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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN MARK MORRIS and TIMOTHY KRAUS

Appeal 2010-010697
Application 11/622,622
Technology Center 2100

Before JOSEPH L. DIXON, ST. JOHN COURTENAY III, and CARLA M. KRIVAK, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeals under 35 U.S.C. § 134(a) from a final rejection of claims 1-18. We have jurisdiction under 35 U.S.C. § 6(b).

We Affirm.

STATEMENT OF THE CASE

Appellants' invention is directed to "[a] system and method for use in retrieving rows of data from at least one table in a database system comprising tables of data stored on one or more storage facilities and managed by one or more processing units." (Spec. 16, Abstract of the Disclosure). Independent claim 1, reproduced below, is representative of the subject matter on appeal:

1. A method for use in retrieving rows of data from at least one table in a database system comprising tables of data stored on one or more storage facilitates and managed by one or more processing units, the method comprising;

maintaining in computer memory a plurality of samples each comprising a row retrieved from a table in the database, the samples associated with age data representing the order in which the samples were retrieved;

calculating a number samples (S) each comprising a row of the table required to be maintained that are representative of the table;

calculating a number of samples (A) each comprising a row of the table to remove from the samples maintained in computer memory;

removing the number of samples calculated to be removed from the oldest samples of the samples maintained in computer memory;

calculating a number of samples (R) each comprising a row of the table to retrieve from the table;

retrieving R new samples each comprising a row of the table from the table; and

storing the R new samples with the samples maintained in computer memory.

REJECTIONS

1. The Examiner rejected claims 1-8 and 14-18 under 35 U.S.C. § 103(a) based upon the combined teachings and suggestions of Markl (US Pat. App. Pub. No. 2008/0133454 A1) and Colossi (US Pat. App. Pub. No. 2004/0215626 A1).
2. The Examiner rejected claims 9-13 under 35 U.S.C. 103(a) based upon the combined teachings and suggestions of Markl in view of Zilio (US Pat. App. Pub. No. 2003/0088541 A1).

GROUPING OF CLAIMS

Based on Appellants' arguments, we will decide the appeal on the basis of representative claims 1, 9, and 14. *See* 37 C.F.R. § 41.37(c)(1)(iv).

ANALYSIS

Claims 1-8

At the outset, we observe that Appellants present the following repeating pattern of argument: (1) Appellants recite the language of the claim, (2) reproduce the cited portions of the references, (3) describe or characterize the "general" teachings of the cited portions, and (4) assert that these cited portions "in no manner" describe or suggest the claim limitations. (App. Br. 6-13).

To the extent that Appellants rely on this pattern of argument, we find Appellants have failed to present substantive arguments that rebut the specific underlying factual findings made by the Examiner in support of the ultimate legal conclusion of obviousness (*see* Ans. 4-16). We note that a

statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim. *See* 37 C.F.R. § 41.37(c)(1)(iv). Moreover, Attorney arguments and conclusory statements that are unsupported by factual evidence are entitled to little probative value. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997).

Regarding the disputed limitation of a plurality of samples "each comprising a row retrieved from a table in the database" (claim 1), we agree with the Examiner's legal conclusion of obviousness:

> To have samples from a database, however, be they columns, tables or something else implies that having samples of rows are obvious. Rows are the most obvious types of samples in a database and this obviousness is shown by the secondary reference Colossi (in lines 5-8, paragraph [0380], page 28 and lines 4-6, paragraph [0383], page 29).

(Ans. 17).

Regarding the disputed limitation of "samples associated with *age data* representing the order in which the samples were retrieved" (claim 1) (emphasis added), we agree with and adopt the Examiner's detailed response:

> In one of their few substantive arguments in the paragraph starting at the bottom of page 7 of the Appeal Brief and ending at the top of page 8, the applicants refer the concept of samples that comprise a row (as well as to the concept of "age data"). The applicants appear to be implying that the samples of Markl are purely statistics. It is true that Markl has an emphasis on statistics. In order to obtain statistics, however, Markl takes samples of an actual database. In order to obtain statistics in paragraph [0039], page 4, Markl "takes as input a list G of tables." Here, tables are samples. In order to confirm statistics, in paragraph [0049], page 4, 2000 pages of a 4000 page table are samples. Here, it is not stated whether the samples are

> rows, columns, tables or some other subset of the database, but it is clear that the samples are part of the database. Similarly, the small samples from a table T in lines 1-4, paragraph [0055], page 4 are from the database (and not merely statistics). Furthermore, to get histograms for each analyzable column, requires taking analyzable columns as samples as is further substantiated in paragraphs [0057] and [0059], page 5. Regarding the "age data representing the order in which the samples were received," the examiner admits that Markl only suggests this limitation. The comparison of new and previous table statistics in paragraph [0052], page 4 suggests that there is a way to distinguish how old the tables taken as samples are. The XML code in Colossi, however, for taking samples in paragraph [0332], page 22 and paragraph [0335], page 23 clearly marks the samples with version numbers. Version numbers are one of the obvious techniques of dating programs and/or data.

(Ans. 17-18).

Appellants advance a substantive argument regarding the rows contained in Colossi's summary tables (paras. [0068]-[0069]):

> The rows contained in the summary table are not samples of rows of a table of the database, and incorporating the summary table rows described in Colossi into the system of Markl would not result in the method for use in retrieving rows of data from at least one table in a database system comprising tables of data stored on one or more storage facilities and managed by one or more processing units recited in claim 1.

(App. Br. 13)

However, we agree with and adopt the Examiner's detailed response:

> Now, the applicants make a substantive argument, in the first full paragraph of page 13 of the Appeal Brief, that the summary table of paragraph [0380], page 28 of Colossi is not a database table because it is a materialized view with aggregations. According to lines 3-6, paragraph [0069], page 4 of Colossi, "a summary table is a hybrid of a view and a table." A view of a

> database table is a table and a hybrid between a table and a table is a table. Furthermore, in lines 6-8, paragraph [0069], page 4 of Colossi, "a summary table can be optimized" and "can have indexes, be partitioned, and exist in a tablespace." These are all characteristics of tables of a database. Thus, to take a sample of rows of a summary table of Colossi is to take a sample of rows of a table of a database.

(Ans. 18).

We also observe that Appellants do not further rebut the Examiner's detailed responses by filing a Reply Brief. On this record, we are not persuaded of error regarding the Examiner's underlying factual findings and ultimate legal conclusion of obviousness. Therefore, we sustain the rejection of claim 1, and of claims 2-8 (not argued separately) which fall therewith. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Claims 14-18

Regarding independent claim 14, Appellants contend:

> With regard to the claim 14 limitation of setting a timer associated with the at least one table to expire at a time calculated from the refresh period (? T1) "thereby triggering the obtaining of a sample of data comprising rows of the at least one table," the Examiner cited paragraph 0055 (reproduced above) of Markl as allegedly disclosing such a method step. Applicants respectfully disagree. Paragraph 0055 of Markl generally describes taking a sample from each table (T) and computing histograms therefrom. However, the samples described by Markl are directed to analyzable columns rather than sample data comprising rows of a table. Further, Markl in no manner describes or suggests a "size of the sample calculated at least partly from the refresh percentage P."

(App. Br. 14).

The Examiner disagrees:

> The refreshment of Markl in lines 4-6, paragraph [0020], page 2 takes place in maintenance window in lines 12-17, paragraph [0033], page 3 which occurs repeatedly in a time period according to lines 4-7, paragraph [0083], page 7. This time period of the maintenance window is a refresh period and is the refreshment that takes place in Markl. The refreshment of Markl is for tables according to lines 4-6, paragraph [0020], page which are samples in Markl and is "executed on one or more tables" in lines 4-7, paragraph [0083], page 7. Thus, the maintenance window acts as a timer that triggers the obtaining of samples from tables in paragraphs [0047]-[0049], page 4 in the calculation of statistics. The refreshment results in a correction in lines 1-12, paragraph [0033], page 3 which is based at least partly on the relationship of actual cardinality to estimated cardinality in paragraph [0067], page 6. The relationship of actual cardinality to estimated cardinality gives a percentage of samples in a table to update and, thus, refresh.

(Ans. 20-21).

For the reasons discussed above, we agree with the Examiner that Colossi teaches or suggests sampling rows in database tables. (Ans. 17; Colossi, ¶¶ [0379]-[0380]). We note that the Examiner's rejection is based on the *combined* teachings and suggestions of Markl and Colossi. We also agree with the Examiner's finding that the disputed limitation of "the size of the sample calculated at least partly from the refresh percentage P" (claim 14) would have been taught or at least suggested by the cited portions of Markl above, particularly the relationship of actual cardinality to estimated cardinality in paragraph [0067], page 6. (*See also* Markl, ¶¶ [0020], [0033], [0083], [0047]-[0049]). We again observe that Appellants do not further rebut the Examiner's detailed responses by filing a Reply Brief.

For these reasons, on this record, we are not persuaded of Examiner error. Therefore, we sustain the Examiner's rejection of claim 14 and of claims 15-18 (not argued separately) which fall therewith. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Claims 9-13

Regarding independent claim 9, Appellants contend:

> With regard to the claim 9 limitation of "a sampler configured to obtain a sample of data from the table(s) comprising a plurality of rows of the table, the number of rows calculated as a function of the refresh percentage associated with the table(s)," the Examiner concedes that Markl does not teach a sampler configured to obtain a sample of data from the table(s) comprising a plurality of rows of the table but alleges that Markl discloses "the number of rows calculated as a function of the refresh percentage associated with the table(s)". Applicants disagree. Because Markl fails to describe or suggest "a sampler configured to obtain a sample of data from the table(s) comprising a plurality of rows of the table," Markl is necessarily precluded from disclosing a sampler configured to obtain a sample of data from the table(s) comprising a plurality of rows of the table for which "the number of rows" are "calculated as a function of the refresh percentage associated with the table(s)."

(App. Br. 16-17).

These arguments essentially mirror the arguments previously presented for claim 14 above that we found unpersuasive. Regarding the rejection of claim 9, we note the Examiner relies on the secondary Zilio reference for teaching or suggesting the disputed limitation of a "sampler configured to obtain a sample of data from the table(s) comprising a plurality of rows of the table." (Ans. 21; claim 9). We observe that Appellants have not substantively rebutted the Examiner's findings

regarding Zilio in the Appeal Brief, nor have Appellants further rebutted the Examiner's detailed responses by filing a Reply Brief.

For these reasons, on this record, we are not persuaded of Examiner error. Therefore, we sustain the Examiner's second-stated rejection of claim 9 and of claims 10-13 (not argued separately) which fall therewith. *See* 37 C.F.R. § 41.37(c)(1)(iv).

DECISION

We affirm the Examiner's decision rejecting claims 1-18 under §103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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