The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte Douglas P. Brown, Paul L. Sinclair, and Jeetendra Chaware

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Appeal No. 2006-1655
Application No. 09/796,289[1]

ON BRIEF

Before BARRY, BLANKENSHIP, and MacDONALD, *Administrative Patent Judges*.
BARRY, *Administrative Patent Judge*.

A patent examiner rejected claims 1-18 and 20-35. The appellants appeal therefrom under 35 U.S.C. § 134(a). We affirm-in-part.

I. BACKGROUND

The invention at issue on appeal displays query execution plans. In a database management system ("DBMS"), users querying a database need not specify how to access desired data, but only what data are desired. Given a query, an optimizer of the

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[1]The appellants' application is a continuation-in-part of U.S. Patent Application No. 09/608,976.

DBMS generates alternative plans for accessing the requested data. After estimating the execution cost of each alternative, it selects the optimum execution plan. (Spec. at 1.)

Furthermore, DBMSs allow a user to view the execution plan for a given query. Some systems present the plan in a textual format, which may suffice for simple, straight-forward execution plans. As the complexity of execution plans grow, however, the appellants have need of a more sophisticated display thereof. (*Id.*) Accordingly, the appellants' invention determines steps of a query execution plan in a parallel database system and displays the steps via a graphical user interface ("GUI"). (*Id.* at 2.)

A further understanding of the invention can be achieved by reading the following claims.

> 20. A method of testing performance of a query, comprising:
>
> displaying, in a graphical user interface, a first execution plan of the query under a first condition; and
>
> displaying, in the graphical user interface, a second execution plan of the query under a second condition.
>
> 25. An article comprising one or more storage media containing instructions that when executed cause a system to:

determine steps of an execution plan of a query for a parallel database system;

representing each step of the execution plan as an icon; and

display, in a graphical user interface, an arrangement of the icons to represent parallel execution of the steps of the execution plan.

Claims 1-18 and 20-35 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,844,554 ("Geller") and U.S. Patent Application Pub. No. 2002/0070953 ("Barg").

II. OPINION

Our opinion addresses the claims in the following order:

- claims 20-24
- claims 1-18 and 25-35.

A. CLAIMS 20-24

"When multiple claims subject to the same ground of rejection are argued as a group by appellant, the Board may select a single claim from the group of claims that are argued together to decide the appeal with respect to the group of claims as to the ground of rejection on the basis of the selected claim alone. Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which

appellant has grouped together shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately." 37 C.F.R. § 41.37(c)(1)(vii) (Sep. 30, 2004). When the patentability of dependent claims in particular is not argued separately, the claims stand or fall with the claims from which they depend. *In re King*, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); *In re Sernaker*, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983).

Here, the appellants argue claims 20-24, which are subject to the same ground of rejection, as a group. (Appeal Br. at 9.) We select claim 20 from the group as representative of the claims therein. With this representation in mind, rather than reiterate the positions of the examiner or the appellants *in toto*, we focus on the point of contention therebetween.

The examiner makes the following findings.

> Geller teaches a method of testing performance of a query, comprising: displaying, in a graphical user interface, a first execution plan of the query under a first condition; and displaying, in the graphical user interface, a second execution plan of the query under a second condition (each of the icons in the parameter selector 1210 shows a topic of different type of data using a similar method of retrieving data and so on, col. 22

> lines 53-65, figs. 10 &12, and create meaningful organizational labels for various types of queries, col. 45 lines 10-31).

(Examiner's Answer at 6-7.) The appellants argue, "The display of parameters in the selector window 1210 is clearly not displaying a first execution plan of a query under a first condition and displaying a second execution plan of *the* query under a second condition." (Reply Br. at 7.)

"In addressing the point of contention, the Board conducts a two-step analysis. First, we construe the representative claim to determine its scope. Second, we determine whether the construed claim would have been obvious." *Ex Parte Massingill*, No. 2003-0506, 2004 WL 1646421, at *2 (Bd.Pat.App & Int. 2004).

1. Claim Construction

"Analysis begins with a key legal question — *what* is the invention *claimed*?" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). In answering the question, "the PTO gives claims their 'broadest reasonable interpretation.'" *In re Bigio*, 381 F.3d 1320, 1324, 72 USPQ2d 1209, 1211 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1668 (Fed. Cir. 2000)). As part of such an interpretation, "'[w]here . . . printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the

prior art in terms of patentability.'" *In re Ngai*, 367 F.3d 1336, 1339, 70 USPQ2d 1862, 1864 (Fed. Cir. 2004) (quoting *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed.Cir.1983)). "Although the printed matter must be considered, in that situation it may not be entitled to patentable weight." *Gulack*, 703 F.2d at 1385, 217 USPQ at 404.

Here, claim 20 recites in pertinent part the following limitations: "displaying, in a graphical user interface, *a first execution plan of the query* under a first condition; and displaying, in the graphical user interface, *a second execution plan of the query* under a second condition." (Emphases added.) We view the phrases "first execution plan of the query" and "second execution plan of the query" as analogous to unpatentable printed matter. Because the data that represent the execution plans do not functionally change the display on which the data are shown, the data lack a functional relation thereto. Therefore, the phrases are not entitled to patentable weight. Giving the representative claim its broadest, reasonable construction, the limitations require using a GUI to display first data under a first condition and to display second data under a second condition. The claim does not require, however, that the first and second data differ, that the first and second data be displayed simultaneously, or that the first and second conditions differ.

2. Obviousness Determination

"Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious." *Massingill*, at *3. "'A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.'" *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). Such a case of obviousness is "based on underlying factual determinations including . . . what th[e] prior art teaches explicitly and inherently. . . ." *In re Zurko*, 258 F.3d 1379, 1383, 59 USPQ2d 1693, 1696 (Fed. Cir. 2001) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); *In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ 1614, 1616 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995)).

Here, Geller discloses that a software developer "us[es] the user interface for the developer environment 18 (or "developer interface") . . . to create a user interface screen, place controls, inspect properties of selected objects, and compile [a] program." (Col. 20, ll. 32-36.) The first figure cited by the examiner, "FIG. 10[,] illustrates the developer environment of FIG. 8, showing the parameter selector window. . . ." (Col. 5, ll. 65-67.) "Referring in this regard to FIG. 10, the parameter selector window 1001

comprises a window showing a hierarchical display of pre-created parameters. The parameter selector window 1001 includes a parameter group icon 1003 with a hierarchy of associated exemplary parameters labeled Parameter1 1005, Parameter2 1007, etc." (Col. 21, ll. 50-55.) In summary, Figure 10 shows the use of the environment's GUI to display data including Parameter1 and Parameter2, under the condition that the developer has "click[ed] in the parameter selector activation box 908," (*id.* at ll. 47-48), of the GUI.

In the second figure cited by the examiner, "FIG. 12, the parameter selector window 1210 . . . displays the particular parameter structure for [an] automotive example. . . ." (Col. 22, ll. 53-56.) More specifically, "[t]he parameter selector window 1210 comprises a principal heading labeled Parameters 1220, with a parameter group icon 1221 displayed to the left. Positioned beneath and indented to the right of the Parameters heading are a plurality of subsidiary parameter headings, each bearing a parameter group icon to the left, and labeled General, Packages, Mechanical, Interior, Exterior, and Dump Body." (*Id.* at ll. 61-67.) In summary, Figure 12 shows the use of the environment's GUI to display General, Packages, Mechanical, Interior,

Exterior, and Dump Body under the condition of the aforementioned automotive example. Because the reference[2] uses a GUI to display first data under a first condition and to display second data under a second condition, we affirm the rejection of claim 20 and of claims 21-24, which fall therewith.

B. CLAIMS 1-18 AND 25-35

The examiner finds, "Geller clearly teaches the build-in query tool (based on SQL) enables constraints and formulas to access data easily from existing databases, and the user is required to enter the appropriate parameters step by step corresponding the particular user interface to be able to get outputting data from the existing databases (e.g., col. 3 line 35-col. 4 line 28)." (Examiner's Answer at 7-8.) The appellants argue, "Entering parameters step by step is not the same as displaying a graphical representation of steps of a query execution plan." (Reply Br. at 4.)

1. Claim Construction

"The Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." *In re Lowry*, 32 F.3d 1579, 1582, 32 USPQ2d 1031, 1034 (Fed. Cir. 1994) (citing *In re Gulack*, 703 F.2d 1381,

[2]We consider the teachings of Barg cumulative to those of Geller.

1385, 217 USPQ 401, 403-04 (Fed. Cir. 1983)). Here, claim 25 recites in pertinent part the following limitations: "determine steps of an execution plan of a query for a parallel database . . . and display, in a graphical user interface, an arrangement of the icons to represent parallel execution of the steps of the execution plan." Claim 1 includes similar limitations. Considering all these claim limitations, claims 1 and 25 require calculating steps of a plan to execute a query of a database in contrast to claim 20. Of course, the former claims also require displaying those steps in a GUI.

2. Obviousness Determination

"In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993) (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)). Here, although the passage of Geller cited by the examiner explains "that [a]nother aspect of the [reference's] invention is the ability for information that is associated with a control to be derived from an external database or table via SQL queries," (col. 4, ll. 11-13), we find no mention therein of a plan for executing such queries. We agree with the appellants, moreover, that "[e]ntering parameters step by step is not the same as displaying a graphical representation of steps of a query execution plan." (Reply Br. at 4.)

The examiner does not allege, let alone show, that the addition of Barg cures the aforementioned deficiency of Geller. Absent a teaching or suggestion of calculating the steps of a plan to execute a query of a database, we are unpersuaded of a prima facie case of obviousness. Therefore, we reverse the rejection of claims 1 and 25 and of claims 2-18 and 26-35, which depend therefrom.

III. CONCLUSION

In summary, the rejection of claims 20-24 under § 103(a) is affirmed. The rejection of claims 1-18 and 25-35 under § 103(a), however, is reversed.

"Any arguments or authorities not included in the brief or a reply brief filed pursuant to [37 C.F.R.] § 41.41 will be refused consideration by the Board, unless good cause is shown." 37 C.F.R. § 41.37(c)(1)(vii). Accordingly, our affirmance is based only on the arguments made in the brief(s). Any arguments or authorities omitted therefrom are neither before us nor at issue but are considered waived. *Cf. In re Watts*, 354 F.3d 1362, 1367, 69 USPQ2d 1453, 1457 (Fed. Cir. 2004) ("[I]t is important that the applicant challenging a decision not be permitted to raise arguments on appeal that were not presented to the Board.") No time for taking any action connected with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

LANCE LEONARD BARRY Administrative Patent Judge	)	
HOWARD B. BLANKENSHIP Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
ALLEN R. MacDONALD Administrative Patent Judge	)	

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