

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MULTI PACKAGING SOLUTIONS, INC.,
Petitioner,

v.

CPI CARD GROUP – MINNESOTA, INC.,
Patent Owner.

Case IPR2017-01650
Patent 8,419,889 B2

Before GRACE KARAFFA OBERMANN, CHRISTOPHER M. KAISER,
and JEFFREY W. ABRAHAM, *Administrative Patent Judges*.

OBERMANN, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
Determining That Claims 1–30 Are Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

This is an *inter partes* review of claims 1–30 of U.S. Patent No. 8,419,889 B2 (Ex. 1001, “the ’889 patent”). In our Institution Decision (Paper 11, “Dec.”), we instituted review based on the grounds set forth in the Petition (Paper 2, “Pet.”). Petitioner bears the burden of proving unpatentability by a preponderance of the evidence, a burden that never shifts to Patent Owner. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d); *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). We have jurisdiction under 35 U.S.C. § 6. We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a).

Patent Owner filed a Response (Paper 19, “Resp.”), Petitioner filed a Reply (Paper 29, “Reply”), and Patent Owner filed a Sur-Reply (Paper 31, “Sur-Reply”). We held a final oral hearing on October 3, 2018. *See* Paper 35 (“Tr.”). Except as otherwise noted, we cite to public versions of papers and exhibits filed in this proceeding.

A. Related Proceedings

According to the parties, Patent Owner asserts claims 1–5, 7, 11, 16–18, 22–27 and 30 against Petitioner in a co-pending district court action. *See* Pet. 3 and Paper 5 (both parties, identifying as a related proceeding the district court action in *CPI Card Group Inc. v. Multi Packaging Solutions, Inc.*, No. 1:16-CV-02536 (D. Colo.) (filed Oct. 11, 2016)).

B. The ’889 Patent (Ex. 1001)

The ’889 patent is titled “Ultrasecure Card Package.” Ex. 1001, 1:1. The invention “relates generally to secure point-of-sale activated cards,” including, for example, “debit cards, gift cards, credit cards, telephone cards

and the like,” and, specifically, to a method of packaging cards for “enhanced security.” *Id.* at 1:12–13, 16–17, 44.

The ’889 patent describes a method of retaining a card between two panels secured together by an adhesive. *Id.*, Abstract. The panels may be constructed of paper stock that is clay coated on both sides. “[A] heat activated adhesive” may be “applied directly to the clay coated inner surfaces” of the paper stock panels. Polyurethane is a suitable heat-activatable adhesive for use in the claimed method. “The adhesive is applied using known printing techniques” that may involve a “printing roller” or “a Gravure press.” *Id.* at 8:20–36.

“The heat activated adhesives” may be applied “in the normal printing process and allowed to dry to be activated later.” *Id.* at 8:45–47. “The heat activated adhesive can be applied to the entire surface of the panel, and only activated selectively by heating only the portions of the panels that are to be bonded.” *Id.* at 8:50–53. The specification describes “embodiments that include” an “aperture.” *Id.* at 7:10–11. The card may have “a data field on it” that “is viewable through the aperture.” *Id.* at 3:56–57.

C. Illustrative Claims

Claims 1 and 18 are the only independent claims. Claim 1 is illustrative and reproduced below:

1. A method for producing a secure card package containing a point-of-sale activatable card, comprising:

providing a first panel and a second panel each comprising paper stock and having a non-polymeric coated inner surface;

printing a heat-activatable adhesive directly upon the non-polymeric coated inner surface of the first panel;

allowing the heat-activatable adhesive to dry upon the non-polymeric coated inner surface of the first panel;

locating a point-of-sale activatable card between the inner surface of the first panel and an inner surface of the second panel, after the step of allowing the heat-activatable adhesive to dry upon the non-polymeric coated inner surface of the first panel; and,

activating the heat-activatable adhesive, after the locating step, by ***applying heat and pressure only in a region substantially surrounding and offset from the point-of-sale activatable card to enclose the point-of-sale activatable card in a secure space between the first and second panels.***

Ex. 1001, 8:66–9:19 (emphasis added).

Claim 18 (the only other independent claim) similarly includes the above-emphasized limitation. Claim 18 further specifies that the surfaces of the panels are clay coated and the heat-activatable adhesive comprises polyurethane. *Id.* at 10:7–28.

D. Evidence Relied Upon

The Petition identifies the following references as prior art in the grounds of unpatentability:

(1) US Pat. Pub. No. 2006/0151348 A1, patent application to Rick L. Willard, published July 13, 2006 (Ex. 1010, “Willard”);

(2) US Pat. Pub. No. 2007/0160833 A1, patent application to Kevin D. Maak, et al., published July 12, 2007 (Ex. 1011, “Maak”);

(3) US Pat. Pub. No. 2007/0034543 A1, patent application to Marty Jones, published February 15, 2007 (Ex. 1012, “Jones”);

(4) J. Dormish, *Tack Measurement of Heat-Activated Polyurethane Adhesives*, Adhesives & Sealants Industry Vol. 12, No. 11 (November 2005) (Ex. 1013, “ASI”);

(5) US Pat. Pub. No. 2007/0051652 A1, patent application to Christopher R. Tilton, published March 8, 2007 (Ex. 10014, “Tilton”);

(6) US Pat. No. 6,099,682, issued to Stephen E. Krampe, et al., on August 8, 2000 (Ex. 1045, “Krampe”);

(7) US Pat. No. 5,605,230, issued to Michael A. Marino, Jr. on February 25, 1997 (Ex. 1044, “Marino”);

(8) US Pat. No. 5,760,381, issued to Rebecca Stich, et al., on June 2, 1998 (Ex. 1020, “Stich”).

Petitioner relies on the Declaration of Paul Singh, Ph. D. Ex. 1002. Patent Owner relies on the corrected Declaration of Robert Kimmel, Sc. D. Ex. 2012. As an initial matter, based on the information reflected in their curricula vitae, we determine that both Dr. Singh and Dr. Kimmel are qualified to opine from the perspective of a person of ordinary skill in the art at the time of the invention. *See* Ex. 1002, Appendix A (Dr. Singh’s curriculum vitae); Ex. 2012, Appendix A (Dr. Kimmel’s curriculum vitae).

E. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–30 of the ’889 patent on the following grounds (*see* Pet. 5 (grounds chart)):

Claim(s)	Basis	References
1–3, 7, 9, 10, 12, 14, 16, 22–27, 30	§ 103	Willard, Maak, Jones
4, 5, 18	§ 103	Willard, Maak, Jones, ASI
6, 8, 11, 17	§ 103	Willard, Maak, Jones, Tilton
13	§ 103	Willard, Maak, Jones, Krampe

Claim(s)	Basis	References
15	§ 103	Willard, Maak, Jones, Marino
28, 29	§ 103	Willard, Maak, Jones, Stich
19	§ 103	Willard, Maak, Jones, ASI, Tilton
20, 21	§ 103	Willard, Maak, Jones, ASI, Tilton, Marino

II. ANALYSIS

We organize our analysis into five main sections. First, we resolve the level of ordinary skill in the art at the time of the invention. Second, we address claim construction. Third, we weigh the evidence of obviousness against the objective indicia of nonobviousness to determine whether Petitioner demonstrates by a preponderance of the evidence that the subject matter of independent claim 1 would have been obvious over the combined disclosures of Willard, Maak, and Jones. Fourth, we assess the challenge asserted against independent claim 18, which adds ASI to the obviousness analysis. Lastly, we address the patentability challenges asserted against dependent claims 2–17 and 19–30.

A. The Level of Ordinary Skill in the Art

We consider the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art at the time of the invention. Petitioner submits that an ordinarily skilled artisan would typically have had at least a bachelor's degree in packaging, or a comparable field, and about six months of internship or work experience creating,

testing, and evaluating paperboard based packaging with adhesives. Pet. 10. Alternatively, in Petitioner’s view, the ordinarily skilled artisan would have had about four years of relevant industry experience in packaging and, further, a familiarity with paper and paperboard packaging, converting, and adhesives. “Additional graduate education could substitute for professional experience, or significant experience in the relevant field . . . could substitute for formal education.” *Id.* at 10–11 (citing Ex. 1002 ¶¶ 3, 14, 36–39).

Based on our review of the asserted prior art references, we determine that the prior art itself reflects the level of ordinary skill in the art at the time of the invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (prior art itself can reflect appropriate level of ordinary skill in the art); *see* Resp. 14 (Patent Owner, agreeing, in this case, “the prior art itself is sufficient to demonstrate the level of ordinary skill in the art at the time of the invention”). To the extent that a more specific definition is required, we adopt Petitioner’s definition, which is not challenged by Patent Owner (Resp. 14) and is comparable to the level of skill reflected in the prior art.

B. Claim Construction

In this *inter partes* review, the Board interprets the claims using the “broadest reasonable construction in light of the specification of the patent.” 37 C.F.R. § 42.100(b) (2016)¹; *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under that standard, claim terms are given their

¹ A recent amendment to this rule does not apply here, because the Petition was filed before November 13, 2018. *See* “Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board,” 83 Fed. Reg. 51,340 (Oct. 11, 2018) (to be codified at 37 C.F.R. pt. 42).

ordinary and customary meaning in view of the specification, as understood by a person of ordinary skill in the art at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). We resolve disputed claim terms only as necessary to our decision. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Neither party advances or requests an express construction of any claim term. Pet. 10; Resp. 14. The main dispute between the parties, however, is whether the combined teachings of Willard, Maak, and Jones would have suggested to an ordinarily skilled artisan the limitation, which appears in both challenged independent claims, that requires “applying heat and pressure only in a region substantially surrounding and offset from the point-of-sale-activatable card to enclose the . . . card in a secure space between the first and second panels.” *Id.* at 9:15–19; 10:24–28 (independent claims 1 and 18); see Pet. 28–29 (claim chart, mapping that limitation to disclosures in Willard, Maak, and Jones); Resp. 18–34 (leading with a 26-page argument that the prior art does not disclose that limitation); Reply 3–12 (Petitioner, devoting about half of its final brief to that issue); Sur-Reply 1–9 (Patent Owner, devoting nearly all of its final brief to that issue).

Based on the information presented during trial, we agree with the parties that no claim term requires express construction for purposes of this Decision. Pet. 10; Resp. 14. To the extent any claim term requires discussion, however, including the limitation that pertains to a selective

application of heat and pressure, we provide it in our analysis below, when addressing the merits of the patentability challenges asserted in the Petition.

C. Independent Claim 1

We next consider whether Petitioner establishes by a preponderance of the evidence that the subject matter of independent claim 1 would have been obvious at the time of the invention in view of the combined disclosures of Willard, Maak, and Jones. *See* Ex. 1001, 8:66–9:19 (claim 1); Pet. 5 (grounds chart). We organize this section into four subparts. First, we address whether the five method steps of claim 1 are taught or suggested by the combined disclosures of Willard, Maak, and Jones. Second, we consider whether Petitioner advances a persuasive, art-based rationale that explains why an ordinarily skilled artisan would have been led to combine the references in the manner claimed. Third, we assess the objective evidence of nonobviousness raised by Patent Owner in the Response. Fourth, we weigh the prior art evidence of obviousness against the objective evidence of nonobviousness to reach our conclusion on whether claim 1 is patentable.

(a) The Five Method Steps of Claim 1

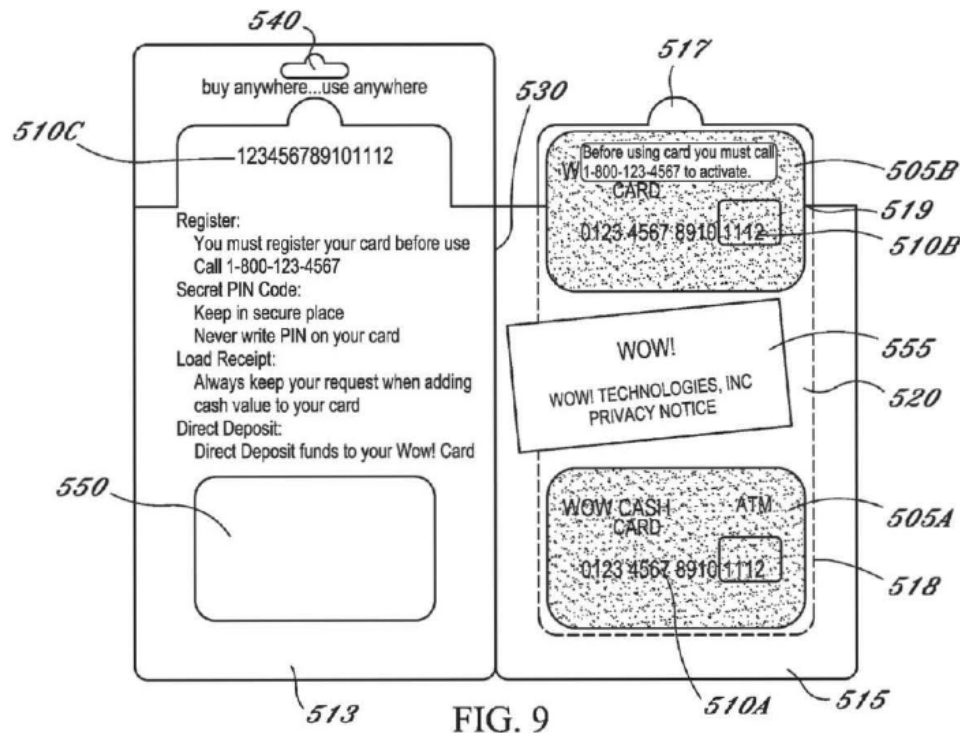
Claim 1 recites a method comprising five steps. Ex. 1001, 8:65–9:19. Petitioner directs us to substantial evidence (organized, for convenience, in a claim chart) that maps each method step of claim 1 to disclosures in Willard, Maak, and Jones. Pet. 16–29 (claim chart) (and evidence cited therein). We address each step of claim 1 in turn below.

(i) Step 1 of Claim 1

Claim 1 is directed to “[a] method for producing a secure card package containing a point-of-sale activatable card” (preamble) that includes

“providing a first panel and a second panel each comprising paper stock and having a non-polymeric coated inner surface” (first method step of claim 1). Ex. 1001, 8:66–9:3.

Willard discloses a method of manufacturing a wallet card package for “phone cards, merchant cards, gift cards, [or] debit cards” that require “point-of-sale activation” before they will function. Ex. 1010 ¶ 2; Pet. 16–20 (claim chart). Willard’s wallet card package may secure multiple cards or a single card. Ex. 1010 ¶ 21; Pet. 17. We reproduce below Figure 9 of Willard, which illustrates, in an open position, a wallet card package manufactured according to Willard’s process for securing two cards.



Ex. 1010, Fig. 9; Pet. 18, 27 (claim chart). Figure 9 is an interior plan view of Willard’s wallet card package in an open position. Ex. 1010 ¶ 15.

Willard’s wallet card package “is manufactured from a conventional die cut paperboard blank.” *Id.* ¶ 32. The front and rear panels of the package “can be die cut as separate elements or,” as illustrated in Figure 9, they can be adjoined” along an edge. *Id.* ¶ 33. Willard’s wallet card package secures one or more point-of-sale activatable cards between two panels of “conventional” paperboard. Pet. 1; Ex. 1010 ¶ 32, claim 7; *see* Pet. 16–18 (claim chart, and evidence cited therein).

Petitioner points us to persuasive evidence that Maak and Jones both describe paperboard panels having “a non-polymeric coated inner surface,” as required by the first step of claim 1, and that these panels would have been recognized as a material suitable for use in manufacturing Willard’s wallet card package. Ex. 1001, 9:2–3. For example, Maak informs that “clay-coated cardboards”² are useful in various commercial applications, including product packaging. Pet. 20 (quoting, *e.g.*, Ex. 1011 ¶¶ 16, 171; citing, *e.g.*, Ex. 1011 ¶ 2). Jones, further, discloses a package for a consumer product that is constructed from a “top panel” and a “bottom panel” of “cardboard” or “paperboard” having “clay-coated” inner and outer surfaces.³ Pet. 18–20 (quoting Ex. 1012 ¶¶ 11, 15, 25, 32).

² It is undisputed that clay is “a non-polymeric” coating within the meaning of claim 1. Pet. 52 (“clay . . . is a well-known type of ‘non-polymeric’ coating”) (citing Ex. 1001, 9:20–22 (claim 2, which specifies “clay” as the non-polymeric coating)); Ex. 1002 ¶ 42 (Dr. Singh, explaining the well-known benefits of using clay-coated paperboard in packaging applications); Resp. 36 (“Patent Owner agrees that clay is a nonpolymeric coating.”).

³ Jones relates to a “blister pack or blister card” used to contain items such as pills, candy, or other consumer products. Ex. 1012 ¶ 3. We find that blister card packaging is within the packaging art or, alternatively, is analogous to

Petitioner persuasively maps the first method step of claim 1 to disclosures in Willard, Jones, and Maak. Pet. 16–20 (claim chart, pertaining to first step of claim 1, and evidence cited therein).

(ii) Step 2 of Claim 1

Claim 1 requires, as a second step, “printing a heat-activatable adhesive directly upon the non-polymeric coated inner surface of the first panel.” Ex. 1001, 9:4–5. Both Maak and Jones disclose or suggest printing an adhesive on a non-polymeric coated panel—specifically, a clay coated panel. See Pet. 2, 12–13; Ex. 1011, Abstract, ¶¶ 2, 10, 12, 16, 18, 19, 22–23, 167–168, 171 (disclosures in Maak teaching the application of “polyurethane polyvinyl chloride” adhesives on “clay-coated cardboard” by “a roll coater or a gravure coater” printing technique); Ex. 1012, Abstract, ¶¶ 25, 32, 34, 36, Fig. 1 (disclosures in Jones that teach sandwiching and protecting an item between top and bottom panels of paperboard that are clay-coated on both sides and sealing the panels together “by any means known in the art, including” by known “heating processes”).

Maak expressly discloses the use of a selectively heat-activatable aqueous dispersion “for forming an adhesive bond” that is useful in

paper-to-paper packaging, because both packaging methods serve the same or similar functions; that is, providing a tamper resistant package that permits a consumer to easily withdraw an item (*compare* Ex. 1001, 1:12–15, 6:22–23, *with* Ex. 1012 ¶¶ 5, 8)), and both packaging methods use the same or similar techniques and materials. Pet. 44 (citing Ex. 1002 ¶¶ 31–35). It follows that an ordinarily skilled artisan would have looked to Jones when seeking to improve the wallet card packaging method of Willard. See Pet. 6 (pointing out that, during patent prosecution, Patent Owner submitted prior art that included blister packaging of products).

“packaging.” Ex. 1011, Abstract, ¶ 2; *see* Pet. 12 (discussing Maak’s disclosure) (citing Ex. 1011, Abstract, ¶¶ 10–12, 19). Maak discloses applying heat-activatable adhesive on clay-coated cardboard having “a non-polymeric inner surface” as specified in claim 1. *Id.* Maak discloses printing on the cardboard an adhesive that comprises polyurethane. Ex. 1011 ¶¶ 22–23 (Maak, explaining that the adhesive may comprise “polyurethane polyvinyl chloride”); Pet. 53.

Relevant also to the printing step, Maak applies the adhesive on a substrate (such as “clay-coated cardboard”) “with a roll coater or a gravure coater.” Ex. 1011 ¶ 171; Pet. 12, 21–22. Those specific printing techniques are discussed and claimed in the ’889 patent. Ex. 1001, 4:5–8, 9:4–46 (the ’889 patent, including claim 9, which specifies that the printing step of the invention “is completed utilizing at least one of a printing roller, a flood coater, a gravure press, and an anilox roller plate”). Maak further identifies conventional techniques of printing a heat-activatable adhesive on a clay-coated surface of cardboard. Pet. 21–22 (claim chart, citing Ex. 1011 ¶¶ 10, 16, 18, 167, and 171). Willard secures the two panels together with “a heat-activated adhesive” that is “pre-applied” using “conventional techniques.” Pet. 1, Ex. 1010 ¶¶ 35–36; *see* Pet. 20–21 (including citations to Willard). Jones similarly seals panels together “by any known means” and refers to “gluing and heating processes known to those skilled in the art.” Pet. 22 (quoting Ex. 1012 ¶ 34).

Patent Owner responds with the argument that Maak is concerned only with “coating” a substrate with adhesive—for example, “coating with a roll coater or a gravure coater.” Resp. 41 (quoting Ex. 1011 ¶ 171). By way of support, Patent Owner directs us to cross-examination testimony of

Dr. Singh, which, in Patent Owner’s view, demonstrates a distinction between Maak’s “coating” technique and the step of “printing” an adhesive as required by the challenged patent claims. *Id.* at 41–43. After considering the extrinsic evidence upon which Patent Owner relies (namely, Dr. Singh’s isolated statements during cross-examination), and the strong intrinsic evidence of record upon which Petitioner relies, we determine that Petitioner persuasively shows that coating an adhesive “with a roll coater or gravure coater” (Ex. 1011 ¶ 171) represents a “printing technique” within the scope of the ’889 patent claims. Pet. 12 (quoting Ex. 1001, 8:34–38 (the ’889 patent specification, identifying those same coating methods as printing techniques suitable for use in the claimed invention)); *see* Reply 22–23 (and evidence cited therein, showing persuasively that Maak’s coating techniques would have been suitable for use in printing adhesives as claimed in the ’889 patent (citing Ex. 2011, 304:4–24 (Dr. Singh’s deposition testimony))).

Petitioner thus persuasively maps the second method step of claim 1 to disclosures in Willard, Jones, and Maak. Pet. 20–22 (claim chart pertaining to second step of claim 1, and evidence cited therein).

(iii) Step 3 of Claim 1

The third step of claim 1 requires “allowing the heat-activatable adhesive to dry upon the non-polymeric coated inner surface of the first panel.” Ex. 1001, 9:6–7. Willard makes plain that any “desired printed information” may be applied to the panels either before or after the die cutting process. Ex. 1010 ¶ 32; Pet. 20. In Willard, “[a] layer of adhesive or cement is then applied to either or both of the interiors front 513 and rear 514 panels using conventional techniques and apparatus.” Ex. 1010 ¶ 35; Pet. 20–21.

Those conventional techniques would have included printing a heat-activatable adhesive onto the surface of a panel and allowing the adhesive to dry. For example, Maak discloses the application of a heat-activatable “aqueous dispersion” directly upon a clay-coated cardboard surface “to form a selectively activatable coating.” Ex. 1011 ¶¶ 10, 16, 18; Pet. 21. Maak further discloses “letting the [adhesive] precursor solution dry” on a “clay coated cardboard” substrate. Ex. 1011 ¶ 167; *see id.* ¶¶ 18, 168, 171 (disclosing further information about drying the adhesive on the clay-coated cardboard prior to shipping or storage and before activation); Pet. 23.

Maak explains the advantage that, by drying the adhesive on the clay-coated cardboard, “[t]he resultant coated substrate may then be shipped to another location for activation, or may be stored for later use.” Ex. 1011 ¶ 168; Pet. 23. Maak’s process, thereby, “provides a source of ‘on-demand’ adhesives” for use in packaging. Ex. 1011 ¶ 168, Pet. 23. Maak discloses shipping the “unactivated” and “potentially dry” adhesive coated substrate to allow for subsequent activation by means of the “application of heat” or “pressure . . . at a later time” and “at the specific substrate location where bonding is desired.” Ex. 1011 ¶ 18; Pet. 24–28; *see* Ex. 1001, 9:8–15 (claim 1 limitations pertaining to these steps).

Petitioner persuasively maps the third method step of claim 1 to disclosures in Willard and Maak. Pet. 23–24 (claim chart pertaining to third step of claim 1, and evidence cited therein).

(iv) Step 4 of Claim 1

The method of claim 1 also requires “locating” the card “between the inner surface of the first panel and an inner surface of the second panel.” Ex. 1001, 9:8–10. Willard discloses and illustrates “front 512” and

“rear 514” panels “that close about and secure debit card 516.” Ex. 1010 ¶ 22, Fig. 9; Pet. 27. Willard expressly states that “the debit card” is “disposed between said front panel and said rear panel.” Pet. 24 (quoting Ex. 1010, claim 7). Jones does not specifically enclose a card, but shows that it was known in the art to dispose a consumer product “between the front panel [] and the back panel” in a package. *Id.* at 27–28 (quoting Ex. 1012 ¶ 34); *see supra* 11–12 n.3 (for reasons why an ordinarily skilled artisan would have looked to Jones’s disclosure when modifying Willard’s method of manufacturing a wallet card package).

Petitioner persuasively maps the fourth step of claim 1 to disclosures in Willard and Jones. Pet. 24–28 (claim chart pertaining to third step of claim 1, and evidence cited therein).

(v) Step 5 of Claim 1

The fifth step of claim 1 requires “activating the heat-activatable adhesive” selectively; that is, “only in a region substantially surrounding and offset from the” card in order to “enclose the . . . card in a secure space between the first and second panels.” Ex. 1001, 9:13–19. As explained above, although neither party advances or requests an express claim construction for any claim term, the central dispute in this case is whether this fifth step of claim 1 would have been obvious to a person of ordinary skill in the art at the time of the invention. *See supra* at 8 (citing Pet. 10, 28–29; Resp. 14, 18–34; Reply 3–12; Sur-Reply 1–9). The meaning and scope of this disputed limitation requires some discussion.

The specification of the ’889 patent explains the limitation at issue as follows:

The heat activated adhesive can be applied to the entire surface of the panel, and only activated selectively by heating only the portions of the panels that are to be bonded. With glues [by comparison], care must be taken to avoid allowing the glue to contact the package contents and adhere to them. This fact, combined with the . . . ease of controlled application of the heat activated adhesives provide for more efficient production of packages and lower reject rates.

Ex. 1001, 8:50–58.

In our view, the fifth step of claim 1 recognizes the benefit of sealing packaging material around an item without activating adhesive directly on top of the item itself. Counsel for Patent Owner confirmed that reasonable view of the disputed claim limitation during the final oral hearing. *See, e.g.*, Tr. 55:16–19 (Patent Owner’s counsel, explaining that the adhesive is “not going to be right on the card, it’s going to be offset from the card a little bit and it’s substantially surrounding the card”). Claim 1 does not require a “hermetically sealed” package (*id.* at 54:3), but rather, by its express terms, employs a selective activation step to create “a secure space” that will “enclose” the card. Ex. 1001, 9:13–19; *see* Tr. 61:24–63:16 (Patent Owner’s counsel, explaining that the claims require sealing two panels together in a manner that secures a card and prevents tampering). For reasons that follow, we find that Petitioner demonstrates by a preponderance of the evidence that a person of ordinary skill in the packaging art would have recognized benefits and advantages of sealing two panels together to secure an item within an interior space formed between the panels—without activating adhesive on the item itself.

Willard teaches, “[w]hen a heat-activated adhesive is used, the two panels are folded and then sealed together by selectively applying heat and

pressure to the panels.” Pet. 28 (claim chart, quoting Ex. 1010 ¶ 36). Willard further states that “front 512 and rear 514 panels” are designed to “close about and secure the debit card 516.” *Id.* (quoting Ex. 1010 ¶ 22). Willard informs that “the secured card 505B stays within the package 500.” *Id.* (quoting Ex. 1010 ¶ 39).

Willard’s disclosure would have informed an ordinarily skilled artisan to seal the open edges of two “separate” panels to secure an item in a space between the two panels. Ex. ¶¶ 31, 38 (explaining that the front and rear panels “can be separate, unconnected pieces” that are “sealed together by selectively applying heat and pressure to the panels”); Pet. 24, 27 (claim chart, citing those two paragraphs). Patent Owner’s counterargument—that Willard uses adhesive “solely to hold portions of the panels in a folded position” (Resp. 22–23)—relates to an embodiment wherein two panels are adjoined along one edge, and ignores Willard’s disclosure of forming a package from two panels that are “separate elements” sealed together around a wallet card. Ex. 1010 ¶¶ 31–32, 36. Patent Owner’s own witness acknowledged that Willard’s front and rear panels “can be separate unconnected pieces.” Reply 7; Ex. 1010 ¶ 31; Ex. 1051, 109:10–110:10 (Dr. Kimmel’s cross-examination testimony).

An ordinarily skilled artisan would have been aware further of Maak’s recommendation to selectively apply heat to a heat-activatable adhesive “at the specific substrate location where bonding is desired” and “only in the locations where sufficient heat” is applied to achieve a bond. Pet. 28–29 (quoting Ex. 1011 ¶¶ 18); Reply 10 (citing Ex. 1011 ¶ 18). The ordinarily skilled artisan also would have been aware of Jones’s teaching that top and bottom panels of packaging material “may be sealed together along the outer

perimeter to form an interior pocket” for containing an item, by employing “any means known in the art, including . . . heating processes known to those skilled in the art.” Pet. 29 (quoting Ex. 1012 ¶¶ 34, 36).

“Knowing that two panels can ‘close about and secure the debit card,’ and that ‘heat and pressure’” are “selectively” applied “to accomplish that result” in Willard, the ordinarily skilled artisan would have been prompted “to apply heat and pressure only in a region substantially around and offset from the card” when sealing two panels together to create a secure package that entraps the card. Reply 7; Ex. 1002 ¶¶ 110, 113–117; Ex. 2011, 247:10–11, 250:11–260:4; Ex. 2010); *see* Ex. 1010 ¶ 38 (Willard, explaining that, “[i]n the completed package,” the two panels “entrap” the cards sought to be secured). Modifying Willard’s process to apply “heat and pressure all around the edge of the package” when two separate panels are employed to entrap a card would have required no more than an exercise of ordinary skill and creativity in the packaging art. Reply 2 (citing Ex. 2011, 247:10–248:24, 250:11–260:4; Ex. 2010; Ex. 1002 ¶¶ 110, 114–116).

Petitioner directs us to substantial evidence that the combined teachings of Willard, Maak, and Jones would have suggested selectively applying heat to Willard’s two separate panel elements to form a bond “only in a region substantially surrounding and offset from the” card (Ex. 1001, 9:13–19) in order to “entrap” the card in an interior pocket between the clay-coated interior of two panels. Ex. 1010 ¶ 38 (Willard, cementing two panels together to “entrap cards” within the completed package); Ex. 1011 ¶ 18 (heat-activatable adhesives enable formation of a bond only in a desired location); Ex. 1012 ¶ 36 (Jones, sealing two clay-coated panels together “to form an interior pocket” for containing an item); Ex. 1002 ¶ 117

(Dr. Singh’s opinion that an ordinarily skilled artisan “would have found it routine and straightforward to activate the heat-activatable adhesive, after the locating step, by applying heat and pressure only in a region substantially surrounding and offset from the” card in view of the combined disclosures of Willard, Maak, and Jones); Pet. 28, 46; Reply 8–10.

Patent Owner, without providing any particular definition for the term “substantially surrounding,” argues that none of the applied prior art references expressly discloses that feature of the claimed invention because none specifically identifies the precise location of bonding. Resp. 32-33; *see, e.g.*, Sur-Reply 4–9 (attacking the prior art references individually instead of fairly addressing their combined disclosures). We agree with Petitioner, however, that Patent Owner “does not address the art as a whole, and instead discusses references only individually.” Reply 12 (citing Resp. 18–28). For example, Patent Owner attacks the disclosure of Willard in isolation, arguing, “Willard contains no teaching whatsoever as to where heat and pressure is applied to its panels.” Resp. 32 (citing Ex. 2012 ¶ 114). Patent Owner dismisses Willard’s instruction to selectively activate the adhesive “at the specific substrate location *where bonding is desired*” (*id.* at 32 (quoting Ex. 1001 ¶ 18 (emphasis Patent Owner’s))), as lacking in specificity sufficient to suggest “a region substantially surrounding and offset from the” card as specified in claim 1 (*id.* at 32–33 (quoting Ex. 2012 ¶¶ 117–118))). Similarly, Patent Owner observes “that Willard does not disclose clay-coated paper board” (Resp. 36–37) without reconciling the disclosures of Maak and Jones, which demonstrate that the use of paper board panels, coated with clay on both sides, was well-known in the packaging art (Pet. 2, 12–13 (and evidence cited therein)).

Patent Owner does not take account of the fact that a person of ordinary skill in the art would have been well aware of the benefits of securing an item within a package by applying adhesive “all around” an item but not on the item itself. Ex. 1058, 87:22–88:18 (cross-examination testimony of Patent Owner’s witness, Dr. Kimmel). A person of ordinary skill is also a person of ordinary creativity, not an automaton, and we do not abandon our common sense when considering the issue of obviousness. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007). Petitioner directs us to substantial evidence that a person of ordinary skill in the packaging art would have readily recognized the benefits of enclosing an item in a secure space between two panels of packaging material by sealing the open edges of the material together around the item. Pet. 28–29 (and evidence cited therein); Reply 1–12 (and evidence cited therein). Those benefits would have included the ability to ensure that the card both is “secured” within and “removabl[e]” from the package—by employing the obvious step of sealing around, but not directly on, the card. Pet. 28 (citing Ex. 1010, claim 1).

Petitioner argues that Willard discloses the application of “heat and pressure to seal the package surrounding the card.” Reply 6 (citing Ex. 1002 ¶¶ 110, 114–117). We agree that Willard’s express disclosure that “‘cement can be eliminated’ in favor of ‘a heat-activated adhesive,’ and that the panels are ‘sealed together’ by ‘selectively applying heat and pressure’” must be read in concert with its disclosure that separate, unconnected panels may be used to form the wallet card package. Reply 7 (quoting Ex. 1010 ¶ 36 (emphasis Petitioner’s)); see Ex. 1010 ¶¶ 31, 33 (Willard’s disclosure that the two panels may be separate and unconnected elements). When separate panel elements are employed, sealing them together by selectively applying

heat and pressure around a card to form a “completed package” in which the front and back panels “entrap” the card, at minimum, suggests step 5 of the method of claim 1. *See, e.g.*, Pet. 8 (quoting Ex. 1010 ¶ 38 (Willard’s disclosure that the panels “entrap” a card “[i]n the completed package”)).

Patent Owner’s counterview that Willard does not contemplate sealing the panels “in a region substantially surrounding and offset from” the card is undercut by Willard’s disclosure of “a perforated cut line 518,” which “allows a customer to tear and fold back a portion to access the card, or to tear a larger portion to remove the cards”—a feature that would be unnecessary if the panels were not sealed together in a manner that secures the card by enclosing it. Reply 7–8 (citing Ex. 1010, Figs. 5–9, ¶¶ 24, 42; Ex. 1002 ¶ 116; Ex. 2011, 251:12-225:35); *see* Pet. 46-47; Ex. 1010 ¶¶ 22–25, 39, 42. Perforated cut line 518 is illustrated in Willard’s Figure 7, reproduced below:

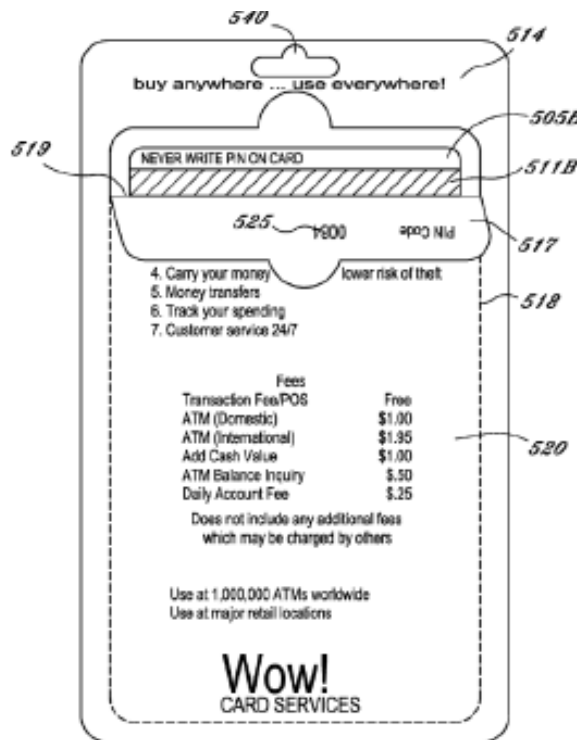


FIG. 7

Pet. 25 (reproducing Ex. 1010, Fig. 7). Figure 7 is a rear plan view of a wallet card illustrating perforated cut line 518 and access flap 517 in an open position. Willard uses perforated cut line 518 to access a card and, thereby, discloses a card that is enclosed in a secure space formed when the panels are sealed together. Pet. 28, 48 (and citations to record therein); Reply 2 (citing Ex. 1002 ¶ 114–116); Reply 7–8 (citing Ex. 2011, 251:12–253:3).

Each applied reference “must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole.” Reply 7 (quoting *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986)). Willard fairly teaches that it would have been obvious to apply heat and pressure around a card to secure the card between two panels. Pet. 46–47; Ex. 1011 ¶¶ 22, 32, 36. Dr. Singh persuasively explains why one would have applied heat and pressure around a card only in places where the panels are sealed. Pet. 46–47 (citing Ex. 1002 ¶¶ 58–60, 109, 113–116). That testimony is supported by persuasive objective proof of the desirability of using known heat-sealing techniques to secure “front and back portions of a package together in a narrow band around” not only “the periphery of the front and back cards of the package,” but also, “**around the periphery of any product**” secured “in the package.” Ex. 1002 ¶ 60 (Dr. Singh, quoting Ex. 1014 ¶ 58) (emphasis added); see Pet. 60 (citing Ex. 1002 ¶ 60 in support of the challenge to claim 1).

Taken together, the combined disclosures of Willard, Maak, and Jones show persuasively that a person of ordinary skill in the art would have been prompted to heat seal two panels together “around the periphery” of an item to surround the item in a secure space without activating adhesive directly on top of the card. *Id.* No more is required to meet the specified step of

“applying heat and pressure only in a region substantially surrounding and offset from” a wallet card “to enclose the . . . card in a secure space between the first and second panels.” Ex. 1001, 9:14–19. The claim requires an application of heat and pressure around the card (but not on the card) to secure the card in a “space between the first and second panels.” *Id.*

Patent Owner’s own witness, Dr. Kimmel, provides testimony that aligns with our view. *See* Reply 8–9 (citing Ex. 1058, 87:22–88:18; 116:2–11 (Dr. Kimmel’s deposition testimony)). Dr. Kimmel states, “[T]here are thousands of packages that are sealed all around the product. I mean, in general, for one reason or another, most products we want to seal all around.” Ex. 1058, 88:3–7. “In some cases it is for security. In some cases it’s for shelf life.” *Id.* at 88:7–8. Dr. Kimmel further observes, “it is more common than not for a package to be sealed all around.” *Id.* at 88:9–10. An ordinarily skilled artisan, in fact, would have been familiar with “an awful [] lot of packages that are sealed all around” the item intended to be secured by the packaging material. *Id.* at 88:16–18. Dr. Kimmel’s testimony provides additional support for our conclusion that selectively sealing two panels “together along the outer perimeter” to secure an item in “an interior pocket”—as expressly disclosed in Jones—would have fallen squarely within the ambit of ordinary skill in the art. Ex. 1012 ¶¶ 34, 36; Ex. 1002 ¶ 112; Pet. 29; Reply 10. Patent Owner’s counterarguments do not detract from Jones’s express disclosures. Resp. 26–28.

Petitioner persuasively maps the fifth step of claim 1 to disclosures in Willard, Jones, and Maak. Pet. 28 (claim chart pertaining to fifth step of claim 1, and evidence cited therein).

(b) Additional Reasons to Combine the References

The Petition identifies additional information (including Dr. Singh's opinion testimony) explaining why the prior art references occupy the same field of invention as the '889 patent, which relates to packaging a retail product and, more specifically, to using paper substrates and adhesive. Pet. 15 (citing Ex. 1002 ¶¶ 66, 68, 70, 74, 76, 80 (Dr. Singh's testimony)); *see* Sur-Reply 9 (Patent Owner, submitting that "the relevant field is 'packaging'"); *supra* 11–12 n.3 (explaining why Jones falls within the packaging field or an art analogous to paper-to-paper packaging). We find that an ordinarily skilled artisan "would look to each reference" asserted in the Petition "when developing a method for making a secure card package." Pet. 16 (citing Ex. 1002 ¶¶ 67, 69, 71, 73, 75, 77, 79, 81).

Petitioner explains why an ordinarily skilled artisan would have been led to combine the disclosures of Willard, Maak, and Jones in the manner specified by claim 1. Pet. 42–48 (and citations to the record therein). Willard discloses enclosing a wallet card in a "secure space." Pet. 48 (citing Ex. 1010 ¶¶ 22, 39). Petitioner identifies prior-art based reasons why an ordinarily skilled artisan would have modified Willard in view of Maak and Jones to attain a wallet card manufacturing process that includes panels of clay-coated paper stock, conventional printing of a heat-activatable adhesive on the inner surfaces of the clay-coated paper stock, allowing the adhesive to dry prior to activation, and selectively applying heat and pressure around the card to enclose it in a secure space—a combination that would predictably work and provide expected functionality. Pet. 42 (citing Ex. 1002 ¶¶ 48, 61, 83, 91, 98, 103, 109, 118, 128, 130), 46, (citing Ex. 58–60, 109. 113–114, 117–118), 50 (citing Ex. 1002 ¶¶ 158–60).

Petitioner directs us to prior-art based reasons why an ordinarily skilled artisan would have selected “C2S paperboard” – a two-sided clay-coated paperboard known in the art – for use in the modified method of Willard. Pet. 42–45 (and evidence cited therein); Reply 15–19 (and evidence cited therein). Clay was a well-known type of “‘non-polymeric’ coating” in the packaging field and Maak discloses the application of a heat-activatable adhesive to clay-coated surfaces—in particular, C2S paperboard. Pet. 42–43 (citing Ex. 1002 ¶¶ 41–43, 47–48, 83, 88–90); *see* Resp. 36 (“clay is a nonpolymeric coating”); Ex. 1011 ¶¶ 16, 18 (Maak).

Patent Owner argues that Maak’s “cardboard” is distinguishable from the “paper stock” of claim 1. *See, e.g.*, Resp. 37 (citing Ex. 1001 ¶¶ 167, 171; Ex. 2011, 172:16–21). Petitioner, however, directs us to substantial evidence that an ordinarily skilled artisan would have understood Maak’s reference to clay-coated cardboard to embrace clay-coated paperboard (that is, “paper stock” as required by claim 1). Pet. 18–20 (citing, for example, Ex. 1011 ¶¶ 2, 16, 167, 171; Ex. 1012 ¶¶ 11, 15, 25, 32); *see* Reply 16 (quoting Ex. 2011, 134:23–135:12) (Dr. Singh, stating, “Cardboard in the packaging industry is the broader term” and covers “both corrugated board and paperboard.”). We agree with Petitioner that Maak’s disclosure of clay-coated cardboard renders obvious both clay-coated corrugated board and clay-coated paper board—given that corrugated board and paper board are two types of cardboard that would have been well-recognized packaging materials. Reply 16 (citing Ex. 1011 ¶¶ 16, 167, 171; Ex. 2011, 173:8–21).

The parties do not genuinely dispute that C2S paperboard was a well-known, commercially available, conventional packaging material available in the art at the time of the invention. *Compare* Pet. 43 (citing Ex. 1012, 32;

Ex. 1023, 2:64–66; Ex. 1034, 714; Ex. 1035, 222; Ex. 1002, ¶¶ 42–43), with Resp. 37–40 (enumerating, but not disputing, the well-known benefits of “C2S”)⁴. Instead, Patent Owner argues that an “increased cost” of 10–15% would have dissuaded an ordinarily skilled artisan from modifying Willard’s package to use C2S paperboard as the panel material. Resp. 9. We agree with Petitioner, however, that Patent Owner “has not demonstrated that the alleged cost difference would have mattered,” given that the “cost difference is less than 0.27% of the average” unit cost per package. Reply 18–19 (citing Ex. 1006 ¶ 5). Petitioner directs us to persuasive evidence that the cost difference would have been “trivial” in view of the known advantages of C2S packaging material, which was known “to ‘upgrade the quality of the printing and aesthetics of the paper stock.’” *Id.* at 19 (quoting Ex. 2012 ¶ 150; citing Ex. 2011, 169:1–2).

Further, even if we accept that C2S would have been a more expensive option, that fact does not make the option nonobvious or denigrate our finding that an ordinarily skilled artisan would have recognized that C2S paperboard provides “a high-quality surface area for printing graphics or other information on both sides.” Pet. 43 (citing Ex. 1034, 177, 182;

⁴ The parties’ witnesses agree that, at the time of the invention, clay-coated paperboard was a conventional packaging material known to provide a higher quality printing surface than uncoated paperboard *Id.* at 18 (citing Ex. 1002 ¶ 89 (Dr. Singh, explaining why Willard contemplates using well-known materials, including paperboard coated with clay on both sides, and why that particular material would have been recognized as providing additional benefits); Ex. 1058, 145:23–146:8 (Dr. Kimmel, testifying that “[c]lay-based coatings” would have enabled “high quality printing” and, moreover, would have been “the most common treatment applied on the paper board machine”); 150:17–19 (same); 157:2–5 (same)).

Ex. 1023, 2:64–3:6; Ex. 1002, ¶¶ 42–43). Willard, on its face, demonstrates the utility of printing on both sides of the packaging material, by including printed matter (namely, a card number and instructions) on the inside of the package and graphics on the outside. The knowledge that clay-coated surfaces enhance printing and graphics would have led a person of ordinary skill in the art to select C2S as the panel material in a modified method of manufacturing Willard’s wallet card package. *See* Pet. 43 (citing Ex. 1010, 32, Figs. 7–9; Ex. 1002 ¶¶ 41–43, 47–48, 83, 88–90).

In addition, C2S would have been understood to provide aesthetically pleasing inner and outer surfaces when both sides of the paperboard are visible to the consumer. *Id.* (citing Ex. 1031, ¶ 38; Ex. 1035, 269; Ex. 1023, 2:64–3:6; Ex. 1002, ¶¶ 42–43). The inside surfaces of Willard’s wallet card package are visible to a consumer after the package is opened. *Id.* (citing Ex. 1010, Fig. 9). An ordinarily skilled artisan would have been led to select C2S for its added benefit of protecting a high-valued item from particles shed when uncoated paperboards are used as the card packaging material. *Id.* (citing Ex. 1002, ¶ 43). It is beyond dispute that Willard’s point-of-sale activatable card would have been regarded as a high-valued item. *Id.* (citing Ex. 1010 ¶ 2 (Willard, explaining that “wallet cards have long been used as credit cards, debit cards, rental cards and bankcards”)).

Aesthetic appeal was an “important consideration” in the packaging field. Reply 18 (quoting Ex. 1058, 178:8–15). Dr. Singh explained that dust from uncoated paper would “prevent the consumer from looking at a card that is covered with dust and accepting that as a new, acceptable product.” *Id.* (quoting Ex. 2011, 63:15–20, 64:17–25). We agree that the “exceptionally smooth, bright surface for printing” provided by clay-coated

paper stock represents another reason why an ordinarily skilled artisan would have selected clay-coated over uncoated paperboard for Willard's wallet card package. *Id.* at 17 (quoting Ex. 2013, I-7, I-12, I-13)⁵; *see* Pet. 43 (citing Ex. 1002 ¶ 42 (Dr. Singh, explaining, by reference to objective proof, the well-known benefits of using clay-coated paperboard as a packaging material, including the benefit of filling “in irregularities between the fibers” of the paperboard “to produce a smooth printing surface as well as improving gloss and brightness” (citing Ex. 1023, 2:64–3:6)). In sum, Petitioner directs us to an array of benefits that would have been understood to attend the selection of C2S as the panel material in Willard's modified method of packaging a wallet card. Pet. 42–45; Reply 15–19.

Having been led to select C2S paperboard as the card packaging material, the ordinarily skilled artisan also would have recognized the benefits associated with pre-applying a heat-activatable adhesive to that material by printing the adhesive directly onto the clay-coated inner-facing surfaces of the panels. *Id.* at 44 (citing Ex. 1002, ¶¶ 45–48, 91, 96–97). Maak teaches the application of a heat-activatable adhesive to a clay-coated surface using the same conventional printing methods discussed in the '889 patent specification. *Id.* at 12, 44; *see* Ex. 1011, Abstract, ¶¶ 2, 10–12, 18, 19, 22–23, 167–168, 171 (Maak); *see also* Ex. 1001, 8:34–38 ('889 patent, describing conventional printing methods). Maak expressly discloses “selectively activat[ing]” adhesive printed on the substrate “only in the locations where sufficient heat and/or pressure is applied to achieve a bond.”

⁵ The quoted material appears on pages 49, 54, and 56 of Exhibit 2013, when referring to the page numbers added by Patent Owner.

Pet. 12 (quoting Ex. 1001 ¶ 18; Ex. 1002 ¶¶ 68–69); *see id.* at 44 (citing Ex. 1030 ¶ 20; Ex. 1034, 221–224; Ex. 1033, 75; Ex. 1002 ¶ 53) (additional evidence of the conventionality of printing methods for applying heat-activatable adhesive).

An ordinarily skilled artisan would have understood that printing, versus hand-application, promotes production efficiency and enhances heat-seal quality by improving control over the quantity and location of adhesive. Pet. 44 (citing Ex. 1027 ¶¶ 5, 39; Ex. 1002 ¶ 56). In addition, Jones informs that applying adhesive directly on the clay-coated paperboard surface would have been conventional in the packaging art at the time of the invention. Pet. 44 (citing Ex. 1015, 2:47-52; Ex. 1029 ¶¶ 30–37; Ex. 1002 ¶ 45); *see* Reply 17 (citing Ex. 1012 ¶¶ 24, 32 (Jones, disclosing “C2S” as packaging material for “small and portable items” and clay coating as “suitable for printing graphics of superior quality”).

Petitioner directs us to substantial evidence that, at the time of the invention, the combined disclosures of the prior art suggested printing a heat-activatable adhesive on a clay-coated paperboard surface. Pet. 42, 44 (citing Ex. 1002 ¶¶ 41–43, 47–48, 83, 88–90, 96–97). The Examiner did not consider that suggestion during patent prosecution, when claim 1 was allowed to issue over a different set of prior art that did not disclose, “alone or in combination,” the step of “printing a heat-activatable adhesive directly upon a coated inner surface” of card packaging material. Ex. 1043, 32. In this proceeding, Patent Owner’s own witness admitted that clay-coated paperboard was recognized as having printing advantages in the packaging art. Reply 17 (citing Ex. 1058, 145:23–146:8, 150:17–19, 157:2–5). Further, Petitioner directs us to rational, art-based reasons why a person of

ordinary skill in the art would have selected a heat-activatable adhesive comprising polyurethane—including its superior bond strength, ease of application, and low heat-activation temperature. Pet. 55–57 (and evidence cited therein); Reply 19–22 (and evidence cited therein)

At the time of the invention, persons of ordinary skill in the art also would have been familiar with the step of allowing a heat-activatable adhesive to dry on packaging material to permit “the manufacturing process to occur at separate locations, phases, or manufacturers.” Pet. 45 (citing Ex. 1002 ¶¶ 56–57, 98, 101–102; Ex. 1010 ¶ 36; Ex. 1011 ¶ 171; Ex. 1013 (“Application Conditions” and “Experimental” sections); Ex. 1014 ¶ 65; Ex. 1030 ¶ 31). Maak expressly discloses advantages that attend the step of allowing a heat-activatable adhesive to dry on a substrate in the packaging field—advantages that would have included beneficially providing “a source of ‘on-demand’ adhesives” that enable production of “bulk quantities of coated substrates” that “may be formed and stored for later use.” Pet. 45–46 (citing Ex. 1011 ¶ 168; Ex. 1002 ¶¶ 100–101). Petitioner directs us to art-based reasons why Willard, which discloses on its face a “pre-applied” heat-activated adhesive that is, subsequently, “selectively” activated (Ex. 1010 ¶ 38), provides a suggestion for turning to Maak’s teaching of allowing the adhesive to dry “after pre-application and before activation.” Pet. 46 (citing Ex. 1002 ¶¶ 57, 98, 101–102)).

Substantial evidence supports Petitioner’s view that an ordinarily skilled artisan would have been led, by teachings in the prior art, to locate a card, after drying the adhesive, between the two panels after printing; specifically, that sequence of steps would have been understood to prevent interference of the card with the printing process. Pet. 46 (citing Ex. 1002

¶¶ 103, 106–108). Further, “locating a card after drying would prevent contact between the card and wet adhesive,” which may leave “undesirable residue on the card.” *Id.* (citing Ex. 1002 ¶ 107).

Petitioner also directs us to substantial evidence that disclosures in the prior art would have prompted an ordinarily skilled artisan to apply “heat and pressure only in a region substantially surrounding and offset from the” card in order to “enclose the . . . card in a secure space between the first and second panels” in the modified method of Willard. Ex. 1001, 9:15–19; Pet. 46–48 (and evidence cited therein). Willard expressly discloses enclosing a wallet card in a “secure space.” Pet. 46 (quoting Ex. 1010 ¶¶ 22, 39). That point is driven home by Willard’s further disclosure of “perforations” or “partial cut lines,” which would be unnecessary were the card located in an insecure space. *Id.* (quoting Ex. 1010 ¶¶ 22–25, 39, 42). Petitioner identifies persuasive art-based reasons why it would have been obvious and conventional in the packaging art to glue two paperboard panels together “around” a card to retain it securely. *Id.* at 46–47 (quoting Ex. 1028, 1:23–31 (disclosing “[a] conventional package” for phone cards, wherein “a pair of paperboard panels [] were glued together about the phone card so that the phone card was sandwiched and securely retained between the panels”), 5:59–61 (claiming a “wallet card display package” that “includes two panels” that “cooperatively” define a “pouch” securing the card); Ex. 1002 ¶ 33 (Dr. Singh, identifying a plethora of prior art examples of packages formed by sealing two panels of packaging material together around an item to be secured, and providing additional persuasive reasons why Jones’s blister packaging is analogous to paper-to-paper packaging)).

(c) Objective Evidence of Nonobviousness

The record includes evidence that Petitioner copied the invention claimed in the '889 patent—in other words, objective evidence of nonobviousness. Paper 18, 66–73 (un-redacted version of Patent Owner's Response filed under seal) (citing sealed versions of Exs. 2014–2020 as well as Ex. 2023–2024 (filed publicly)). Patent Owner filed that evidence under seal because it includes allegedly confidential information owned by Petitioner or a third party. *See* Paper 21 (Joint Stipulation for Entry of Default Protective Order); Paper 23 (Petitioner's Motion to Seal); Paper 25 (Order); Paper 26 (Notice of Filing of Redacted Exhibits). Before any allegedly confidential information was filed in this proceeding, we placed both parties on express notice that any “[i]nformation subject to a protective order will become public if identified in a final written decision in this proceeding.” Paper 12, 4. In the next section, without identifying the substance of any allegedly confidential information of record, for purposes of this Decision, we assume that Petitioner did, in fact, copy the claimed invention, and we weigh that circumstance against the substantial evidence of obviousness as reflected in the asserted prior art references.

Based on the full trial record, we find that Patent Owner waived all other arguments pertaining to objective evidence of nonobviousness. In that regard, we observe that Patent Owner asserted additional objective evidence of nonobviousness in the Preliminary Response filed prior to trial institution. *See* Paper 7, 67–70 (asserting evidence of alleged commercial success of the invention). On the preliminary record, we declined to draw any conclusions, regarding any genuinely disputed issue of material fact surrounding that evidence, except to observe that Petitioner identified information (including

opinion testimony) sufficient to demonstrate a reasonable likelihood of prevailing at trial. Dec. 12–13 (citing Pet. 9 (citing Ex. 1002 ¶¶ 194–195)). We expressly placed Patent Owner on notice that any “[a]rguments not raised by Patent Owner in a timely-filed response shall be deemed waived, even if they were presented in the Preliminary Response.” *Id.* at 2. Patent Owner has waived any arguments pertaining to alleged commercial success as objective evidence of nonobviousness.

(d) Conclusions on the Patentability of Claim 1

Petitioner persuasively shows that the combined disclosures of Willard, Maak, and Jones would have led an ordinarily skilled artisan to the combination of steps required by claim 1. Pet. 16–29 (claim chart, and evidence cited therein), 42–48 (providing persuasive reasons why an ordinarily skilled artisan would have combined the disclosures of Willard, Maak, and Jones); see Reply 14–19 (for further discussion of reasons to combine). Patent Owner’s objective evidence of nonobviousness—which consists solely of evidence that Petitioner copied the claimed invention—is entitled to some weight. *See supra* 33 (accepting Patent Owner’s evidence of copying for purposes of this Decision). Even if we accept that Petitioner copied the claimed invention, however, that circumstance does not outweigh the strong showing of obviousness made by Petitioner in this proceeding. Pet. 16–29, 42–48; Reply 14–19; see *Sud-Chemie, Inc. v. Multisorb Techs., Inc.*, 554 F.3d 1001, 1009 (Fed. Cir. 2009) (objective evidence of nonobviousness “will not necessarily overcome a strong . . . showing of obviousness”).

We are mindful that the objective evidence of nonobviousness can be the most probative evidence of nonobviousness in the record, enabling a

factfinder to avoid the trap of hindsight. *Crocs, Inc. v. Int’l Trade Comm’n*, 598 F.3d 1294, 1310 (Fed. Cir. 2010). Taking full account of the evidence of copying, we discern no hindsight bias in Petitioner’s asserted rationale for combining the disclosures of Willard, Maak, and Jones. Pet. 42–48; Reply 14–19 (advancing persuasive, art-based reasons for combining the references). Accordingly, we find that the subject matter of claim 1 would have been obvious to a person of ordinary skill in the art at the time of the invention in view of the combined disclosures of Willard, Maak, and Jones.

D. Independent Claim 18

Claim 18 is similar to claim 1, except that claim 18 further specifies that the surfaces of the panels are clay coated and the heat-activatable adhesive comprises polyurethane. *Compare* Ex. 1001, 8:66–9:19 (claim 1) *with id.* at 10:7–28 (claim 18); *see* Ex. 1002 ¶ 19 (Dr. Singh’s declaration). Petitioner directs us to a claim chart that maps each limitation of claim 18 to disclosures in Willard, Maak, Jones, and ASI. Pet. 52–55.

ASI is a journal article that identifies polyurethanes as “a class of adhesive raw materials that, over the last 40 years, have developed a reputation for reliability and high performance in many applications,” including “packaging applications.” Ex. 1013, 5. As Petitioner points out, ASI discloses a heat-activatable adhesive comprising polyurethane as a dispersion that “is applied to a substrate and water is evaporated in a drying tunnel.” Pet. 53 (claim chart, quoting Ex. 1013, 5 (Application Conditions) (emphasis omitted). ASI further teaches, “The dispersion was applied . . . and allowed to dry for one hour at room temperature.” *Id.* at 54 (quoting Ex. 1013, 7 (Experimental) (emphasis omitted).

Petitioner also advances argument, supported by the declaration of Dr. Singh, which persuasively establishes that a person of ordinary skill in the art would have been led to combine the disclosures of Willard, Maak, Jones, and ASI in a manner that would have resulted in the method of claim 18. *Id.* at 55–57 (and citations to the record therein).

Patent Owner argues that the patentability of claim 18 is supported by the arguments made in connection with the challenge to claim 1. Resp. 46. Our reasoning above, set forth in connection with claim 1, applies equally to claim 18. Patent Owner’s further argument that polyurethane was “not at all a well-known adhesive” at the time of the invention is contradicted by the cross-examination testimony of its own witness. *Id.* at 47 (citing Ex. 2012 ¶ 168 (Dr. Kimmel’s declaration testimony)). Specifically, as Petitioner observes, “Dr. Kimmel testified that all of his undergraduate students learned such adhesives.” Reply 20 (citing Ex. 1058, 84:7–19). We find “[h]eat-activatable adhesives comprising polyurethane” would have been “a very common and widely used” adhesive at the time of the invention. Ex. 1058, 84:23–19 (cross-examination testimony of Dr. Kimmel, Patent Owner’s own witness).

In addition, Petitioner directs us to persuasive reasons why “[t]he advantages of providing ‘a source of “on-demand” adhesives”’ would have motivated” an ordinarily skilled artisan “to combine polyurethane (as disclosed in ASI and Maak) with Willard.” Reply 21; Ex. 1011 ¶¶ 18, 168. We agree with Petitioner that Maak explicitly states that a polyurethane-based adhesive is useful for bonding. Reply 21 (citing Ex. 1011 ¶¶ 22, 23). Patent Owner’s observations that Maak discloses other polymers and distinguishes pressure sensitive adhesives from heat sensitive adhesives

(Resp. 47–49) does not diminish Maak’s teaching that polyurethane would have been recognized as useful for bonding in the packaging field.

Reply 21. Petitioner persuasively demonstrates that, at the time of the invention, many heat activatable polyurethane-based adhesives were known and recognized as having advantages in the packaging art. *Id.* at 22 (citing Ex. 1058, 58:3–61:4).

Accordingly, we find that the combined disclosures of Willard, Maak, Jones, and ASI would have suggested to an ordinarily skilled artisan the method of claim 18, including the use of clay-coated paper stock panels and a heat-activatable adhesive comprising polyurethane.

E. Dependent Claims 2–17 and 19–30

The Petition asserts challenges against dependent claims 2–17 and 19–30 that are based on the disclosures of Willard, Maak, and Jones in combination with one or more additional references. *See* Pet. 5 (grounds chart); Pet. 29–42, 55, 57–61, 64–72 (claim charts). To the extent that Patent Owner argues that those claims are not unpatentable for reasons asserted in connection with independent claims 1 or 18, we are unpersuaded in view of our above analysis of claims 1 and 18.

Of the dependent claims, Patent Owner raises separate arguments—that is, additional argument beyond that asserted in support of independent claims 1 and 18—only with respect to claims 6, 8, 10, 11, 17, 19–21, and 23–30. We address the separately-argued dependent claims first, then address the remaining dependent claims.

(a) Claims 6 and 8

Claims 6 and 8 depend directly or indirectly from claim 1, and include limitations that pertain to printing the heat-activatable adhesive “on

substantially all of the non-polymeric inner surface of the first panel” (claim 6) or “on substantially all of the non-polymeric coated inner surface of the first panel and on substantially all of the non-polymeric coated inner surface of the second panel” (claim 8). Ex. 1001, 9:29–31, 39–43.

Petitioner directs us to substantial evidence that the combined disclosures of Willard, Maak, Jones, and Tilton would have suggested the subject matter of claims 6 and 8. Pet. 57–59 (for claim charts pertaining to claims 6 and 8) (and evidence cited therein); *see id.* at 61–62 (for reasons to combine the references in the manner claimed) (and evidence cited therein).

Tilton discloses “applying adhesive to the ‘entire surface’ of a panel used in packaging.” Pet. 62 (quoting Ex. 1014 ¶ 65); *see id.* (citing Ex. 1027 ¶ 25 (for conventionality of applying a heat-activatable adhesive “to the entire sheet” when forming a package by sealing together two “cardboard sheets”). Petitioner identifies substantial evidence that an ordinarily skilled artisan would have been prompted to add this feature to the modified method of manufacturing Willard’s wallet card package because the feature provides “a high coverage of adhesive on the surface to be bonded” and one would select “high coverage where flexibility and convenience outweighs the cost of using more adhesive.” Pet. 62 (citing Ex. 1002 ¶¶ 54, 137–138). Further, Petitioner directs us to substantial evidence that an ordinarily skilled artisan would have been led “to apply adhesive on both interior sides of the panels to be bonded.” *Id.* (citing Ex. 1002 ¶¶ 54–55).

Petitioner also identifies rational reasons why an ordinarily skilled artisan would have been prompted to combine the asserted prior art references, including Tilton. Pet. 57–64 (and evidence cited therein); Reply 23–24 (and evidence cited therein). For example, Dr. Singh

persuasively testifies, “[p]rinting adhesive on ‘substantially all’ of the surface of a panel to be bonded” would have been understood to provide “a wider area of adhesive”—such that “the placement of a package on the sealing machine is less critical and items of various sizes can be more easily sealed within the package because different regions of adhesive can be activated as desired.” Ex. 1002 ¶ 137; Pet. 62 (citing Ex. 1002 ¶ 137). Further, Dr. Singh states, “The trade-off with this technique would be using a larger amount of adhesive.” Ex. 1002 ¶ 137. As Dr. Singh points out, however, an ordinarily skilled artisan “would have been motivated to make this trade-off for convenience and flexibility in manufacturing.” *Id.* In our view, that testimony represents reasoning with a rational underpinning that explains why an ordinarily skilled artisan would have been led to incorporate Tilton’s method of “applying adhesive to the ‘entire surface’ of a panel used in packaging” to the interior surfaces of both panels in the modified wallet card package of Willard. Pet. 62 (quoting Ex. 1014 ¶ 65).

Patent Owner counters that Tilton teaches applying adhesive “on plastic portions of its package, not on paper stock panels as required by claims 6 and 8.” Resp. 58 (emphasis omitted). That position is unpersuasive in view of both the disclosure of Tilton and the testimony of Patent Owner’s own witness, Dr. Kimmel. Tilton expressly discloses the use of a heat-activatable adhesive to seal together two paperboard portions of packaging material. Reply 23 (citing Ex. 1014 ¶ 8). Dr. Kimmel admits that Tilton uses “paperboard cards that are coated or laminated with plastic or ***other materials at the papermill,***” which would have included clay coatings. *Id.* (quoting Ex. 1014 ¶ 36 (Tilton) (emphasis Petitioner’s);

Ex. 1058, 225:13–226:13 (Dr. Kimmel’s testimony that “clay coatings” were “certainly available at a paper mill or at most paper mills”)).

Patent Owner also argues, unpersuasively, that Tilton includes an “overt criticism of the use of cardboard in packaging applications” that constitutes a “teaching away” from the claimed invention. Resp. 49. We agree with Petitioner, however, that nothing in Tilton rises to the level of a teaching away. Reply 24. On the contrary, given that “Tilton expressly uses paperboard coated with non-plastic materials,” we are persuaded that Tilton “does not disparage” the practice of applying adhesive to substantially all of the surface of a panel made of “clay-coated paperboard.” *Id.*; Ex. 1014 ¶ 36 (Tilton); Ex. 1058, 225:13–226:13 (Dr. Kimmel’s testimony). A preponderance of the evidence shows that the subject matter of claim 6 and claim 8 would have been obvious at the time of the invention.

(b) Claim 10

Claim 10, which depends from claim 1, includes a limitation that requires “applying a filament strip to one of the first panel and the second panel prior to the locating and activating steps.” According to claim 10, “the filament is utilizable to access the secure space” that secures the card. Petitioner contends, and Patent Owner does not dispute, that such filament strips were commonly used in Federal Express envelopes (a type of package) prior to the date of the invention. *See* Pet. 51–52 (citing Ex. 1001, 6:18–23); Resp. 43–45. Petitioner also presents alleged advantages of using a prior-art filament strip. Pet. 52. In response, Patent Owner observes that Willard uses a flap to access the wallet card, arguing that incorporating a filament strip would have changed the principle of operation of Willard’s wallet card package. Resp. 43–45. On that basis, Patent Owner argues that an

ordinarily skilled artisan “would not have been motivated to make such a substitution” (*id.* at 45)—that is, replacing Willard’s access flap with a known filament strip that serves the same purpose of providing access to a packaged item while protecting against theft or tampering (Reply 25).

Patent Owner’ own witness, Dr. Kimmel, testifies that “[s]uch a filament could be incorporated either in addition to Willard’s access flap, or in lieu of the flap.” *Id.* at 24 (quoting Ex. 2012 ¶ 159) (emphasis omitted). That testimony supports a conclusion that the proposed addition or substitution would not disturb Willard’s principle of operation, which broadly relates to “providing card access while showing tamper evidence.” *Id.* at 25. Accordingly, we find that Petitioner demonstrates by a preponderance of the evidence that the subject matter of claim 10 would have been obvious at the time of the invention.

(c) Claims 11 and 17

Claims 11 and 17 both depend from claim 1. Claim 11 adds a limitation to the printing step that requires “applying the heat-activatable adhesive in a predetermined pattern on the inner surface of the first panel.” Ex. 1001, 9:52–55. Claim 17 adds a limitation specifying that “the heat-activated adhesive is disposed only in the region substantially surrounding and offset from the” card. *Id.* at 10:3–6.

Petitioner directs us to substantial evidence that the prior art would have suggested those additional limitations in the modified wallet card package of Willard. Pet. 59–61 (claim chart) (and evidence cited therein); *see id.* at 62–64 (advances persuasive reasons why an ordinarily skilled artisan would have been led to combine the asserted prior art references to arrive at a method that meets claims 6 and 8). For example, Tilton teaches

applying a heat-activatable adhesive in a predetermined pattern on the inner surface of a first panel as required by claim 11. Pet. 59–60 (claim chart); *see, e.g.*, Ex. 1014 ¶¶ 8, 52, 54, 65 (disclosures in Tilton cited in claim chart). In addition, Tilton suggests packaging a retail product by heat-activating an adhesive in an “outer band” along the periphery of the package in a manner that would have met the requirements of claim 17. Pet. 61 (claim chart, quoting Ex. 1014 ¶ 69). Applying adhesive in a predetermined pattern, as taught by Tilton, particularly in an area surrounding and offset from the product, would have allowed one to control how much and where adhesive is applied and repeat the same adhesive pattern in mass production. Ex. 1002 ¶ 148. And one of ordinary skill in the art would have been motivated to apply Tilton’s teachings in the modified method of Willard to realize cost savings and increase efficiency by using less heat-activatable adhesive to cover a smaller area. Pet. 61 (citing Ex. 1002 ¶¶ 161–165).

Patent Owner raises essentially the same counter argument that we discuss above in our analysis of claims 6 and 8. Specifically, Patent Owner argues that Tilton is limited to applying adhesive to a plastic substrate. Resp. 61–62. Our analysis of that argument, set forth above in the context of claims 6 and 8, applies with equal force to claims 11 and 17. *See supra* 39–40. Tilton is not limited to applying adhesive to a plastic substrate, but rather, contemplates applying adhesive to paperboard coated with other paper mill materials, such as clay. Reply 23 (and evidence cited therein).

(d) Claims 19–21

Claim 19 depends from claim 18 and further requires printing adhesive “on substantially all of the inner surface of the first panel.” Ex. 1001, 10:29–31. Petitioner directs us to evidence that the subject matter

of claim 19 would have been obvious at the time of the invention in view of the combined disclosures of Willard, Maak, Jones, ASI, and Tilton. Pet. 70 (citing Ex. 1002 ¶ 168 (“Printing adhesive on ‘substantially all’ of the surface of a panel to be bonded . . . was known and conventional” (citing Ex. 1002 ¶ 54, which includes substantial objective support for that proposition, including Tilton’s disclosure of applying adhesive to the “entire surface” of the packaging material (Ex. 1014 ¶ 65))).

Patent Owner does not contest Petitioner’s evidence on that point, but argues that too many references are applied against claim 19. Resp. 63–64. Patent Owner raises essentially the same argument against the alleged “maze of prior art references” applied against claims 20 and 21. Resp. 65. Petitioner, however, identifies persuasive, art-based reasons that support the combination of references, including evidence that the combination “would predictably work and provide the expected functionality”—evidence not opposed effectively by Patent Owner. Pet. 71 (citing Ex. 1002 ¶¶ 54, 168) (for claim 19), 73 (citing Ex. 1002 ¶¶ 53, 55, 169–173) (for claims 20 and 21); Resp. 63–64. Moreover, to the extent Patent Owner relies on “reasons discussed” in connection with claim 18 (Resp. 64–65), those reasons are unpersuasive as explained above in our analysis of claim 18.

Accordingly, we find that a preponderance of the evidence supports a conclusion that the subject matter of claim 19 would have been obvious to an ordinarily skilled artisan at the time of the invention. Our reasoning applies with equal force to Patent Owner’s argument that the challenge to claims 20 and 21 depend on a “maze of prior art references.” Resp. 65.

Petitioner shows by a preponderance of the evidence that the subject matter of claims 19–21 would have been obvious at the time of the invention.

(e) Claims 23–30

Claim 23, which indirectly depends from claim 1, requires “an aperture” that permits a person to view “at least a portion of” a data field provided on the card. Ex. 1001, 10:44–48. Claims 24–30 directly or indirectly depend from claim 23 and, accordingly, inherit the limitation pertaining to an aperture. *Id.* at 10:49–11:6. Petitioner directs us to evidence demonstrating that Willard discloses the additional limitations of claims 23–30. Pet. 39–42 (and evidence cited therein).

Patent Owner argues that the prior art fails to disclose or suggest the required aperture recited in claim 23. Resp. 34. Willard, however, discloses a panel that includes an aperture (“opening 550” and “access flap 516”) that permits a person to view a portion of the data field provided on the card. Pet. 39 (claim chart) (and evidence cited therein); Ex. 1010 ¶ 22 (“The front panel 512 defines an opening 550 that permits viewing of the wallet card 505A.”). Patent Owner advances unpersuasive counter arguments, which appear to depend on Dr. Kimmel’s opinion that an aperture must be open to the air with no intervening material, such as, for example, Willard’s transparent film. Resp. 34–36; Reply 12. Willard plainly discloses an opening that may, if desired, include a transparent window, “such as a transparent plastic film” for viewing the card, but does not require such a film. Reply 13 (citing Ex. 1010, Fig. 9, ¶ 30). Patent Owner’s position that Willard’s opening is not an aperture is particularly unpersuasive in view of Dr. Kimmel’s cross-examination testimony that, “if the film isn’t there, it is

an aperture . . . I haven't really studied that point.” *Id.* (quoting Ex. 1058, 141:18–142:8).

Patent Owner further argues that Willard's wallet card package contains no aperture until an opening is “*created by opening* the access flap 516” as depicted in Figure 6 of Willard. Resp. 35 (quoting Ex. 1002 ¶ 176) (emphasis Patent Owner's). There is no dispute, however, that Willard includes an aperture “through which at least a portion of a magnetic strip 511B containing data is viewable.” *Id.* Patent Owner's further argument that “every package” could “have any number of apertures” if a consumer chose to “tear any number of holes in a package” is ineffective to denigrate Willard's suggestion of an open flap (an aperture) for the purpose of viewing a data field on a card. Pet. 39–40 (claim chart for claim 23) (and evidence cited therein). Patent Owner's position is untenable in view of Willard's express disclosure that “[t]he front panel 512 defines an opening 550 that permits viewing of the wallet card 505A.” Pet. 40 (quoting Ex. 1010 ¶ 22).

Petitioner demonstrates by a preponderance of the evidence that the subject matter of claim 23 (as well as the subject matter of claims 24–30, which depend directly or indirectly from claim 23) would have been obvious at the time of the invention.

(f) The Remaining Dependent Claims

Petitioner directs us to persuasive evidence that claims 2–5, 7, 9, 12–16, and 22 would have been obvious at the time of the invention. *See* Pet. 29–39, 55, 64–66 (claim charts) (and evidence cited therein); *see id.* at 42–51, 55–57, 64–66 (reasons to combine the asserted prior art references) (and evidence cited therein). Regarding those remaining

dependent claims, Patent Owner argues only that the independent claims from which those claims depend are not proven unpatentable—argument that is unpersuasive for reasons discussed above in connection with independent claims 1 and 18. Resp. 36 (for claims 16 and 22), 43 (for claims 2, 3, 7, 9, 12, and 14), 57 (for claims 4 and 5), 63 (for claims 13 and 15).

Petitioner demonstrates by a preponderance of the evidence that the subject matter of dependent claims 2–5, 7, 9, 12–16, and 22 would have been obvious at the time of the invention. Pet. 29–39, 42–51, 55–57, 64–66 (and evidence cited therein).

III. CONCLUSION

For the above reasons, we find that Petitioner establishes by a preponderance of the evidence that the subject matter of claims 1–30 of the '889 patent would have been obvious at the time of the invention in view of the combined disclosures of the asserted prior art references.

IV. ORDER

It is

ORDERED that claims 1–30 of the '889 patent are 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.

Case IPR2017-01650

Patent 8,419,889 B2

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