables being connecting tables and such common variables being connecting variables;
- electing a starting table among said first subset of boundary tables and connecting tables.

On the one hand, these features specify that the "first subset" consists of "boundary tables containing selected calculation variables". On the other hand, they specify that a starting table is selected "among said first subset of boundary tables and connecting tables", which suggests that the "first subset" includes connecting tables as well as boundary tables. This discrepancy renders claim 1 unclear.

The first two steps were intended to correspond to the description on page 9, lines 12 to 16, which states that "a subset (B) can be defined that includes all boundary tables (Tables 1-2) containing such calculation variables and any connecting tables between such boundary tables in the snowflake structure". According to this passage, the (first) subset is to include not only connecting tables but also all boundary tables containing selected calculation variables, whereas the claim refers merely to "boundary tables containing selected calculation variables". This discrepancy between the claim and the description throws further doubt on the intended scope of claim 1.

5.2 Claim 1 is also unclear in that the expression "said final data structure" in the step "building said final data structure ..." lacks an antecedent in the claim.

5.3 According to claim 1, the step of "building" the "final data structure" includes the following steps:

- sequentially reading a data record of said starting table,
- creating a current combination of values of said selected variables by using said conversion structure to convert each value of each connecting

variable in said data record into a value of at least one corresponding selected variable,
- evaluating said mathematical function for said current combination of values, such that said evaluation yields a final data structure containing a result of said mathematical function for each unique combination of values of the classification variables, and
- aggregating the result of said evaluation in the appropriate aggregation field based on the current value of each selected classification variable.

Hence, the claim mentions two "final data structures": a final data structure produced by the "building" step and a final data structure produced by the "evaluating" step, which is an intermediate sub-step of the "building" step. It is not clear from the claim how these two "final data structures" relate to each other.

5.4 These clarity problems arise from the amendments made by the appellant in the letter of 6 November 2017, and the Board does not rule out that they can be overcome by suitable amendments. But the appellant chose not to attend the oral proceedings before the Board.

6. *Sufficiency of disclosure - Article 83 EPC*

6.1 In its communication accompanying the summons to oral proceedings, the Board expressed doubt that the invention as claimed sufficiently restricted the choice of a "starting table" for the invention to work over the whole scope claimed. In its further communication, the Board elaborated on its doubts by giving a specific example in which the starting table, although being a "boundary table" in the "first subset" of claim 1, appeared to be unsuitable.

6.2 As the Board does not have the benefit of the appellant's full explanations on this issue - the appellant refrained from commenting in writing and chose not to attend the oral proceedings - and the appeal in any event cannot be allowed, the Board prefers not to examine further its objection under Article 83 EPC so as not to prejudice two divisional applications that are still pending before the Examining Division.

7. *Conclusion*

Since the sole substantive request on file is not allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

I. Aperribay R. Moufang

Decision electronically authenticated