UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/268,799	11/07/2005	Russell C. Blaisdell	AUS920050726US1	5002

35525 7590 03/01/2013
IBM CORP (YA)
C/O YEE & ASSOCIATES PC
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER
SOMERS, MARC S

ART UNIT	PAPER NUMBER
2159	

NOTIFICATION DATE	DELIVERY MODE
03/01/2013	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptonotifs@yeeiplaw.com
mgamez@yeeiplaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RUSSELL C. BLAISDELL, KAREN LYNN BUROS,
JONATHAN MICHAEL COOK, RANDY ALLAN RENDAHL,
DAVID G. ROBINSON, SHAW-BEN SHI, and
LORRAINE PHYLLIS VASSBERG

Appeal 2010-000936
Application 11/268,799
Technology Center 2100

Before ELENI MANTIS MERCADER, JEREMY J. CURCURI,
and DAVID C. McKONE, *Administrative Patent Judges*.

McKONE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 2, 3, 7, 11, 12, 16, 18, 19, and 23, which constitute all the claims pending in this application. *See* App. Br. 4.[1] Claims 1, 4-6, 8-10, 13-15, 17,

---

[1] Throughout this opinion, we refer to the Appeal Brief filed April 15, 2009 ("App. Br."), the Examiner's Answer mailed July 21, 2009 ("Ans."), and the Reply Brief filed September 21, 2009 ("Reply Br.").

and 20-22 are cancelled. *See id.* We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

THE INVENTION

Appellants' invention relates to aggregating and pruning data in a data storage system such as a data warehouse. *See, e.g.*, Spec. ¶ 0007. Claim 7, which is illustrative of the invention, reads as follows:

> 7. A computer implemented method for managing data in a data warehouse storage system comprising a plurality of data tables, the computer implemented method comprising:
>
> identifying a section of the data in the data warehouse storage system, wherein the data is active data that has not been deleted;
>
> pruning the section of the data in the data warehouse storage system based on a policy, wherein pruning the section of the data comprises deleting the section of the data based on the policy;
>
> wherein the data is aggregated data that is a summary of raw data collected from a plurality of different data sources remote from the data warehouse storage system such that a size of the aggregated data is less than a size of the raw data that was collected and summarized to form the aggregated data, and wherein the step of identifying a section of the data in the data warehouse storage system comprises identifying a section of the aggregated data in the data warehouse storage system, and the step of pruning the section of the data in the data warehouse storage system based on a policy comprises pruning the section of the aggregated data based on an age of the aggregated data in the section; and

> setting the policy by receiving user input from a graphical user interface, wherein the policy is maintained in an aggregation and pruning table that maintains a schedule for both aggregation and the pruning operations to be performed on raw data and aggregated data, respectively.

THE REJECTIONS

The Examiner relies on the following prior art in rejecting the claims:

Hoover	US 5,560,005	Sept. 24, 1996
Norcott	US 5,848,405	Dec. 8, 1998
Takeuchi	US 5,944,778	Aug. 31, 1999
Cannon	US 6,021,415	Feb. 1, 2000
Schilit	US 2002/0052898 A1	May 2, 2002
Cochrane	US 6,496,828 B1	Dec. 17, 2002

Claims 2, 11, 18, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cannon, Norcott, Hoover, and Takeuchi. *See* Ans. 4-7.

Claims 7 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cannon, Norcott, Hoover, Takeuchi, and Schilit. *See* Ans. 8.

Claims 3, 12, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cannon, Norcott, Hoover, Takeuchi, and Cochrane. *See* Ans. 9-10.

ISSUES

Appellants argue claims 7 and 16 together. Regarding claims 7 and 16, the issues are:

1. Whether Cannon, Norcott, Hoover, Takeuchi, and Schilit teach "pruning [a] section of the data" wherein "the data is aggregated data that is a summary of raw data." *See* App. Br. 13;
2. Whether Cannon, Norcott, Hoover, Takeuchi, and Schilit teach "aggregated data that is a summary of raw data collected from a plurality of different data sources remote from the data warehouse storage system." *See id.*;
3. Whether Cannon, Norcott, Hoover, Takeuchi, and Schilit teach "wherein the policy is maintained in an aggregation and pruning table that maintains a schedule for both aggregation and the pruning operations to be performed on raw data and aggregated data, respectively." *See* App. Br. 14-15; and
4. Whether the Examiner has articulated reasons, with rational underpinning, to combine Cannon, Norcott, Hoover, Takeuchi, and Schilit. *See* App. Br. 13-14.

Appellants argue claims 2, 11, 18, and 23 together. *See* App. Br. 16-17. Regarding claims 2, 11, 18, and 23, the issues are:

1. Whether Cannon, Norcott, Hoover, and Takeuchi teach "pruning [a] section of the data" wherein "the data is aggregated data that is a summary of raw data." *See* App. Br. 16;
2. Whether Cannon, Norcott, Hoover, and Takeuchi teach "aggregated data that is a summary of raw data collected from a plurality of different data sources remote from the data warehouse storage system." *See id.*;
3. Whether Cannon, Norcott, Hoover, and Takeuchi teach "wherein the age of the aggregated data that is pruned is maintained in an

aggregation and pruning table that specifies how often the data is aggregated and how often the aggregated data is pruned." *See* App. Br. 16-17; and

4. Whether the Examiner has articulated reasons, with rational underpinning, to combine Cannon, Norcott, Hoover, and Takeuchi. *See* App. Br. 17.

ANALYSIS

REJECTION OF CLAIMS 7 AND 16 UNDER 35 U.S.C. § 103(a)

Regarding claim 7, the Examiner finds that: (1) Cannon teaches identifying a section of data (a file) in a data warehouse and pruning (deleting) that section based on a policy (the age or version number of the file); (2) Norcott teaches aggregated data that is a summary of raw data collected from a plurality of different sources remote from the data warehouse; and (3) Hoover teaches collecting data from a plurality of dissimilar data sources such as heterogeneous database systems. *See* Ans. 4-6, 8.[2] The Examiner also finds that Cannon and Norcott teach schedules for pruning and summarizing data and that Takeuchi teaches keeping track of processes and operations using a scheduling table. *See* Ans. 6-8.

Appellants contend that the combination of Cannon, Norcott, and Hoover fails to teach the "*particular actions* being performed on the *particular type of data* as is recited in" claim 7. App. Br. 13. Instead, Appellants argue, the combination teaches pruning "generic data," not "*aggregated* data," and aggregating "generic data," not data "collected from

[2] The Examiner, at Ans. 8, incorporates by reference his findings, set forth at Ans. 4-7, for substantially the same limitations recited in claim 2.

a plurality of different data sources remote from the data warehouse storage system." *Id.* (emphasis omitted). Appellants are considering the references individually, rather than addressing their combined teachings. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981). While Cannon may not explicitly teach pruning aggregated data and Norcott may not explicitly teach aggregating data collected from a plurality of remote sources, the Examiner concludes that a person of ordinary skill would have been able to apply Cannon's teaching of pruning to Norcott's aggregated data and further apply Norcott's teaching of aggregation to Hoover's raw data collected from multiple remote sources. *See* Ans. 6. In other words, putting the teachings of Cannon, Norcott, and Hoover together, the Examiner arrives at a system that prunes (per Cannon) a section of aggregated data (per Norcott), wherein the aggregated data is a summary of raw data collected from a plurality of remote sources (per Hoover). *See* Ans. 5-6. Appellants do not adequately explain why this conclusion is incorrect.

We additionally and separately note that Appellants' asserted distinction that the combination merely teaches pruning of *generic data*, rather than *aggregated* data or a *particular type of data* (collected from a plurality of different data sources) (App. Br. 13) is not persuasive because the *type of data* constitutes nonfunctional descriptive material. Nonfunctional descriptive material cannot render nonobvious an invention that would otherwise have been obvious. *See In re Ngai*, 367 F.3d 1336, 1339 (Fed. Cir. 2004); *Ex parte Curry*, 84 USPQ2d 1272, 1274 (BPAI 2005) (informative); *see also Ex parte Nehls*, 88 USPQ2d 1883, 1887-90 (BPAI 2008) (precedential) (discussing cases pertaining to non-functional descriptive material). When descriptive material is not functionally related

to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability. *See In re Gulack*, 703 F.2d 1381, 1385 (Fed. Cir. 1993).

Appellants also contend that Cannon teaches away from modifications that would extend pruning operations to aggregated data. *See* App. Br. 13. Specifically, Appellants argue that the "expressed purpose of Cannon's prune/delete operation is to delete backup copies of actual client files," and that if these actual client files were modified to contain aggregated data, the backup copies of the actual client files would no longer exist, obviating the need to perform backup operations. *Id.* (citing Cannon, col. 14, ll. 2-4, 42-46). According to Appellants, modifying Cannon as the Examiner suggests "would in effect eviscerate the fundamental reason of the Cannon teachings (backing up client files)." *Id.* The Examiner responds that, according to his proposed modification, the Cannon reference would incorporate summary data such that Cannon's backup system would backup and prune the summary data as well as the client files. *See* Ans. 11-12.

"A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). In the passages cited by Appellants, Cannon discloses receiving a request from a client station identifying a desired "user file" to delete. Cannon, col. 14, ll. 4-7. Appellants, however, have not adequately explained why the specific contents of such "user files" are critical to Cannon's system, or what the content of those files would include and why those files could not include aggregated data. Indeed, Appellants elsewhere

argue that Cannon teaches pruning "generic data." App. Br. 13. Thus, we are not persuaded that Cannon teaches away from pruning aggregated data.

In reply, Appellants change their argument, contending instead that "the very purpose of Cannon is to *create* aggregated data," and that pruning this aggregated data "is an illogical modification." Reply Br. 3. Appellants further argue that if Cannon's aggregated data were pruned, the data would no longer have any gaps to delete in the underlying user files that were aggregated, "eliminat[ing]" another "fundamental premise/issue that the Cannon teachings are directed towards." *Id.* (citing Cannon, col. 2, ll. 48-67). These arguments are waived. *See, e.g.*, *Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010) (informative) ("[T]he reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner's rejections, but were not."). They are also unpersuasive, as Appellants again have not adequately explained why the individual "constituent user files" are restricted from including aggregated data.

Appellants further dispute the Examiner's reason to combine the teachings of Cannon and Norcott. *See* App. Br. 13-14. The Examiner concludes that a person of ordinary skill in the art would have modified a database system, as taught by Cannon, to incorporate aggregated data, per Norcott, "in order to speed up query processing." Ans. 5-6. Appellants contend that data integrity, rather than speed, is the "primary concern when it comes to backing up data." App. Br. 14. According to Appellants, a skilled artisan would not have modified Cannon because it would then have been impossible to "mak[e] an exact copy of the primary data source," which Appellants contend is "the fundamental premise of data backup." *Id.*

The Examiner acknowledges that data integrity is important to backing up data, but finds that aggregating information is important to speeding up query processing. *See* Ans. 12 (citing Norcott, col. 1, ll. 12-23). As the Examiner notes, although Appellants have provided a competing concern, they have not adequately explained why the Examiner's reasoning is incorrect. *See* Ans. 12; *see also In re Mouttet*, 686 F.3d 1322, 1334 (Fed. Cir. 2012) ("[J]ust because better alternatives exist in the prior art does not mean that an inferior combination is inapt for obviousness purposes."). Thus, we cannot say that the Examiner's reason to combine Cannon and Norcott lacks rational underpinning.

Appellants also argue that a person of ordinary skill in the art would not have modified Norcott to summarize data from sources "remote" from a data warehouse storage system. App. Br. 14. Instead, Appellants argue, Norcott teaches that data must be stored internally in a particular fashion in order to take advantage of the described "delta summary" process. *Id.* (citing Norcott, col. 1, l. 64–col. 2, l. 8). The Examiner casts the dispute as whether the claim language "wherein the data is aggregated data that is a summary of raw data collected from a plurality of different data sources remote from the data warehouse storage system" means (1) aggregating raw data remote from the warehouse and collecting the aggregated data at the warehouse; or (2) collecting the raw data from sources remote from the warehouse and aggregating the collected at the warehouse. *See* Ans. 13. The Examiner concludes that the claim language is broad enough to include the later interpretation and finds that Hoover discloses collecting raw data from the Internet (which includes sources remote from the warehouse) and that Norcott teaches aggregating the collected data. *See* Ans. 14. Appellants

deny that there is a claim construction dispute and argue that a skilled artisan would have lacked motivation to combine regardless of the claim construction. *See* Reply Br. 4.

We are not persuaded by Appellants' argument. Hoover teaches collecting raw data from remote locations and storing it locally. *See* Ans. 6 (citing Hoover, col. 6, ll. 57-62). Norcott teaches aggregating data stored locally. *See* Ans. 5 (citing Norcott, col. 4, ll. 19-39). Accepting the Examiner's claim construction, which we conclude is reasonable, we do not see where Appellants have adequately addressed the Examiner's conclusion that Norcott's teaching of aggregation could be applied to Hoover's remotely collected raw data.

Finally, Appellants argue that Takeuchi does not teach "an aggregation and pruning table that maintains a schedule for both aggregation and the pruning operations to be performed on raw data and aggregated data, respectively." *See* App. Br. 14-15. Instead, Appellants contend, Takeuchi includes a "generalized assertion" that is insufficient to show the "particular specific features" recited in claim 7. App. Br. 15. In response the Examiner explains that Takeuchi is merely cited to show that tables can be used to schedule tasks and keep track of processes and operations. *See* Ans. 15; *see also id.* at 7. The Examiner cites Norcott for a teaching that data is aggregated when new data is detected and Cannon for a teaching that data is pruned based on the age of the data. *See* Ans. 15 (citing Norcott, col. 4, ll. 19-39; Cannon, col. 14, ll. 42-46); *see also id.* at 6. Thus, the Examiner concludes, a person of ordinary skill in the art would have known to use a scheduling table, as taught in Takeuchi, to schedule the events according to timing taught in Norcott (aggregation) and Cannon (pruning). *See* Ans. 7,

15. Appellants' argument again attacks the cited prior art references individually rather than addressing the Examiner's combination as a whole. *See Keller*, 642 F.2d at 425. Appellants have not adequately explained why the Examiner's conclusion lacks rational underpinning.

Accordingly, we sustain the rejection of claims 7 and 16.

REJECTION OF CLAIMS 2, 11, 18, AND 23 UNDER 35 U.S.C. § 103(a)

Appellants argue claims 2, 11, 18, and 23 as a group. *See* App. Br. 16-17. Appellants make many of the same arguments for the patentability of claims 2, 11, 18, and 23 as they do for claims 7 and 16. In particular, they incorporate by reference their arguments that the prior art does not teach "pruning [a] section of the data" wherein "the data is aggregated data" and "aggregated data that is a summary of raw data collected from a plurality of different data sources remote from the data warehouse storage system." *See* App. Br. 16. These arguments are unpersuasive for the reasons given above.

Appellants also argue that Takeuchi's "generalized" scheduling table does not teach "an aggregation and pruning table that specifies how often the data is aggregated and how often the aggregated data is pruned." *See id.* This is substantially the same as the argument presented for the similar limitation recited in claim 7. *See* App. Br. 14-15. We are unpersuaded by Appellants' argument for the reasons given above.

Finally, Appellants argue that modifying Takeuchi's table would "eviscerate the very fundamental premise that Takeuchi is attempting to provide (constant process execution)." App. Br. 17. As explained above, the Examiner is only citing Takeuchi for the concept that it was well-known to schedule events and processes using a table. *See* Ans. 19. Appellants

again argue Takeuchi individually without adequately considering the Examiner's combination as a whole. *See Keller*, 642 F.2d at 425. Thus, Appellants have not shown that the Examiner's conclusion of obviousness lacks rational underpinning.

Accordingly, we sustain the rejection of claims 2, 11, 18, and 23.

REJECTION OF CLAIMS 3, 12, AND 19 UNDER 35 U.S.C. § 103(a)

Claim 3 depends on claim 2; claim 12 depends on claim 11; and claim 19 depends on claim 18. Appellants only nominally argue these claims separately. *See* App. Br. 17. Accordingly, we sustain the rejection of claims 3, 12, and 19 for the same reasons as set forth above for claims 2, 11, and 18.

ORDER

The decision of the Examiner to reject claims 2, 3, 7, 11, 12, 16, 18, 19, and 23 is affirmed.

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). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2010).

AFFIRMED

babc