

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SONY CORPORATION  
Petitioner,

v.

IMATION CORPORATION  
Patent Owner.

Case IPR2015-01557  
Patent 6,890,188 B1

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**IMATION CORPORATION'S NOTICE OF APPEAL**

Pursuant to 35 U.S.C. §§ 141 and 142, and 37 C.F.R. §§ 90.1, 90.2, and 90.3, Patent Owner Imation Corporation (“Imation”) hereby gives notice of its appeal to the United States Court of Appeals for the Federal Circuit from the January 3, 2017 Final Written Decision of the United States Patent and Trademark Office Patent Trial and Appeal Board, in IPR2015-01557 concerning U.S. Patent No. 6,890,188 B1, and from all orders, decisions, rulings, and opinions underlying the Final Written Decision. A copy of the Final Written Decision is attached hereto as Exhibit A.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), Imation provides the following information regarding issues to be reviewed on appeal in order to allow the Director to determine whether to exercise the right to intervene:

1. Whether the Board erred in its determination that claims 10 and 14 of U.S. Patent No. 6,890,188 B1 are unpatentable under 35 U.S.C. §§ 102 and 103(a).

Simultaneously with this filing, copies of this Notice of Appeal are being served on the Director of the United States Patent and Trademark Office, filed with the Clerk's Office for the United States Court of Appeals for the Federal Circuit, and served on opposing counsel.

Dated: March 6, 2017

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**CERTIFICATE OF SERVICE AND/OR FILING**

I certify that, on March 6, 2017, in addition to being electronically filed through the United States Patent and Trademark Office's Electronic Filing System, true and correct copies of IMATION CORPORATION'S NOTICE OF APPEAL were served and/or filed as set forth below:

**Filing by Hand Delivery**

Pursuant to 37 C.F.R. §§ 90.2 and 104.2, filed by hand delivery on the Director of the United States Patent and Trademark office, at the following address:

Director of the United States Patent and Trademark Office  
c/o Office of the General Counsel, 10B20  
Madison Building East  
600 Dulany Street  
Alexandria, Virginia

**Filing Electronically**

Pursuant to 37 C.F.R. § 90.2 and Federal Circuit Rules 15, 25 and 52, filed through CM/ECF with the Clerk's Office of the United States Court of Appeals with the appropriate fee.

**Service by U.S. Mail**

Pursuant to 37 C.F.R. §§ 42.6(e), served by email and U.S. Mail on counsel of record for Sony Corporation:

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Dated: March 6, 2017

s/ Michelle E. Dawson  
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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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Patent 6,890,188 B1

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Before KEVIN F. TURNER, STACEY G. WHITE, and  
KERRY BEGLEY, *Administrative Patent Judges*.

TURNER, *Administrative Patent Judge*.

DECISION  
Final Written Decision  
*35 U.S.C. § 318(a) and 37 C.F.R. § 42.73*

## I. INTRODUCTION

This *inter partes* review, instituted pursuant to 35 U.S.C. § 314, challenges the patentability of claims 10 and 14 of U.S. Patent No. 6,890,188 B1 (Ex. 1001, “the ’188 Patent”), owned by Imation Corporation (“Patent Owner”). We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons discussed below, Petitioner has shown by a preponderance of the evidence that claims 10 and 14 of the ’188 Patent are unpatentable.

### *A. Procedural History*

Sony Corporation (“Petitioner”) filed a Petition for *inter partes* review of claims 10 and 14 of the challenged patent. Paper 1 (“Pet.”). Patent Owner filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

We instituted an *inter partes* review of claims 10 and 14 (“the instituted claims”) of the ’188 Patent as unpatentable under 35 U.S.C. §§ 102 and 103<sup>1</sup> over the following bases and references. Paper 7 (“Institution Decision” or “Dec.”).

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<sup>1</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29 (2011), revised 35 U.S.C. §§ 102–103. Because the ’188 patent has a filing date before the effective date of the relevant sections of the AIA, we refer to the pre-AIA versions of §§ 102–103 in this Decision.

Reference(s)	Basis	Claim Challenged
Yen <sup>2</sup>	§ 102	10
Yen and Yu <sup>3</sup>	§ 103	14
Chang <sup>4</sup> , Yen, and either the SD Specification <sup>5</sup> or the MMC Specification <sup>6</sup>	§ 103	10
Chang, Yen, Yu, and either the SD Specification or the MMC Specification	§ 103	14

Dec. 32.

Subsequent to institution, Patent Owner filed a Patent Owner Response to the Petition (Paper 12, “PO Resp.”) and Petitioner filed a Reply to Patent Owner’s Response (Paper 13, “Reply”).

An oral hearing was held on September 14, 2016. A transcript of the hearing has been entered into the record. Paper 18 (“Tr.”).

#### *B. Related Matters*

Petitioner identifies the following lawsuits brought by the Patent Owner with respect to the ’188 Patent, namely *Imation Corp. v. Sony Electronics Inc.*, C.A. No. 14-628 (D. Minn.) (MJD/SER); *Imation Corp. v.*

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<sup>2</sup> U.S. Patent No. 6,744,634 B2 (filed Jan. 30, 2002) (issued June 1, 2004) (Ex. 1003, “Yen”).

<sup>3</sup> U.S. Patent No. 6,763,410 B2 (filed Mar. 10, 2003) (issued July 13, 2004) (Ex. 1004, “Yu”).

<sup>4</sup> U.S. Patent Application Publication No. 2002/0177362 A1 (filed Mar. 4, 2002) (published Nov. 28, 2002) (Ex. 1006, “Chang”).

<sup>5</sup> MMCA TECHNICAL COMMITTEE, THE MULTIMEDIA CARD SYSTEM SPECIFICATION, VERSION 1.4 (1998) (Ex. 1008, “MMC Specification”).

<sup>6</sup> SD GROUP, SD MEMORY CARD SPECIFICATIONS – SIMPLIFIED VERSION OF: PART 1 PHYSICAL LAYER SPECIFICATION VERSION 1.01 (2001) (Ex. 1007, “SD Specification”).



IPR2015-01557  
Patent 6,890,188 B1

*Tandon Digital Products, Inc. et al.*, C.A. No. 14-3314 (D. Minn.) (ADM/BRT); and *Imation Corp. v. Sanho Corp.*, C.A. No. 15-1883 (D. Minn.) (MJD/JSM). Pet. 2–3; Paper 4. Petitioner also identifies IPR2015-00066 as a prior proceeding against the same patent and references U.S. Patent No. 6,908,038 B1 (“the ’038 Patent”), also owned by Patent Owner, as being the subject of concurrent proceeding IPR2015-01556. Pet. 3.

### C. *The ’188 Patent*

The ’188 patent is directed to a memory card that includes both a device connector, conforming to a device connection standard, and a host connector, conforming to a host connection standard. Ex. 1001, 1:61–2:6, 3:58–61. For example, the device connector may conform to a Memory Stick (“MS”) standard, the MultiMediaCard (“MMC”) standard, or the Secure Digital (“SD”) standard, whereas the host connector may conform to a Universal Serial Bus (“USB”) standard, such as a “USB tab without a conventional electrical shield.” *Id.* at 2:6–10, 3:61–4:9, 12:18–21.

The dimensions of the memory card, including height, width, and thickness, “may substantially conform” to dimensions defined by a memory card standard. *Id.* at 2:11–12, 4:30–32. The memory card, however, may include “irregularities” in its shape “that are not consistent with the form factor of the memory card standard.” *Id.* at 2:12–18, 4:32–40.

The memory card may “include a cover to fit over the host connector.” *Id.* at 2:19–20, 4:10–23. With the cover over the host connector, the form factor of the memory card conforms to a “form factor of

the memory card standard.” *Id.* at 2:20–22. This “allows for compatibility with memory card accessories, such as storage case[s], or other accessories that are affected by the form factor of the memory card.” *Id.* at 4:23–29; *see id.* at 4:40–42. The cover may be removable or secured to the housing of the memory card with a hinge. *Id.* at 6:24–27, 6:63–64; *see id.* at 6:65–7:46, Fig. 4A (depicting hinge 37), Fig. 5A (depicting hinges 47A, 47B).

Figure 2 of the ’188 patent is reproduced below:

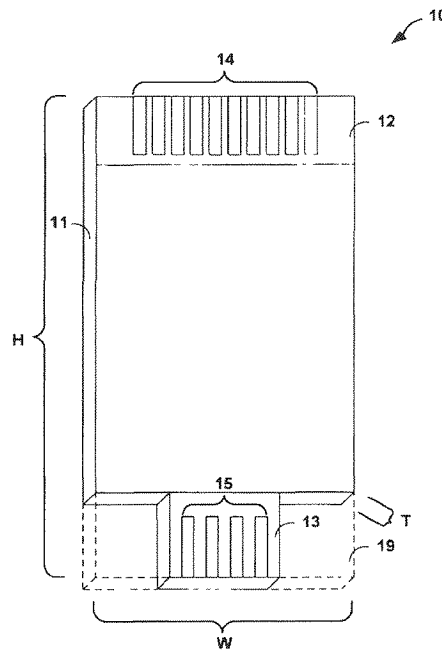


Figure 2 depicts memory card 10 with housing 11, device connector 12, shieldless tab 13, and cover 19. *See id.* at 3:38–40, 4:43–46, 6:18–23.

#### *D. Illustrative Claim*

Claim 10, which reads as follows, is the only independent claim of the challenged claims and is illustrative of the claimed subject matter:

10. A memory card comprising:
  - a housing;
  - a memory in the housing;
  - a device connector accessible through the housing, the device connector conforming to the device connection standard and allowing access to the memory by a device compatible with the device connection standard;
  - a host connector protruding from the housing, the host connector conforming to a host connection standard and allowing access to the memory upon insertion of the host connector into a computer interface compatible with the host connection standard; and
  - a cover to cover the host connector, wherein the housing and the cover collectively define a form factor of the memory card that substantially conforms to a form factor of the memory card standard.

Ex. 1001, 13:39–14:6.

## II. DISCUSSION

### *A. Claim Construction*

In an *inter partes* review, the Board interprets claims in an unexpired patent using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.100(b); *see Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of broadest reasonable construction standard). Consistent with the broadest reasonable construction standard, claim terms are presumed to have their ordinary and customary meaning as understood by one of ordinary skill in the art in the context of the entire patent disclosure at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257

(Fed. Cir. 2007). An inventor may provide a meaning for a term that is different from its ordinary meaning by defining the term in the specification with “reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). Moreover, limitations are not to be read from the specification into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). In addition, the Board may not “construe claims during [an *inter partes* review] so broadly that its constructions are unreasonable under general claim construction principles.” *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015). We construe the challenged claims according to these principles.

In the Institution Decision, we construed “host connector protruding from the housing,” determining that such a limitation does not “require physically distinct or separately molded parts or structures, with a boundary between them.” Dec. 6–10. Rather, we determined that the “host connector protruding from the housing” encompasses “the host connector and the housing as different parts of a single integral structure, i.e., attached, connected, joined, or molded to one another.” *Id.* We also construed “form factor” to mean “exterior size and shape,” and “hinge” to mean “a jointed device or flexible piece on which the cover rotates, turns, or swings.” *Id.* at 10–14.

In Patent Owner’s Response, Patent Owner does not contest the constructions of “form factor” and “hinge,” but reserves the right to propose a different claim construction in district court, given the different claim construction standard. PO Resp. 14. Patent Owner asserts, however, that a

plain meaning of the claim limitation “host connector protruding from the housing,” recited in claim 10, should be understood to mean that the housing ends and the host connector protrudes from the end of the housing, such that the housing does not surround or enclose the host connector. *Id.* at 2–14. Petitioner replies that Patent Owner’s proposed interpretation is not based on the plain meaning of the phrase and should be rejected. Reply 1–3.

*1. “host connector protruding from the housing”*

Independent claim 10 recites, in part, the “host connector protruding from the housing.” Patent Owner indicates that although it “does not necessarily object to” the claim interpretation we made in the Institution Decision, it does respectfully disagree with statements we made in our analysis. PO Resp. 2–3. Patent Owner argues that the plain and ordinary meaning of the claim limitation is that the housing ends, the host connector protrudes from that end, and the housing does not encase or surround the host connector. *Id.* at 3 (citing Ex. 2007 ¶¶ 33–46). In short, Patent Owner asserts that “you can’t protrude from something if you’re still part of it.” Tr. 58:8–9.

As part of the plain and ordinary meaning, Patent Owner cites to definitions of “protrude” and “from,” namely “to jut out from the surrounding surface or context,” and “indicating the starting-point or the first considered of two boundaries adopted in defining a given extent in space,” respectively. *Id.* at 3–4. Patent Owner also argues that every limitation in claim 1 is described relative to the housing, and that the Patentee chose the preposition “from” specifically, distinguishing such use from “on” the

housing, or “in” the housing, applied to other elements in claim 1. *Id.* at 5–8.

We do not agree with Patent Owner’s comments on the use of the preposition “from.” The standard linguistic usage of the verb “protrude” takes the prepositions “from” and “over”; it would not be standard usage to talk about “protruding in” or “protruding on.” *See* Ex. 3004; *see also Protrude*, [www.merriam-webster.com/dictionary/protrude](http://www.merriam-webster.com/dictionary/protrude) (for examples of standard usage, last visited Dec. 21, 2016). Therefore, ascribing certain requirements based on the use of a preposition may not be appropriate when only certain prepositions have common usage. As such, we are not persuaded that “from” in the claim limitation “protruding from” must take on the special meaning advocated by Patent Owner. We continue to determine that the “host connector protruding from the housing” encompasses “the host connector and the housing as different parts of a single integral structure.” *See* Dec. 10.

Patent Owner also suggests that “[a] person of ordinary skill in the art would understand that for a host connector to protrude from the housing, the host connector must extend beyond the housing, or jut out from the housing, *with a clear boundary line between the housing and the host connector* that extends beyond it.” PO Resp. 4 (citing Ex. 2007 ¶¶ 33–46) (emphasis added).

Patent Owner also argues that the written description of the ’188 Patent supports Patent Owner’s construction of the subject limitation.

PO Resp. 10–12 (citing Dec. 8–10). In the Institution Decision, we compared Figures 2 and 7 of the '188 Patent, reproduced below:

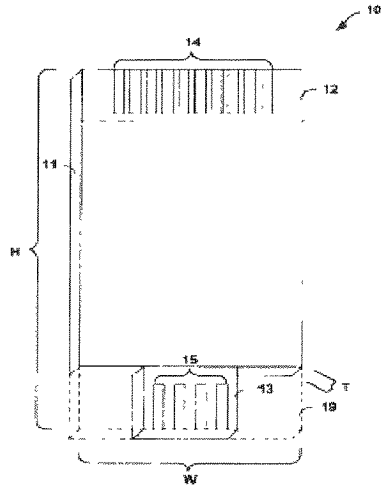


FIG. 2

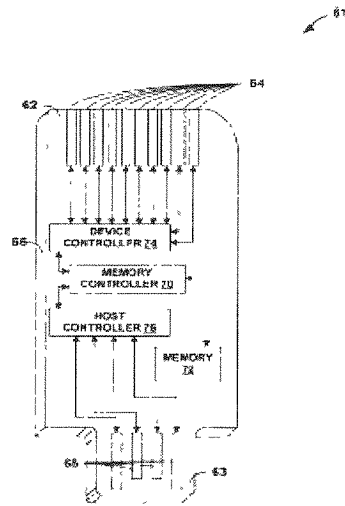


FIG. 7

We found that:

Although Figure 2 features a line between housing 11 and shieldless tab 13, Figure 7 does not feature a line or other boundary between shieldless USB tab 63 and housing 66. Rather, in Figure 7, shieldless USB tab 63 and housing 56 appear to be part of an integral structure. *See* Ex. 1002 ¶ 63. Thus, the '188 patent's characterization of a host connector as protruding from the housing does not depend on whether there is a boundary or division between the host connector and the housing.

Dec. 9. Patent Owner argues that our characterization of the figures is inaccurate because Figure 2 is a “perspective view,” and Figure 7 is a “block diagram,” with the latter illustrating the internal components of the device.

PO Resp. 11–12.

Petitioner responds that the claims only require that the connector protrude from the housing, not that the connector and housing be manufactured in a manner that creates a “boundary line.” Reply 1. Petitioner continues that the claims cover embodiments where “one or more subcomponents are manufactured integrally or continuously with the housing.” *Id.* (citing Ex. 1018 ¶¶ 5–8, 10–12). Petitioner also argues that the Specification of the ’188 Patent does not mention a boundary line and any boundary lines illustrated in the figures are merely exemplary and do not limit the claim language. *Id.* at 1–2 (citing Dec. 8; *Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1306–07 (Fed. Cir. 2003)). Petitioner also explains that the Specification of the ’188 Patent provides that the embodiment of Figure 7 defines memory card dimensions that substantially conform to dimensions of a memory card standard, such that Figure 5 cannot be regarded as merely a “block diagram.” *Id.* at 2–3 (citing Ex. 1001, 8:53–57; Ex. 1015 ¶¶ 13–14). We agree with Petitioner.

We disagree with Patent Owner that the claim limitation “host connector protruding from the housing” requires a “boundary line” between the host connector and the housing. The ’188 Patent’s characterization of a host connector as protruding from the housing does not depend on whether there is a boundary or division between the host connector and the housing, as discussed in the Institution Decision. Dec. 8–10. As discussed by Petitioner, the Specification of the ’188 Patent does not require such a boundary line and the figures are not dispositive of such a requirement. We conclude that the claims require only that the connector protrude from the



housing, not that the connector and housing be manufactured in a manner that creates a boundary line.

Patent Owner also disputes that claim 8 supports our finding that a host connector “need not be physically separate from a part or structure in order to protrude from it.” PO Resp. 9–10 (citing Dec. 7–8). We found that because the “host connector” is part of the “memory card,” yet “protrudes” from it, per claim 8, the host connector need not be physically separate from the housing in order to protrude from it. Dec. 7–8. Patent Owner argues that claim 8 is actually directed to a specific embodiment, one in which the host connector extends from the edge of the device, rather than the top or bottom of the device. PO Resp. 9–10 (citing Ex. 2007 ¶¶ 41–42).

We disagree. Claim 1 recites “[a] memory card comprising: a housing” and “a host connector protruding from the housing,” with the exact same recitations found in claim 10. Ex. 1001, 12:56–64, 13:39–46. Claim 8 adds a requirement that “the host connector protrudes from an edge of the memory card.” *Id.* at 13:11–12. Under this express claim language, the recited “host connector” is part of the “memory card,” yet “protrudes” from it. In other words, the “host connector” need not be physically separate from a part or structure in order to protrude from it. Even if claim 8 is directed to a specific embodiment, what claim 8 covers is based on its actual claim language, which informs the scope of the independent claim from which it depends.

Patent Owner also argues that our citation to *Retractable Technologies, Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1306 (Fed.

Cir. 2011), is inapt because the disclosure of the '188 Patent only supports a host connector that protrudes from the end of the housing, and the claim language makes clear that the housing does not surround or enclose the host connector. PO Resp. 13. We do not agree. We cited to *Retractable Technologies* to support the proposition that two claimed elements need not be “separately molded pieces” and instead could cover “distinct portions of a single structure.” Dec. 9–10. Patent Owner does not dispute this view of *Retractable Technologies*, only arguing that the '188 Patent supports Patent Owner's interpretation. As discussed above, we disagree, and do not conclude that the limitation “host connector protruding from the housing” requires discrete and severable sections with a clear boundary line between the housing and the host connector.

Lastly, Patent Owner argues that part of the construction of “host connector protruding from the housing” should include that the “housing does not surround or enclose the host connector.” PO Resp. 5, 9, 13 (citing Ex. 2007 ¶¶ 33–46). We do not agree. Although multiple embodiments discussed and illustrated in the '188 Patent support a housing that does not “surround or enclose the host connector,” we are not persuaded that such a stricture should be added to the claim construction of the cited limitation. As discussed above, limitations are not to be read from the specification into the claims. *Van Geuns*, 988 F.2d at 1184.

## 2. Other Claim Terms

To the extent it is necessary for us to construe other claim terms in this Decision, we do so below in the context of analyzing whether the prior art renders the claims unpatentable.

### B. Principles of Law

To prevail in challenging Patent Owner's claims, Petitioner must demonstrate by a preponderance of the evidence that the claims are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). "In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim")). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review). Furthermore, Petitioner cannot satisfy its burden of proving obviousness by employing "mere conclusory statements." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

Petitioner has asserted each of the challenged claims in the '188 Patent is unpatentable under 35 U.S.C. §§ 102 and 103(a). A claim is unpatentable under 35 U.S.C. § 102 if a single prior art reference expressly or inherently describes each and every limitation set forth in the claim. *See*

*Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375 (Fed. Cir. 2005);  
*Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir.  
1987).

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time of the invention to a person having ordinary skill in the art. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). “A determination of whether a patent claim is invalid as obvious under § 103 requires consideration of all four *Graham* factors, and it is error to reach a conclusion of obviousness until all those factors are considered.” *Apple v. Samsung Elecs. Co.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc) (citations omitted). “This requirement is in recognition of the fact that each of the *Graham* factors helps inform the ultimate obviousness determination.” *Id.*

### *C. Level of Ordinary Skill*

In determining whether an invention would have been obvious at the time it was made, 35 U.S.C. § 103 requires us to resolve the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. “The importance of resolving the level of ordinary skill in the art

lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991). The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). The level of ordinary skill in the art may be reflected by the prior art of record. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Factors that may be considered in determining the level of ordinary skill in the art include, but are not limited to, the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field. *Id.* In a given case, one or more factors may predominate. *Id.* Generally, it is easier to establish obviousness under a higher level of ordinary skill in the art. *Innovention Toys, LLC v. MGA Entm’t, Inc.*, 637 F.3d 1314, 1323 (Fed. Cir. 2011) (“A less sophisticated level of skill generally favors a determination of nonobviousness . . . while a higher level of skill favors the reverse.”).

Petitioner’s declarant, Mr. Brian A. Berg, testifies that one of ordinary skill in the art would have been “a person with at least a bachelor’s degree or equivalent academic or professional training in computer engineering, electrical engineering, computer science or a closely related field, plus 2–3 years of work experience in design or development of portable memory devices and/or systems.” Ex. 1002 ¶ 26; *see* Pet. 18–19 (citing Ex. 1002 ¶¶ 26). Patent Owner’s declarant, Dr. Kenneth W. Fernald, proposes, with respect to such an ordinarily skilled artisan: “an individual in the 2004 time-frame having the equivalent of a four-year degree in electrical

engineering and four years of experience in technologies relevant to memory storage systems.” Ex. 2009 ¶ 32. We determine that there is little difference in the definitions, and based on the problems and solutions described in the ’188 patent and the cited prior art, we adopt Mr. Berg’s definition of the level of ordinary skill in the art for the purposes of the analysis below.

*D. Asserted Ground of Anticipation of Claim 10 by Yen*

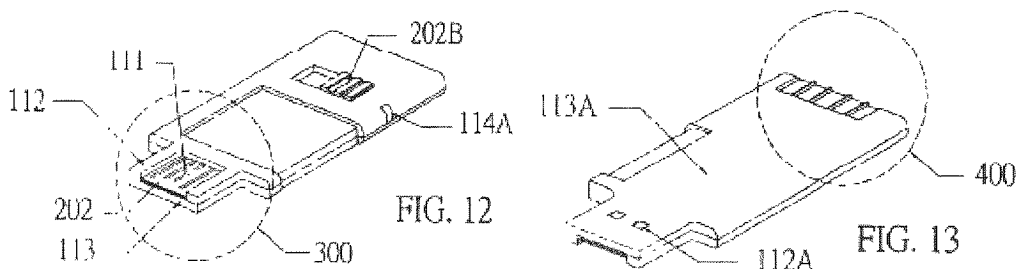
Petitioner asserts that claim 10 is anticipated by Yen. Pet. 21–34. Petitioner provides explanations, with liberal specific citations to the asserted references, regarding how the references would have conveyed to one of ordinary skill in the art the limitations of the challenged claims. *Id.* Petitioner also relies on the declarations of Mr. Brian A. Berg. Exs. 1002, 1018. With support of the declaration of Dr. Kenneth W. Fernald (Ex. 2009), Patent Owner challenges Petitioner’s contentions, arguing that Petitioner failed to demonstrate anticipation of the claim. PO Resp. 14–19. In reply, Petitioner maintains its position. Reply 4–16.

We have reviewed the Petition, the Patent Owner’s Response, and Petitioner’s Reply, as well as the relevant evidence discussed in those papers. For reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence the subject matter of claim 10 is anticipated by Yen, as set forth by the Petitioner.

*1. Summary of Asserted Prior Art Reference: Yen*

Yen discloses a “dual interface memory” card (Ex. 1003, 2:13–29), with “two different interface ends, a USB interface end and an application

interface end.” *Id.* at 5:24–32. Figures 12 and 13 of Yen are reproduced below.



Figures 12 and 13 depict an embodiment of the disclosed dual interface memory card, with Figure 12 showing the top of the memory card and Figure 13 showing the bottom of the memory card. *Id.* at 2:22–26, 5:67–6:7. USB interface contact 300, shown at the left end of the memory card in Figure 12, acts as an interface for connecting the memory card with a host, such as a computer. *Id.* at 5:19–39, 5:67–6:7. When inserted into a USB slot socket in a computer, USB interface contact 300 can send data to the computer. *Id.* at 5:19–39; *see id.* at 3:23–31, Fig. 9.

Application interface 400, shown at the right end of the memory card in Figure 13, includes “different specifications depending on different memory cards.” *Id.* at 5:22–32, 5:67–6:7. For example, application interface 400 may feature the interface for a MS card, a MMC, or a SD card. *Id.* at 5:5–9, 5:14–32. Application interface 400 “connect[s] signal between the device and the application system.” *Id.* at 5:29–32; *see id.* at 3:20–24, 5:19–23, Fig. 9.

The memory card features casings 113A, 114, which enclose printed circuit board 202; fool proof jut piece 112; and base 113. *Id.* at 4:23–27,

5:40–43, 5:56–57. Gold contacts 111 are arranged on printed circuit board 202. *Id.* at 5:43–45; *see id.* at 4:27–29.

In addition, the memory card may include cover guard 301 to protect USB interface contact 300. *Id.* at 6:7–11, Fig. 14; *see id.* at 3:35–40, Figs. 4–5. Cover guard 301 “may be detachable or fixedly attached” to USB interface contact 300. *Id.* at 6:9–11.

## *2. Independent Claim 10*

Independent claim 10 is directed to a memory card having a housing, a memory, a device connector, a host connector, and a cover. Claim 10 recites that the memory is in the housing and the device connector is on the housing, with the latter conforming to a device connection standard and allowing access to the memory by a device compatible with the device connection standard. The host connector protrudes from the housing, and conforms to a host connection standard and allows access to the memory upon insertion of the host connector into a computer interface compatible with the host connection standard. The cover covers the host connector, and the housing and the cover collectively define a form factor of the memory card that substantially conforms to a form factor of the memory card standard.

### *a. Petitioner’s Contentions*

Petitioner contends that casings 113A, 114 correspond to the recited “housing” and that the card’s memory, e.g., memory array 507, corresponds to the recited “memory in the housing.” Pet. 23–29 (citing Ex. 1003, 5:5–14, 5:39–43, 5:54–58, Figs. 9–14; Ex. 1002 ¶¶ 55–56). In addition,



Petitioner contends that application interface 400 discloses the “device connector” limitation, and that USB interface contact 300, comprising gold contacts 111, fool proof jut piece 112, and base 113, discloses the “host connector” limitation. Pet. 24–29 (citing Ex. 1003, 1:35–43, 4:19–29, 5:18–45, 5:67–6:7, Figs. 9–13; Ex. 1002 ¶¶ 51–61).

In addition, Petitioner contends that cover guard 301 discloses the recited “cover,” and the exterior size and shape of casings 113A, 114, together with cover guard 301, substantially conform to that of existing memory card standards, such as a MS card, a MMC, or a SD card. Pet. 29–30. *See* Ex. 1003, 4:65–5:4, 5:14–20, 5:46–57, 6:7–11, Fig. 14; *see also id.* at 3:34–40, Fig. 4; Ex. 1002 ¶¶ 68–69.

*b. Patent Owner’s Contentions*

Patent Owner begins by arguing that Yen does not disclose a host connector protruding from the housing and therefore, Yen cannot anticipate claim 10. PO Resp. 18 (citing Ex. 2007 ¶¶ 47–58). Patent Owner takes issue with our preliminary finding in the Institution Decision that Yen’s USB interface contact 300 in its second embodiment is a distinct part, comprising gold contacts 111, fool proof jut piece 112, and base 113. *Id.* (citing Dec. 20). Patent Owner argues that a determination of whether Yen discloses the elements of claim 10 is not whether Yen uses the same or equivalent words, but rather what would a person of ordinary skill understand Yen to disclose as the “housing,” as recited in claim 1. *Id.* at 18–19. Patent Owner argues that Yen specifically disavows that the second embodiment is a “connector” at all. *Id.* at 19 (citing Ex. 1003, 4:19–20,

6:22–23). Patent Owner alleges all of the components of element 300, shown in Figure 12, are called the “interface contact,” but elements 112 and 113 are still “housing” that are provided to support planar electrodes 202 because Yen has removed the traditional casing. *Id.* (citing Ex. 2009 ¶ 54). Patent Owner also argues that a person of ordinary skill in the art would have understood that Yen’s electrodes are surrounded by housing, thus failing to disclose a host connector protruding from the housing. *Id.*

Petitioner responds that Patent Owner’s assertions are incorrect because Yen explicitly characterizes the entire USB interface as a “connector” and explains that the entire USB interface functions as a connector, and cannot so function without sub-components 112 and 113. Reply 5. Petitioner points out that item 110, the “planar electrode contact” in Figure 6, is explicitly referred to as a “connector,” providing “[t]he entire height of the connector 110 can be received in the USB slot socket of the main unit” and “once the preceding connector is assembled, it provides a function same as the connector shown in FIG. 2.” *Id.* (citing Ex. 1003, 4:22–23, 4:29–31; Ex. 1018 ¶ 22).

In addition, Petitioner argues that Yen also notes that planar electrode contact 110 can be “inserted into the standard USB interface, like standard USB connector,” demonstrating that the term planar electrode contact is used to describe a component that functions as a USB connector to transmit data to a host computer, but does so using an embodiment that is not a “standard USB connector.” *Id.* at 6 (Ex. 1003, 4:39–40; Ex. 1018 ¶ 23). Petitioner also argues that Figure 6 of Yen shows the USB tab of Figure 12

of Yen as a separate and distinct connector, even if in certain embodiments, such as Figure 12, the connector is mounted by integrally manufacturing portions of it with the casing of the memory card. *Id.* at 7–8 (citing Ex. 1003, 4:66–5:6; Ex. 1018 ¶ 24; Dec. 20).

Petitioner also relies on its declarant, Mr. Berg, who testifies that a “host connector” is a connector on a memory card including not only the electrical contacts but also the supporting portions, adapted to connect with a host computer. Ex. 1002 ¶¶ 42–45. Petitioner contrasts this with testimony from Patent Owner’s declarant, Dr. Fernald, that “[e]lements 111 and 202 are the ‘connector’ because they are components necessary to achieve the USB data transfer” (Ex. 2009 ¶ 53), but argues it is clear from Yen that they are not sufficient nor operable to achieve such data transfer. Reply 9.

Petitioner also argues that Yen never describes jut piece 112 and base 113 (or elements 102 and 103 of low height connector 100) as “housing.” *Id.* at 12. Parts 112 and 113 are clearly always described separately, and the fact that Yen identifies 112 as a separate structure (in Figures 6, 11, and 12) further supports the view that jut piece 112 is part of a connector that has been attached to casing 114 through an integral manufacturing process. *Id.* (citing Ex. 1018 ¶¶ 34–35).

We agree with Petitioner. In describing its first embodiment, a USB low height connector, Yen expressly states that “USB low height connector 100 . . . comprises a metal terminal 101, two jut pieces 102, and a connector part 103.” Ex. 1003, 2:45–3:3. Figure 2, reproduced below,

shows low-height connector 100, with sub-components 101, 102, and 103, as a separate part. *See* Ex. 1003, Fig. 2.

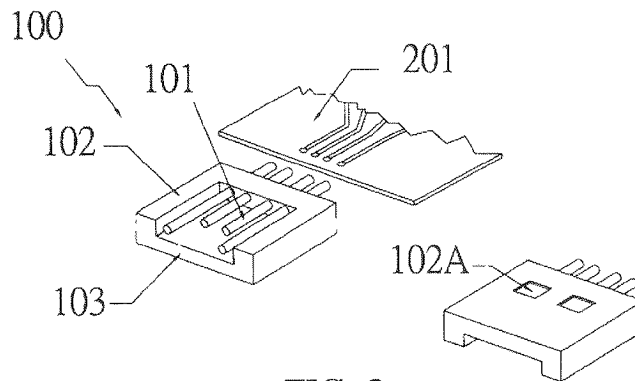


FIG. 2

Figure 2 depicts “low height USB connector 100.” *Id.* at 1:60–61, 2:45–47.

Yen explains that the USB contact in its second embodiment differs from the USB connector in its first embodiment in that metal connective pieces, or gold contacts, 111 “replace the metal terminal 101 shown in [Figure] 2.” *Id.* at 4:18–30, 5:43. Fool proof jut piece 112 in the second embodiment corresponds to jut pieces 102 in the first embodiment; base 113 in the second embodiment corresponds to connector part 103 in the first embodiment. *See* Ex. 1003, 2:45–60, 4:18–40, Figs. 2, 6, 8, 12.

Accordingly, we conclude that Petitioner has demonstrated by a preponderance of the evidence that Yen’s USB interface contact 300 in its second embodiment is a distinct part, comprising gold contacts 111, fool proof jut piece 112, and base 113. *See* Ex. 1002 ¶ 61. Other disclosures of Yen reinforce that Yen’s USB interface contact 300 is a distinct part. *See* Pet. 24; Ex. 1002 ¶¶ 62, 64. Yen refers to the USB interface contact being

“mounted to various currently used memory storage apparatus,” and  
“arranged on the memory card.” Ex. 1003, 4:66–5:4, 5:67–6:7.

We disagree with Patent Owner’s argument (PO Resp. 18–19) that Yen indicates that fool proof jut piece 112 and base 113 are part of casings 113A, 114 (“housing”), rather than USB interface contact 300 (“host connector”). We do not agree with Patent Owner that the lack of a boundary line between jut piece 112 and casing 114 and between base 113 and casing 113A in Yen’s figures renders jut piece 112 and base 113 housing. Figures 10 and 11 are reproduced below.

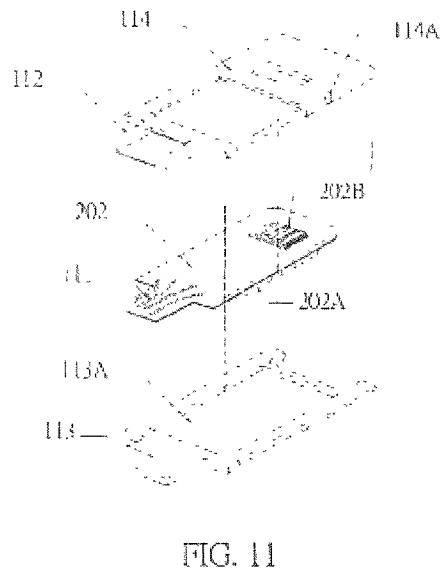
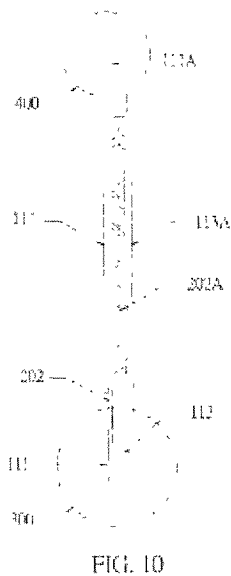


Figure 10 provides a “lateral sectional view” and Figure 11 provides a  
“disassembled perspective view” of Yen’s dual-interface memory card.  
Ex. 1003, 2:15–22, 5:54–57.

The figures separately identify jut piece 112 and casing 114, as well  
as base 113 and casing 113A, even though these elements are on the same  
side of the memory card. Figure 12, reproduced above, also features

separate labels for jut piece 112 and base 113. *See id.* at Fig. 12. Thus, we agree with Petitioner that, consistent with Yen’s disclosures, these figures show that jut piece 112 and base 113 are different parts than casings 113A, 114.

Additionally, we conclude that Petitioner has demonstrated that USB interface contact 300 (“host connector”), with sub-parts gold contacts 111, jut piece 112, and base 113, protrudes from casings 113A, 114 (“housing”). *See* Pet. 22–24. As we explain *supra* in Section II.A.1, the host connector and the housing can meet the language of claim 1, “host connector protruding from the housing,” even if they are different parts of a single integral structure, i.e., attached, connected, joined, or molded to one another.

Petitioner and Mr. Berg persuasively demonstrate that Figs. 11–13 of Yen show USB interface contact 300, comprising gold pieces 111, jut piece 112, and base 113, protruding, or jutting out, from casings 113A, 114. *See* Ex. 1003, Figs. 11–13; Pet. 22–24; Ex. 1002 ¶¶ 61, 64. We see no meaningful difference in the relationship between the host connector and the housing in these figures and that in Figure 7 of the ’188 patent, which the ’188 patent characterizes as the host connector protruding from housing. *Compare* Ex. 1001, 8:53–57, Fig. 7, *with* Ex. 1003, Figs. 11–13.

For these reasons, we determine that Petitioner demonstrates by a preponderance of the evidence that Yen would have conveyed to one of ordinary skill in the art the limitations recited in claim 10 and that claim 10 is anticipated by Yen.

*E. Asserted Ground of Obviousness of Claim 14 over Yen and Yu*

Petitioner asserts that claim 14 would have been obvious over the combination of Yen and Yu. Pet. 36–38. Petitioner provides explanations, with liberal specific citations to the asserted references, how the references would have conveyed to one of ordinary skill in the art the limitations of the challenged claims and reasons why one of ordinary skill in the art would have combined the references in the manner proposed by Petitioner. *Id.* Petitioner also relies on the declarations of Mr. Brian A. Berg. Exs. 1002, 1018. Patent Owner challenges Petitioner’s contentions, arguing that Petitioner failed to demonstrate the obviousness of the claims, based on Patent Owner’s arguments, discussed above, with respect to Yen. PO Resp. 20. In reply, Petitioner maintains its position. Reply 16.

We have reviewed the Petition, the Patent Owner’s Response, and Petitioner’s Reply, as well as the relevant evidence discussed in those papers. For reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence the subject matter of claim 14 would have been obvious over the combination of Yen and Yu, as set forth by the Petitioner.

*1. Summary of Asserted Prior Art Reference: Yu*

Yu discloses a portable memory device, with housing 10, USB plug 30, and dustproof cap 40 to cover USB plug 30. Ex. 1004, 2:63–67. Dustproof cap 40 is connected to housing 10 by flexible strap hinge 41. *Id.* at 3:1–2. Figure 3 of Yu is reproduced below.

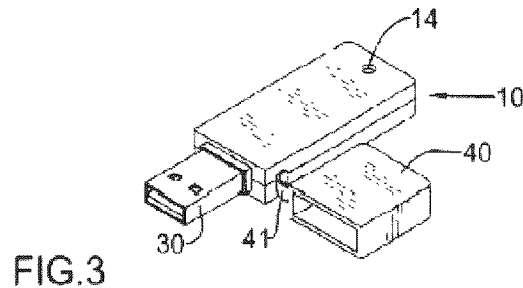


Figure 3 depicts an embodiment of the memory device disclosed in Yu. As shown in Figure 3, when dustproof cap 40 is open, flexible strap hinge 41 allows the cap to remain connected to housing 10 of the device so that “dustproof cap (40) is not lost.” *Id.* at 3:3–5.

## 2. Contentions

Claim 14 recites that the cover is connected to the housing via a hinge. Petitioner contends that a person of ordinary skill in the art would have had sound reason, with “rational underpinning,” to combine Yu’s hinge with the memory card disclosed in Yen. Pet. 37–38. As Mr. Berg testifies, both Yen and Yu are directed to a portable memory device with a cover for a USB connector. *See* Ex. 1003, 3:34–40, 6:7–10, Fig. 14; Ex. 1004, 2:63–3:5, Figs. 2–3; Ex. 1002 ¶¶ 76–77. Additionally, Yu discloses that using a hinge to connect the cover to the housing of the device has the benefit of preventing loss of the cover. Ex. 1004, 3:3–5; *see id.* at 1:65–67. We credit Mr. Berg’s testimony that a person of ordinary skill would have improved Yen’s cover by incorporating the hinge disclosed in Yu “to have the protection of a cover for the USB connector without the risk of losing the cover.” Ex. 1002 ¶ 77.



As noted above, Patent Owner does not separately challenge the ground with respect to claim 14, relying instead only on the arguments discussed above with respect to claim 10, but the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378.

We agree with Petitioner's contentions. For these reasons, we determine that Petitioner demonstrates by a preponderance of the evidence that the combination of Yen and Yu would have conveyed to one of ordinary skill in the art the limitations recited in claim 14. We also determine that Petitioner demonstrates by a preponderance of the evidence articulated reasoning with some rational underpinning to support the legal conclusion that the subject matter of claim 14 would have been obvious to one of ordinary skill in the art in view of the teachings of Yen and Yu as combined in the manner proposed by Petitioner.

*F. Asserted Grounds of Obviousness of Claims 10 and 14 over Combinations of Chang, Yen, Yu, and either the SD Specification or the MMC Specification*

Petitioner asserts that claim 10 is obvious over Chang, Yen, and either the SD Specification or the MMC Specification. Pet. 48–57; *see* Dec. 4 n.2. Petitioner also asserts that claim 14 is obvious over Chang, Yen, Yu, and either the SD Specification or the MMC Specification. Pet. 58. Patent Owner argues that the combinations of references do not render the challenged claims obvious, which Petitioner disputes. PO Resp. 20–28; Reply 16–26.

As an initial matter, we address the issue of whether the SD Specification and the MMC Specification are available as prior art under § 102 for purposes of this Decision. The Institution Decision indicated that the record contained evidence sufficient “for purposes of institution” that both specifications were printed publications before the filing date of the ’188 Patent. Dec. 27. We also quoted 35 U.S.C. § 311(b), stating that “[I]nter partes review may [be] request[ed] . . . only on the basis of prior art consisting of patents or printed publications.” *Id.* The standard for institution, under 35 U.S.C. § 314(a), is concerned with whether there is a reasonable likelihood that Petitioner would prevail in establishing that at least one claim is unpatentable. As noted above, at this stage, Petitioner must demonstrate by a preponderance of the evidence that the claims are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

The determination of whether a given reference qualifies as a prior art “printed publication” involves a case-by-case inquiry into the facts and circumstances surrounding the reference’s disclosure to members of the public. *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004). “Because there are many ways in which a reference may be disseminated to the interested public, ‘public accessibility’ has been called the touchstone in determining whether a reference constitutes a ‘printed publication’ bar under 35 U.S.C. § 102(b).” *In re Hall*, 781 F.2d 897, 898–99 (Fed. Cir. 1986). To qualify as a prior art printed publication, the reference must have been disseminated or otherwise made accessible to persons interested and ordinarily skilled in the subject matter to which the document relates prior to

the critical date. *Kyocera Wireless Corp. v. Int'l Trade Comm'n*, 545 F.3d 1340, 1350 (Fed. Cir. 2008).

Although Patent Owner does not challenge whether the applied references are printed publications, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. Petitioner must demonstrate by a preponderance of the evidence that the challenged claims are obvious, and one aspect of such a showing is that the references relied upon are patents or printed publications.

In the Petition, Petitioner alleges that the SD Specification “qualifies as prior art under 35 U.S.C. § 102(b) because it was published by the SD Group on April 15, 2001.” Pet. 20 (citing Ex. 1007, 2). Petitioner also asserts that “[t]he ’188 Patent admits that the SD standard and SD cards were in the prior art,” as were their dimensions. *Id.* (citing Ex. 1001, 1:30–37, 12:14–21). With respect to the MMC Specification, Petitioner alleges that it was “published by the MultiMediaCard Association,” and that the ’188 Patent admits that the MMC standard and MMC cards were in the prior art. *Id.* Petitioner also argues that the MMC Specification is prior art under § 102(b) because “it was included in the file history of U.S. Patent No. 6,279,114, which issued on August 21, 2001.” *Id.* We are not persuaded that Petitioner’s showing is sufficient to demonstrate by a preponderance of the evidence that the SD Specification and the MMC Specification are available as prior art under § 102.

First, a copyright indication alone is not necessarily evidence of publication or that a document was distributed or had public accessibility.

Although the year indicated in a copyright notice is intended to be “the year of first publication of the work” (37 C.F.R. § 401(b)), it details nothing about accessibility before the critical date. *See In re Lister*, 583 F.3d 1307, 1312–13 (Fed. Cir. 2009) (detailing that even when the Copyright Office issues a certificate of registration for a manuscript, that does not mean that the manuscript was listed in a catalog or index that would have permitted an interested researcher to learn of its existence and locate it for inspection); *see also Microsoft Co. v. Corel Software, LLC*, Case IPR2016-01083, slip op. at 13–14 (PTAB December 1, 2016) (Paper 14) (“The copyright notice, alone, however, sheds virtually no light on whether the document was publicly accessible as of that date, therefore additional evidence is typically necessary to support a showing of public accessibility.”).

Additionally, although the SD Specification details “[c]onditions for publication” (Ex. 1007, 2), we have no information about its dissemination, i.e., was it publically disseminated, or reproduced for some subset of a private group. As well, reproduction is prohibited without permission of “SD Group” (*id.*), which does not offer evidence of public accessibility. Similarly, the MMC Specification discloses that “[n]o part of this publication may be transmitted, reproduced or distributed in any way,” without prior written consent (Ex. 1008, 2), which does not offer proof of sufficient accessibility to interested parties.

Petitioner also asserts that the ’188 Patent admits that the MMC and SD standards, as well as cards following those standards, were in the prior art. Pet. 20. The acknowledgement that the standards were known, or even

well-known, does not provide evidence regarding the specific documents relied upon by Petitioner. As provided in 35 U.S.C. § 311(b), a ground of unpatentability in an *inter partes* review can be made “only on the basis of prior art consisting of patents or printed publications.” The general knowledge of systems or methods, or their public use, cannot serve as a basis. As such, the general citation of the standards existing in the prior art cannot substantiate the publication status of the specifically cited MMC Specification and SD Specification documents.

Petitioner also argues that the MMC Specification is prior art under § 102(b) because it was included in the file history of U.S. Patent No. 6,279,114. Pet. 20. It is not clear, however, that interested parties could find the MMC Specification and the SD Specification documents through a search of a single patent. Petitioner provides no case law support for such a proposition, and also provides no rationale why U.S. Patent No. 6,279,114 would serve as a touchstone for interested researchers to learn of its existence and locate it for inspection.

At oral hearing, when the issue of printed publication status was raised, counsel for Petitioner raised the issues discussed above. Tr. 28–34. Petitioner also argues that without the MMC Specification and the SD Specification, “the obviousness position would still prevail.” *Id.* at 35. Petitioner asserts that “there’s no question that those skilled in the art understand that if you’re talking about a specific size, that there was no choice once those MMC or SD cards or their associated specs are known to be prior art, that it’d be obvious to modify the size to however you want.”

*Id.* We are not persuaded, however, that dropping the Specification references would not be viewed as altering the grounds upon which trial instituted. Per *In re Magnum Oil Tools*, 829 F.3d 1364 (Fed. Cir. 2016), that could be interpreted as “borrowing the rationale for combining the first set of references [and] equally apply[ing it] to the second set of references” (*id.* at 1378), without providing Patent Owner its due process rights with respect to the “new” ground. We respectfully decline to entertain such a new position at this stage of the proceeding.

Therefore, based on the totality of the factual evidence in this record, we are not persuaded that Petitioner has established, by a preponderance of the evidence, that the SD Specification and the MMC Specification are printed publications under § 102. As such, Petitioner cannot demonstrate by a preponderance of the evidence that claims 10 and 14 of the '038 Patent are unpatentable over combinations of Chang, Yen, Yu, and either the SD Specification or the MMC Specification.

### III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has shown by a preponderance of the evidence that (1) claim 10 of the '188 Patent is anticipated by Yen, and (2) claim 14 of the '188 Patent is obvious over Yen and Yu. We also determine that Petitioner has not shown by a preponderance of the evidence that (1) claim 10 of the '188 Patent is unpatentable over Chang, Yen, and either the SD Specification or the MMC

IPR2015-01557  
Patent 6,890,188 B1

Specification, or that claim 14 of the '188 Patent is unpatentable over Chang, Yen, Yu, and either the SD Specification or the MMC Specification.

#### IV. ORDER

Accordingly, it is:

ORDERED that claims 10 and 14 of U.S. Patent No. 6,890,188 B1 have been shown to be unpatentable; and

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2015-01557  
Patent 6,890,188 B1

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