

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHARLES A. MILLIGAN, THOMAS NELSON NOLAND,
and LESLIE K. HODGE

Appeal 2007-4004
Application 10/330,875
Technology Center 2100

Decided: July 10, 2008

Before JAMES D. THOMAS, LANCE LEONARD BARRY, and
CAROLYN D. THOMAS, *Administrative Patent Judges*.

BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

A Patent Examiner rejected claims 1-8, 10-19, and 21-26. The Appellants appeal therefrom under 35 U.S.C. § 134(a). We have jurisdiction under 35 U.S.C. § 6(b).

A. INVENTION

The invention at issue on appeal uses metadata to manage data. More specifically, the invention logically links families of inter-related tables of metadata. When certain types of changes are made to any member of such a family, the invention propagates these changes to all members of that family. (Spec. 12.)

B. ILLUSTRATIVE CLAIM

Claim 1, which further illustrates the invention, follows.

1. A method of distributing metadata, comprising:

generating one or more copies of metadata that have associated data, wherein the one or more copies of metadata are copies of source metadata stored in a data source computing device and wherein the one or more copies and the source metadata constitute a family of metadata copies;

the family of metadata copies being logically linked using a management mechanism that includes a locking mechanism and a listing of locations, the locking mechanism for maintaining a list of locks for each physical storage location of a data storage device and the listing of locations indicating a current location of each one of the metadata copies;

modifying a portion of at least one copy of the metadata in the family of metadata copies;

in response to said modification, updating, by the management mechanism, all other copies of the metadata in the family by:

retrieving, by the management mechanism from the listing of locations, the location of each one of the other copies of the metadata in the family; and

propagating the modification to the at least one copy of the metadata to all other copies of the metadata in the family of metadata copies by broadcasting, by the management mechanism, the modification to the location of each one of the other copies of the metadata in the family.

C. REJECTION

Claims 1-8, 10-19, and 21-26 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent Application Pub. No. 2002/0133491 A1 ("Sim") and U.S. Patent No. 4,965,719 ("Shoens").

II. CLAIM GROUPING

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) (2005).¹

Here, the Appellants argue claims 1-8, 10-19, and 21-26, which are subject to the same ground of rejection, as a group. (App. Br. 7-11). We select claim 1 as the sole claim on which to decide the appeal of the group.

¹ We cite to the version of the Code of Federal Regulations in effect at the time of the Appeal Brief. The current version includes the same rules.

"With this representation in mind, rather than reiterate the positions of the parties *in toto*, we focus on the issues therebetween." *Ex Parte Zettel*, No. 2007-1361, 2007 WL 3114962, at *2 (BPAI 2007).

III. CURRENT LOCATION OF EACH COPY OF METADATA

The Examiner makes the following findings.

[S]ince Sim teaches a metadata file being copied to each location that a file is copied to (Sim; par [0202]), the distribution map of Sim indicates not only the current location of each copy of a file, but also the [sic] indicates the current location of each copy of the corresponding metadata file.

(Ans. 10.) The Appellants argue, "The distribution map of Sim is not analogous to a management mechanism having a locations listing which indicates a current location of each copy of the metadata because the distribution map of Sim indicates where the underlying data can be found."

(App. Br. 8.) Therefore, the issue is whether Sim's distribution map indicates a current location of each copy of metadata.

The question 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, 1383-84 (Fed. Cir. 2001) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *In re Dembicza*k, 175 F.3d 994, 998 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613 (Fed. Cir. 1995)). "'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 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976)).

Here, Sim's "[f]ile system object metadata helps VFCS [i.e., Virtual File Control System] 470 and DS [i.e., Distribution Server] 410 uniquely identify the [associated file system] objects, locate the origin node, locate the nodes that contain the objects, and locate the data within the storage devices in a node." (¶ [0198].) "[T]here are three file system object metadata files namely—volume, directory, and file." (*Id.*) "FIG. 13C shows the content of an example file metadata 1320 (also called a file meta object)." (*Id.*) Among the file metadata, a "distribution map indicates where the file is replicated." (¶ [0202].) "When a file is updated, portions of the content and the file metadata are replicated." (*Id.*) Because the distribution map indicates where a file is replicated, and Sim replicates associated metadata along with the file, we agree with the Examiner's finding that the distribution map also indicates the current location of each copy of the metadata.

IV. MECHANISM FOR BROADCASTING

The Examiner makes the following findings.

[I]n Sim, the updating is done by way of the distribution map in that the distribution map contains the information required for the updating to take place, and that the process, or mechanism, by which all the copies of the metadata are updated in Sim meets the limitations of the claims, as recited (Sim; par [0164], lines 1-27).

(Ans. 11-12.) The Appellants argue that "neither Sim nor Shoens teaches or suggests a management mechanism broadcasting the modification of at least

one metadata copy to the location of each other metadata copy in the family of metadata copies . . ." (App. Br. 10.) Therefore, the issue is whether Sims discloses a mechanism for broadcasting a modification to a copy of metadata copy to the location of each other metadata copy in the family of metadata copies.

As mentioned regarding the first issue, Sims replicates updated files and their associated metadata. The reference also discloses that "[w]hen a DS receives 'info' packet, it modifies the meta file system structure, and the related object metadata and it then further distribute [sic] the 'info' packet out to its neighbors." (¶ [0164].) Therefore, we find that the Distribution Server broadcasts a modification to a copy of metadata copy to the location of each other metadata copy in the family of metadata copies.

V. LOCATING NODES

The Examiner finds, "[S]ince the modifications are broadcast to locations where the data is replicated, and the listing of locations, i.e. the distribution map, contains the location information, it is obvious that the locations to which to broadcast the modifications are retrieved from the distribution map." (Ans. 12.) The Appellants make the following argument.

In contrast to using a listing of locations such as a location listing arguably provided by the distribution map of a metadata file to locate the nodes at which data files and/or the metadata files are to be replicated, Sim uses other things such as "a flow optimization technique that provides for the intelligent management of the all file system objects and portions of data" (paragraph 0062), "a set of distribution rules" (paragraphs 0114-0115), "specific distribution criteria"

(paragraph 0152), "the distribution criteria for that file" (paragraph 0164), "[q]ualified' neighbors (i.e., those that meet the criteria)" (paragraph 0171), "qualified nodes" matching distribution criteria (paragraphs 0174-0175), "the content owner's distribution criteria" (paragraph 0178), "a set of distribution criteria" (paragraph 0195), etc.

(Reply Br. 2-3.) Therefore, the issue is whether Sim uses its distribution map to locate nodes at which files or metadata are to be replicated.

For its part, Sims discloses "[a] method for propagating a distribution command related to file system object changes in a network having a plurality of network nodes . . ." (Claim 34.) "[A]t each network node" (*id.*) the method includes "creating a distribution map containing distribution criteria for a respective node" (*id.*) and "forwarding the distribution command to a qualified set of neighbors in part based on the distribution map . . ." (*Id.*) Because the reference forwards the distribution command based on the distribution map, we agree with the Examiner's finding that Sim uses its distribution map to locate nodes at which files or metadata are to be replicated.

VI. ORDER

For the aforementioned reasons, we affirm the rejection of claim 1 and of claims 2-8, 10-19, and 21-26, which fall therewith.

"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 affirmation is based only on the arguments made in the

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Briefs. 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 (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

rwk

BROOKS KUSHMAN P.C. / SUN / STK
1000 TOWN CENTER, TWENTY-SECOND FLOOR
SOUTHFIELD MI 48075-1238