

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

MOZIDO CORFIRE-KOREA, LTD.,
Patent Owner.

IPR2022-01149
Patent 10,223,692 B2

Before KRISTEN L. DROESCH, MICHAEL R. ZECHER, and
PAUL J. KORNICZKY, *Administrative Patent Judges*.

KORNICZKY, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Apple Inc. (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–13 of U.S. Patent No. 10,223,692 B2 (Ex. 1001, “the ’692 patent”). Paper 2 (“Pet.”). Mozido Corfire-Korea Ltd. (“Patent Owner”)¹ filed a Preliminary Response opposing institution. Paper 6. We instituted an *inter partes* review of claims 1–13 of the ’692 patent on all grounds of unpatentability alleged in the Petition. Paper 7 (“Institution Decision” or “Inst. Dec.”).

After institution of trial, Patent Owner filed a Response (Paper 9, “PO Resp.”), Petitioner filed a Reply (Paper 13, “Reply”), and Patent Owner filed a Sur-reply (Paper 14, “Sur-reply”).

An oral hearing was held on October 3, 2023, and the record contains a transcript of this hearing. Paper 23 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–13 of the ’692 patent are unpatentable.

II. BACKGROUND

A. *Related Proceedings*

As required by 37 C.F.R. § 42.8(b)(2), Petitioner and Patent Owner identify the judicial or administrative matters that would affect or be affected by a decision in this proceeding. Petitioner states it is unaware of any related matters. Pet. 1. Patent Owner states the ’692 patent is the subject of

¹ Patent Owner identifies Fintiv, Inc. as a real party in interest. Paper 4, 1 (Patent Owner’s Mandatory Notices).

Fintiv, Inc. v. Paypal Holdings, Inc., Civil Act. 6:22-cv-00288 (W.D. Tex. March 17, 2022). Paper 4, 1.

B. Overview of the '692 Patent (Ex. 1001)

The '692 patent is titled “Method for Setting Temporary Payment Card and Mobile Device Applying the Same.” Ex. 1001, code (54). The '692 patent describes “a method for setting a mobile payment card to be used for payment and a mobile device applying the same.” *Id.* at 1:16–20. The '692 patent states that, “[w]hen the user temporarily uses another mobile payment card to make a payment (for example, for one-time payment), the user should recover the original main payment card after finishing the payment.” *Id.* at 1:32–35. However, “the operation of recovering the original main payment card may be a cumbersome procedure and may cause inconvenience to the user” and “changing the main payment card to another payment card may also cause inconvenience.” *Id.* at 1:35–43. The '692 patent’s method sets a temporary payment card so “a user can change the temporary payment card more easily, swiftly, naturally, amusingly, and intuitively.” *Id.* at 1:49–57.

Figures 10 and 11 of the '692 patent are reproduced below.

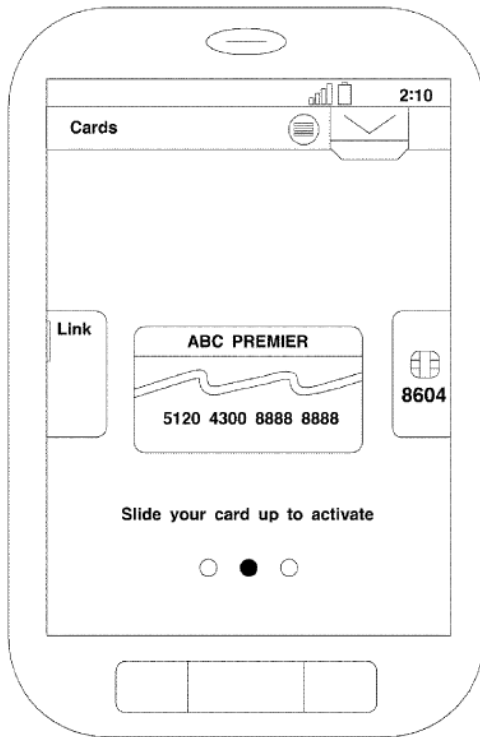


FIG. 10

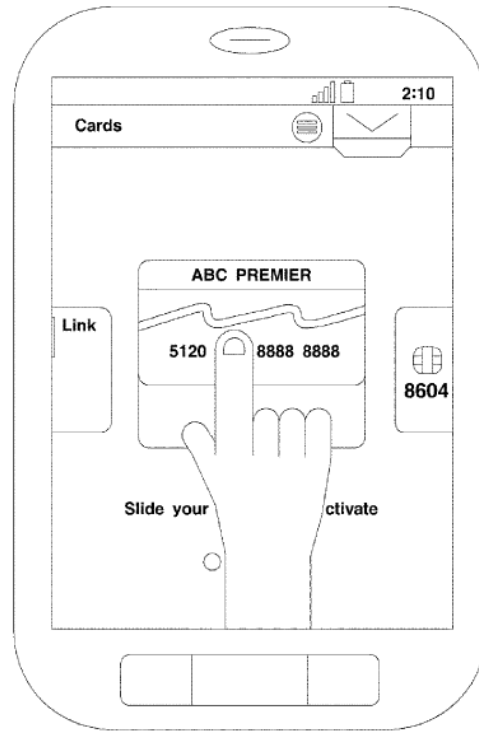


FIG. 11

Figure 10 illustrates a mobile device which displays a payment card selection screen of a mobile wallet application and a list of mobile payment cards. Ex. 1001, 4:36–40. Figure 11 illustrates that the user may select a mobile payment card (i.e., “ABC PREMIER”) from the mobile payment card list to use as a temporary payment card by sliding up the mobile payment card. *Id.* at 4:41–48.

The '692 patent states that the “payment by the temporary payment card should be made within a ‘payable time’” and, “when the payable time passes, the setting of the temporary payment card is reset and a payment is made by a main payment card.” Ex. 1001, 4:62–65.

Figures 15 and 16 of the '692 patent are reproduced below.

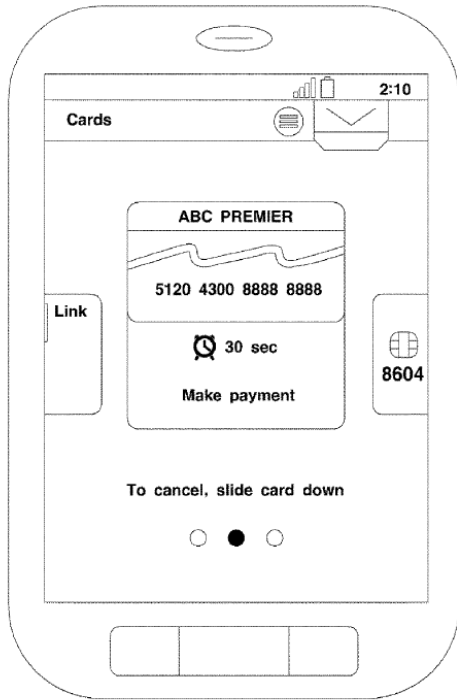


FIG. 15

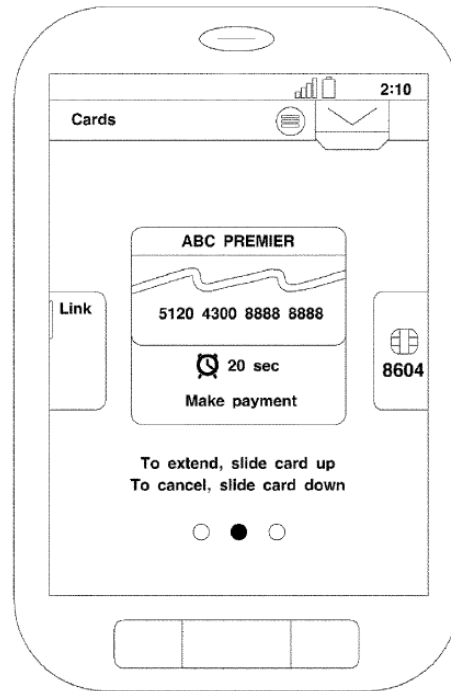


FIG. 16

Figure 15 illustrates a payment card selection screen showing when a mobile payment card is slid up by the user and is selected/set as a temporary payment card, whereas Figure 16 illustrates the same screen after 10 seconds pass. Ex. 1001, 3:36–40. In Figure 15, the screen also displays a payable time (e.g., 30 seconds) while the temporary card is active. *Id.* at 4:66–5:2, 5:42–43. As the time decreases, Figure 16 shows the remaining payable time (i.e., 20 seconds) and the temporary card (ABC PREMIER) slowly slides down as the payable time passes and returns to the original position. *Id.* at 5:53–58.

C. *Illustrative Claims 1 and 13*

As mentioned above, Petitioner challenges claims 1–13 of the ’692 patent. Claims 1 and 13 are the two independent claims. Ex. 1001, 7:41–8:6, 8:55–9:19. Claim 1 is a method claim and claim 13 is written as an apparatus of method claim 13. Claims 1 and 13 are reproduced below with similar limitations juxtaposed.²

[1.0] A method for setting a temporary payment card, comprising:	
	[13.0] A mobile device comprising:
[1.1] displaying a list of mobile payment cards at a first portion of a touch screen interface;	[13.1] a touch screen configured to display a list of mobile payment cards; and a processor configured to: [13.2] displaying a list of mobile payment cards at a first portion of a touch screen interface;
[1.2] receiving, through the touch screen interface, a user input selecting a mobile payment card from the list of mobile payment card;	[13.3] receive, through the touch screen interface, a user input selecting a mobile payment card from the list of mobile payment card;
[1.3] detecting the user input sliding the mobile payment card from the first portion of the touch screen interface to a second portion of the touch screen interface;	[13.4] detect the user input sliding the mobile payment card from the first portion of the touch screen interface to a second portion of the touch screen interface;

² For ease of reference, we use Petitioner’s claim recitation numbering scheme as indicated by the bracketed numbers.

<p>[1.4] based upon the user input sliding the mobile payment card, setting, as a temporary card, the mobile payment card, wherein while the mobile payment card is set as the temporary card, payments will be made by the mobile payment card;</p>	<p>[13.5] based upon the user input sliding the mobile payment card, set as temporary card, the mobile payment card, wherein while the mobile payment card is set as the temporary card, payments will be made by the mobile payment card;</p>
<p>[1.5] displaying a numerical indicator of a payable time, wherein the numerical indicator initially indicates a first remaining time amount;</p>	<p>[13.6] displaying a numerical indicator of a payable time, wherein the numerical indicator initially indicates a first remaining time amount;</p>
<p>[1.6.1] simultaneously:</p>	<p>[13.7.1] simultaneously:</p>
<p>[1.6.2] moving the mobile payment card a first distance from the first <u>second</u> portion of the screen towards a second <u>first</u> portion of the touch screen,³ and</p>	<p>[13.7.2] moving the mobile payment card a first distance from the first <u>second</u> portion of the screen towards a second <u>first</u> portion of the touch screen, and</p>
<p>[1.6.3] decrementing the numerical indicator a first difference to display a remaining payable time, wherein:</p>	<p>[13.7.3] decrementing the numerical indicator a first difference to display a remaining payable time, wherein:</p>
<p>[1.7.1] the first distance is proportional to an amount of payable time that has passed, and</p>	<p>[13.8.1] the first distance is proportional to an amount of payable time that has passed, and</p>

³ Petitioner and Patent Owner agree that claim limitations 1.6.2 and 13.7.2 contain an error and should properly recite “moving the mobile payment card a first distance from the second portion of the screen towards a first portion of the touch screen.” PO Resp. 15; Reply 1–2, 8–10.

[1.7.2] the first difference is proportional to the amount of payable time that has passed: and	[13.8.2] the first difference is proportional to the amount of payable time that has passed: and
[1.8] resetting the setting of the temporary payment card when the payable time passes such that the mobile payment card is no longer set as the temporary card and payments are made through a main card.	[13.9] reset the setting of the temporary payment card when the payable time passes.

D. Evidence and Asserted Grounds

Petitioner relies upon the following evidence:

- (1) US 2009/0288012 A1, published November 19, 2009 (“Hertel,” Ex. 1005);
- (2) US 2009/0037326 A1, published February 5, 2009 (“Chitti,” Ex. 1006);
- (3) US 8,296,686 B1, issued October 23, 2012 (“Tedesco,” Ex. 1007);
- (4) US 2012/0123937 A1, published May 17, 2012 (“Spodak,” Ex. 1008);
- (5) US 7,967,196 B1, issued June 28, 2011 (“Bierbaum,” Ex. 1010);
- (6) US 2012/0197743 A1, published August 2, 2012 (“Grigg,” Ex. 1012);
- (7) US 2009/0183120 A1, published July 16, 2009 (“Ording,” Ex. 1016); and
- (8) US 9,116,596 B2, issued August 25, 2015 (“Roman,” Ex. 1017).

Petitioner submits two declarations from Dr. Henry Houh (Exs. 1003 (Dr. Houh’s Declaration in support of the Petition), 1020 (Dr. Houh’s

Declaration in support of Petitioner’s Reply)). Patent Owner submits a declaration from Michael I. Shamos, Ph.D in support of the Patent Owner Response (Ex. 2004).

Petitioner challenges the patentability of the ’692 patent claims based on the following grounds (Pet. 13):

Ground	Claim(s) Challenged	35 U.S.C. § ⁴	Reference(s)/Basis
1	1–4, 11–13	103	Hertel, Chitti, Spodak, Tedesco
2	5, 6, 10	103	Hertel, Chitti, Spodak, Tedesco, Bierbaum
3	7	103	Hertel, Chitti, Spodak, Tedesco, Bierbaum, Grigg
4	8	103	Hertel, Chitti, Spodak, Tedesco, Ordning
5	9	103	Hertel, Chitti, Spodak, Tedesco, Roman

III. ANALYSIS

A. Legal Standards

Petitioner bears the burden of persuasion to prove unpatentability, by a preponderance of the evidence, of the claims challenged in the Petition. 35 U.S.C. § 316(e). Except in limited circumstances not present here, this burden of persuasion does not shift to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

⁴ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the ’692 patent claims priority to an application filed after this date, our citations to 35 U.S.C. § 103 in this Decision are to the post-AIA version. Our decision is not impacted, however, by which version of the statute applies.

As mentioned above, Petitioner's challenges are based on obviousness. Pet. 13. A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. *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) when in the record, objective evidence of nonobviousness.⁵ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The person of ordinary skill in the art is a hypothetical person 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). In determining the level of ordinary skill in the art, we may consider certain factors, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *Id.*

⁵ During trial, Patent Owner has not directed us to any objective evidence of non-obviousness. *See* PO Resp.

Petitioner states a person of ordinary skill in the art would have had a working knowledge of mobile payment techniques pertinent to the '692 Patent, including software development in the field of mobile payment techniques. Such [person of ordinary skill in the art] would have had a bachelor's degree in electrical engineering, computer science, or equivalent training, and approximately two years of work experience in software development. Lack of work experience can be remedied by additional education, and vice versa.

Pet. 7 (citing Ex. 1003 ¶¶ 20–22).

Patent Owner states a person of ordinary skill in the art would have had

a bachelor's degree in electrical engineering, computer science, or equivalent training, and approximately two years of work experience in software development involving network-based monetary transaction systems. Lack of work experience can be remedied by additional education, and vice versa. Appropriate experience could substitute for education.

PO Resp. 1 (citing Ex. 2004 ¶ 35).

We do not see any substantive difference between the parties' proposals. We adopt Petitioner's definition of the level of ordinary skill because it is consistent with the '692 patent and the applied prior art, but note that our obviousness evaluation would not differ if we were to apply Patent Owner's definition of the level of ordinary skill in the art.

C. Claim Construction

In an *inter partes* review, the claims are construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b) (2021). This claim construction standard includes construing the claim in accordance

with the ordinary and customary meaning of such claims as would have been understood by one of ordinary skill in the art. *Id.*; *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005). In construing claims in accordance with their ordinary and customary meaning, we consider intrinsic evidence such as the specification and the prosecution history of the patent. *Phillips*, 415 F.3d at 1315–17. Extrinsic evidence, including expert and inventor testimony, dictionaries, and treatises, may also be used but is less significant than the intrinsic record. *Id.* at 1315. Usually, the specification is dispositive, and it is the single best guide to the meaning of a disputed term. *Id.* Any special definitions for claim terms must be set forth in the specification with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Other than the claim terms discussed below, we determine that we do not need to expressly construe any other terms to resolve the parties’ disputes. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e 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))).

1. *“Screen Terms”*

Patent Owner and Petitioner agree that certain “screen” terms used throughout the claims are synonymous, as shown in the table below.

Claim Phrase	Plain and Ordinary Meaning
“touch screen interface” “touch screen” “screen” (Claims 1-13)	All three terms are used synonymously in the Patent. All refer to the screen of a mobile device.
“first portion of a touch screen interface” “first portion of the screen” (Claims 1-13)	Both terms are used synonymously in the Patent. They refer to a first portion of the screen of a mobile device.
“second portion of the touch screen interface” “second portion of the touch screen” (Claims 1-13)	Both terms are used synonymously in the Patent. They refer to a second portion of the screen of a mobile device that is different from a first portion of the screen.

PO Resp. 8; Reply 11.

2. *“Moving the mobile payment card a first distance from the first portion of the screen towards a second portion of the touch screen”*

Claim limitations 1.6.2 and 13.7.2 recite “moving the mobile payment card a first distance from the first portion of the screen towards a second portion of the touch screen.” Ex. 1001, 7:60–62 (claim 1), 9:8–12 (claim 13) (emphasis added). Patent Owner explains that there is an obvious error in these limitations because “[a]t the time this step is performed, the mobile payment card is already at the second portion of the touch screen and is actually moved towards the first portion of the touch screen (its “original position”), not the other way around.” PO Resp. 15 (citing Ex. 2004 ¶ 68).

Petitioner agrees. Reply 8; *see id.* at 1–2, 8–10. Thus, these limitations should recite “moving the mobile payment card a first distance from the second portion of the screen towards a first portion of the touch screen.” PO Resp. 15; Reply 1–2, 8–10; Tr. 3:24–4:7 (Petitioner).

3. “*Temporary card*” and “*temporary payment card*”

Petitioner and Patent Owner agree that the terms “temporary card” and “temporary payment card” used throughout the claims are synonymous. Reply 2; PO Resp. 7. However, both parties present different definitions for these terms.

Petitioner states that the “plain and ordinary meaning of a ‘temporary payment card’ is a payment card that can be used for a limited time.” Reply 2 (citing Ex. 1020 ¶ 14 (citing Ex. 1022 (defining “temporary” as “lasting for a limited time.”); Ex. 1023 (defining “temporary” as “[l]asting, used, or enjoyed for a limited time.”)); Ex. 1020 ¶¶ 13–15, 26).

Patent Owner states that “temporary card” and “temporary payment card” mean a “payment card that can only be used for a payable time.” PO Resp. 7–8 (referring to PO Resp. 2–4); *see* Sur-reply 2–6. Patent Owner explains that a temporary payment card “is one that can be used only for a ‘payable time,’ after which the ‘main payment card’ is used unless another temporary payment card is selected.” PO Resp. 7–8 (citing Ex. 2004 ¶ 50). Patent Owner bases its construction on two embodiments described in column 1, line 24 through column 2, line 31 of the ’692 patent: (1) if payment is made with a temporary payment card during a payable time, then the main payment card is reset; and (2) if no payment is made with the temporary payment card during the payable time, the main payment card is

reset at the expiration of the payable time. *Id.* at 2–3; Ex. 2004 ¶¶ 38–39 (citing Ex. 1001, 1:49–67, 2:6–8), ¶ 43 (describing two conditions); Ex. 1021, 33:23–36:10 (construction based on those two conditions); Ex. 1020 ¶ 21.

We do not agree with Patent Owner because there are several issues with its proposed construction. First, the claims do not recite that a temporary payment card “can only be used for a payable time” nor does Patent Owner direct us to specific claim language suggesting the claims should be limited to the two embodiments identified by Patent Owner. *EPOS Techs. Ltd. v. Pegasus Techs. Ltd.*, 766 F.3d 1338, 1341 (Fed. Cir. 2014) (“[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.”). The claim language is not limited to the embodiments identified by Patent Owner. *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment”). Claim limitation 1.8, for example, recites only “resetting the setting of the temporary payment card when the payable time passes such that the mobile payment card is no longer set as the temporary card and payments are made through a main card.” Ex. 1001, 8:3–6. This limitation broadly relates to embodiment 2 listed above (i.e., “if no payment is made with the temporary payment card during

the payable time, the main payment card is reset at the expiration of the payable time”), and is not limited to embodiment 1 listed above.

Second, Patent Owner’s proposed construction renders superfluous portions of limitation 1.8. If “temporary payment card” is construed so that it “can only be used for a payable time,” then this construction renders superfluous the portion of limitation [1.8] that specifically recites a condition on resetting the temporary payment card (“when the payable time passes”). Ex. 1020 ¶ 25.

Third, Patent Owner’s proposed construction that the temporary payment card “can only be used for a payable time” excludes embodiments in the ’692 patent. *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1320 (Fed. Cir. 2005) (“A claim construction that does not encompass a disclosed embodiment is rarely, if ever, correct.” (alteration omitted)). The ’692 patent, for example, discloses that a user can reset the temporary payment card “even if the payable time remains” by sliding down the temporary payment card on the screen. Ex. 1001, 5:16–19 (“When the user intentionally slides down the temporary payment card as shown in FIG. 13 even if the payable time still remains, the setting of the temporary payment card is reset.”). Thus, the ’692 patent does not require that the temporary payment card can “only be used for a payable time” because a user may intentionally remove the card before the payable time expires.

After Petitioner identified the problems with Patent Owner’s proposed construction (*see* Reply 3–8), Patent Owner raised new arguments that

“payable time” can (i) expire when the time reaches zero by decrementing with the passage of time (Ex. 1001 at 5:3–11), when the user manually sets the payable time to zero (*id.* at 5:16–19), or a transaction is performed using the temporary card (*id.* at 5:13–14), and (ii) be manually extended by the user

before the payable time reaches zero (*id.* at 5:59–62). However, once the remaining payable time reaches zero or the transaction is performed, the main card is activated, and the temporary card is no longer usable. The remaining payable time can either reach zero by decrementing with the passage of time or the user manually setting payable time to zero.

Sur-reply 2. But once again, Patent Owner’s arguments in this regard improperly reads limitations from preferred embodiments described in the specification into the claims. *EPOS Techs.*, 766 F.3d at 1341.

We determine that Petitioner shows by a preponderance of the evidence that the plain and ordinary meaning of a “temporary payment card” and “temporary card” is “a payment card that can be used for a limited time.”

4. *Summary*

We further determine that we do not need to expressly construe any other terms to resolve the parties’ disputes. *See Nidec Motor*, 868 F.3d at 1017 (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs.*, 200 F.3d at 803)).

5. *Printed Matter*

Petitioner contends that

Although Limitations [1.5]-[1.7.2] and [13.6]-[13.8.2] would have been obvious (*see* §VIII.C.5), they lack patentable weight under the printed-matter doctrine. *Praxair Distribution v. Mallinckrodt Hosp. Prod. IP*, 890 F.3d 1024, 1033 (Fed. Cir. 2018) (addressing during claim construction). These limitations are “directed to the content of the information conveyed” (time remaining) and “merely inform[] people of the

claimed information” rather than “create a new functionality in a claimed device or [] cause a specific action in a claimed process.” *C R Bard Inc. v. AngioDynamics*, 979 F.3d 1372, 1381-82 (Fed. Cir. 2020). Although the temporary card is reset when the “payable time” expires (Limitations [1.8]/[13.9]), that occurs based on “payable time” expiring and would occur regardless of whether or how remaining time is *displayed*.

Pet. 11 (alterations in original).

In response to Petitioner’s argument, Patent Owner contends

Petitioner argues that limitations [1.5]-[1.7.2] and [13.6]-[13.8.2] lack patentable weight under the “printed matter doctrine,” citing *C R Bard Inc. v. AngioDynamics*, 979 F.3d 1372, 1381-82 (Fed. Cir. 2020) for the proposition that the limitation are “‘directed to the content of the information conveyed’ (time remaining) and ‘merely inform[] people of the claimed information’ rather than ‘create a new functionality in a claimed device or [] cause a specific action in a claimed process’.” (Pet. at 11.)

However, printed matter is given patentable weight if the printed matter and its associated product are in a “functional relationship.” MPEP § 2111.05. (Shamos at ¶ 70.) In evaluating the existence of a functional relationship, the court considers whether the alleged printed matter instead “interacts with the other elements of the claim to create a new functionality in a claimed device or to cause a specific action in a claimed process.” (*C R Bard Inc. v. AngioDynamics*, 979 F.3d 1372, 1381-82 (Fed. Cir. 2020)). Here, contrary to Petitioner has alleged in the Petition, the alleged printed matter (time remaining) does not merely inform people of the claimed invention but rather create a new functionality in the claimed device (e.g., as recited in Claim 13) and/or causes a specific action in the claimed process (e.g., Claim 1).

PO Resp. 16–17.

We determine that, regardless of whether limitations 1.5–1.7.2 and 13.6–13.8.2 lack patentable weight under the printed matter doctrine,

Petitioner demonstrates that the applied prior art teaches these limitations (Pet. 37–57, 78–79). *See Nidec Motor*, 868 F.3d at 1017.

D. Ground 1: Asserted Obviousness of Claims 1–4 and 11–13 Over Hertel, Chitti, Spodak, and Tedesco

Petitioner asserts that claims 1–4 and 11–13 are unpatentable under 35 U.S.C. § 103 as being obvious over Hertel (Ex. 1005), Chitti (Ex. 1006), Spodak (Ex. 1008), and Tedesco (Ex. 1007). Pet. 14–79; Reply 12–30. Patent Owner opposes Petitioner’s challenge. PO Resp. 32–50; Sur-reply 6–21.

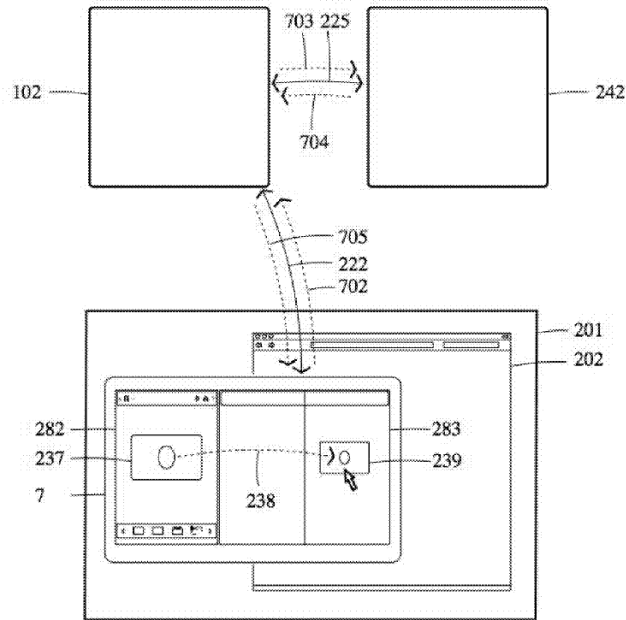
For the reasons discussed below, we determine Petitioner has shown by a preponderance of the evidence that claims 1–4 and 11–13 are unpatentable.

Below, we present a brief overview of Hertel, Chitti, Spodak, and Tedesco and then we address Petitioner’s and Patent Owner’s contentions.

1. Overview of Hertel (Ex. 1005)

Hertel is a U.S. patent publication titled “Secured Electronic Transaction System.” Ex. 1005, code (54). Hertel describes a payment system having a user interface that acts as a visual wallet simulator. *Id.* at code (57).

Figure 17 of Hertel is reproduced below.



Payment receptacle displayed in conjunction with electronic wallet

FIG. 17

Figure 17 illustrates Hertel’s electronic wallet 7 and screen 201 of user computer 100 (not shown) for “initiating (or providing) for display and execution a payment receptacle.” *Id.* ¶¶ 33, 206. Transaction authority 102, credit card payment gateway 242, and user computer 101 (not shown) are communicatively coupled through a network (not shown). *Id.* ¶ 206. Screen 201 of user computer 101 displays a user interface of web browser 202 and user interface 282 of electronic wallet 7. *Id.* Digital object 237, which corresponds to a deactivated credit card, is displayed in electronic wallet program 282. *Id.* To activate digital object/credit card 237, the user selects credit card 237 and moves it by dragging 238 and dropping it on target 239. *Id.* ¶ 207. Target 239 is payment receptacle module 283 displayed in electronic wallet 282. *Id.* When digital object/credit card 237

is dropped on drop target 239, payment receptacle program 283 transmits through user computer 100 an instruction 702 containing identification information of the credit card and activates the credit card. *Id.*

After the user is done with digital object/credit card 237, the user drags digital object/credit card from payment receptacle module 283 to user interface portion 282, where the credit card is deactivated. Ex. 1005 ¶¶ 218, 288.

2. *Overview of Chitti (Ex. 1006)*

Chitti is a U.S. patent application titled “Virtual Card Selector for a Portable Electronic Device.” Ex. 1006, code (54). Chitti describes a mobile telephone which is equipped with a virtual card application configured to manage a plurality of virtual credit cards. *Id.* at code (57). Chitti recognizes the concept of a “default card,” which is used unless a different card is selected. *Id.* ¶ 26. The default card is the card having the highest “priority” among a selection of cards. *Id.* The priority of a card can be determined automatically, according to a schedule/calendar, location, usage history or other criteria. *Id.* The user also may select a specific card to be used in a given transaction. *Id.* ¶ 25. The portable device on which the cards reside may detect a payment terminal, and automatically select a payment card appropriate for that terminal. *Id.* ¶ 42.

3. *Overview of Spodak (Ex. 1008)*

Spodak is a U.S. patent application titled “Portable-E-wallet and Universal Card.” Ex. 1008, code (54). Spodak generally relates to e-wallets with payment cards. *Id.* at code (57). Spodak discloses a programmable

“universal card,” programmed using an e-wallet application, to emulate any card in the e-wallet. *Id.* ¶¶ 28–30. A user may program the universal card in a “default card mode[], where the universal card always emulates a specific [default] card, unless programmed otherwise.” *Id.* ¶ 52. In this default mode, “the universal card is always configured to emulate the default card, unless the user re-programs the universal card to temporarily act as another card or to change to a new default card.” *Id.* A user may program the card in a “temporary card mode” to temporarily emulate a nondefault card for a time period (e.g., three hours), then have the card “revert back to the default” card (e.g., where a certain card is preferred in a particular location or context). *Id.* ¶¶ 52, 90.

4. *Overview of Tedesco (Ex. 1007)*

Tedesco is a U.S. patent titled “Portable Prompting Aid for the Developmentally Disabled.” Ex. 1007, code (54). Tedesco discloses an application running on a mobile device that aids developmentally disabled individuals to follow a schedule by alerting them to upcoming events (e.g., by displaying a timer). *Id.* at 2:39–45. Tedesco’s graphical timer animation could take any form, such as a bar graph (Figure 18), hourglass, car traveling down a road, “a sun rising/setting,” or an animation symbolizing “finality.” *Id.* at 8:14–24.

5. *Independent Claims 1 and 13*

Petitioner, relying on Dr. Houh’s testimony, provides a limitation-by-limitation comparison of the teachings of Hertel, Chitti, Spodak, and Tedesco to independent claims 1 and 13. Pet. 18–59 (claim 1), 73–79

(claim 13). As mentioned above in Section II.C, independent claim 1 is a method claim and independent claim 13 is written as an apparatus of method claim 1. Ex. 1001, 7:41–8:6, 8:55–9:19. We address both claims together because of the substantial overlap between the limitations and Petitioner’s contentions. *See, e.g.*, Pet. 73–79 (stating Petitioner’s contentions as to claim 13 rely on its contentions for claim 1).

a) *Preamble 1.0*

Preamble 1.0 recites a “method for setting a temporary payment card.” Petitioner contends that the preamble is not limiting but, regardless, Hertel teaches this preamble because it describes “a method for setting a card to use for a particular transaction (*a method for setting a temporary payment card*).” Pet. 18. Petitioner explains that, in Hertel, a user sets a payment instrument (e.g., a particular credit card) to use for a transaction by dragging and dropping that card from its location (drag origin) in the e-wallet into a target payment receptacle. *Id.* (citing Ex. 1005 ¶¶ 203–204, 216, 230, 330 (drag-and-drop selection); Ex. 1005 ¶¶ 177–179, 347–350 (how drag-and-drop animation works); Ex. 1003 ¶¶ 73–74). After the user is done with the digital object/credit card 237, the user drags digital object/credit card 237 from payment receptacle module 283 to user interface portion 282, where the credit card is deactivated. Ex. 1005 ¶¶ 218, 288.

Petitioner argues that, to the extent Patent Owner contends Hertel does not explicitly disclose a temporary payment card, Hertel in view of Chitti teaches this preamble recitation because using a temporary payment card was well-known, as shown in Chitti. Pet. 20 (citing Pet. 35–37 (discussing limitation 1.4); Ex. 1003 ¶ 78). Petitioner explains that Chitti

discloses the claimed temporary payment card because Chitti’s virtual wallet designates a card as the “top of the wallet card,” which is “the default card” used in transactions and for payments. *Id.* at 35 (citing Ex. 1006, code (57), ¶¶ 26–27; Ex. 1003 ¶ 112). Petitioner further explains that a user may set a different card, rather than the default card, for a particular transaction or context (i.e., the recited “temporary payment card”) by temporarily selecting a card as the “top-of-the-wallet card,” and “after the transaction at the particular location occurs,” the virtual wallet may “revert back to the default” card as the top-of-the-wallet card. *Id.* at 35–36 (citing Ex. 1006 ¶¶ 27, 31, 66 (stating “the user may override the automatic selection of the arranger module” “[a]t any time”); Ex. 1003 ¶ 112).

Arguing that Petitioner relies solely on Hertel for the preamble, Patent Owner contends that Hertel does not disclose a “temporary payment card” under Patent Owner’s proposed construction — a card usable only for a payable time. PO Resp. 34 (citing Ex. 2004 ¶ 115). According to Patent Owner, Hertel discloses a “timer” for security purposes and, if the user selects a payment card and does not complete a transaction within a timeout period, the entire transaction is cancelled; thus, preventing a thief who steals the user’s mobile device from using the payment card to make a payment. *Id.* (citing Ex. 2004 ¶ 115; Ex. 1005 ¶ 165). According to Patent Owner, Hertel’s “timeout period is not the ‘payable time of the claim’s ‘temporary card,’ as it applies to all the cards in Hertel’s electronic wallet” and the temporary payment card does not revert to a main (default) payment card. *Id.*

We do not agree with Patent Owner’s argument for two reasons. First, as discussed in Section III.C.3, we decline to adopt Patent Owner’s

proposed claim construction and determine a temporary payment card is a payment card that can be used for a limited time. Hertel discloses that one card may be temporarily used for certain time period. Ex. 1005 ¶ 167 (stating that, if an electronic wallet “remains unused for too long a period of time, it can lock itself, requiring the user to re-authenticate in order to open it”). We also understand that Hertel discloses more than one card so that the user may select and temporarily activate a first card and, when the transactions are completed, the user may deselect and deactivate the first card and, subsequently, use a second card. *Id.* ¶¶ 203–204, 216, 230. In this situation, the first card is temporarily used for the first set of transactions and the second card is used for the second, different set of transactions. *Id.*

Second, Patent Owner does not contest Petitioner’s contention that the combined teachings of Hertel and Chitti disclose a temporary payment card. Pet. 20, 35–37. We agree with Petitioner because its record-citations support Petitioner’s contentions.

We determine that Petitioner has proven by a preponderance of the evidence that Hertel teaches the preamble of claim 1.⁶

b) Preamble 13.0

Preamble 13.0 recites a “mobile device.” Petitioner contends that the preamble is not limiting but, regardless, Hertel teaches this preamble because it describes a mobile device having an e-wallet. Pet. 73 (citing Ex. 1003 ¶ 213). Patent Owner does not address this preamble recitation.

⁶ The parties do not address whether the preamble is limiting. Because Petitioner shows that the preamble is satisfied by the applied prior art, there is no need to determine whether the preamble is limiting. *See Nidec*, 868 F.3d at 1017.

We determine that Petitioner has proven by a preponderance of the evidence that Hertel teaches the preamble of claim 13.⁷

c) Limitations 1.1, 13.1, and 13.2

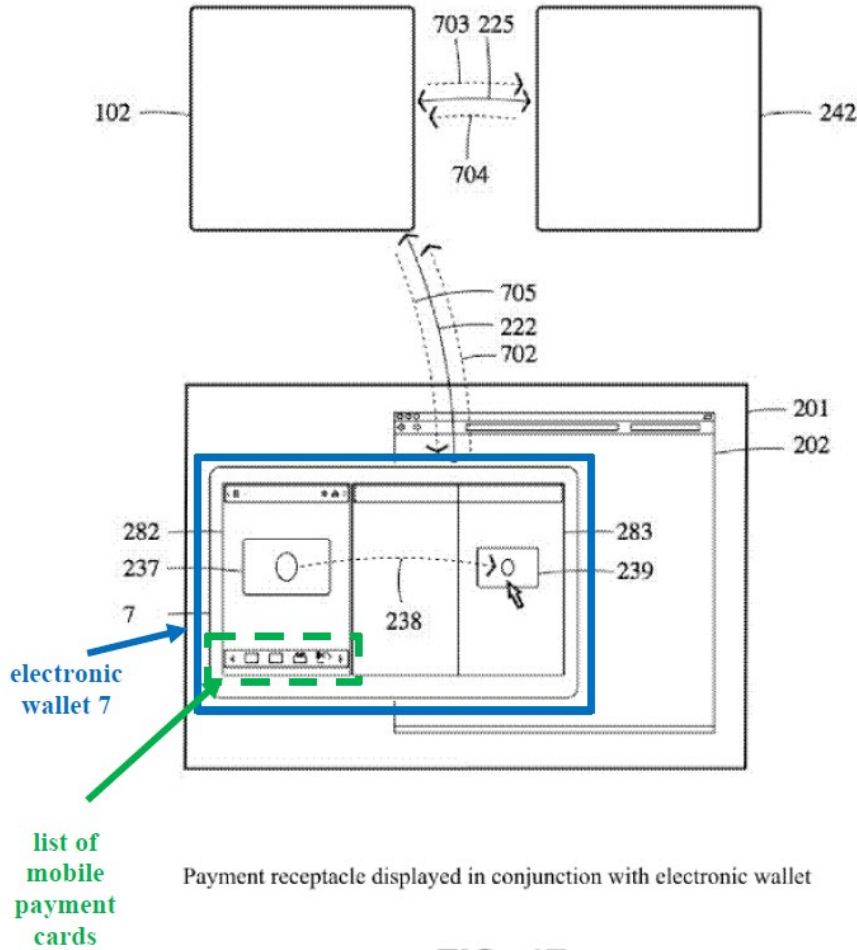
Limitation 1.1 recites “displaying a list of mobile payment cards at a first portion of a touch screen interface.” Similarly, limitations 13.1 and 13.2 recite “a touch screen configured to display a list of mobile payment cards; and a processor configured to: display[] a list of mobile payment cards at a first portion of a touch screen interface.” Petitioner contends that Hertel discloses these limitations. Pet. 20–27 (limitation 1.1), 73–77 (claim 13.1 and 13.2 discussion relying on limitation 1.1 discussion).

Petitioner demonstrates that Hertel teaches these limitations by disclosing its e-wallet may reside on a mobile device (Pet. 20 (citing Ex. 1005 ¶¶ 58, 95, 182, 227; Ex. 1003 ¶¶ 80–81)), and its mobile device has a processor configured to operate Hertel’s e-wallet software (*id.* at 74 (citing Ex. 1005 ¶¶ 97–99, 101–103, Fig. 7 (showing processor 2); Ex. 1003 ¶ 216)). Petitioner demonstrates that Hertel teaches “mobile payment cards” by disclosing its e-wallet “stores ‘digital representations of the kinds of objects typically found in a real-world purse or wallet,’ such as ‘credit cards, debit cards, gift cards,’ and other items (*mobile payment cards*)” and these “objects perform different functions, including payment.” *Id.* at 22–23 (citing Ex. 1005 ¶¶ 58, 59, 61, 103–104, 107, 190, 191; Ex. 1003 ¶¶ 83–84). Petitioner further shows that Hertel teaches “displaying a list of mobile

⁷ The parties do not address whether the preamble is limiting. Because Petitioner shows that the preamble is satisfied by the applied prior art, there is no need to determine whether the preamble is limiting. *See Nidec*, 868 F.3d at 1017.

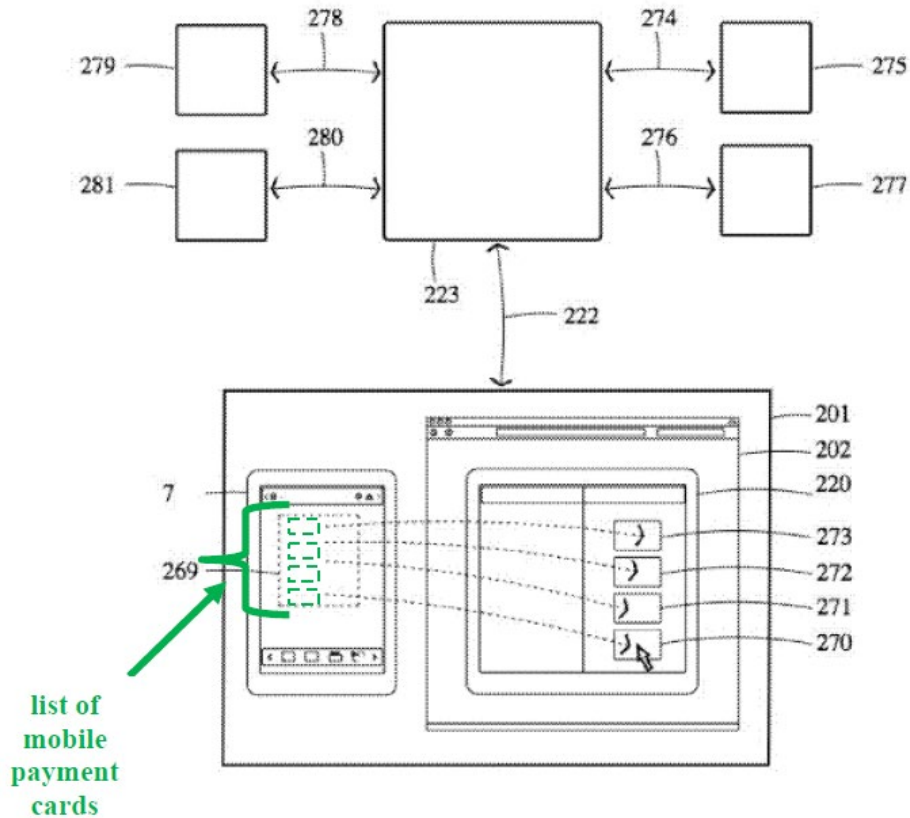
payment cards” by disclosing its digital objects (e.g., credit cards) are “displayed to the user in a selectable form, e.g., list or menu.” *Id.* at 23–25 (citing Ex. 1005 ¶ 229; Ex. 1003 ¶¶ 85–86).

Petitioner’s annotated Figure 17 of Hertel is reproduced below.



Pet. 24 (citing Ex. 1003 ¶ 86).

Petitioner's annotated Figure 20 of Hertel is reproduced below.



Multiple local drags and drops instruct transaction authority to apply multiple forms of payment to an online transaction

FIG. 20

Pet. 25 (citing Ex. 1005 ¶ 207 (#238 is a “drag”); Ex. 1003 ¶ 87). Figures 17 and 20 illustrate a list of cards for use by the user. Ex. 1005 ¶¶ 33, 86 (Fig. 17), 36, 215–216 (Fig. 20). Petitioner has annotated both of the figures reproduced above to show a list of mobile payment cards (each color coded green) which the user may drag to the payment receptacle from their original locations in the e-wallet. Pet. 23–24 (citing Ex. 1005 ¶¶ 216, 330; Ex. 1003 ¶ 87).

Patent Owner does not address limitations 1.1, 13.1, and 13.2. We determine that Petitioner has proven by a preponderance of the evidence that Hertel teaches these limitations.

d) Limitations 1.2 and 13.3

Limitation 1.2 recites “receiving, through the touch screen interface, a user input selecting a mobile payment card from the list of mobile payment card.” Similarly, limitation 13.3 recites “receive, through the touch screen interface, a user input selecting a mobile payment card from the list of mobile payment card.” Petitioner contends that Hertel teaches these limitations. Pet. 27–28 (limitation 1.2), 77 (limitation 13.3 discussion relying on limitation 1.2 discussion).

Petitioner demonstrates that Hertel teaches these limitations by disclosing a touch-screen interface to obtain user input and a “graphical user interface” “configured to receive input from a user for interaction with the electronic wallet.” Pet. 27 (citing Ex. 1003 ¶¶ 94–95, 82; Ex. 1005 ¶ 176) (emphasis omitted). Petitioner explains that the user interface may obtain input through a “drag and drop” interaction on a touch sensitive screen of a user’s device and “the user drags and drops (e.g., with touch sensitive screen embodiments of a mobile phone) payment instruments in order to pay.” *Id.* at 27–28 (citing Ex. 1005 ¶¶ 104, 230; Ex. 1003 ¶ 95) (emphasis omitted).

Petitioner also demonstrates that Hertel discloses “the user input received is selection of a payment card from a list of cards (*a user input selecting a mobile payment card from the list of mobile payment card*)” because “Hertel displays a list of payment cards” and “a user selects a card from that list to use for payment by dragging and dropping it from its

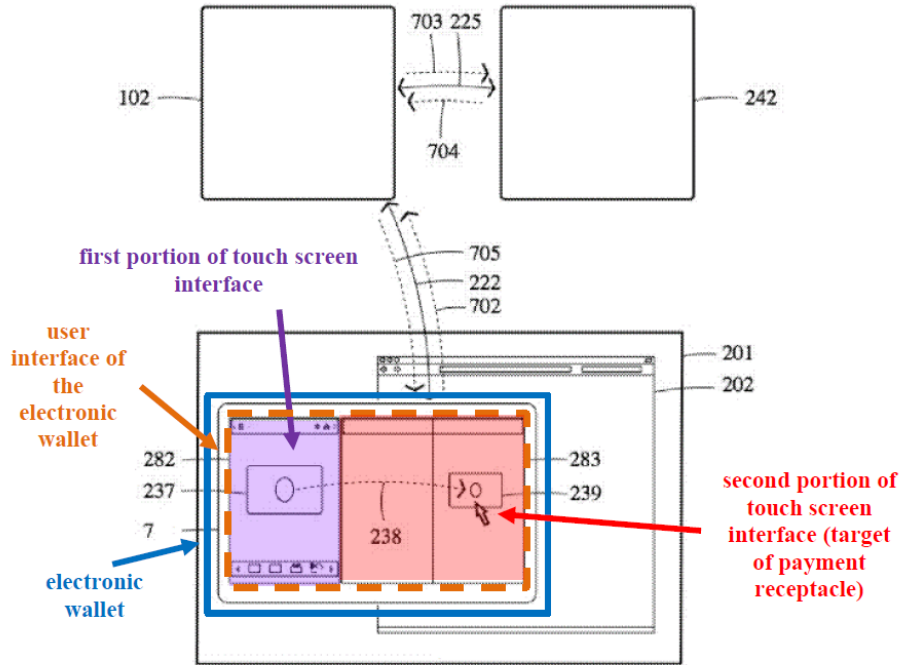
location in the e-wallet into the payment receptacle (*selecting a mobile payment card from the list of mobile payment card*)." Pet. 28 (citing Ex. 1003 ¶ 96).

Patent Owner does not address limitations 1.2 and 13.3. We determine that Petitioner has proven by a preponderance of the evidence that Hertel teaches these limitations.

e) Limitations 1.3 and 13.4

Limitation 1.3 recites "detecting the user input sliding the mobile payment card from the first portion of the touch screen interface to a second portion of the touch screen interface." Similarly, limitation 13.4 recites "detect the user input sliding the mobile payment card from the first portion of the touch screen interface to a second portion of the touch screen interface." Petitioner contends that Hertel discloses these limitations. Pet. 28–35 (limitation 1.3), 77 (limitation 13.4 discussion relying on limitation 1.3 discussion).

Petitioner demonstrates that Hertel discloses these limitations. Pet. 29 (citing Ex. 1003 ¶¶ 99, 100, 82–88). Hertel's Figure 17, as annotated by Petitioner, is reproduced below.



Payment receptacle displayed in conjunction with electronic wallet

FIG. 17

Id. at 30 (citing Ex. 1003 ¶ 102). Figure 17 illustrates Hertel’s payment receptacle and electronic wallet. Ex. 1005 ¶ 33. Petitioner annotated Figure 17 to show that Hertel’s “cards in an e-wallet may be displayed in a list, e.g., toward the left portion of the e-wallet’s user interface (*the first portion of the touch screen interface*)” (color coded purple) and Hertel’s “payment receptacle may be displayed toward the right of an e-wallet (*a second portion of the touch screen interface*) [color coded red], e.g., at a different location than the card list.” Pet. 29 (citing Ex. 1005 ¶¶ 69–70, 76, 184, 198, 204, 206–207, Fig. 17 (payment receptacles in e-wallet); Ex. 1003 ¶¶ 100–102, 83).

According to Petitioner,

[Hertel’s] user sets a card for use in payment by dragging and dropping it from its original location, e.g., on the left side of the

e-wallet where payment instruments are displayed, into the payment receptacle, e.g., on the e[-]wallet's right side (*user input sliding the mobile payment card from the first portion of the touch screen interface to a second portion of the touch screen interface*).

Pet. 30–31 (citing Ex. 1005 ¶¶ 176, 204; Ex. 1003 ¶ 103). Petitioner demonstrates that a person of ordinary skill in the art would have understood “Hertel’s drag-and-drop animation is equivalent to *sliding* a card across the touch screen interface.” *Id.* at 32–33 (citing Ex. 1019; Ex. 1005 ¶¶ 347–350 (how drag-and-drop animation works); Ex. 1003 ¶ 106 (discussing Ex. 1019)).

Patent Owner does not address limitations 1.3 and 13.4. We determine that Petitioner has proven by a preponderance of the evidence that Hertel teaches these limitations.

f) Limitations 1.4 and 13.5

Limitation 1.4 recites “based upon the user input sliding the mobile payment card, setting, as a temporary card, the mobile payment card, wherein while the mobile payment card is set as the temporary card, payments will be made by the mobile payment card.” Similarly, limitation 13.5 recites “based upon the user input sliding the mobile payment card, set as temporary card, the mobile payment card, wherein while the mobile payment card is set as the temporary card, payments will be made by the mobile payment card.” Petitioner contends that the combined teachings of Hertel and Chitti render obvious these limitations. Pet. 35–37 (limitation 1.5), 77 (limitation 13.5 relying on limitation 1.4 discussion).

Petitioner demonstrates that the combined teachings of Hertel and Chitti account for these limitations. Pet. 35. Petitioner demonstrates that

Hertel discloses “setting a mobile payment card as a temporary card for a transaction, where the selected card is then set for use in payment, and setting a card for payment by dragging and dropping it into a payment receptacle (*the user input sliding the mobile payment card*).” *Id.* (citing Ex. 1003 ¶ 111; Pet. 18–20 (citing limitation 1.0 discussion); Ex. 1003 ¶ 111) (emphasis omitted).

Petitioner also shows that Chitti teaches a temporary payment card by disclosing that Chitti’s virtual wallet includes a designation of a card as the “top of the wallet card,” which is “the default card” used in a transaction. Pet. 35 (citing Ex. 1006, code (57), ¶¶ 26–27; Ex. 1003 ¶ 112). “Chitti’s ‘top of the wallet card’ is used for payments” but a “user may set a different card, rather than the default, for a particular transaction or context (*a temporary payment card*) by temporarily making a selected card the top-of-the-wallet card.” *Id.* (citing Ex. 1006 ¶¶ 26–27, 31, 66 (stating “the user may override the automatic selection of the arranger module” “[a]t any time”)). Petitioner explains that, “[u]nless the user selects a temporary card, the default card is used for payment,” and “after the transaction at the particular location occurs,” the virtual wallet may “revert back to the default” card as the top-of-the-wallet card. *Id.* at 36 (citing Ex. 1006, code (57), ¶¶ 26–27, 31; Ex. 1003 ¶ 112).

Petitioner explains that, in view of “Chitti’s disclosure of a user being able to set a temporary payment card for a particular transaction,” a person of ordinary skill in the art would have been motivated to “modify Hertel in view of Chitti so that a user can set a temporary payment card for a particular transaction.” Pet. 36 (citing Ex. 1003 ¶¶ 112–113; Ex. 1006 ¶ 31 (discussing making a card top-of-the-wallet at a particular location));

Ex. 1008 ¶ 90 (Spodak describing desiring a different card at a mall)). According to Petitioner, “Hertel already discloses choosing from a list of cards (*see* Limitation [1.1]), and including Chitti’s temporary card in Hertel would provide the user with the convenience of a default card, while still permitting selection of a temporary card for a particular context.” *Id.* (citing Ex. 1006 ¶ 31; Ex. 1008 ¶ 90; Ex. 1003 ¶¶ 112–113).

In response to Petitioner’s arguments, Patent Owner only contends that Hertel does not disclose a “temporary payment card” under Patent Owner’s proposed construction — a card usable only for a payable time. PO Resp. 36–37 (citing Ex. 2004 ¶¶ 121–122); Sur-reply 20–21. We do not agree with Patent Owner’s argument because, as discussed above in Section III.C.3, we decline to adopt Patent Owner’s proposed claim construction and, instead, we determine a temporary payment card is a payment card that can be used for a limited time.

We also do not agree with Patent Owner’s argument because Petitioner’s contentions are based on the combination of Hertel and Chitti, not Hertel alone. It is well-settled that “non-obviousness [cannot be established] by attacking references individually,” when, as here, the asserted ground of obviousness is based upon the combined teachings of Hertel and Chitti. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). Instead, the test is what the combined teachings of these references would have taught or suggested to one with ordinary skill in the art. *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991). Patent Owner does not address Petitioner’s proposed combination.

We determine that Petitioner has proven by a preponderance of the evidence that Hertel renders obvious limitations 1.4 and 13.5.

g) Limitations 1.5 and 13.6

Limitations 1.5 and 13.6 recite “displaying a numerical indicator of a payable time, wherein the numerical indicator initially indicates a first remaining time amount.” Petitioner contends that the combined teachings of Hertel, Chitti, Spodak, and Tedesco account for these limitations. Pet. 37–41 (limitation 1.5), 78 (limitation 13.6 discussion relying on limitation 1.5 discussion).

Petitioner demonstrates that the combined teachings of Hertel, Chitti, Spodak, and Tedesco account for these limitations. *See, e.g.*, Pet. 37 (citing Ex. 1003 ¶¶ 115–126). According to Petitioner, Chitti describes a temporary payment card and “Spodak, which also discloses temporary and default payment cards, expressly describes a time limit for using a temporary payment card (*a payable time*).” *Id.* (citing Ex. 1003 ¶ 116). For example, Petitioner explains that Spodak discloses “a VISA card may have been selected as a default card,” but a user may use “a DISCOVER card **for a three-hour period and then revert back to the default** VISA card” and this “may occur when the user is planning to spend several hours at a shopping mall and wants to use the DISCOVER card while at the mall.” *Id.* (citing Ex. 1008 ¶ 90; Ex. 1003 ¶ 117).

Petitioner further demonstrates that a person of ordinary skill in the art would have been motivated to incorporate Spodak’s payable time for a temporary card in Hertel because “Hertel already discloses a similar timer and for the reason suggested by both Chitti and Spodak: a user may desire to use a particular card (e.g., a Macy’s card) only while the user is at a particular location or in a particular transaction,” and “[s]etting a time limit for using the temporary card would prevent the user from continuing to use

the temporary card beyond the intended context.” Pet. 38 (citing Ex. 1008 ¶ 90 (different card at mall); Ex. 1006 ¶ 31 (particular card in given location); Ex. 1003 ¶ 119). Petitioner explains that this

would have been a combination of prior art elements (Hertel’s selection of a temporary card for a transaction (e.g., Chitti’s temporary card), with Spodak’s time limit for a temporary card according to known methods (implementation in software in an e-wallet) to yield predictable results (having a time period during which the temporary card may be used for payments).

Id. (citing Ex. 1003 ¶ 119).

Petitioner also shows that, “while Spodak does not explicitly describe displaying its timer, displaying a countdown timer to a user was well-known, as in Tedesco.” Pet. 38 (citing Ex. 1007, 8:14–24, Fig. 18; Ex. 1003 ¶ 120). According to Petitioner, “Tedesco describes displaying a ‘countdown screen’ including a ‘graphical timer’ and a ‘digital countdown 224’ (*a numerical indicator*) showing how much time remains in a time period.” *Id.* at 39 (citing Ex. 1007, 8:14–24; Ex. 1003 ¶ 121).

Petitioner demonstrates a person of ordinary skill in the art would have been motivated to “use Tedesco’s numerical countdown indicator with Hertel’s selection of a temporary card (e.g., Chitti’s temporary card) to provide an indication of the payable time period” because (1) the “numerical display of a timer was well-known before the ’692 patent”; and (2) “[w]ithout a countdown timer being displayed, a user would not understand how much time remains to use the temporary card and would be confused when the time period terminates unexpectedly.” Pet. 40 (citing Ex. 1003 ¶ 123). Petitioner further explains that the skilled artisan would have been motivated to “have the countdown begin by displaying the full amount of time permitted (*wherein the numerical indicator initially indicates a first*

remaining time amount)” because this “would inform the user of the time limit and is consistent with typical countdown timers well-understood and common before the ’692 Patent.” *Id.* (citing Ex. 1009, 17:34–36, Fig. 16; Ex. 1003 ¶ 124 (discussing Ex. 1009)).

Patent Owner argues that Petitioner’s contentions are erroneous because Tedesco is not analogous art to the ’692 patent and it has nothing to do with payments. PO Resp. 37 (citing to discussion on PO Resp. 27); Sur-reply 6–7. According to Patent Owner, “Tedesco is devoid of any disclosure of payment instruments, default cards, temporary cards, or selection of cards,” and a skilled artisan “looking to develop a process for selecting a temporary payment card would not look to unrelated disclosures of interfaces for developmentally disabled individuals that have nothing to do with making payments.” PO Resp. 27.

We do not agree with Patent Owner’s analogous art arguments. To qualify as prior art for an obviousness analysis, a reference must qualify as “analogous art,” i.e., it must satisfy one of the following conditions: (1) the reference must be from the same field *of the inventor’s* endeavor; or (2) the reference must be reasonably pertinent to the particular problem *with which the inventor is involved*. *K-TEC, Inc. v. Vita-Mix Corp.*, 696 F.3d 1364, 1375 (Fed. Cir. 2012). “Whether a prior art reference is ‘analogous’ is a question of fact.” *Innovation Toys, LLC v. MGS Entertainment, Inc.*, 637 F.3d 1314, 1321 (Fed. Cir. 2011). Here, Patent Owner addresses the first prong of the test but not the second prong. One of the problems addressed by the inventor of the ’692 patent relates to the display of time for certain payment-related activities (Ex. 1001, 2:4–5) and we find that Tedesco, which addresses the display of time for different activities, is reasonable

pertinent to this problem. Dr. Houh explains that “Tedesco is analogous art to the ’692 patent because it is reasonably pertinent to a problem with which the inventor of the ’692 patent was involved (e.g., visual display techniques for interacting with a user).” Ex. 1003 ¶ 65 (citing Ex. 1001, 2:11–13, 2:24–28, Figs. 16–17, 5:42–58; Ex. 1007, code (57), Fig. 18, 2:39–67, 3:1–5). Petitioner demonstrates that a person of ordinary skill in the art would have been motivated to “use Tedesco’s numerical countdown indicator with Hertel’s selection of a temporary card (e.g., Chitti’s temporary card) to provide an indication of the payable time period” because (1) the “numerical display of a timer was well-known before the ’692 patent”; and (2) “[w]ithout a countdown timer being displayed, a user would not understand how much time remains to use the temporary card and would be confused when the time period terminates unexpectedly.” Pet. 40 (citing Ex. 1003 ¶ 123). Patent Owner argues that another problem addressed by the ’692 patent is “the problem of setting a temporary payment card for a payable time” (Sur-reply 8–9) but does not address squarely the problem identified by Petitioner — the display of time for certain payment-related activities (Ex. 1001, 2:4–5).

Patent Owner also argues the Petitioner’s challenge is erroneous because “Spodak discloses a universal card that may be programmed with a payable time” but “Petitioner does not explain why a [person of ordinary skill in the art] would eliminate the secure universal card of Spodak, thus discarding its security function, to make the proposed combination.” PO Resp. 35 (citing Ex. 2004 ¶ 118).

We do not agree with Patent Owner’s argument in this regard because Patent Owner misunderstands Petitioner’s proposed combination. Petitioner

shows that a person or ordinary skill in the art would have been motivated to modify the temporary payment card as taught by the Hertel-Chitti combination to “incorporate Spodak’s payable time for [the] temporary card” in view of Spodak’s teaching that a temporary card may be used for a particular time period. Pet. 37–38; Ex. 1003 ¶¶ 118–119. Contrary to Patent Owner’s argument, Petitioner did not rely on Spodak to teach the claimed temporary payment card.

We determine that Petitioner has proven by a preponderance of the evidence that Hertel renders obvious limitations 1.5 and 13.6.

h) Limitations 1.6.1–1.6.3 and 13.7.1–13.7.3

Limitations 1.6.1–1.6.3 recite

[1.6.1] simultaneously

[1.6.2] moving the mobile payment card a first distance from the first second portion of the screen towards a second first portion of the touch screen, and

[1.6.3] decrementing the numerical indicator a first difference to display a remaining payable time

Similarly, limitations 13.7.1–13.7.3 recite

[13.7.1] simultaneously

[13.7.2] moving the mobile payment card a first distance from the first second portion of the screen towards a second first portion of the touch screen, and

[13.7.3] decrementing the numerical indicator a first difference to display a remaining payable time

Petitioner contends that the combined teachings of Hertel, Chitti, Spodak, and Tedesco render obvious these limitations. Pet. 41–56 (claim 1.6.1–1.6.3), 78 (claim 13 discussion relying on discussion of claim 1.6.1–1.6.3).

(1) *Limitation 1.6.1*

As to limitation 1.6.1, Petitioner demonstrates, as described below in limitations 1.6.2 and 1.6.3, that Tedesco displays a graphical countdown timer (a bar graph) that decreases to visually depict time remaining at the same time the corresponding numerical indication of time remaining decreases. Pet. 41 (citing Ex. 1003 ¶ 128). Petitioner explains, in part, that the skilled artisan would have understood that “Tedesco’s graphical display and numerical indicator correspond to one another and decrease at the same time because having both indicators of remaining time updated simultaneously is the best way to accurately depict time remaining for user awareness.” *Id.* at 41–42 (citing Ex. 1003 ¶ 128).

(2) *Limitation 1.6.2*

As to limitation 1.6.2, Petitioner demonstrates that “Spodak describes a time period for using a temporary card,” and “Hertel describes a user moving a payment method back toward the list of inactive cards when the card is changed from an active to inactive state.” Pet. 43 (citing Ex. 1003 ¶¶ 133–134).

Hertel's Figure 17, as annotated by Petitioner, is reproduced below.

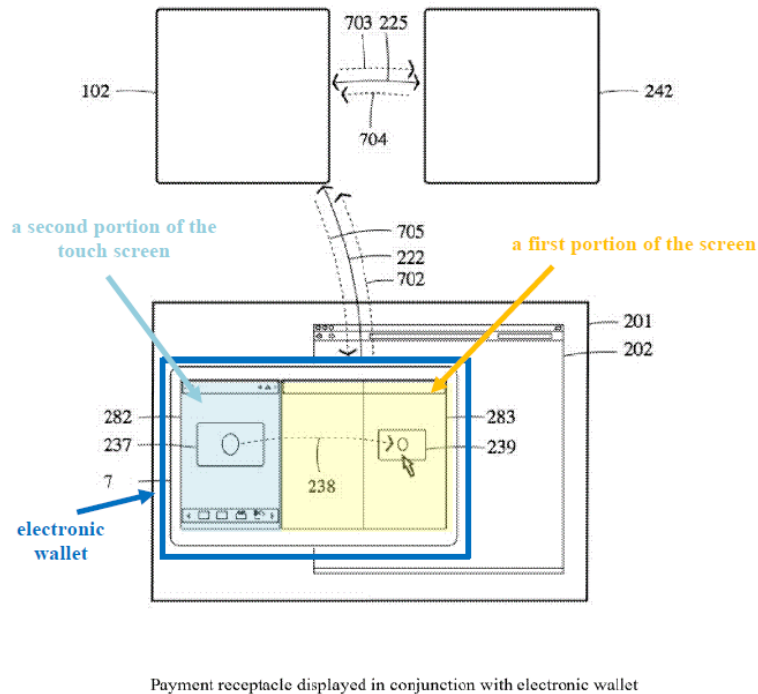


FIG. 17

Pet. 44 (citing Ex. 1003 ¶ 135). Figure 17 illustrates Hertel's payment receptacle in conjunction with its electronic wallet 7. Ex. 1005, Fig. 17. Referring to annotated Figure 17, Petitioner explains that "Hertel describes selecting a temporary card to use as the active card for payment by dragging and dropping it from its location in the e-wallet into a payment receptacle" which is on "the right side of the e-wallet (*[a] first portion of the screen*) [(color coded in yellow)], while the inactive cards are toward the left (*a second portion of the touch screen*) [(color coded in blue)]." Pet. 43–44 (citing Ex. 1003 ¶ 135) (first alteration in original).

Hertel's Figure 37, as annotated by Petitioner, is reproduced below.

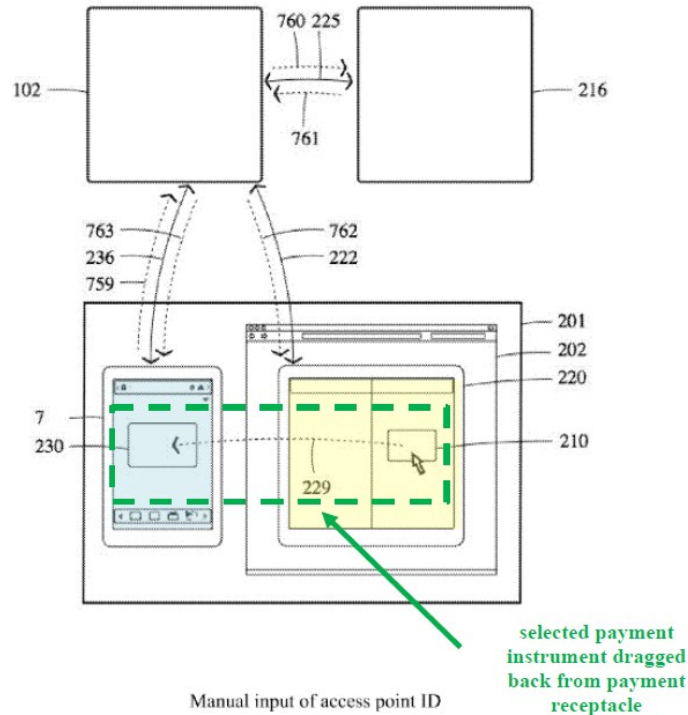


FIG. 37

Pet. 46 (citing Ex. 1003 ¶ 136). Petitioner annotated Figure 37 to show that, “[t]o cancel application of a card, a user drags and drops it from the payment receptacle back to where the inactive cards are displayed [(this action is color coded in green)].” *Id.* (citing Ex. 1005 ¶¶ 218, 288; Ex. 1003 ¶ 136). Petitioner explains that “Hertel describes using a moving-card animation (drag-and-drop) to illustrate a card being deactivated” and a “user manually cancels use of a card in this way, such that the selected card is no longer active for payment.” *Id.* at 45 (citing Ex. 1005 ¶¶ 218, 288; Ex. 1003 ¶ 136).

According to Petitioner, “Hertel’s drag-and-drop animation was well-known before the ’692 Patent” (Pet. 47 (citing Ex. 1003 ¶ 137) and, in “a drag-and-drop animation, the object being dragged ‘appear[s] to move with the cursor’ between the drag origin and drop target, so it ‘appears to be

moving with the drag operation” (*id.* (citing Ex. 1005 ¶ 349; *see also* Ex. 1005 ¶¶ 177–179, 347–350 (how drag-and-drop animation works)). Petitioner explains “[i]t was well-known a drag-and-drop was a type of animation, as shown by [Ex.] 1015.” *Id.* (citing Ex. 1015, code (57); Ex. 1003 ¶ 138 (discussing Ex. 1015)).

Petitioner further demonstrates that, “[w]hile Hertel describes movement from the payment receptacle back to the list of inactive cards occurring when a user manually deactivates a card, a [person of ordinary skill in the art] would have been motivated to use the same animation upon timer expiration” because “Hertel already uses this animation to show deactivation.” Pet. 47 (citing Ex. 1003 ¶ 139; Ex. 1005 ¶ 288, Fig. 37).

(3) *Limitation 1.6.3*

As to limitation 1.6.3, Petitioner demonstrates that Spodak discloses “a timer corresponding to time remaining to use a temporary card” and “Tedesco describes a ‘digital countdown 224’ (*the numerical indicator*) showing time remaining in a countdown (*to display a remaining payable time*).” Pet. 54–55 (citing Ex. 1007, 8:14–24; Ex. 1003 ¶ 153).

Petitioner explains that a person of ordinary skill in the art would have understood Tedesco’s digital countdown is decremented based on how much time has elapsed from a countdown at a given point in time (*a first difference*). A [person of ordinary skill in the art] would have understood a countdown timer starts with a certain amount of time (e.g., 30 seconds), decreases as time passes, and the amount by which remaining time decreases (*a first difference*) corresponds to time elapsed (*the first difference is proportional to the amount of payable time that has passed*). For example, in a 30-second timer, once 10 seconds have elapsed, the initial 30 seconds will be decremented by 10 seconds to show 20 seconds remaining.

Countdown timers were well-known in software, and this is how countdown timers traditionally and necessarily operated at the time of the '692 Patent (and operate today), as shown by [Ex.] 1009 and [Ex.] 1011, which Dr. Houh discusses as examples. Moreover, to the extent this is not explicitly present, it would have been obvious to a [person of ordinary skill in the art] that a countdown timer is decremented by the elapsed time, as shown by [Ex.] 1009 and [Ex.] 1011, which Dr. Houh discusses as examples.

Pet. 56 (citing Ex. 1003 ¶ 155).

(4) *Patent Owner's Arguments*

Patent Owner contends that Petitioner's arguments are erroneous for several reasons. First, Petitioner argues that Tedesco is not analogous art. PO Resp. 37. We do not agree because, as discussed above in limitation 1.5 (Section III.D.5.g), we find that Tedesco is analogous art to the '692 patent because it is reasonably pertinent to the particular problem with which the named inventor was involved.

Second, Patent Owner argues that Hertel does not disclose "simultaneous triggering of any later deactivation of the card based on payable time." PO Resp. 37. We do not agree with Patent Owner because limitations 1.6.1–1.6.3 do not require this feature and Petitioner relies on Spodak, not Hertel, for teaching the recited payable time. *Id.* (Spodak "discloses a limited time during which payment can be made by the temporary card (*a payable time*).") (citing Ex. 1008 ¶ 90; Ex. 1003 ¶ 117).

Third, Patent Owner argues that Petitioner relies on two different embodiments in Figures 17 and 37 of Hertel. PO Resp. 39–42. According to Patent Owner, "[t]he Petition relies on Figure 37 of Hertel and the description of that figure in ¶ 288 of Hertel, as allegedly teaching the

movement of a card on the screen to show card deactivation.” *Id.* at 39 (emphasis original) (citing Pet. 46–48). According to Patent Owner, “neither Figure 37 of Hertel, nor the description of that figure in ¶288, disclose in any way the use of a credit card image for *any* purpose, let alone for showing card deactivation” and “Figure 37 and ¶ 288 of Hertel are limited [to] cancelling coupons – not credit cards.” *Id.* (citing Ex. 2004 ¶ 127).

We do not agree with Patent Owner. Petitioner relies on Figure 17 and ¶ 218 of Hertel to show temporary card selection (dragging-and-dropping). *See* Pet. 43–45 (citing Ex. 1005 ¶¶ 218, 288, Fig. 17). Hertel’s ¶ 218 describes “rollback” (deactivation) of “the payment instrument” in the electronic wallet 7. Ex. 1003 ¶ 135. Petitioner cites Figure 37 as an example of a drag-and-drop animation for card deactivation. Pet. 45–46 (citing Ex. 1005 ¶¶ 218, 288, Fig. 37; Ex. 1003 ¶ 136). As explained by Dr. Houh, the rollback of a payment card in ¶ 218 would work in a similar way to Figure 37’s deactivation (“canceling application”). Ex. 1003 ¶ 136 (citing Ex. 1005 ¶ 218 (“In order to rollback the application of the payment instrument, the user can simply drag and drop it back from the payment receptacle to the electronic wallet 7. The rollback of the application works in a similar way to the application”). Contrary to Patent Owner’s argument (PO Resp. 39), Petitioner did not rely solely on Hertel’s disclosure of “coupons” to show card deactivation, because the Petitioner relies on ¶ 218 of Hertel to show deactivation (rollback). We also note that the ’692 patent discloses the same animation display features for coupons as it does payment cards. Ex. 1001, 6:25–42 (explaining that “mobile additional services,” which include a “mobile coupon,” are displayed in a list with a usable time

and slid up the display by the user). We, therefore, decline to draw a distinction between Hertel's disclosures of payment instruments and coupons that is not otherwise provided in the '692 patent itself.

Fourth, Patent Owner argues that Hertel's "rollback" is not a deactivation because the "card is not 'deactivated' in any sense; rather, it is still active and usable for payment in connection with transactions." PO Resp. 41.

We do not agree with Patent Owner because Patent Owner does not show that the claims require deactivation. According to Dr. Shamos, the "temporary payment card" of the '692 patent can be reused if it is selected again. Ex. 1021, 33:12–22 (the temporary payment card can be reused if "you select it again" for a new transaction). Similarly, because Hertel teaches that a user can drag-and-drop a payment card for an individual transaction, the card is not permanently deactivated as PO suggests. Ex. 1005 ¶¶ 203–204, 230; Ex. 1003 ¶¶ 73–74.

Finally, Patent Owner argues a comparison of Tedesco individually to the claimed invention shows that Tedesco "suggests the reverse of the claimed invention" because Tedesco "counts down the amount of time until the disabled user is supposed to do something, like brush their teeth, according to a schedule that was established by a first user." PO Resp. 44 (citing Ex. 2004 ¶ 134). According to Patent Owner, "the proposed combination would result in the user having to wait 5 minutes for the temporary card to become active," and while this "may be useful to reduce the possibility of impulse purchases," "it does not teach or suggest that the user is no longer able to do something after the timer has expired." *Id.*

We do not agree with Patent Owner’s bodily incorporation argument. “[T]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.” *MCM Portfolio LLC v. Hewlett-Packard Co.*, 812 F.3d 1284, 1294 (Fed. Cir. 2015). The proper inquiry is “whether there was an apparent reason to combine the known elements in the fashion claimed.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Petitioner did not argue that a person of ordinary skill in the art would have been motivated to bodily incorporate Tedesco’s countdown timer in the same depiction as disclosed in Tedesco. Instead, Petitioner demonstrated that Tedesco discloses “a graphical animation of a countdown timer depicting time remaining in the timer,” and a person of ordinary skill in the art would have been motivated to use Hertel’s animation upon timer expiration. Pet. 43, 47–48 (citing Ex. 1003 ¶¶ 133, 139–140).

(5) *Summary*

We determine that Petitioner has proven by a preponderance of the evidence that Hertel renders obvious limitations 1.4 and 13.5.

i) *Limitations 1.7.1 and 13.8.1*

Limitations 1.7.1 and 13.8.1 both recite “the first distance is proportional to an amount of payable time that has passed.” Petitioner contends that the combined teachings of Hertel, Chitti, Spodak, and Tedesco account for these limitations. Pet. 53–57 (limitation 1.7.1), 79 (limitation 13.8.1 discussion relying on limitation 1.7.1 discussion).

Petitioner demonstrates that Hertel’s animation of a card moving between two distinct locations within a screen based on whether the card is active for payment, combined with Spodak’s payable time and Tedesco’s animation to visually depict the time elapsed in a countdown, renders obvious this limitation. Pet. 54 (citing Ex. 1003 ¶¶ 132–151); *see id.* at 52–54. More specifically, Petitioner shows that a person of ordinary in the art would have understood Tedesco renders obvious that “the card in Hertel’s animation moves by a *first distance* (as required by Limitation [1.6.2]) that is *proportional to an amount of payable time that has passed* (as required by Limitation [1.7.1]).” *Id.* at 52 (citing Ex. 1003 ¶ 148).

Figure 18 of Tedesco, as annotated by Petitioner, is reproduced below.

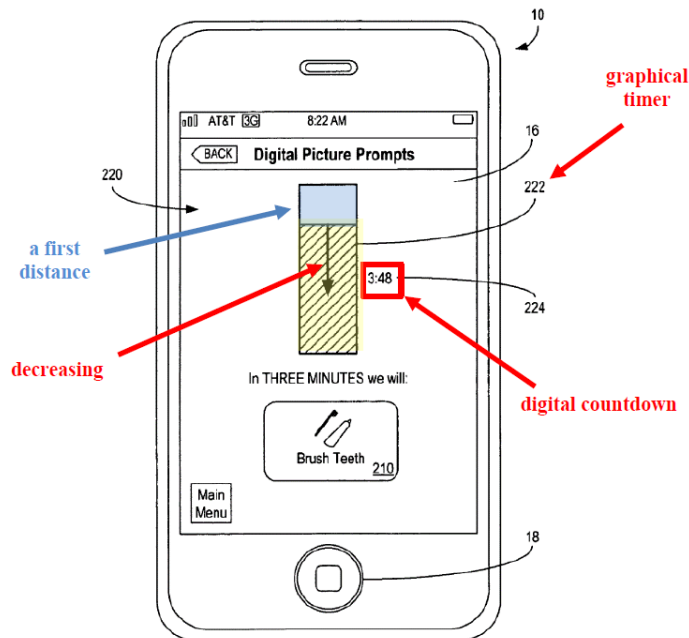


FIG. 18

Pet. 53 (citing Ex. 1003 ¶ 149). Annotated Figure 18 shows the countdown timer being decreased by a certain distance (a first distance color coded in blue). *Id.* at 52. According to Petitioner, a skilled artisan would have been motivated “to ensure Tedesco’s ‘graphical timer 222’ is decreased

proportionally to time elapsed in the countdown.” *Id.* at 53 (citing Ex. 1003 ¶ 150). Petitioner explains that the “purpose of Tedesco’s timer animation is ‘to convey visually that time is elapsing,’ . . . so a user ‘has a graphical indication of an amount of time remaining until a change in activity is to occur,’” and the “most accurate way of conveying this information is to have the graphical depiction move proportionally to time elapsed.” *Id.* at 53–54 (citing Ex. 1007, claim 1, 2:44–47; Ex. 1003 ¶ 150). Petitioner further explains that, “[i]f the animation’s movement does not correspond proportionally to elapsed time, a user would be misled and confused by the visual representation of time remaining, thus defeating the point of the display.” *Id.* at 54 (citing Ex. 1003 ¶ 150). Finally, Petitioner demonstrates that it was well-known to “use a graphical animation in which the distance by which an animation moves corresponds to time elapsed and remaining as shown by [Ex.] 1011, Fig. 16, which Dr. Houh discusses.” *Id.* (citing Ex. 1003 ¶ 150).

Patent Owner does not dispute that Tedesco’s movement is proportional to the amount of remaining time (Tr. 40:22–41:12) but does repeat its argument that Petitioner fails to show that “the ‘moving’ step, which defines the distance, ever occurs” for reasons discussed above in connection with limitation 1.6.2. PO Resp. 44–45 (citing Ex. 2004 ¶ 135). For the same reasons discussed above with respect to limitation 1.6.2, we do not agree with Patent Owner’s arguments.

We determine that Petitioner has proven by a preponderance of the evidence that Hertel renders obvious limitations 1.7.1 and 13.8.1.

j) Limitations 1.7.2 and 13.8.2

Limitations 1.7.1 and 13.8.2 both recite “the first difference is proportional to the amount of payable time that has passed.” Petitioner contends that the combined teachings of Hertel, Chitti, Spodak, and Tedesco account for these limitations. Pet. 56–57 (limitation 1.7.2), 79 (limitation 13.8.2 discussion relying on limitation 1.7.2 discussion).

Petitioner demonstrates that a person of ordinary skill in the art would have understood that “Tedesco’s digital countdown is decremented based on how much time has elapsed from a countdown at a given point in time (*a first difference*),” and that “a countdown timer starts with a certain amount of time (e.g., 30 seconds), decreases as time passes, and the amount by which remaining time decreases (*a first difference*) corresponds to time elapsed (*the first difference is proportional to the amount of payable time that has passed*).” Pet. 56 (citing Ex. 1003 ¶ 155). Dr. Houh testifies that “[c]ountdown timers were well-known in software, and this is how countdown timers traditionally and necessarily operated at the time of the ’692 Patent (and operate today),” as shown by Exhibit 1009 and Exhibit 1011. Ex. 1003 ¶ 155.

Patent Owner contends that Petitioner fails to show that limitation 1.7.2 is taught by the alleged combination for the same reasons discussed above in connection with limitation 1.6.3. PO Resp. 45 (citing Ex. 2004 ¶ 136). For the same reasons identified above with respect to limitation 1.6.3, we do not agree with Patent Owner’s argument.

We determine that Petitioner has proven by a preponderance of the evidence that Hertel renders obvious limitations 1.7.2 and 13.8.2.

k) *Limitations 1.8 and 13.9*

Limitation 1.8 recites “resetting the setting of the temporary payment card when the payable time passes such that the mobile payment card is no longer set as the temporary card and payments are made through a main card.” Similarly, limitation 13.9 recites “reset the setting of the temporary payment card when the payable time passes.” Petitioner contends the combined teachings of Hertel, Chitti, and Spodak account for this limitation. Pet. 57–59 (limitation 1.8) (citing Ex. 1003 ¶¶ 159–166), 79 (limitation 13.9 discussion relying on limitation 1.8 discussion).

As discussed above, Petitioner demonstrates a person of ordinary skill in the art would have been motivated to modify Hertel “to have a temporary payment card for a particular transaction” as taught by Chitti (the setting of the temporary payment card) and “to have a period of time to use the temporary card, as in Spodak (*the payable time*).” Pet. 57 (citing Ex. 1003 ¶¶ 160–162).

As Petitioner explains,

both Chitti and Spodak disclose resetting the temporary payment card to a default card, such that payments are then made by the default card, rather than the temporary card (*resetting the setting of the temporary payment card . . . such that the mobile payment card is no longer set as the temporary card and payments are made through a main card*).

Pet. 58 (citing Ex. 1006 ¶ 31; Ex. 1008 ¶ 90; Ex. 1003 ¶ 164) (alteration in original). Petitioner shows that “Chitti explains that ‘the top of wallet selection may revert back to the default’ after a transaction at a particular location occurs” (*id.* (citing Ex. 1006 ¶ 31; Ex. 1003 ¶ 164)), and “Spodak explains that, at the end of the time limit, a temporary card will ‘revert back to the default VISA card’” (*id.* (citing Ex. 1008 ¶ 90; Ex. 1003 ¶ 164)).

Petitioner further demonstrates that a person of ordinary skill in the art would have been motivated to “reset the temporary payment card in Hertel, as modified to use Chitti’s temporary card, based on Spodak’s teaching of a payable time and both Chitti’s and Spodak’s teachings of reverting to a default card from the temporary card” because “[r]everting back to a default card from the temporary card, as in Chitti and Spodak, after a period of time would prevent the user from accidentally using the temporary card beyond the anticipated time period, location, transaction, or context.” Pet. 58–59 (citing Ex. 1003 ¶ 165). Petitioner explains

[t]his would have been a simple combination of prior art elements used in their expected ways (Hertel’s setting of a temporary card (e.g., Chitti’s card) and Spodak’s time limits corresponding to temporary payment cards, with Chitti’s and Spodak’s teachings of reverting to a default card), according to known methods (implementation in software for an e-wallet on a mobile device) to yield the predictable result of having a time-delimited period when the temporary card may be used, such that the temporary card automatically becomes deactivated when that period expires and the default card is reactivated.

Id. at 59 (citing Ex. 1003 ¶ 165).

Repeating arguments made in connection with the limitations above, Patent Owner contends Petitioner fails to show that limitation 1.8 is taught by the combined teachings of Hertel, Chitti, and Spodak because (1) “there is no ‘temporary card’ or ‘main card’ in Hertel, just a card that is being used in a given transaction,” (2) “Chitti does not disclose a ‘temporary card,’ as claimed,” and (3) “[w]hat Spodak refers to as a ‘temporary’ card’ is one that has been specifically programmed by the user to be active for a programmed time period, and is not designed by the user by ‘sliding,’ as required by

limitation 1.3.” PO Resp. 45 (citing Ex. 2004 ¶ 138). We do not agree with Patent Owner’s arguments for the same reasons identified above.

We determine that Petitioner has proven by a preponderance of the evidence that Hertel renders obvious limitations 1.8 and 13.9.

l) Conclusion

For the reasons above, we determine that Petitioner has proven by a preponderance of the evidence that the combination of Hertel, Chitti, Spodak, and Tedesco render obvious independent claims 1 and 13.

6. Dependent Claim 2

Claim 2 recites

[2.0] The method of claim 1, further comprising:

[2.1] receiving, through the touch screen interface, a user input selecting the mobile payment card;

[2.2] detecting the user input sliding the mobile payment card from the second portion of the touch screen interface to an original position within the first portion of touch screen interface;

[2.3] based upon the mobile payment card being moved to the original position by the user, resetting the setting of the temporary payment card.

Ex. 1001, 8:7–17.

Petitioner, relying on Dr. Houh’s testimony, provides a limitation-by-limitation comparison of Hertel, Chitti, Spodak, and Tedesco to claim 2. Pet. 59–65. As to limitation 2.1, Petitioner demonstrates that Hertel teaches a user’s device may have a touch screen interface to obtain input. *Id.* at 59 (citing Ex. 1003 ¶¶ 168, 92–97).

As to limitation 2.2, Petitioner also shows that

[Hertel's] user may "rollback" application of a selected card by dragging and dropping the card (*the user input sliding the mobile payment card*) from the payment receptacle where the card is active (*the second portion of the touch screen interface*) back to its original location in the e-wallet where the card becomes inactive again (*to an original position within the first portion of touch screen interface*).

Id. at 60 (citing Ex. 1005 ¶¶ 218, 288, Fig. 37; Ex. 1003 ¶ 171). According to Petitioner, "[t]his works 'in a similar way to the application' of the card, but in reverse, i.e., the user drags the selected card from the payment receptacle and drops it in its original location in the e-wallet." *Id.* (citing Ex. 1005 ¶ 218, Fig. 37; Ex. 1003 ¶ 171).

As to limitation 2.3, Petitioner demonstrates that Hertel and Chitti render obvious "setting a temporary payment card (*the setting of the temporary payment card*)." Pet. 65 (citing Ex. 1003 ¶ 177). And, as described in limitation 2.2, Petitioner shows that

Hertel discloses cancelling use of a selected card by dragging it from the payment receptacle back to its original location in the e-wallet, such that the card is no longer set for payment (*based upon the mobile payment card being moved to the original position by the user, resetting the setting of the temporary payment card*).

Id. (citing Ex. 1003 ¶ 178).

Patent Owner repeats its arguments made in connection with limitations 1.6.2 and 1.6.3 that Petitioner improperly relies on different embodiments shown in Figures 17 and 37 of Hertel. PO Resp. 46. Patent Owner argues that a person of ordinary skill in the art "reading Hertel would not combine the different embodiments in FIGs. 17 and 37" and "Petitioner is not accurate in saying that 'Hertel discloses cancelling use of a selected

card by dragging the card from the payment receptacle back to its original location in the e-wallet, such that the card is no longer used for payment.”” *Id.* at 48 (citing Ex. 2004 ¶ 144).

We do not agree with Patent Owner for the same reasons discussed above in connection with limitations 1.6.2 and 1.6.3. Petitioner shows that the animation for Hertel’s rollback in ¶ 218 (Fig. 17) “works ‘in a similar way to the application’” shown in Fig. 37. Pet. 60–61 (citing Ex. 1005 ¶¶ 171–172). Even though Hertel’s Figures 17 and 37 address payment instruments and coupons, respectively, this is of no moment because, as we explain above, the ’692 patent does not draw a distinction between the animation display features for payment cards and coupons. *See* Ex. 1001, 6:25–42.

We determine that Petitioner has proven by a preponderance of the evidence that the combination of Hertel, Chitti, Spodak, and Tedesco render obvious dependent claim 2.

7. *Dependent Claims 3 and 11*

Petitioner asserts that dependent claims 3 and 11 are unpatentable as obvious over Hertel, Chitti, Spodak, and Tedesco. Pet. 65–67 (claim 3), 69–74 (claim 11). Petitioner, citing the supporting declaration of Dr. Houh, provides a limitation-by-limitation comparison of the prior art to these claims. *Id.*

Other than its arguments as to claim 1 discussed above, Patent Owner does not address the substance of Petitioner’s contentions. We determine that Petitioner has shown by a preponderance of the evidence that claims 3 and 11 are rendered obvious by Hertel, Chitti, Spodak, and Tedesco.

8. *Dependent Claim 4*

Dependent claim 4 recites:

[4.0] The method of claim 1, further comprising:

[4.1] determining that the payable time has passed;

[4.2] based upon the determination that the payable time has passed, displaying the mobile payment card being moved to an original position.

Ex. 1001, 8:21–25.

Petitioner, relying on Dr. Houh’s testimony, provides a limitation-by-limitation comparison of Hertel, Chitti, Spodak, and Tedesco to claim 4.

Pet. 67–69. As to limitation 4.1, Petitioner demonstrates that Spodak describes a time period for using a temporary card and, when time expires, the system reverts to the default card. *Id.* at 67 (citing Ex. 1008 ¶ 90; Ex. 1003 ¶¶ 186–187). Petitioner explains that, because Spodak discloses events occurring based on timer expiration, a person of ordinary skill in the art would have understood “Spodak discloses *determining that the payable time has passed.*” *Id.*

Petitioner demonstrates that Hertel, Chitti, and Spodak renders obvious limitation 4.2. Pet. 68 (citing Ex. 1003 ¶¶ 190–194). Petitioner explains that, as shown in limitations 1.5 and 4.1, “Spodak discloses or renders obvious a *determination that the payable time has passed.*” *Id.* (citing Ex. 1003 ¶ 191). And, as shown in limitation 2.2, Petitioner shows that Hertel discloses “cancelling a selected card by dragging it from the payment receptacle and dropping it in its original position in the e-wallet. In a drag-and-drop animation, the object appears “to move with the cursor until the user finishes the drag operation” (*displaying the mobile payment card being moved to an original position.*)” *Id.* (citing Ex. 1005 ¶ 347; Ex. 1005

¶¶ 177–179, 347–350 (describing drag-and-drop animation); Ex. 1003 ¶ 192). Petitioner explains that a person of ordinary skill in the art would have been motivated “to use Hertel’s drag-and-drop animation, which depicts a card moving back to its inactive state in the e-wallet, to visually illustrate deactivation of the mobile payment card (Chitti’s temporary card) upon expiration of Spodak’s time period.” *Id.* (citing Ex. 1003 ¶ 193). According to Petitioner, this animation would visually convey the temporary card is no longer available for payments. *Id.*

In response to Petitioner’s contentions, Patent Owner repeats its argument in limitation 2.2 that Hertel does not disclose cancelling a payment card by dragging its image back to an original location. PO Resp. 48–49 (citing Ex. 2004 ¶ 146). According to Patent Owner, (1) Hertel does not disclose this, (2) Hertel’s cancelling requires a manual operation by the user, (3) there is no manual step in claim 4 at all, and (4) Petitioner offers no explanation why an automated movement of a card back to an original position upon the expiration of a timer would have been obvious. *Id.* at 49. We do not agree with Patent Owner for the same reasons discussed above in connection with claim 2.

We determine that Petitioner has proven by a preponderance of the evidence that the combination of Hertel, Chitti, Spodak, and Tedesco render obvious dependent claim 4.

9. *Dependent Claim 12*

Claim 12 recites:

12. The method of claim 11, further comprising, when a usable time passes, setting the additional service to be disabled.

Ex. 1001, 8:52–54.

Petitioner, relying on Dr. Houh’s testimony, provides a limitation-by-limitation comparison of Hertel, Chitti, Spodak, and Tedesco to claim 12. Pet. 72–73 (citing Ex. 1003 ¶¶ 208–212). Petitioner demonstrates that Hertel’s e-wallet includes additional services such as coupons, gift cards, cash, and membership cards. *Id.* at 72 (citing Ex. 1003 ¶ 209). Petitioner also explains that, as described in limitations 1.5 and 4.1, Spodak discloses time limits corresponding to when a temporary card may be used, and discloses or renders obvious determining when that time has passed. *Id.* (citing Ex. 1003 ¶ 210).

Petitioner demonstrates that a person of ordinary skill in the art would have been motivated “to apply Spodak’s time limits to the additional services in Hertel, such that the selected service is no longer available for use after a time period has passed (*when a usable time passes*).” Pet. 72 (citing Ex. 1003 ¶ 211). Petitioner explains that, similar to the analysis in limitation 1.5, “a user may desire to use a particular coupon (e.g., a store-specific coupon) or membership card (e.g., a gym membership card) only in a particular context.” *Id.* at 72–73 (citing Ex. 1008 ¶ 90 (using different card at a shopping mall); Ex. 1006 ¶ 31 (using card in a given location); Ex. 1003 ¶ 211).

Patent Owner argues that a person of ordinary skill in the art would not have been motivated to combine Hertel, Chitti, Spodak, and Tedesco as proposed by Petitioner. PO Resp. 49–50. According to Patent Owner, “[w]hether or not it would have been obvious to disable a credit card after a Spodak period of time, it would not have been obvious to apply the same disabling to other services, and Petitioner offers no explanation why it would have been obvious.” *Id.* at 49 (citing Ex. 2004 ¶ 148). Patent Owner

explains that Spodak discloses types of cards other than payment cards, such as gift, membership and loyalty cards, but only discloses disabling with respect to debit and credit cards. *Id.* (citing Ex. 2004 ¶ 148; Ex. 1008 ¶ 96).

As Spodak explains at [0075], payments are made using EMV [Europay, Mastercard and Visa] chip 1001, which resides on the universal card. (*Id.*) An EMV chip is part of a physical card (chip card), and is programmed to correspond to a single credit or debit card. (*Id.*) If the EMV simulator on Spodak's universal card to work properly, it must be programmed as a particular card. (*Id.*) When the usable time passes, that particular card can no longer be used. (*Id.*) However, there is no such requirement for other services, as these do not require an EMV chip to operate. (*Id.*) There would be no reason, based on Spodak, to disable additional services other than debit and credit cards. (*Id.*)

Id. at 49–50.

We do not agree with Patent Owner. Petitioner demonstrates that a person of ordinary skill in the art “would have been motivated to apply Spodak’s time limits to the additional services in Hertel, such that the selected service is no longer available for use after passage of a time period (*when a usable time passes*).” Pet. 72–73 (citing Ex. 1003 ¶ 211). Patent Owner’s argument that “Spodak *only* discloses disabling with respect to debit and credit cards” (PO Resp. 49 (emphasis added)) is wrong for two reasons. First, Spodak discloses an *example* of disabling additional time for credit and debit cards (Ex. 1008 ¶ 90), but Spodak is not limited to disabling time “only” for debit and credit cards.

Second, Patent Owner’s argument improperly attacks Spodak individually, whereas Petitioner’s challenge is based on the combination of Hertel, Chitti, Spodak, and Hertel. *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Petitioner modifies Hertel’s additional services based on

Spodak's teaching of limiting additional time for payment cards. As Petitioner explains, a user may desire to use a particular coupon (e.g., store-specific coupon) or membership card (e.g., gym membership card) only in a particular context. Pet. 72–73 (citing Ex. 1008 ¶ 90 (using different card at a shopping mall); Ex. 1006 ¶ 31 (using card in a given location); Ex. 1003 ¶ 211).

We determine that Petitioner has proven by a preponderance of the evidence that the combination of Hertel, Chitti, Spodak, and Tedesco render obvious dependent claim 12.

E. Grounds 2–5: Asserted Obviousness of Claims 5–10

Petitioner asserts that

(1) dependent claims 5, 6, and 10 are unpatentable as obvious over Hertel, Chitti, Spodak, Tedesco, and Bierbaum (Pet. 79–83);

(2) dependent claim 7 is unpatentable as obvious over Hertel, Chitti, Spodak, Tedesco, Bierbaum, and Grigg (*id.* at 84–86);

(3) dependent claim 8 is unpatentable as obvious over Hertel, Chitti, Spodak, Tedesco, and Ording (*id.* at 87–91); and

(4) dependent claim 9 is unpatentable as obvious over Hertel, Chitti, Spodak, Tedesco, and Roman (*id.* at 91–94). Petitioner, citing the supporting declaration of Dr. Houth, provides a limitation-by-limitation comparison of the applied prior art to these claims. *Id.* at 79–94.

Other than its arguments as to claim 1 discussed above, Patent Owner does not address the substance of Petitioner's contentions. PO Resp. 50–52. We determine that Petitioner has shown by a preponderance of the evidence that claims 5–10 are rendered obvious by the applied prior art.

IV. CONCLUSION⁸

For the reasons discussed above, we determine Petitioner has proven, by a preponderance of the evidence, that all of the challenged claims are unpatentable, as summarized in the following table:

Claim(s)	35 U.S.C. §	Reference(s) /Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–4, 11–13	103	Hertel, Chitti, Spodak, Tedesco	1–4, 11–13	
5, 6, 10	103	Hertel, Chitti, Spodak, Tedesco, Bierbaum	5, 6, 10	
7	103	Hertel, Chitti, Spodak, Tedesco, Bierbaum, Grigg	7	
8	103	Hertel, Chitti, Spodak, Tedesco, Ording	8	
9	103	Hertel, Chitti, Spodak, Tedesco, Roman	9	
Overall Outcome			1–13	

⁸ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. §§ 42.8(a)(3), (b)(2).

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–13 of U.S. Patent No. 10,223,692 B2 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.

IPR2022-01149
Patent 10,223,692 B2

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