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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ZHEN HUA LIU,
MURALIDHAR KRISHNAPRASAD, HUI JOE CHANG, and
VIKAS ARORA

Appeal 2010-007874
Application 11/601,147
Technology Center 2100

Before: KALYAN K. DESHPANDE, MICHAEL J. STRAUSS, and JOHN G. NEW, *Administrative Patent Judges*.

STRAUSS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1-38. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

The claims are directed to a method wherein commonly searched nodes of complex data types contained in a collection of XML documents are projected to, and their values are stored in, corresponding columns in XML Table Index tables in a database system. Those columns store logical pointers, rather than raw values, of the complex data types. Domain indexes are further provided to index at least one of the columns of complex data types in XML Table Indexes. Abstract. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A method comprising:
> storing a collection of XML documents in one or more base database structures managed by a database system;
> creating a table, separate from the one or more base database structures, that indexes the collection of XML documents, wherein the table includes a plurality of columns, wherein each column is associated with one or more criteria and contains values of nodes that are in the collection of XML documents and that satisfy the one or more criteria; and
> maintaining a domain index on a first column of the plurality of columns;
> wherein the domain index is not a B-tree index ordered according to values of nodes contained in the first column; wherein the first column is of a complex data type; and
> wherein the method is implemented by one or more computing devices.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Chau	US 6,643,633 B2	Nov. 4, 2003
Nishizawa	US 6,694,306 B1	Feb. 17, 2004
Pavlik	US 2004/0225724 A1	Nov. 11, 2004
Thusoo	US 7,398,265 B2	Jul. 8, 2008

REJECTIONS[1]

The Examiner made the following rejections:

Claims 1-8, 10-18, 20-27 and 29-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chau and Thusoo. Ans. 4.

Claims 9 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chau, Thusoo, and Pavlik. Ans. 11.

Claims 19 and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chau, Thusoo, and Nishizawa. Ans. 12.

APPELLANTS' CONTENTION[2]

"The suggested combination of *Chau* and *Thusoo* fails to disclose 'maintaining a domain index on a first column of the plurality of columns,' wherein the first column is a **complex data type column** of a table that indexes a collection of XML documents." App. Br. 8 and Reply Br. 3.

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[1] Based on the dependencies of the claims and the dispositive issue, we decide the appeal of the rejection of claims 1-38 on the basis of claim 1.
[2] We note that Appellants' arguments present additional issues; however, we do not reach these issues, as this contention is dispositive of the appeal.

ISSUE

Whether the combination of Chau and Thusoo teaches or suggests the disputed claim limitation rendering the claims obvious under 35 U.S.C. 103(a).

ANALYSIS

Appellants contend that "[t]he suggested combination of Chau and Thusoo fails to disclose 'maintaining a domain index on a first column of the plurality of columns,' wherein the first column is a **complex data type column** of a table that indexes a collection of XML documents." App. Br. 8. *See also* Reply Br. 3. Appellants argue that the SQL data type disclosed by Chau is not a complex data type and therefore does not satisfy the disputed claim language. App. Br. 8. Appellants further argue that the character large object (CLOB) storing the actual XML text, object relational structured form (O-R) and binary large object (BLOB) disclosed by Thusoo are used for storing XML documents, but are not part of a separate table that indexes the XML documents. App. Br. 8-9. We agree.

Although we agree with the Examiner that, consistent with Appellants' Specification, CLOB are complex data types (Ans. 14-15), Thusoo discloses CLOB for storing the XML data, rather than providing a domain index. Nor has the Examiner otherwise explained why it would be obvious to use the complex data types disclosed by Thusoo for storing XML data to also provide a domain index. While we also agree with the Examiner that Chau discloses that the data type of the column can be any SQL data type (Ans. 14), there is no evidence provided that the SQL data type satisfies the requirement of a complex data type. Therefore the combination of Chau

and Thusoo fails to teach or suggest maintaining a domain index on a first column of a complex data type.

Accordingly, we will not sustain the rejection of claim 1 and, for the same reason, the rejection of dependent claims 2-38[3].

CONCLUSION

Appellants have persuaded us of error in the Examiner's decision to reject independent claim 1 and, for the same reasons, 2-38. Thus, we will not sustain the Examiner's rejection of claims 1-38 under 35 U.S.C. § 103(a).

DECISION

The decision of the Examiner to reject claims 1-38 is reversed.

REVERSED

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[3] While not before us we note that claims 20-38 recite computer-readable medium storing instructions causing a processor to perform the methods of respective claims 1-19. The Examiner should consider whether these claims are in improperly dependent form and/or are inclusive of non-statutory subject matter.