

1 UNITED STATES PATENT AND TRADEMARK OFFICE

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3
4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES

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8 *Ex parte* GORDON J. HARRIS

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11 Appeal 2007-1516
12 Application 09/891,020¹
13 Technology Center 2100

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16 Decided: January 15, 2008

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20 Before LANCE LEONARD BARRY, ALLEN R. MACDONALD, and
21 CAROLYN D. THOMAS, *Administrative Patent Judges*.

22
23 THOMAS, C., *Administrative Patent Judge*.

24
25 DECISION ON APPEAL

26 I. STATEMENT OF THE CASE

27 Appellant appeals under 35 U.S.C. § 134 from a final rejection
28 of claims 1-11, 14-20, and 23-25 entered April 19, 2006. We have
29 jurisdiction under 35 U.S.C. § 6(b).

¹ Application filed June 25, 2001. The real party in interest is EMC Corporation.

1 We affirm-in-part.

2 A. INVENTION

3 Appellant invented a system, method, and computer readable medium
4 for moving network data to a storage resource, including a physical memory
5 page comprising a plurality of physical memory clusters. (Specification 2:1-
6 6).

7

8 B. ILLUSTRATIVE CLAIMS

9 The appeal contains claims 1-11, 14-20, and 23-25. Claims 1, 6, and
10 14 are independent claims. As best representative of the disclosed and
11 claimed invention, claims 1, 3, 5, 19, and 23 are reproduced below:

12 1. A method comprising:

13 moving data from a network layer into a physical memory page,
14 wherein the network layer receives and transmits the data packets that are
15 odd-sized, arrive asynchronously, and contain metadata embedded with real
16 data and the physical memory page comprises a plurality of physical
17 memory clusters;

18 creating a logical page providing an aligned view of the data;

19 establishing a relationship between the logical page and the
20 physical memory page such that the logical page is associated with the
21 plurality of physical memory clusters; and

22 forwarding a list of the logical pages to a storage resource such
23 that the data referenced by the logical pages are stored subsequently into a
24 storage resource.

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1 3. The method of claim 1 further comprising:
2 creating a plurality of logical pages based on the offset and
3 length of the data associated with a network write operation.

4
5 5. The method of claim 1 further comprising:
6 merging an existing physical memory cluster with a new
7 physical cluster based on the offset and length of the existing physical
8 memory cluster and based on the offset and length of the new physical
9 memory cluster.

10

11 19. The method of claim 1 wherein the network layer uses a
12 transport control protocol/internet protocol (TCP/IP) to transmit and receive
13 the data over a computer network.

14

15 23. The method of claim 1, wherein the data packets arrive in a
16 sequence that is different from an original sequence in which they were
17 transmitted.

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19

C. REFERENCES

20 The references relied upon by the Examiner in rejecting the claims on
21 appeal are as follows:

22	Vishin	US 5,860,146	Jan. 12, 1999
23	Nijhawan	US 6,374,341 B1	Apr. 16, 2002
24			(filed Sep. 2, 1998)
25	Richter	US 2003/0097481 A1	May 22, 2003
26			(filed Oct. 22, 2002)
27	Westbrook	US 6,934,760 B1	Aug. 23, 2005
28			(filed Feb. 4, 2001)
29			

1 Applicant Admitted Prior Art (AAPA), *see* Specification, page 1, lines
2 8-12.

3
4 D. REJECTIONS

5 The Examiner entered a Final Rejection on April 19, 2006 with the
6 following rejections which are before us for review:

7 1. Claims 1-11, and 14-18 are rejected under 35 U.S.C. § 103(a) as
8 being unpatentable over Nijhawan in view of Vishin and further in view of
9 Applicant Admitted Prior Art (AAPA).

10 2. Claims 19 and 20 are rejected under 35 U.S.C. § 103(a) as being
11 unpatentable over Nijhawan-Vishin-AAPA, and further in view of Richter.

12 3. Claims 23-25 are rejected under 35 U.S.C. § 103(a) as being
13 unpatentable over Nijhawan-Vishin-AAPA, and further in view of
14 Westbrook.

15
16 II. PROSECUTION HISTORY

17 Appellant appealed from the Final Rejection and filed an Appeal Brief
18 (Br.) on September 6, 2006. The Examiner mailed an Examiner's Answer
19 (Answer) on December 4, 2006. Appellant filed a Reply Brief (Reply Br.)
20 on February 5, 2007.

21
22 III. ISSUE(S)

23 Whether Appellant has shown that the Examiner erred with respect to
24 the rejection under 35 U.S.C. § 103(a).

1 IV. PRINCIPLES OF LAW

2 Appellant has the burden on appeal to the Board to demonstrate error
3 in the Examiner’s position. See *In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir.
4 2006) (“On appeal to the Board, an applicant can overcome a rejection
5 [under § 103] by showing insufficient evidence of prima facie obviousness
6 or by rebutting the prima facie case with evidence of secondary indicia of
7 nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir.
8 1998)).

9 “Section 103 forbids issuance of a patent when ‘the differences
10 between the subject matter sought to be patented and the prior art are such
11 that the subject matter as a whole would have been obvious at the time the
12 invention was made to a person having ordinary skill in the art to which said
13 subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727,
14 1734 (2007). The question of obviousness is resolved on the basis of
15 underlying factual determinations including (1) the scope and content of the
16 prior art, (2) any differences between the claimed subject matter and the
17 prior art, (3) the level of skill in the art, and (4) where in evidence, so-called
18 secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18
19 (1966). See also *KSR*, 127 S. Ct. at 1734 (“While the sequence of these
20 questions might be reordered in any particular case, the [*Graham*] factors
21 continue to define the inquiry that controls.”)

22

1 V. ANALYSIS

2 *Grouping of Claims*

3 In the Brief, Appellant argues claims 1, 2, 4, 6, 7, 9, 10, 14, 15, and 17
4 as a group. In other words, for claims 2, 4, 6, 7, 9, 10, 14, 15, and 17
5 Appellant merely repeats the same argument made for claim 1. Thus, the
6 Board selects representative claim 1 to decide the appeal for this group.
7 37 C.F.R. § 41.37(c)(1)(vii)(2006). Accordingly, the remaining claims in
8 this group stand or fall with claim 1.

9 Appellant separately argues claims 3, 5, 19, and 23.

10 Appellant argues claims 3, 8, and 16 as a group. For claims 8 and 16,
11 Appellant repeats the same argument made for claim 3. We will therefore
12 treat claims 8 and 16 as standing or falling with claim 3.

13 Appellant argues claims 5, 11, and 18 as a group. For claims 11 and
14 18, Appellant repeats the same argument made for claim 5. We will
15 therefore treat claims 11 and 18 as standing or falling with claim 5.

16 Appellant argues claims 19 and 20 as a group. For claim 20,
17 Appellant repeats the same argument made for claim 19. We will therefore
18 treat claim 20 as standing or falling with claim 19.

19 Appellant argues claims 23-25 as a group. For claims 24 and 25,
20 Appellant repeats the same argument made for claim 23. We will therefore
21 treat claims 24 and 25 as standing or falling with claim 23.

22 *See also In re Young*, 927 F.2d 588, 590 (Fed. Cir. 1991).

23

1 that used by district courts. We have held that it is error for the Board to
2 “appl[y] the mode of claim interpretation that is used by courts in litigation,
3 when interpreting the claims of issued patents in connection with
4 determinations of infringement and validity.” *In re Zletz*, 893 F.2d 319, 321
5 (Fed. Cir. 1989); accord *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997)
6 (“It would be inconsistent with the role assigned to the PTO in issuing a
7 patent to require it to interpret claims in the same manner as judges who,
8 post-issuance, operate under the assumption the patent is valid.”). Instead,
9 as we explained above, the PTO is obligated to give claims their broadest
10 reasonable interpretation during examination. *In re Am. Acad. of Sci. Tech.*
11 *Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004).

12 In the instant case, Appellant has not provided a lexicographic
13 definition for the term “network layer”. As such, “network layer” could
14 mean any layer in a network component. The Examiner has shown that
15 Vishin discloses a “switch” in Fig. 9, which can be construed as being in the
16 network layer or the data link layer. Thus, we find the Examiner has
17 provided an adequate reason why an artisan would have construed Vishin’s
18 network 114 as including a network layer.

19 Appellant further contends that “Vishin’s description of the
20 network 114 does not contain features that would suggest that the network
21 114 uses a network layer. Such features could include, for example, the
22 routing of data packets” (Br. 11.)

1 Vishin discloses that “if most of a large file is stored at a first location
2 in the system 100, but a segment of the file has been moved to a particular
3 cluster 102 for updating, a first RPTE would be used to indicate the position
4 of the entire file at the first location, and a second RPTE stored at a lower
5 index position in the same group as the first RPTE would be used to indicate
6 the position of the file segment that has been moved.” (Vishin, col. 6, ll. 39-
7 46.) In other words, Vishin discloses moving a *segment* of a data file if
8 necessary. We find that the term “moving a segment of data” suggests the
9 transmitting and receiving of data packets.

10 Therefore, we find that Vishin’ network 114 would have suggested
11 the use of a network layer having a switch and the transmitting and receiving
12 of data packets.

13 Appellant also contends that “[t]here is nothing in Vishin that suggests
14 that network 114 is anything more than a simple connection between
15 processor clusters, which could, for example, be implemented by serial
16 connection that sends data one bit at a time, not as packets. Thus, neither
17 Nijhawan nor Vishin provide any suggestion as to why one skilled in the art
18 would be motivated to modify their systems with AAPA to transmit and
19 receive data packets, and in particular, to transmit and receive data packets
20 that are odd-sized, arrive asynchronously, and contain metadata embedded
21 with real data.” (Br. 13.)

22 For at least the reasons noted above, we do not find Appellant’s
23 argument persuasive. As noted *supra*, we find that Vishin suggests the

1 movement of data packets. Furthermore, Appellant admits that Ethernet
2 networks transmit and receive data packets that are odd-sized, asynchronous,
3 and having metadata embedded therein (Spec. 1:8-12). The Examiner
4 contends that the “references are all directed to virtual memory management
5 systems to access data over a computing network.” (Answer 6.)

6 It appears that the weight of Appellant’s argument is aimed at the
7 contention that Vishin fails to disclose transmitting and receiving data
8 packets, and having already dismissed this contention *supra*, we find that the
9 ordinary artisan who possessed knowledge and skills relating to computer
10 networks that include data packets would have been capable of combining
11 AAPA with Vishin and Nijhawan in the manner suggested by the Examiner.

12 We find that the Appellant has failed to show error in the Examiner’s
13 rejection. Therefore, we affirm the rejection of claim 1 and of claims 2, 4, 6,
14 7, 9, 10, 14, 15, and 17, which fall therewith.

15

16

Claims 3, 8, and 16

17 Appellant contends that “[t]here is nothing in Nijhawan that discloses
18 or suggests that a logical page number or an associated logic page is based
19 on the offset and length of the data associated with a network write
20 operation.” (Br. 14.) Appellant further contends that “there is nothing in
21 Nijhawan that discloses or suggest that the logical page *is created* based on
22 data associated with a network write operation. Rather, . . ., Nijhawan’s

1 logical page is created based on a mapping to a physical page.” (Reply Br.
2 9.)

3 The Examiner contends that Nijhawan teaches that an “offset can be
4 used to define the page number such that a 19-bit logical page number is
5 provided and a 13-bit offset is provided as an offset within the 8K page . . .”
6 (Answer 15) and that Appellant acknowledges that “in Nijhawan, a logical
7 page can assist a network write operation . . . (Answer 15).” We agree.

8 Nijhawan discloses that “if the page being mapped by 32-bit linear
9 address 81 is an 8K page, then the upper 9 bits of the 10+12 bit offset can be
10 used to define the page number such that a 19-bit logical page number is
11 provided and a 13-bit offset is provided as an offset within the 8K page (col.
12 8:40-44).” Thus, Nijhawan suggests a logical page being based on an offset
13 and length of the data associated with a network write operation.

14 We find that the Appellant has failed to show error in the Examiner’s
15 rejection. Therefore, we affirm the rejection of claim 3 and of claims 8 and
16 16, which fall therewith.

17

18

Claims 5, 11, and 18

19 Appellant contends that “. . . Nijhawan discloses allocating and
20 reallocating blocks of physical memory depending on memory requirements
21 of an operating system. The Examiner incorrectly interprets the term
22 ‘reallocated’ as meaning the same as ‘remerged’ or ‘merged.’ . . . Allocating
23 memory blocks is not the same a[s] merging memory blocks.” (Br. 15.)

1 Appellant further contends that “[a]lthough, claim 5 does not literally recite
2 combining the new and existing physical memory clusters, the feature of
3 ‘merging of an existing physical memory cluster with a new physical
4 memory’ inherently requires that the new and existing physical memory
5 clusters be combined.” (Reply Br. 10.) We Agree.

6 The ordinary and usual meaning of “merging” is to cause to combine,
7 unite, or coalesce. *Merriam-Webster’s Collegiate Dictionary*, p. 777 (11th
8 Edition 2005). The Examiner proffered teachings in Nijhawan merely
9 disclose allocating memory, which denotes setting aside or apart for a
10 specified purpose. Absent a teaching or suggestion of a merging of existing
11 memory cluster with new memory cluster, we are unpersuaded of a case of
12 obviousness. Therefore, we reverse the rejection of claims 5, 11, and 18.

13

14

Claims 19 and 20

15 Appellant contends that “neither Nijhawan nor Vishin disclose or
16 suggest anything that would motivate a person of ordinary skill in the art to
17 modify their systems to transmit data over a network as data packets, a
18 feature required by AAPA and Richter. Therefore, to combine Nijhawan,
19 Vishin, AAPA, and Richter in the manner suggested by the Examiner, a
20 person of ordinary skill in the art would need to rely upon the Appellant’s
21 invention as a roadmap.” (Br. 17.) We disagree.

22 As noted *supra*, Vishin has been found to disclose the transmission of
23 data packets. As such, we find that the Appellant has failed to show error in

1 the Examiner's rejection. Therefore, we affirm the rejection of claim 19 and
2 of claim 20, which fall therewith.

3
4 *Claims 23-25*

5 Appellant contends that "[t]he Examiner's proposed combination of
6 Nijhawan, Vishin, AAPA, and Westbrook amounts to a hindsight
7 combination, which as discussed above, is improper as a matter of law."
8 (Br. 18.) Appellant further contends that "[b]oth AAPA and Westbrook
9 require networks that transmit data as data packets; however, neither
10 Nijhawan nor Vishin disclose or suggest anything that would motivate a
11 person of ordinary skill in the art to modify their systems to transmit data
12 over a network as data packets." (Reply Br. 14.) We disagree for the same
13 reasons noted *supra* regarding Vishin's disclosure of data packets.

14 We find that the Appellant has failed to show error in the Examiner's
15 rejection. Therefore, we affirm the rejection of claim 23 and of claims 24
16 and 25, which fall therewith.

17
18 VI. CONCLUSIONS

19 We conclude that Appellant has not shown that the Examiner erred in
20 rejecting claims 1-4, 6-10, 14-17, 19, 20, and 23-25.

21 Thus, claims 1-4, 6-10, 14-17, 19, 20, and 23-25 are not patentable.

