

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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BOKU, INC. and BOKU ACCOUNT SERVICES, INC.,  
Petitioner,

v.

XILIDEV, INC.,  
Patent Owner.

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Cases CBM2014-00140 and CBM2014-00148  
Patent 7,273,168 B2<sup>1</sup>

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Before JUSTIN T. ARBES, JO-ANNE M. KOKOSKI, and  
TINA E. HULSE, *Administrative Patent Judges*.

ARBES, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*35 U.S.C. § 328(a) and 37 C.F.R. § 42.73*

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<sup>1</sup> Case CBM2014-00148 has been consolidated with Case CBM2014-00140.

## I. BACKGROUND

Boku, Inc. and Boku Account Services, Inc. (collectively, “Petitioner”) filed a Corrected Petition in Case CBM2014-00140 (Paper 5, “-140 Pet.”) requesting covered business method patent review of claims 1–16 and 18–23 of U.S. Patent No. 7,273,168 B2 (Ex. 1001,<sup>2</sup> “the ’168 patent”), and a Petition in Case CBM2014-00148 (Paper 2, “-148 Pet.”) requesting covered business method patent review of claims 1–23 of the ’168 patent. We instituted a covered business method patent review of claims 1–23 on four grounds of unpatentability and consolidated Case CBM2014-00148 with Case CBM2014-00140 (Paper 9, “Dec. on Inst.”). Patent Owner Xilidev, Inc. did not file a response or motion to amend in the consolidated proceeding,<sup>3</sup> and the parties informed the Board that they would not file any other papers or request oral argument. *See* Paper 23.

We have jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 328(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–18 and 20–23 are unpatentable, but has not shown by a preponderance of the evidence that claim 19 is unpatentable.

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<sup>2</sup> Unless otherwise specified, all references to papers and exhibits are to those filed in Case CBM2014-00140.

<sup>3</sup> In the Scheduling Order and a subsequent conference call, we cautioned Patent Owner that “any arguments for patentability not raised in the response will be deemed waived.” *See* Paper 10, 3; Papers 21, 23; *see also* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012) (a patent owner’s “response should identify all the involved claims that are believed to be patentable and state the basis for that belief”).

*A. The '168 Patent*

The '168 patent describes a system and method for allowing the purchase of products using hand-held devices, such as mobile phones and personal digital assistants, “without requiring the user of the hand-held device to enter payment information for each sales transaction.” Ex. 1001, col. 1, ll. 32–37. According to the '168 patent, prior art systems lacked sufficient mechanisms to ensure the identity of the individual attempting to purchase a product using a hand-held device. *Id.* at col. 1, ll. 15–28.

Figure 1 of the '168 patent is reproduced below.

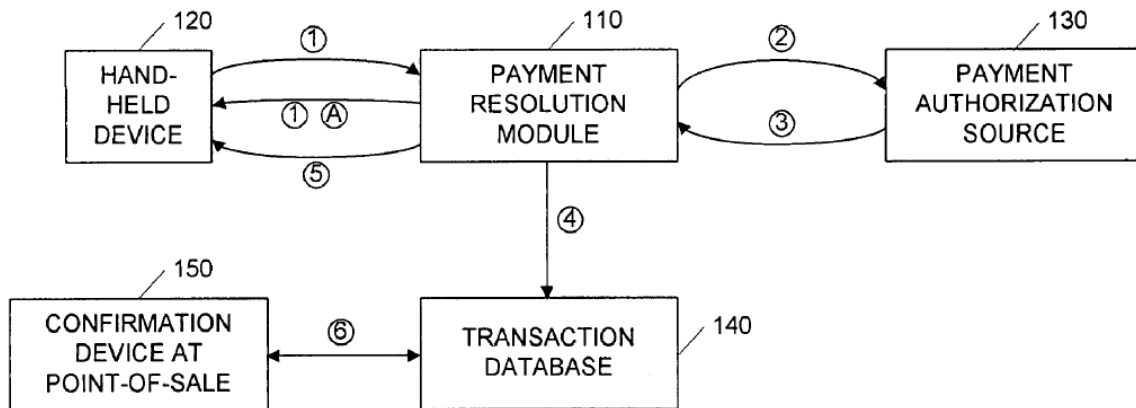


Figure 1 depicts five devices and entities that communicate with each other to perform a transaction. *Id.* at col. 2, ll. 49–51. The process begins in step 1 when the user selects a product using hand-held device 120, and hand-held device 120 contacts payment resolution module 110 to place an order for the product. *Id.* at col. 3, ll. 14–24. Payment resolution module 110 then identifies the user of hand-held device 120 using information specific to hand-held device 120 (e.g., caller ID information). *Id.* at col. 3, ll. 29–45. In step 2, payment resolution module 110 transmits information regarding the user and product (e.g., price) to payment authorization source 130 (e.g., a credit card company). *Id.* at col. 3, ll. 46–61. In step 3, payment

authorization source 130 returns an authorization or denial for the amount requested. *Id.* at col. 3, l. 62–col. 4, l. 3. In step 4, payment resolution module 110 generates and transmits an authorization code to transaction database 140, along with information about the transaction. *Id.* at col. 4, ll. 4–26. In step 5, payment resolution module 110 transmits the authorization code to hand-held device 120. *Id.* at col. 4, ll. 27–39. Finally, in step 6, the user of hand-held device 120 enters the authorization code into confirmation device 150, and confirmation device 150 communicates with transaction database 140 to confirm that the authorization code is correct, and that the transaction was authorized. *Id.* at col. 4, ll. 40–50. If so, “the user is allowed to retrieve the selected product and the payment authorization source 130 charges the appropriate payment source.” *Id.* at col. 4, ll. 47–50.

### *B. Illustrative Claim*

Claim 1 of the '168 patent recites:

1. A method of authenticating a transaction comprising:
  - receiving from a hand-held device a transaction request associated with one or more products and a payment amount;
  - determining a payment source associated with a user of the hand-held device;
  - authorizing the transaction request;
  - transmitting an authorization code to the hand-held device prior to completing the transaction request, the authorization code indicating that the payment source authorized deduction of the payment amount from an account of the user that is maintained by the payment source;

storing the authorization code in a transaction database configured to store the authorization code and an indication of the transaction request;

receiving the authorization code at a point-of-sale of the one or more products indicated in the transaction request;

accessing the transaction database;

comparing the received authorization code with the authorization code stored in the transaction database in order to verify the authorization code; and

in response to verifying the authorization code, completing the transaction request by authorizing deduction of a transaction amount from the user account maintained by the payment source and authorizing release of the one or more products to the user of the hand-held device.

### *C. Prior Art*

The pending grounds of unpatentability in the instant covered business method patent review are based on the following prior art:

U.S. Patent No. 6,456,984 B1, issued Sept. 24, 2002 (Ex. 1004, “Demoff”);

U.S. Patent Application Publication No. 2003/0101137 A1, published May 29, 2003 (Ex. 1006, “Wronski”); and

International Patent Application Publication No. WO 01/95546 A2, published Dec. 13, 2001 (Ex. 1005, “Gerson”).<sup>4</sup>

### *D. Pending Grounds of Unpatentability*

The instant covered business method patent review involves the following grounds of unpatentability:

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<sup>4</sup> Citations to Gerson are to the page number listed on the bottom-right corner of each page. *See* 37 C.F.R. § 42.63(d)(2).

Reference(s)	Basis	Claim(s)
Gerson	35 U.S.C. § 102(b)	12–16, 18, and 19
Gerson and Wronski	35 U.S.C. § 103(a)	1–11 and 20–23
Demoff	35 U.S.C. § 102(b)	1–5, 7–16, 18, and 20–23
N/A	35 U.S.C. § 112, second paragraph <sup>5</sup>	17

## II. ANALYSIS

### A. Claim Interpretation

The Board interprets claims of unexpired patents using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.300(b); *see* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278–79 (Fed. Cir. 2015). Under this standard, we interpret claim terms using “the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). We presume that claim terms have their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257

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<sup>5</sup> The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. §§ 102, 103, and 112. Because the ’168 patent has an effective filing date before the effective dates of the applicable AIA amendments, we refer to the pre-AIA versions of 35 U.S.C. §§ 102, 103, and 112.

(Fed. Cir. 2007) (“The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question.” (internal quotation marks omitted)). A patentee, however, may rebut this presumption by acting as his own lexicographer, providing a definition of the term in the specification with “reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

In the Decision on Institution, we interpreted the term “point-of-sale” to mean the place at which the merchant verifies the authorization code, and determined that no other term requires interpretation. Dec. on Inst. 6–8. The parties do not dispute the interpretation of “point-of-sale” and we do not perceive any reason or evidence that now compels any deviation from the interpretation. Accordingly, we adopt our previous analysis for purposes of this Decision.

We also noted in the Decision on Institution that claims 2, 5, 8, 15, and 16 recite limitations selected from a group “including” or “comprising” (rather than “consisting of,” as used in a Markush claim) certain things. *See* Dec. on Inst. 23 n.5; Ex. 1003 ¶ 39. Upon further review of these claims, we conclude that a person of ordinary skill in the art would have understood the claims to require one or more of the enumerated items in the respective group. For example, claim 2 recites that “the hand-held device is selected from the group including a cellular phone, a personal digital assistant, and a portable computer.” The Specification indicates that all three are examples of types of hand-held devices. *See* Ex. 1001, col. 1, ll. 32–37 (“hand-held devices (such as mobile phones, PDA’s, or computers)”), col. 4, ll. 58–65, col. 8, ll. 30–37. Thus, we are able to interpret the claims and assess

Petitioner's prior art arguments based on whether the cited references disclose at least one item of the group for each claim.

*B. Asserted Ground Based on 35 U.S.C. § 112*

Petitioner challenges claim 17 as being indefinite under 35 U.S.C. § 112, second paragraph, relying on the Declaration of Michael Shamos, Ph.D. (Ex. 1003) in support. -148 Pet. 14–22. Petitioner contends that the “means for completing the transaction request by deducting a transaction amount from a payment source in response to an output from the means for verifying” recited in claim 17 is a means-plus-function limitation under 35 U.S.C. § 112, sixth paragraph, and that the Specification of the '168 patent does not disclose sufficient corresponding structure for the limitation. *Id.*

Interpreting a means-plus-function limitation requires first defining the particular function of the limitation and then identifying the corresponding structure for that function in the specification. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1351 (Fed. Cir. 2015). A structure is corresponding “only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001) (quotation omitted). Additionally, the corresponding structure of a means-plus-function limitation must be “more than simply a general purpose computer or microprocessor” to avoid pure functional claiming. *Williamson*, 792 F.3d at 1352 (citing *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008)). If a special purpose computer is required to carry out the recited function, the specification must disclose



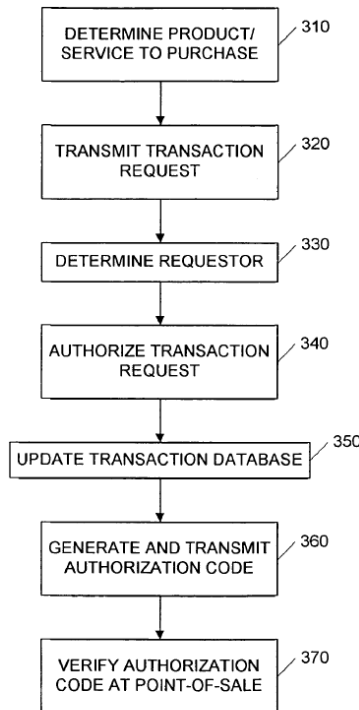
an “algorithm for performing the claimed function,” *id.*, which may be expressed “in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure,” *Finisar Corp. v. DirectTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008) (citation omitted). “[I]f a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim, a means-plus-function clause is indefinite” under 35 U.S.C. § 112, second paragraph. *Williamson*, 792 F.3d at 1352.

We have reviewed the -148 Petition and the evidence cited therein, and are persuaded, by a preponderance of the evidence, that claim 17 is indefinite. The “means for completing” in claim 17 is a means-plus-function limitation, as the claim uses the word “means,” describes the function performed by the means, and recites no structure for performing the function. The function of the limitation is “completing the transaction request by deducting a transaction amount from a payment source in response to an output from the means for verifying.”

With respect to corresponding structure, we agree with Petitioner that the Specification of the ’168 patent does not contain an adequate disclosure of corresponding structure for performing the “completing” function. *See* -148 Pet. 17–22. The Specification indicates that payment authorization source 130 in Figure 1 may be involved in completing a transaction, but does not describe any particular structure for payment authorization source 130, instead merely referring to it as a “credit card company,” “provider of wireless service,” or “interface to various banks, credit card companies, [or] wireless service providers.” *See id.* at 18–19; Ex. 1001,

col. 3, ll. 49–61, col. 4, ll. 47–50 (“payment authorization source 130 charges the appropriate payment source”), col. 6, ll. 51–56 (a message may be sent to payment authorization source 130 indicating that “the payment amount should be charged to the user’s account”).

Further, even if payment authorization source 130 could be considered a specially programmed computer (rather than, for example, an entity like a credit card company),<sup>6</sup> we agree with Petitioner that the Specification does not describe any algorithm for performing the “completing” function. *See* -148 Pet. 19–22. Figure 3 of the ’168 patent is reproduced below.



**FIG. 3**

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<sup>6</sup> As Petitioner correctly points out, the Specification defines the term “module” to include “a software or hardware component . . . which performs certain tasks.” Ex. 1001, col. 2, ll. 51–64; *see* -148 Pet. 19–20 n.4. Unlike other components in Figure 1, such as payment resolution module 110, though, the Specification does not describe payment authorization source 130 as a “module.”

Figure 3 depicts a “flow chart illustrating an exemplary process of securely completing a transaction.” Ex. 1001, col. 7, ll. 12–14. The steps in Figure 3 correspond generally to the preceding means-plus-function limitations in claim 17. -148 Pet. 20–22. For example, the “means for verifying the authorization code at a point-of-sale” in claim 17 corresponds to step 370. *See* Ex. 1001, col. 8, ll. 11–17. Figure 3, however, does not depict any steps pertaining to “completing [a] transaction request by deducting a transaction amount from a payment source in response to an output from the means for verifying,” as recited in claim 17. We have reviewed the other figures of the ’168 patent as well, which provide additional detail about the steps of Figure 3, and do not find any other disclosure of an algorithm for performing the recited function. Indeed, the sequence of steps disclosed in the Specification ends with verification of the authorization code (step 370 in Figure 3, steps 810–860 in Figure 8), but the recited “means for completing” requires deduction of the transaction amount “in response to an output from the means for verifying.” Therefore, we are persuaded that the Specification lacks an adequate disclosure of corresponding structure for the “means for completing” limitation recited in claim 17.

Based on all of the evidence of record, we determine that Petitioner has shown, by a preponderance of the evidence, that claim 17 is indefinite under 35 U.S.C. § 112, second paragraph.

### *C. Anticipation Ground Based on Gerson*

Petitioner argues that claims 12–16, 18, and 19 are anticipated by Gerson under 35 U.S.C. § 102(b), relying on the testimony of Dr. Shamos in support. -140 Pet. 69–80. We have reviewed the -140 Petition and the

evidence cited therein, and are persuaded, by a preponderance of the evidence, that claims 12–16 and 18 are anticipated by Gerson, but are not persuaded, by a preponderance of the evidence, that claim 19 is anticipated by Gerson.

### *1. Gerson*

Gerson discloses a “method for conducting financial payment transactions, and authorizations therefor to purchase goods and services as desired,” where payment is made through a “mobile telephony system.” Ex. 1005, 2 (ll. 6–9). Figure 1 of Gerson is reproduced below.

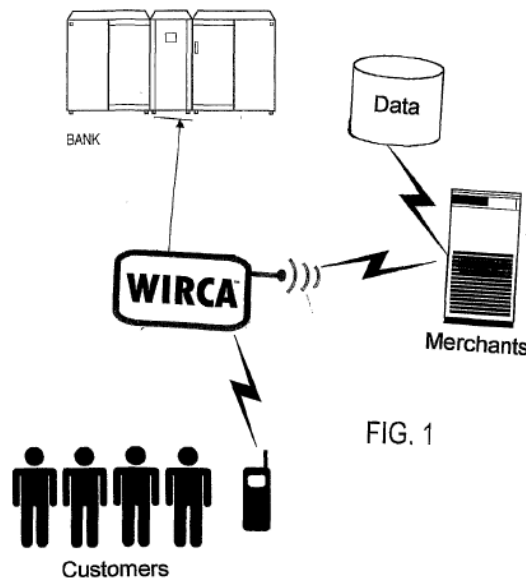


Figure 1 depicts a central processing computer (labeled “WIRCA”) in communication with a bank, a set of subscribing merchants with point-of-sale terminals (POSTs), and customers communicating via mobile phone. *Id.* at 3 (ll. 12–16), 5 (ll. 21–29), 6 (ll. 1–19). A customer has an account funded by, for example, a credit card, and an authorization personal identification number (PIN) code corresponding to the account. *Id.* at 3 (ll. 10–12). When a customer wants to purchase something from a particular

merchant, the central processing computer verifies that the customer is an authorized user by “requesting the authorization PIN code or recognizing the user through existing caller ID technology (CID),” receives the purchase amount from the customer, and verifies that the merchant is a subscribing merchant by requesting a code from the merchant. *Id.* at 7 (ll. 6–13). The central processing computer then verifies that the customer has sufficient funds for the transaction and, if so, provides a “transaction-specific authorization code” to the customer. *Id.* at 7 (ll. 13–16). The customer provides the transaction-specific authorization code to the merchant, which uses its POST to provide the code to the central processing computer. *Id.* at 7 (ll. 16–19). The central processing computer “confirms for the merchant that the mobile unit user has confirmed payment.” *Id.* at 7 (ll. 19–21).

## 2. Claims 12–16 and 18

Petitioner has presented sufficient evidence showing that Gerson discloses every limitation of claims 12–16 and 18. For example, with respect to claim 12, Petitioner asserts, with supporting testimony from Dr. Shamos, that Gerson discloses (1) a “payment authorization source” (i.e., bank or other financial institution) configured to authorize payment for a transaction; (2) a “payment resolution module” (i.e., central processing computer) in communication with the bank or other financial institution; (3) a “hand-held device” (i.e., user’s mobile phone) in communication with the central processing computer that transmits an authorization request (i.e., payment transaction) to the central processing computer; and (4) a “confirmation device” (i.e., POST) that receives an “authorization code” (i.e., transaction-specific authorization code) from the user and authorizes

the transaction in response to validating the authorization code.

-140 Pet. 69–73; *see* Ex. 1003, 83–90. Petitioner further argues that Gerson necessarily includes an “I/O interface” because the central processing computer transmits (i.e., outputs) the transaction-specific authorization code to the mobile phone via a “wireless telecommunications link,” and such transmission requires an I/O interface between the mobile phone and central processing computer. -140 Pet. 71–72 (citing Ex. 1005, 6 (ll. 8–14)). We also have reviewed Petitioner’s arguments and evidence for the other challenged claims, and are persuaded that Petitioner has met its burden of demonstrating anticipation by a preponderance of the evidence. Based on all of the evidence of record, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 12–16 and 18 are anticipated by Gerson under 35 U.S.C. § 102(b).

### 3. Claim 19

Claim 19 recites that “the information from the hand-held device comprises a product identification code, a product quantity, and the transaction amount.” Petitioner argues that Gerson discloses one of the three recited items—the transaction amount—and the other two would have been obvious:

Gerson explicitly discloses that the information from the mobile device can include a transaction amount. As discussed in the Shamos Declaration, *it would have been obvious* to a [person of ordinary skill in the art] for this information to also include a product identification code and a product quantity, especially if the purchase transaction occurred entirely on a mobile device. Such product IDs and quantity numbers are essential for determining the total transaction amount. *Thus, Gerson anticipates claim 19.*

-140 Pet. 79–80 (emphasis added, citations omitted). Dr. Shamos similarly testifies that Gerson expressly discloses providing a transaction amount and “[i]n placing an order from a hand-held device, it would have been obvious to include information including a product identification code [and] a product quantity.” Ex. 1003, 95–96. Dr. Shamos does not testify that Gerson discloses all three items of claim 19.

Petitioner has not shown that Gerson discloses, expressly or inherently, a hand-held device providing a product identification code and product quantity (in addition to the transaction amount), and we do not find any such disclosure in the reference. The mobile phone in Gerson only provides the purchase amount. *See* Ex. 1005, 3 (ll. 22–23), 7 (ll. 6–13). Further, Petitioner’s assertion that it “would have been obvious” to also provide a product identification code and product quantity is insufficient to prove anticipation. *See* -140 Pet. 79–80; *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1255–56 (Fed. Cir. 1989) (“Anticipation requires that every limitation of the claim in issue be disclosed, either expressly or under principles of inherency, in a single prior art reference.”). Based on all of the evidence of record, we determine that Petitioner has not shown, by a preponderance of the evidence, that claim 19 is anticipated by Gerson under 35 U.S.C. § 102(b).

We also note that, even if a trial had been instituted on Petitioner’s obviousness ground for claim 19 based on Gerson and Wronski, the ground as asserted in the -140 Petition would fail for the same reasons explained in the Decision on Institution regarding Petitioner’s obviousness ground based on Demoff. *See* Dec. on Inst. 18–19, 23–24. Specifically, Petitioner argued that, “[a]s discussed in the Shamos Declaration,” Demoff explicitly discloses

a mobile phone providing a transaction amount and it “would have been obvious” to also provide a product identification code and product quantity because such information is “essential for determining the total transaction amount.” -140 Pet. 47. In the Decision on Institution, we determined that Petitioner had not provided a sufficient explanation in the -140 Petition as to why the limitations of claim 19 would have been obvious in view of Demoff, and that Petitioner could not rely on testimony from Dr. Shamos that was not discussed sufficiently in the -140 Petition. Dec. on Inst. 23–24; *see* 37 C.F.R. §§ 42.6(a)(3), 42.22(a)(2), 42.304(b)(4) (a petition for covered business method patent review must include a “full statement of the reasons for the relief requested, including a detailed explanation of the significance of the evidence,” and must identify “[h]ow the construed claim is unpatentable under the statutory grounds identified” and “where each element of the claim is found in the prior art”). Therefore, we denied institution on the asserted ground. Dec. on Inst. 23–24. Petitioner’s assertions regarding claim 19 as unpatentable over Gerson and Wronski are nearly identical to those made with respect to Demoff, and are deficient for the same reasons. *Compare* -140 Pet. 47 *with id.* at 79–80.

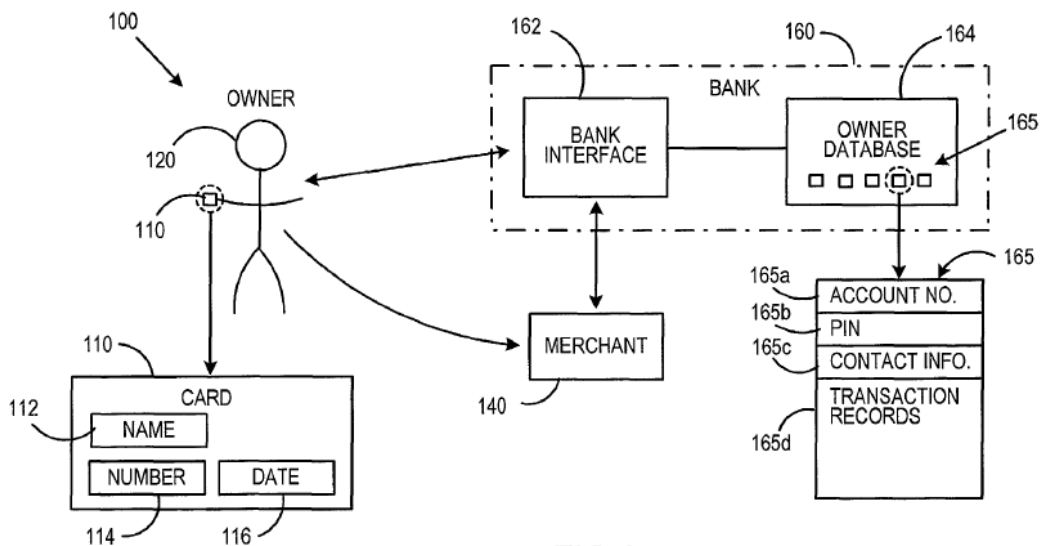
*D. Obviousness Ground Based on Gerson and Wronski*

Petitioner argues that claims 1–11 and 20–23 are unpatentable over the combination of Gerson and Wronski under 35 U.S.C. § 103(a), relying on the testimony of Dr. Shamos in support. -140 Pet. 48–69. We have reviewed the -140 Petition and the evidence cited therein, and are persuaded, by a preponderance of the evidence, that claims 1–11 and 20–23 are unpatentable over the combination of Gerson and Wronski.



*I. Wronski*

Wronski discloses a “method for authorizing purchases by an owner of an account previously established with a bank where the owner wants to purchase an item from a merchant.” Ex. 1006, Abstract. In Wronski, a bank maintains a data center with an “owner account database” that stores an authorization code provided to a user during the course of a transaction. *Id.* ¶¶ 17–18. Figure 1 of Wronski is reproduced below.



**FIG. 1**

Figure 1 depicts owner 120, merchant 140 offering items for sale, and bank 160 that issued card 110 to owner 120. *Id.* ¶ 16. Owner 120 contacts bank 160, provides a personal identification number (PIN), and selects various authorization parameters (e.g., date, cost, merchant name) for card 110. *Id.* ¶ 18. Bank 160 calculates an “authorization code . . . for use in making approval determinations for subsequent purchase transactions” and provides the code to owner 120. *Id.* Owner 120 then selects an item to purchase, and presents card 110 and the authorization code to merchant 140, which sends the authorization code to bank 160. *Id.* ¶ 19. Bank 160 retrieves the owner’s information from its database and determines “whether

or not the authentication code AC provided to and uploaded by the merchant 140 compares with the confirmation authentication code CAC.” *Id.* If there is a match, the transaction is approved. *Id.*

## 2. *Level of Ordinary Skill in the Art*

“Section 103(a) forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 405 (2007) (quoting 35 U.S.C. § 103(a)). Dr. Shamos testifies that he believes a person of ordinary skill in the art would have had “an undergraduate degree in computer science, or equivalent work experience, and, in addition, at least two years of experience with electronic payment systems, including familiarity with databases and integration with interactive voice response software.” Ex. 1003 ¶ 14; *see* -140 Pet. 11. Based on the record presented, including our review of the ’168 patent and the types of problems and solutions described in the ’168 patent and cited prior art, we determine that a person of ordinary skill in the art would have had an undergraduate degree in computer science (or equivalent work experience) and at least two years of experience with electronic payment systems, including familiarity with databases. We apply this level of ordinary skill in the art for purposes of this Decision. Although a person of ordinary skill in the art may have had experience with interactive voice response software, we do not see why such experience should be required, as the ’168 patent discloses that “various communication mediums and protocols [for interacting with users were]

known in the art,” of which interactive voice response is merely one example. *See, e.g.*, Ex. 1001, col. 5, ll. 4–52.

### 3. Analysis

Petitioner has presented sufficient evidence that the combination of Gerson and Wronski teaches all of the limitations of claims 1–11 and 20–23, and that a person of ordinary skill in the art would have had reason to combine their teachings to achieve the recited methods. Petitioner relies on Gerson for the majority of the limitations of the claims, and relies on Wronski as teaching certain limitations. -140 Pet. 48–69.

For example, with respect to claim 1, Petitioner asserts, with supporting testimony from Dr. Shamos, that Gerson discloses (1) receiving from a “hand-held device” (i.e., user’s mobile phone) a transaction request associated with a product and payment amount; (2) determining a “payment source” (i.e., bank or other financial institution) associated with the user of the mobile phone; (3) authorizing the transaction request (i.e., verifying that there are sufficient funds in the user’s account); (4) transmitting to the mobile phone an “authorization code” (i.e., transaction-specific authorization code) indicating that the bank or other financial institution authorized deduction of the payment amount; and (5) receiving the transaction-specific authorization code at a “point-of-sale” (i.e., the POST’s location). *Id.* at 49–56. As to the limitations of storing the authorization code in a “transaction database” and accessing the “transaction database,” Petitioner argues that Gerson stores the transaction-specific authorization code in a processor, and it would have been obvious in view of Wronski to instead do so in a transaction database:

It would have been obvious to combine Gerson's system storing the authorization code in a processor with Wronski's database additionally storing an indication of the transaction request because in both cases the information relates to the transaction being authorized and therefore Wronski merely stores additional information about the same transaction that Gerson does. Furthermore, a user in Gerson would be motivated to combine the processor database with Wronski's database including an indication of the transaction request because such a combination would facilitate the later retrieval of transaction specific information (such as when Gerson's processor database is accessed by the point-of-sale system).

*Id.* at 54, 56–57; *see* Ex. 1003, 67–68, 70. Regarding the limitation of “comparing the received authorization code with the authorization code stored in the transaction database in order to verify the authorization code,” Petitioner cites Gerson and Wronski, and further argues that Gerson inherently discloses such a comparison because the central processing computer receives the transaction-specific authorization code from the POST and “[i]n the absence of a comparison, Gerson's system would have no way to conduct the merchant confirmation step.” -140 Pet. 57–58 (citing Ex. 1005, Fig. 3); *see* Ex. 1003, 70–72.

Petitioner's obviousness analysis for claim 1 is supported by the disclosures of Gerson and Wronski, as well as the testimony of Dr. Shamos, and is persuasive. *See* -140 Pet. 48–60; Ex. 1003, 59–74. In particular, we are persuaded that Petitioner has shown “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” based on the combined teachings of the references. *See KSR*, 550 U.S. at 417–18 (quotation omitted). We also have reviewed Petitioner's arguments and evidence for the other challenged claims, and are persuaded that

Petitioner has met its burden of demonstrating obviousness by a preponderance of the evidence.

Based on all of the evidence of record, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–11 and 20–23 are unpatentable over the combination of Gerson and Wronski under 35 U.S.C. § 103(a).

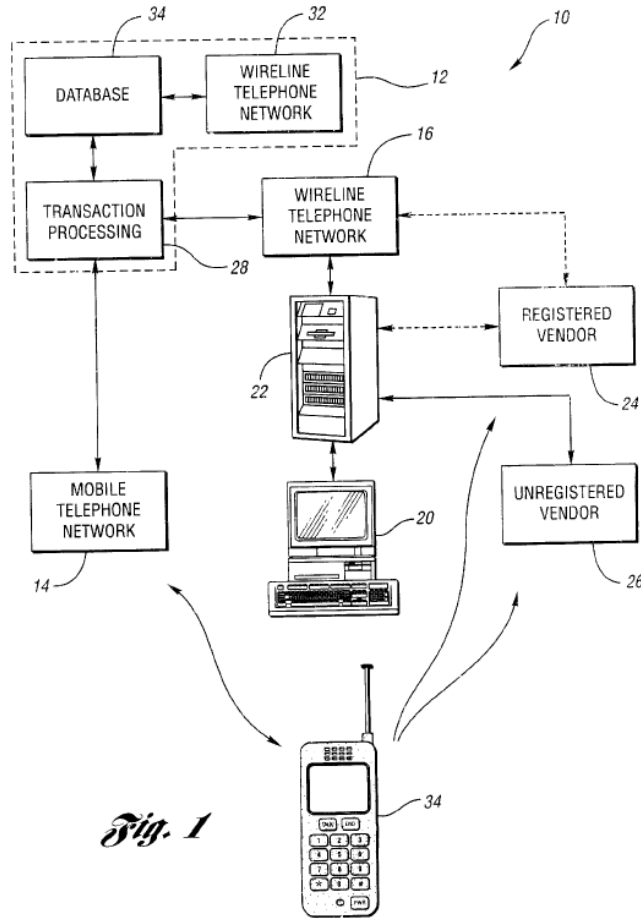
*E. Anticipation Ground Based on Demoff*

Petitioner argues that claims 1–5, 7–16, 18, and 20–23 are anticipated by Demoff under 35 U.S.C. § 102(b), relying on the testimony of Dr. Shamos in support. -140 Pet. 17–47. We have reviewed the -140 Petition and the evidence cited therein, and are persuaded, by a preponderance of the evidence, that claims 1–5, 7–16, 18, and 20–23 are anticipated by Demoff.

*1. Demoff*

Demoff discloses a method and system for “issuing credit as payment in a consumer transaction which eliminates the need for a traditional credit card while also minimizing any potential for fraud or theft.” Ex. 1004, Abstract.

Figure 1 of Demoff is reproduced below.<sup>7</sup>



*Fig. 1*

Figure 1 depicts cellular telephone unit 34 in communication with service provider 12 via mobile telephone network 14, and unregistered vendor 26 in communication with service provider 12 via Internet server 22 and wireline telephone network 16. *Id.* at col. 3, ll. 19–33. When a customer wants to make a purchase from an unregistered merchant, cellular telephone unit 34 sends a request to service provider 12 with the purchase amount and identification of the merchant. *Id.* at col. 3, ll. 34–37, col. 4, ll. 39–41,

<sup>7</sup> We agree with Petitioner that certain components in Figure 1 of Demoff are mislabeled. *See* -140 Pet. 22–23; Ex. 1003 ¶ 56; Dec. on Inst. 21 n.4. Database 34 should be labeled with numeral 32, and component 32 should be labeled as accounting subsystem 30. *See* Ex. 1004, col. 3, ll. 31–33.

col. 6, ll. 18–33. If approved, service provider 12 randomly generates a “temporary credit transaction number [‘TCT number’] valid only for the requested transaction and transaction amount” (i.e., “authorized only for a specific date and time, for a specific amount, and from a unique personal ID”), stores the number in database 32, and provides the number to cellular telephone unit 34. *Id.* at col. 3, ll. 34–55, col. 4, ll. 39–45. The customer operating cellular telephone unit 34 then provides the TCT number to the merchant, and the merchant processes the TCT number like it would for a typical credit card. *Id.* at col. 3, ll. 55–58, col. 6, ll. 18–45, col. 7, ll. 25–33.

## 2. Analysis

Petitioner has presented sufficient evidence showing that Demoff discloses every limitation of claims 1–5, 7–16, 18, and 20–23. For example, with respect to claim 1, Petitioner asserts, with supporting testimony from Dr. Shamos, that Demoff discloses (1) receiving from a “hand-held device” (i.e., cellular telephone unit 34) a transaction request associated with a product and payment amount; (2) determining a “payment source” (i.e., service provider 12) associated with the user of the cellular telephone unit; (3) authorizing the transaction request (i.e., verifying the credit status of the customer); (4) transmitting to the customer an “authorization code” (i.e., TCT number) indicating that the service provider authorized deduction of the payment amount; (5) storing the TCT number in a “transaction database” (i.e., database 32); (6) receiving the TCT number at a “point-of-sale” (i.e., place where the TCT number is provided to the merchant and verified); (7) accessing the database; and (8) completing the transaction in response to verifying the TCT number. -140 Pet. 17–29.

Regarding the limitation of “comparing the received authorization code with the authorization code stored in the transaction database in order to verify the authorization code,” Petitioner argues that a person of ordinary skill in the art would have understood that the conventional credit card processing described in Demoff “requires comparing a number provided to a merchant with a number stored in a database to determine whether there is a match,” where such a comparison is a “necessary background function for *any* purchase transaction.” *Id.* at 25 (citing Ex. 1004, col. 4, ll. 22–24 (“the credit transaction number can be sent directly to the identified business for processing like a conventional credit card”)). Petitioner further cites Demoff’s disclosure that the TCT number is sent to the vendor for “*verification* and finalization of the transaction,” and argues that a person of ordinary skill in the art would have understood such verification to be a comparison of the provided TCT number with the one stored in the database. *Id.* at 25–26 (citing Ex. 1004, col. 7, ll. 29–32).

Petitioner’s anticipation analysis for claim 1 is supported by the disclosure of Demoff, as well as the testimony of Dr. Shamos, and is persuasive. *See* -140 Pet. 17–29; Ex. 1003, 22–34. We also have reviewed Petitioner’s arguments and evidence for the other challenged claims, and are persuaded that Petitioner has met its burden of demonstrating anticipation by a preponderance of the evidence. Based on all of the evidence of record, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–5, 7–16, 18, and 20–23 are anticipated by Demoff under 35 U.S.C. § 102(b).



### III. ORDER

Petitioner has demonstrated, by a preponderance of the evidence, that (1) claim 17 is indefinite under 35 U.S.C. § 112, second paragraph; (2) claims 12–16 and 18 are anticipated by Gerson under 35 U.S.C. § 102(b); (3) claims 1–11 and 20–23 are unpatentable over the combination of Gerson and Wronski under 35 U.S.C. § 103(a); and (4) claims 1–5, 7–16, 18, and 20–23 are anticipated by Demoff under 35 U.S.C. § 102(b). Petitioner has not demonstrated, by a preponderance of the evidence, that claim 19 is anticipated by Gerson under 35 U.S.C. § 102(b).

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–18 and 20–23 of the '168 patent have been shown to be unpatentable; and

FURTHER ORDERED that claim 19 of the '168 patent has not been shown to be unpatentable.

This is a final 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.

CBM2014-00140 and CBM2014-00148  
Patent 7,273,168 B2

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