

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* MICHAEL A. ROTHMAN and VINCENT J. ZIMMER

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11 Appeal 2007-1357
12 Application 10/317,579¹
13 Technology Center 2100

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16 Decided: November 20, 2007

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20 Before ALLEN R. MACDONALD, JEAN R. HOMERE, and CAROLYN
21 D. THOMAS, *Administrative Patent Judges*.

22

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

24

25 DECISION ON APPEAL
26 STATEMENT OF THE CASE

27 Appellants appeal under 35 U.S.C. § 134 from a Final Rejection
28 of claims 1-29 entered May 2, 2006. We have jurisdiction under
29 35 U.S.C. § 6(b).

¹ Filing date: December 12, 2002. The real party in interest is Intel Corporation.

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1 Appellants invented a system, method, and machine readable medium
2 for providing self-describing media. A processor readable media includes a
3 second portion storing a firmware extension that is adapted to be read by a
4 processor in a pre-boot environment and to inform the processor of the
5 format of information stored in a first portion. (Specification, Abstract).

6 The appeal contains claims 1-29. Claims 1, 10, 20, and 26 are
7 independent claims. As best representative of the disclosed and claimed
8 invention, claim 1 is reproduced below:

9 1. A machine readable medium configured to be read by a machine,
10 the machine readable medium comprising:

11 a first portion storing information arranged according to a format; and
12 a second portion storing a firmware extension thereon, wherein the
13 firmware extension is adapted to be read by a machine in a pre-boot
14 environment and to inform the machine how to read the format of
15 information stored in the first portion.

REFERENCES²

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

20 Greene 5,836,013 Nov. 10, 1998

² Although three (3) separate references were used in the pending rejections, Appellants' arguments only address the "El Torito" reference. Thus, only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. See 37 C.F.R. § 41.37(c)(1)(vii) (2004).

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1 Curtis E. Stevens et al., "El Torito" Bootable CD-ROM Format
2 Specification Version 1.0, Jan. 25, 1995.
3

4 Intel, "Extensible Firmware Interface-Changing the face of BIOS and
5 Extensible Interface Specification", Dec. 12, 2000.
6

7 The Final Rejection shows the following rejections which are before
8 us for review:

9 (a) Claims 1-5, 7-8, 10-16, and 18-29 are rejected under 35 U.S.C.
10 § 102(b) as being anticipated by Torito;

11 (b) Claims 6 and 17 are rejected under 35 U.S.C. § 103(a) as being
12 unpatentable over Torito in view of EFI; and

13 Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable
14 over Torito in view of Greene.

15 Appellants appealed from the Final Rejection and filed an Appeal
16 Brief (Br.) on September 20, 2006. The Examiner mailed an Examiner's
17 Answer (Answer) on November 3, 2006. Appellants filed a Reply Brief
18 (Reply Br.) on January 2, 2007.

19 We reverse.

20 We also use our authority under 37 C.F.R. § 41.50(b) to enter a new
21 ground of rejection of claim 1.

22

23 ISSUES

24 The issue is whether Appellants have shown that the Examiner erred
25 in rejecting representative claim 1 based on anticipation. The issue

1 specifically turns on whether Torito expressly or inherently discloses a
2 *stored firmware extension that informs the machine how to read the format,*
3 as set forth in Appellants' claim 1.

4

5 FINDINGS OF FACT

6 The following findings of fact (FF) are supported by a preponderance
7 of the evidence.

8 *Claim Construction*

9 1. Appellants' Specification discloses that "To the contrary . . .
10 enabling descriptors of those formats to be written onto the removable
11 storage media 32 as firmware extensions . . ." is designed into the system to
12 accommodate future formats and developments in formatting.
13 (Specification, paragraph [0025]).

14 2. The Specification provides a lexicographic definition for the
15 phrase ". . . inform the machine how to read the format . . ." by describing
16 the use of descriptors.

17 3. The ordinary and usual meaning of the term "how" is "in what
18 manner or way". *Merriam-Webster's Collegiate Dictionary*, p. 603 (11th
19 Edition 2005).

20

21 *The Invention*

22 4. Appellants' Specification discloses that "[t]he EFI image may be
23 referred to as an El Torito standard formatted image, wherein the standard

1 formatted image contains a firmware extension.” (Appellants’ Specification,
2 paragraph [0022].)

3 5. Appellants’ Specification discloses that “the disclosed system is
4 designed to accommodate future formats and developments in formatting by
5 enabling descriptors of those formats to be written onto the removable
6 storage media 32 as firmware extensions when the removable storage media
7 32 is formatted. This enables the firmware extension to be read and
8 executed by any subsequent processor so that the processor that executed the
9 firmware extension is able to read the balance of the information on the
10 media, despite the fact that the format of the data on the balance of the
11 media was foreign to the processor before execution of the firmware
12 extension.” (Appellants’ Specification, paragraph [0025].)

13 6. Appellants’ Specification discloses that “[w]ithin the accessed
14 image on the removable storage media 32 is a firmware extension defining
15 the format in which the remaining information on the removable storage
16 media 32 is written. After being read, the firmware extension is executed by
17 the processor 12, which . . . causes the processor 12 to publish an API
18 describing the format for the information on the remainder of the removable
19 storage media 32 (block 140).” (Appellants’ Specification, paragraph
20 [0036].)

21 *Torito*

22 7. Torito describes “how makers of CD-ROMs can package several
23 ‘images’ of floppy and hard disks on a single CD with the ability to catalog

1 these images and to selectively boot from any single image.” (Torito, page
2 4, section 1.0.)

3 8. Torito further discloses “how to format a CD-ROM from which
4 you can boot a suitably-equipped computer system.” (Torito, page 4, section
5 1.1.)

6 9. Torito discloses “[t]he CD-ROM is a removable media type . . .”
7 (Torito, page 4, section 1.3.)

8 10. In Torito, “A BIOS with . . . a number of Bootable Disk Images
9 [are] listed in the Booting Catalog.” (Torito, page 6, section 1.4.)

10 11. Torito discloses that “[t]he Boot Catalog is a collection of 20 byte
11 entries . . . This catalog allows the system to pick a proper boot image and
12 then to boot from the selected image.” (Torito, page 8, section 2.0.)

13 12. Torito discloses that “[t]he initial entry must contain a boot image
14 which consists of generic programs/drivers that use only the BIOS provided
15 INT 13 interface.” (Torito, page 8, section 2.2.)

16 13. Torito discloses that “[t]he format of the selection criteria is a
17 function of the BIOS vendor, the other fields are standardized for
18 compatibility reasons. In the case of a foreign language BIOS three bytes
19 would be used to identify the language.” (Torito, page 8, section 2.4.)

20 14. Torito discloses a “Section Entry Extension . . . This Extension
21 defines additional selection criteria.” (Torito, page 9, section 2.5 and Fig.
22 6.)

23

1 PRINCIPLES OF LAW

2 “A claim is anticipated only if each and every element as set forth in
3 the claim is found, either expressly or inherently described, in a single prior
4 art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d
5 628, 631(Fed. Cir. 1987). Analysis of whether a claim is patentable over the
6 prior art under 35 U.S.C. § 102 begins with a determination of the scope of
7 the claim. We determine the scope of the claims in patent applications not
8 solely on the basis of the claim language, but upon giving claims their
9 broadest reasonable construction in light of the specification as it would be
10 interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech.*
11 *Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim
12 must then be compared with the prior art.

13

14 ANALYSIS

15 In the Brief, Appellants argue claims 1-29 as a group. In other words,
16 for claims 2-29, Appellants merely repeat the same argument made for claim
17 1. Thus, the Board selects representative claim 1 to decide the appeal.
18 37 C.F.R. § 41.37(c)(1)(vii)(2006). Accordingly, the remaining claims stand
19 or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(vii). *See also In re Young*,
20 927 F.2d 588, 590 (Fed. Cir. 1991).

21

22 *The Board's Claim Construction*

23 To determine whether Torito anticipates claim 1, we must first

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1 determine the scope of the claims. Our reviewing court stated in *Phillips v.*
2 *AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005), *cert. denied, sub nom.*
3 *AWH Corp. v Phillips*, 126 S. Ct. 1332 (2006): The claims, of course, do not
4 stand alone. Rather, they are part of “a fully integrated written instrument,”
5 *Markman*, 52 F.3d at 978, consisting principally of a specification that
6 concludes with the claims. For that reason, claims “must be read in view of
7 the specification, of which they are a part.” *Id.* at 979. As we stated in
8 *Vitronics*, the specification “is always highly relevant to the claim
9 construction analysis. Usually, it is dispositive; it is the single best guide to
10 the meaning of a disputed term.” 90 F.3d at 1582.

11 Upon our review of Appellants’ claim 1 in light of Appellants’
12 Specification, we conclude the following:

13 Appellants’ Specification specifically states that descriptors of
14 formats are written onto the removable storage media as firmware
15 extensions. (FF 1). Thus, Appellants has defined the claimed phrase
16 “inform the machine how to read the format” broadly to include any
17 descriptors of formats that are written as firmware extensions. (FF 2).
18 Furthermore, we find that the term “how” as used in claim 1 describes a
19 manner or way of doing something. (FF 3).

20 Based on our findings, the Examiner’s anticipation conclusion is in
21 error.

22 Specifically, Appellants contend that “all of the art rejections are
23 based on incorrect definitions of the terms “how” and “load segment” used

1 by the Examiner.” Appellants further contend that “[l]oad segment’ is
2 clearly defined in *El Torito* as a physical location of information.” (Br. 14).
3 Appellants also contend that “providing a load segment provides where
4 information is located but not how to read or interpret that information or
5 information located at another location.” (Br. 17)(emphasis in original).

6 The Examiner states that “[a]s Appellant[s] did not claim the specific
7 elements of the format description, Examiner is entitled to take the broadest
8 interpretation that a starting address [load segment associated with a
9 particular system] is one of the format description to indicate the layout of
10 the first portion [e.g., first portion format/layout is data divided into X
11 sectors starting at address Y].” (Answer 8-9). The Examiner further states
12 that “El Torito may disclose “where” as *one of the elements* of the format
13 description in determining how to read/interpret, but nothing in Appellant’s
14 claims or disclosure specifically precludes “where” as an element in the
15 format description [e.g., how to find my house may include the address of a
16 landmark].” (Answer 10). We disagree.

17 While Appellants did not specifically describe the format in claim 1,
18 claim 1 does require that a firmware extension be stored wherein the
19 firmware extension . . . inform the machine how to read the format
20 Thus, we find that while Appellants’ format includes both known and
21 unknown formats, Appellants’ invention requires that a descriptive type
22 firmware extension be apart of the medium. (FF 4-6). Further, it is our

1 opinion that the term “how” denotes “in what manner or way” as opposed to
2 describing “where”.

3 The Examiner contends that “[t]he boot catalog in figure 3 clearly
4 contains the format description such as the load segment [cited as an
5 example] and sector count that are needed in order for the machine to know
6 how to read the bootable disk image . . . ” (Answer 8). We disagree.

7 Torito’s “load Segment” found in the boot catalog in figure 3 merely
8 discloses an address location for the initial boot image. This “Load
9 Segment” does not include a firmware extension informing the machine how
10 to read the format. Instead, it merely tells ‘where’ to find the initial boot
11 image.

12 Therefore, we will not sustain the rejection based on the Examiner’s
13 above reasoning and will instead reverse the Examiner’s rejection under 35
14 U.S.C. § 102(b) for the same reasons as set forth above.

15

16 NEW GROUND OF REJECTION

17 35 U.S.C. § 102

18 Our decision below relies on different reasoning with respect to the
19 Torito patent than that set forth by the Examiner. Due to our new reasoning,
20 we designate our decision as a new ground of rejection.

21 As such, we have set forth a new ground of rejection for independent
22 claim 1 under 35 U.S.C. § 102(b) as being anticipated by Torito.

1 Specifically, Torito discloses formatting a removable CD-ROM by
2 packaging several images thereon with the ability to catalog the images and
3 to selectively boot from any single image (FF 7-11). In other words, Torito
4 discloses several boot capabilities, one of which uses a boot image which
5 consists of generic programs/drivers that use only the BIOS provided INT 13
6 interface. (FF 12).

7 Torito further discloses a “Section Entry” that includes a selection
8 criteria. Torito’s selection criteria is formatted as a function of the BIOS
9 vendor. However, in the case of a foreign language BIOS, Torito would use
10 three bytes to identify the language. In addition, if the bytes provided for the
11 selection criteria are insufficient, Torito adds a “Section Entry Extension.”
12 (FF 13-14).

13 In other words, Torito stores a selection criteria according to a format
14 in a first portion. In a second portion, Torito identifies the language of the
15 format. If additional information is needed, Torito further adds an extension
16 to identify the format. The ordinary and usual meaning of “extension” is “a
17 series of usually three or four characters following a dot at the end of the
18 name of a computer file that specifies the file’s format or purpose.”
19 *Merriam-Webster’s Collegiate Dictionary*, p. 443 (11th Edition 2005).

20 For the above reasons, we find that claim 1 is unpatentable over
21 Torito.

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23

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OTHER ISSUES

2 The Board of Patent Appeals and Interferences is a review body,
3 rather than a place of initial examination. We have made a rejection above
4 under 37 C.F.R. § 41.50(b). However, we have not reviewed claims 2-29 to
5 the extent necessary to determine whether these claims are patentable over
6 the Torito document. We leave it to the Examiner to determine the
7 appropriateness of any further rejections based on the Torito reference alone
8 or in combination with any other prior art references.

9

10 37 C.F.R. § 41.50(b)

11 37 C.F.R. § 41.50(b) provides that, “[a] new ground of rejection
12 pursuant to this paragraph shall not be considered final for judicial review.”

13 37 C.F.R. § 41.50(b) also provides that the Appellants, *WITHIN TWO*
14 *MONTHS FROM THE DATE OF THE DECISION*, must exercise one of the
15 following two options with respect to the new grounds of rejection to avoid
16 termination of proceedings (37 C.F.R. § 1.197 (b)) as to the rejected claims:

17 (1) Reopen prosecution. Submit an appropriate amendment of the
18 claims so rejected or new evidence relating to the claims so rejected,
19 or both, and have the matter reconsidered by the examiner, in which
20 event the proceeding will be remanded to the examiner ...

21

22 (2) Request rehearing. Request that the proceeding be reheard under
23 37 C.F.R. § 41.52 by the Board upon the same record ...

24

25

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1 DECISION

2 In view of the foregoing discussion, we reverse the Examiner's
3 rejection of claims 1-29. Therefore, the decision of the Examiner rejecting
4 claims 1-29 is reversed.

5 Under C.F.R. § 41.50(b), we enter a new ground of rejection against
6 claim 1 under 35 U.S.C. § 102(b).

7

8 No time period for taking any subsequent action in connection with
9 this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R.
10 § 1.136(a)(1)(iv) (2006).

11

12 REVERSED

13 37 C.F.R. § 41.50(b)

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17 rwk

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