UNITED STATES PATENT AND TRADEMARK OFFICE

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13/252,418	10/04/2011	GARY W. GRUBE	CS00606	6521

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Garlick & Markison (PST)
100 Congress Avenue, Suite 2000
Austin, TX 78701

EXAMINER
LE, MICHAEL

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte GARY W. GRUBE and TIMOTHY W. MARKISON

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Appeal 2019–004174
Application 13/252,418
Technology Center 2100

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Before ST. JOHN COURTENAY III, LARRY J. HUME, and
PHILLIP A. BENNETT, *Administrative Patent Judges*.

BENNETT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the
Examiner's decision to reject claims 1–6 and 8–13. Claims 7 and 14–20 are
cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] We use the word "Appellant" to refer to "applicant" as defined in
37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as
International Business Machines Corp. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The claims relate generally to computing systems and more particularly to data storage solutions within such computing systems. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1.   A method by a computing device, the method comprises:

receiving a retrieval request for a file stored in one or more memory devices;

accessing a data location table;

determining whether the file is being converted from a redundant array of independent disks ("RAID") storage format to a dispersed error coding storage format, *wherein the determining is at least partially based on a migration indicator, and further wherein the migration indicator indicates that the file is being migrated*;

when the file is being converted from RAID format to the dispersed error coding storage format, identifying a first portion of the file that has been converted to the dispersed error coding storage format and a second portion of the file that is currently in the RAID storage format, wherein conversion of the first portion of the file from the RAID format to the dispersed error coding storage format includes retrieving at least part of the first portion of the file from a first location in the memory devices prior to the conversion and storing the at least part of the first portion of the file in a different location in the memory devices following the conversion, and wherein the at least part of the first portion of the file is, at least in part, an entry in the data location table;

retrieving, from the memory devices, the first portion of the file as a plurality of sets of encoded data slices in accordance with the dispersed error coding storage format;

retrieving, from the memory devices, the second portion of the file in accordance with the RAID format; and

reconstructing the file from the retrieved first portion and the retrieved second portion.

Appeal Br. 12 (Claims Appendix) (disputed limitations emphasized).

REFERENCES

The references[2] relied upon as prior art the Examiner are:

Name	Reference	Date
Wilson	US 2005/0108304 A1	May 19, 2005
Lacapra	US 2006/0167838 A1	July 27, 2006
Beary	US 7,296,024 B2	Nov. 13, 2007
Julie Bellance, *A cost-effective approach for petabyte storage systems-Strategic shift from RAID to dispersal*, Network World (2010) ("Network World")		

REJECTIONS

Claims 1–4 and 8–11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Beary, Wilson and Network World. Final Act. 6–14.

Claim 5, 6, 12, and 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Beary, Wilson, Network World, and Lacapra. Final Act. 14–15.

ANALYSIS[3]

In rejecting the independent claims under 35 U.S.C. § 103, the Examiner concludes the claims would have been obvious over the combined teachings of Beary, Wilson, and Network World. Final Act. 3–8. Relevant to the issues raised by Appellant, the Examiner finds Beary is the primary reference teaching or at least suggesting the disputed limitations. Final Act. 6–7. The Examiner further finds that although Beary teaches migrating data between disparate storage platforms, Wilson teaches migrating data

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[2] We identify the prior art references according to their first named inventor.
[3] The Examiner has withdrawn his rejection of claims 1–6 and 8–13 rejected under § 101. Ans. 3.

between two disparate storage platforms, while allowing a user access to the data. Final Act. 7–8.

Appellant first argues the disputed limitation "migration indicator" is not taught by Wilson. Appeal Br. 7–8. We are not persuaded by Appellant's argument because Appellant is arguing the references separately. The Examiner cites Beary for teaching this limitation. Final Act. 6–7.

Appellant next argues the Examiner has erred because "the prior art fails to disclose both a) determining, based on a migration pointer, <u>whether</u> a file is <u>being</u> migrated and b) providing access to both the portion of the file in the RAID storage format and the portion already converted to the dispersed error coding storage format." Appeal Br. 7, Reply Br. 3.

We disagree with Appellant's argument (a) because it is not commensurate with the claim language. Claim 1 does not recite a "migration pointer," instead it recites a "migration indicator." We agree with the Examiner's conclusion that the broadest reasonable interpretation of a "migration indicator" is something indicating that a file is being migrated and it may be anything that indicates migration of such requested data. Ans. 6. Appellant's Specification does not provide a definition for the term "migration indicator" that precludes or is otherwise inconsistent with the Examiner's interpretation of the phrase.

The Examiner maps the phrase "migration indicator" to Beary's migration triggers which trigger data migration. *Id.*, citing Beary at col. 3, lines 66–67; col. 4, lines 1–4; col. 5, lines 67; col. 6, lines 1–5. We agree with the Examiner and find Beary's determining whether a trigger event occurred, and then migrating the data if the trigger event occurred, teaches or at least suggests the disputed limitation "*wherein the determining is at*

least partially based on a migration indicator, and further wherein the migration indicator indicates that the file is being migrated." Ans. 6, Beary Col. 6, ll. 21–42.

We also disagree with Appellant's argument (b) "providing access to both the portion of the file in the RAID storage format and the portion already converted to the dispersed error coding storage format" because Appellant's argument is not commensurate with the scope of the claim. Claim 1 does not recite this argued phrase "providing access . . . ." We are also not persuaded by Appellant's arguments because Appellant is arguing the references separately. Appellant argues Beary does not disclose this limitation, but the Examiner instead cites Wilson and Network for teaching or suggesting that the first storage device/database is using RAID storage format and the second storage device/database is using a dispersed error coded storage format. Ans. 7.

We agree with the Examiner's findings because Wilson's method, enabling a user to access data from the source volume and also move off the source volume at substantially the same time, where the migration of the files is done track-by-track or bit-by-bit, teaches or at least suggests the disputed limitation of providing access to both the portion of the filed in the RAID storage format and the portion already converted to the dispersed error coding storage format. Wilson ¶¶ 9, 13, 19. We also agree with the Examiner's further findings that Network World's teaching migrating from a RAID storage form to a dispersed encoded storage format, where only a subset of slices are needed to reconstitute the original data, at least suggests the disputed limitation. Final Act. 8, citing Network World at pp. 2–5.

Because we do not find Appellant's arguments persuasive of error, we sustain the rejection of independent claims 1 and 8 as being unpatentable over Beary, Wilson and Network World.

Remaining Claims

Appellant does not advance separate arguments for any other claim. As such, we also sustain the rejections of the remaining dependent claims under § 103.

CONCLUSION

We affirm the Examiner's rejection of claims 1–4 and 8–11 under 35 U.S.C. § 103 as being unpatentable over Beary, Wilson, and Network World.

We affirm the Examiner's rejection of claim 5, 6, 12, and 13 under 35 U.S.C. § 103 as being unpatentable over Beary, Wilson, Network World, and Lacapra.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–4, 8–11	103(a)	Beary, Wilson, Network World	1–4, 8–11	
5, 6, 12, 13	103(a)	Beary, Wilson, Network World, Lacapra	5, 6, 12, 13	
Overall Outcome			1–6, 8–13	

TIME PERIOD FOR RESPONSE

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED