

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASKELADDEN L.L.C.,
Petitioner,

v.

CALABRESE STEMER LLC,
Patent Owner.

IPR2024-00369
Patent 7,954,706 B2

Before SHARON FENICK, SCOTT B. HOWARD, and
ANDREAS BALTATZIS, *Administrative Patent Judges*.

BALTATZIS, *Administrative Patent Judge*.

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

I. INTRODUCTION

Askeladden L.L.C. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–7 (the “challenged claims”) of U.S. Patent No. 7,954,706 B2 (Ex. 1001, “the ’706 patent”). Paper 1 (“Pet.”). Calabrese Stemer LLC (“Patent Owner”) did not file a Preliminary Response. We instituted *inter partes* review under 35 U.S.C. § 314(a). Paper 7 (“Inst. Dec.”).

During the trial, Patent Owner did not file a Response.¹ See Paper 8 at 9 (“Patent Owner is cautioned that any arguments not raised in the response may be deemed forfeited.”). Petitioner filed a Reply addressing the Institution Decision. Paper 14 (“Pet. Reply.”). See Consolidated Trial Practice Guide² at 73 (“[T]he Board will permit the petitioner, in its reply brief, to address issues discussed in the institution decision.”). Petitioner requested oral argument. Paper 15. A hearing was held on March 27, 2024, and the record contains a transcript of this hearing.³ Paper 17 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). Having reviewed the complete trial record, we determine that Petitioner has shown, by a preponderance of the evidence, that the challenged claims are unpatentable.

¹ Patent Owner notified the Board that it would not file a Response. Paper 11, 3. However, Patent Owner has not abandoned the contest or requested adverse judgment. *Id.*; see also Tr. 30:22–31:5. Thus we proceed with our final written decision. See 35 U.S.C. § 318(a) (“If an *inter partes* review is instituted and not dismissed under this chapter, the Patent Trial and Appeal Board shall issue a final written decision . . .”).

² Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

³ The oral hearing was a consolidated hearing for IPR2024-00367, IPR2024-00368, and IPR2024-00369. Tr. 1.

II. BACKGROUND

A. Real Parties in Interest

Petitioner identifies itself as the real party in interest. Pet. 1.

Patent Owner identifies itself as the real party in interest. Paper 4 (Patent Owner's Mandatory Notices), 1.

B. Related Matters

Petitioner concurrently filed petitions for *inter partes* review challenging claims of related patents: U.S. Patent Nos. 7,357,310 B2 (IPR2024-00367, instituted June 27, 2024) and 8,783,564 B2 (IPR2024-00368, instituted June 27, 2024). *See* Pet. 1.

C. The '706 Patent (Ex. 1001)

The '706 patent relates to “a non-intrusive, user-selectable notification and authorization system for credit card transactions.” Ex. 1001, 1:52–53.

Figure 1, reproduced below, illustrates a notification process.

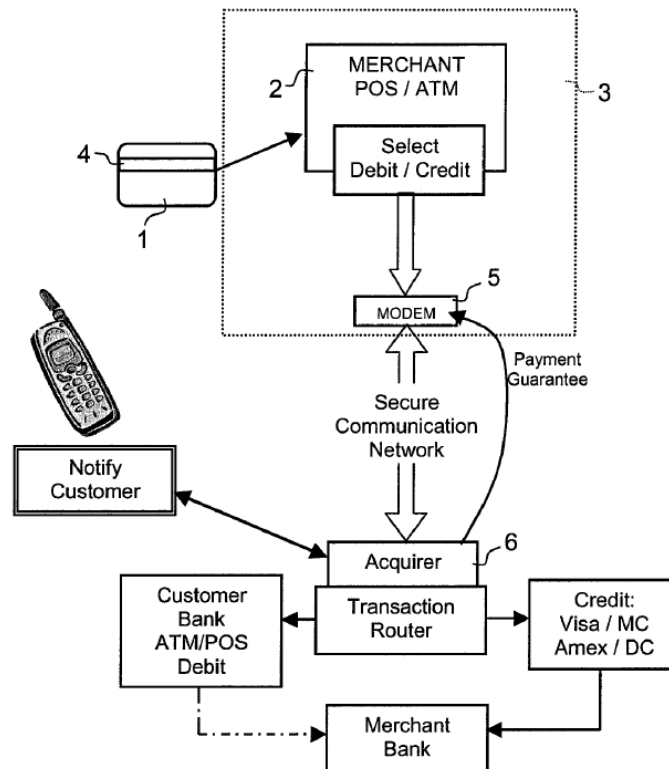


FIG. 1

Figure 1 shows a flow chart representing “a simplified process stream in a cash-less sales transaction.” Ex. 1001, 3:21–23. With reference to Figure 1, the Specification describes a method in which charge card 1 is swiped or entered at merchant terminal 3. *Id.* at 3:23–26. Merchant terminal 3 may represent a store, an ATM, or “a virtual terminal in an internet-type transaction.” *Id.* at 3:26–28. Merchant terminal 3 uses modem 5 to send transaction information to acquirer 6. *Id.* at 3:34–36. Acquirer 6 determines whether to authorize the transaction by communicating with the customer bank or credit service. *See id.* at 3:36–38, Fig. 1.

Acquirer 6 also checks a customer profile for “the customer’s set preferences concerning [] notification/authorization options.” *Id.* at 3:38–41. One profile option includes notification, in which the system “notifies the

cardholder by sending a message to his wireless device.” *Id.* at 3:42–44. The message may include, for example, a short message service (SMS) notification. *Id.* at 3:45–48.

A second option includes a notification, “followed by a prompt to confirm the purchase.” *Id.* at 3:49–51. Confirmation examples may include responding with “1” to authorize or “2” to refuse, or entering a personal identification number (PIN) stored in the customer profile. *Id.* at 3:51–59.

A third option includes preauthorizing an imminent charge request. *Id.* at 3:65–67. In this example, the customer may preauthorize an impending transaction for a limited valid time period with a maximum payment amount covering the planned purchase. *Id.* at 4:2–13.

D. Illustrative Claims

Petitioner challenges claim 1–7, of which claims 1, 5, and 6 are independent. Claims 1, 5, and 6 illustrate the claimed subject matter and are reproduced below:⁴

1. A payment authorization method, which comprises:
 - [a] gathering, at a merchant’s, account information for payment of a customer’s purchase;
 - [b] transmitting an authorization request from the merchant’s to a financial authorization system requesting payment authorization for the customer’s purchase;
 - [c] checking whether or not a profile is present with regard to the customer and, if the profile is present, checking whether or not the customer has requested notification regarding the authorization request;
 - [d] if the customer has requested notification, notifying the customer that the authorization request has been received by transmitting a notification to a cell phone or a cellular

⁴ We use the bracketed identifiers added by Petitioner.

network-connected communications device associated with the customer; and

- [e] processing the transaction for payment authorization and, if the purchase is authorized, notifying the merchant substantially contemporaneously with the step of transmitting the notification to the cell phone or the communications device associated with the customer.

Ex. 1001, 5:53–6:10.

5. A charge card processing method, which comprises:

- [a] inputting a transaction request to a stationary merchant terminal disposed at a merchant location;
- [b] processing the transaction request with the merchant terminal, including a transmission of a first authorization request to a remote processing facility and receipt of a notification that authorization has been accepted or declined;
- [c] transmitting a second authorization request from a remote processing facility to a mobile communications device of a customer associated with the requested transaction through a cellular network; and
- [d] authorizing the requested transaction only if authorization has been accepted for the first authorization request and a proper response has been received by the remote processing facility to the second authorization request.

Id. at 6:22–37.

6. A charge processing method, which comprises:

- [a] preauthorizing an imminent given transaction by transmitting a preauthorization for the imminent given transaction from a customer to a financial authorization system;
- [b] subsequently inputting a transaction request concerning the given transaction at a merchant terminal disposed at a merchant location;

- [c] processing the transaction request at the merchant terminal, including a transmission of an authorization request for the given transaction to the financial authorization system;
- [d] transmitting a response to the authorization request from the financial authorization system to the merchant terminal, and thereby authorizing the transaction request at the merchant's if the preauthorization from the customer is available in the financial authorization system, and otherwise contacting the customer for authorization or declining the authorization request.

Id. at 6:38–55.

E. Asserted References

Petitioner relies on the following references in its asserted grounds of unpatentability:

Name	Reference	Ex. No.
Kobayashi	JP 2001-306806 A (Nov. 2, 2001) ⁵	1010
Horie	JP 2002-133100 A (May 10, 2002) ⁶	1009
Kano	WO 2002/008981 A1 (Jan. 31, 2002) ⁷	1012

F. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims would have been unpatentable on the following grounds:

⁵ We rely on Petitioner's provided translation, Ex. 1007.

⁶ We rely on Petitioner's provided translation, Ex. 1006.

⁷ We rely on Petitioner's provided translation, Ex. 1011.

Claim(s) Challenged	35 U.S.C. § ⁸	Reference(s)/Basis
1, 2	102	Horie
1, 2	103	Horie
3–5	103	Horie, Kobayashi
6, 7	102	Kano
6, 7	103	Kano

Petitioner supports its challenges with a declaration from Robert Akl, D.Sc. Ex. 1003.

III. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review). Furthermore, Petitioner must explain with particularity how the prior art would have rendered the challenged claims unpatentable. 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.104 (“The petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon.”).

⁸ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284, 285–88 (2011), included revisions to 35 U.S.C. §§ 102 and 103 that became effective on March 16, 2013. Because the ’706 patent issued from an application having a filing date of March 6, 2008, we apply the pre-AIA version of the statutory basis for unpatentability. *See* Ex. 1001, code (22).

A patent claim is unpatentable under 35 U.S.C. § 102 if “the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.” *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). “A single prior art reference may anticipate without disclosing a feature of the claimed invention if such feature is necessarily present, or inherent, in that reference.” *Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 958 (Fed. Cir. 2014). Moreover, the reference must also “disclose[] within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim.” *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008).

A claim is unpatentable under 35 U.S.C. § 103 if 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 to a person having ordinary skill in the art to which said subject matter pertains. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of 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 skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations.⁹ *See Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966).

⁹ In the present record, neither party presents arguments or evidence relating to secondary considerations.

B. Level of Ordinary Skill in the Art

In order to determine whether an invention would have been obvious at the time the invention was made, we consider the level of ordinary skill in the pertinent art. *Graham*, 383 U.S. at 17. In assessing the level of ordinary skill in the art, various factors may be considered, 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.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (quotation omitted).

Petitioner contends that a person of ordinary skill in the art (“POSITA”) at the time the invention was made “would have a bachelor’s degree in computer science, computer engineering, electrical engineering, or a related study, and would have at least one or two years of experience with wired and wireless networks used to securely process requests for authorization of activity such as financial transactions.” Pet. 7–8 (citing Ex. 1003 ¶ 22). Additionally, Petitioner contends that “[l]ess experience is necessary with additional education (e.g., a Master’s degree), and likewise, less education is necessary with additional work experience (e.g., 5–6 years).” *Id.*

Patent Owner does not oppose or comment on Petitioner’s definition of a POSITA.

We determine this level of skill, with the exception of the open-ended phrase “at least,” which we remove from Petitioner’s proposal, comports with the qualifications a person would have needed to understand and implement the teachings of the ’706 patent and the prior art of record.

C. Claim Construction

We construe claim terms according to the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–17 (Fed. Cir. 2005) (en banc), i.e., as construed in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b). Under *Phillips*, claim terms are afforded “their ordinary and customary meaning.” *Id.* at 1312. “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313. “Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* An inventor may rebut that presumption by 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 absence of such a definition, limitations are not to be read from the specification into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

Petitioner contends that, “no claim terms require an express construction.” Pet. 8. However, Petitioner explains the term “merchant’s” recited in independent claims 1 and 6. *Id.*; *see* Ex. 1001, 5:54, 5:56, 6:52. The possessive term “merchant’s” is not followed by a subject noun. *See id.* Petitioner contends that during prosecution of the parent patent, U.S. Patent No. 7,357,310 B2, “the applicant explained that the ‘secure network and the ‘payment guarantee’ channel are illustrated between the acquirer 8 [*sic*] and the modem 5 of the merchant’s *terminal*.”” *Id.* (citing Ex. 1013, 45). Accordingly, Petitioner asserts that both instances of “merchant’s” should be read as “merchant’s terminal.” *Id.*

In the Reply, responsive to our discussion of this term in the Institution Decision (Inst. Dec. 11), Petitioner adds that Patent Owner in a related proceeding explained “the expression may refer to anything in possession of, or under the control of the merchant, as the use of the possessive form implies.” Pet. Reply 2 (citing IPR2024-00367, Paper 10 (Patent Owner Response), 4)¹⁰. This explanation accords with Petitioner’s argument that “merchant’s” includes least a “merchant’s terminal.” Accordingly, we are persuaded by Petitioner’s argument and interpret “merchant’s” as at least including a “merchant’s terminal.”

We need not construe explicitly any other claim terms because doing so would not change the outcome of the analysis below. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Anticipation by Horie (Claims 1 and 2)

Petitioner argues that Horie anticipates claims 1 and 2. Pet. 21–30. As discussed above, Patent Owner has not presented any arguments in a Response. The burden however remains on Petitioner, so we examine the Petition’s contentions to determine if they show by a preponderance of the evidence that the claims are unpatentable. For the reasons set forth below, Petitioner has shown by a preponderance of the evidence that Horie anticipates claims 1 and 2.

¹⁰ IPR2024-00367 challenges U.S. Patent No. 7,357,310 B2, to which the ’706 patent claims priority as a division and shares a common specification. *See* Ex. 1001, code (62).

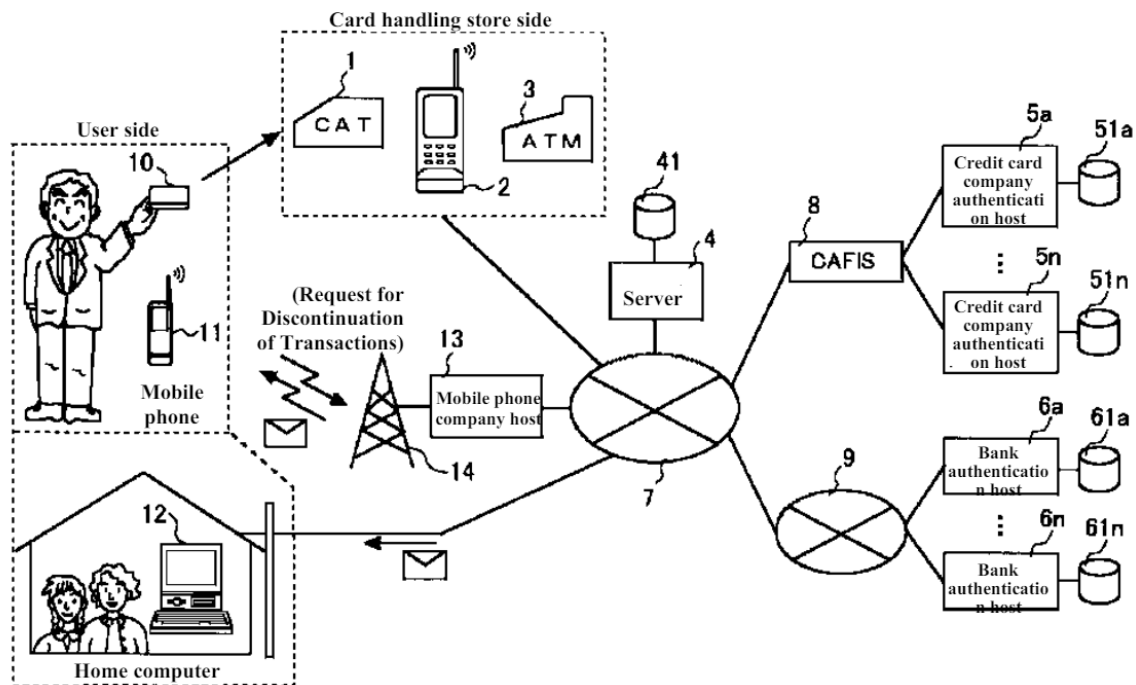
1. Horie (Ex. 1006)

Horie describes notifying a user of a card payment transaction via, *e.g.*, a mobile phone or personal computer. Ex. 1006, code (57), ¶ 1.¹¹ Horie explains that conventional card payment transaction systems provide information regarding payment transactions via transaction receipts, periodic invoices, and usage status inquiries. *Id.* ¶¶ 3–4. Horie notes that a fraudulent transaction may not be discovered for some time, and that there may be situations in which one party wishes to track legitimate transactions of others using the credit card account. *Id.* ¶ 4. Thus, Horie proposes a system by which a card usage status notification is made via email or mobile phone notification. *Id.* ¶¶ 5, 6, 8, 12–18, 20–22. The notification may include “transaction content information such as card usage date and time [and] card usage location information.” *Id.* ¶¶ 16, 17, 23.

Horie’s Figure 1, reproduced below, “is a diagram showing a schematic configuration of a card payment transaction system.” *Id.*, “Brief Description of the Drawings.”

¹¹ Our citations to Horie (Ex. 1009) are to Petitioner’s provided translation, Ex. 1006.

[FIG. 1]



In Figure 1, card 10 is used for a payment and authenticated using card transaction terminal devices 1, 2, and 3. *Id.* ¶¶ 39, 44. Credit card company authentication hosts 5a–5n perform card authentication processing for credit cards in conjunction with CAFIS¹² 8 and bank authentication hosts 6a–6n perform authentication for debit cards in conjunction with an interbank network 9. *Id.* ¶¶ 39–40. Network 7 connects the card transaction terminal devices 1, 2, and 3, with CAFIS 8 and interbank network 9. *Id.* ¶¶ 39, 42. In addition, user’s mobile phone 11 and home computer 21 are connected to the network 7. *Id.* ¶ 41. Information processing server 4 is also connected to network 7. *Id.* ¶¶ 39, 44.

Horie describes that, based on an authentication processing request from the card transaction terminal, information is transmitted to the card

¹² We understand CAFIS to refer to a card payment processing network in Japan. *See* www.nttdata-gps.com/about-us (accessed May 31, 2024).

authentication host. *Id.* ¶ 53, Fig. 3. The authentication host performs the authentication process, and, if successful, a signal indicating success and any necessary data is transmitted back to the card transaction terminal. *Id.* ¶ 54, 56, Fig. 3. A predetermined file is then called to determine whether a notification should be sent via email. *Id.* ¶¶ 57, 58, Fig. 3. If the email notification is requested, the email is sent via the information processing server, and an email transmission processing request is made. *Id.* ¶¶ 59–60, Fig. 3. Horie also describes an alternative embodiment where “the email can also be sent, for example, during the card authentication process.” *Id.* ¶ 73. Horie continues, “[i]n such a case, for example, it would be possible to prevent fraudulent card use by making it possible to issue a transaction cancellation request to the authentication hosts 5 to 6 via the mobile phone 11.” *Id.*

2. Independent Claim 1

a) Preamble: A payment authorization method, comprising:

Petitioner contends that, to the extent the preamble is limiting, Horie discloses a card payment transaction method that automatically notifies a card user that a card payment transaction has occurred via a network. Pet. 22 (citing Ex. 1006 ¶ 1, Fig. 9; Ex. 1003 ¶ 127).¹³

We find that Horie discloses a card payment method using an authentication host. *See* Ex. 1006 ¶¶ 1, 39. Accordingly, we find that, to the

¹³ Petitioner asserts, and we agree, that Horie’s disclosure for Figure 9 refers to the various processing described in Figure 1 (Ex. 1006 ¶ 75), so that “the figures may both be considered with respect to the analysis for anticipation.” *See* Pet. Reply 3–5 (responding to observations regarding these figures in the Institution Decision (Inst. Dec. 15 n. 11)).

extent the preamble is limiting, Petitioner sufficiently shows that Horie discloses the preamble of claim 1.

b) 1[a] gathering, at a merchant's, account information for payment of a customer's purchase;

Petitioner asserts Horie discloses using a payment card for a payment transaction at a card transaction terminal (corresponding to a merchant's terminal¹⁴) "installed on the card handling store side." Pet. 22–23 (citing Ex. 1006 ¶¶ 39, 44, 76; Ex. 1003 ¶ 129). Petitioner further asserts Horie discloses that the card transaction terminal device reads card number information, transaction details information, and other necessary information for payment. *Id.* (citing Ex. 1006 ¶¶ 44, 46, 47). Patent Owner does not dispute that Horie discloses this limitation.

We find that Horie discloses a card transaction terminal (merchant's) that reads (gathers) card number information (account information) for payment of a customer's purchase. Ex. 1006 ¶¶ 44, 46, 47. Accordingly, we find that Petitioner sufficiently shows that Horie discloses limitation 1[a].

c) 1[b] transmitting an authorization request from the merchant's to a financial authorization system requesting payment authorization for the customer's purchase;

Petitioner asserts Horie discloses issuing a card authentication processing request after the card transaction terminal reads the card information. Pet. 23–24 (citing Ex. 1006 ¶¶ 46, 48; Ex. 1003 ¶ 131). Petitioner further asserts Horie discloses sending the card authentication request from the merchant's terminal to CAFIS (a financial authorization system) that executes card authentication and authorization. *Id.* at 24 (citing

¹⁴ Petitioner argues that "merchant's" includes a "merchant's terminal." *See supra* § II.C.

Ex. 1006 ¶ 54; Ex. 1003 ¶¶ 132–134). Patent Owner does not dispute that Horie discloses this limitation.

We find that Horie discloses sending (transmitting) a card authentication processing request (authorization request) from the card transaction terminal (merchant's) to CAFIS (a financial authorization system) requesting payment authorization for the customer's purchase. Ex. 1006 ¶¶ 48, 54. Accordingly, we find that Petitioner sufficiently shows that Horie discloses limitation 1[b].

d) 1[c] checking whether or not a profile is present with regard to the customer and, if the profile is present, checking whether or not the customer has requested notification regarding the authorization request;

Petitioner asserts Horie discloses calling a predetermined file to determine whether or not to notify the user of the card transaction. Pet. 24 (citing Ex. 1006 ¶ 57; Ex. 1003 ¶ 135). Dr. Akl explains that “Horie's call to the predetermined file associated with the customer is . . . an example of checking whether or not a profile is present with regard to the customer.” Ex. 1003 ¶ 138; *see also id.* ¶¶ 136–137 (citing Ex. 1006 ¶¶ 57–59). Petitioner further asserts Horie discloses processing a request for email transmission when “email notification service has been applied for” and terminating transmission processing when “email notification service is not requested.” Pet. 24–25 (citing Ex. 1006 ¶ 59; Ex. 1003 ¶ 136). Patent Owner does not dispute that Horie discloses this limitation.

We find that Horie's call to the predetermined file corresponds to checking whether or not a profile is present. Ex. 1006 ¶ 57; Ex. 1003 ¶ 138. We further find that checking Horie's predetermined file for notification status corresponds to checking whether or not the customer has requested

notification. Ex. 1006 ¶ 57; Ex. 1003 ¶ 138. Accordingly, we find that Petitioner sufficiently shows that Horie discloses limitation 1[c].

- e) 1[d] if the customer has requested notification, notifying the customer that the authorization request has been received by transmitting a notification to a cell phone or a cellular network-connected communications device associated with the customer; and*

Petitioner asserts Horie discloses automatically notifying the user of a card payment transaction via the normal phone line of a pre-specified mobile phone. Pet. 26 (citing Ex. 1006 ¶¶ 18, 20, 44; Ex. 1003 ¶¶ 140–142). Petitioner further asserts Horie discloses transmitting specific data indicating the content of the card payment transactions to the mobile phone, and displaying “the content on the display by text.” *Id.* at 26–27 (citing Ex. 1006 ¶ 79; Ex. 1003 ¶ 142). Petitioner asserts that Horie discloses sending a notification “when a customer’s profile indicates that a notification is requested,” to “[a] phone ‘owned’ by a card user” that “is a phone that is associated with [the] user.” *Id.* at 27 (citing Ex. 1003 ¶ 143). Patent Owner does not dispute that Horie discloses this limitation.

We find that Horie discloses notifying the user, who requested notification, of a card payment transaction (authorization request) by transmitting a notification to the user’s mobile phone. Ex. 1006 ¶¶ 18, 20, 44; Ex. 1003 ¶ 140. As discussed above for limitation 1[c], Horie discloses sending notifications only to customers who request them. *See* Ex. 1006 ¶ 58; Ex. 1003 ¶ 143. Accordingly, we find that Petitioner sufficiently shows that Horie discloses limitation 1[d].

- f) 1[e] processing the transaction for payment authorization and, if the purchase is authorized, notifying the merchant substantially contemporaneously with the step of transmitting the notification to the cell phone or the communications device associated with the customer.*

Petitioner asserts Horie discloses an authentication host (CAFIS) that authenticates the transaction and responds to the merchant whether the authentication is successful or not (step 205 YES, step 206 NO). Pet. 27–28 (citing Ex. 1006 ¶¶ 48–50, 54; Ex. 1003 ¶¶ 145–147). Petitioner further asserts Horie discloses simultaneously performing “both normal card authentication processing and card usage status notification via email.” *Id.* at 28 (citing Ex. 1006 ¶ 43). Petitioner asserts that one skilled in the art would have recognized “performed simultaneously” as “substantially contemporaneously.” *Id.* (citing Ex. 1003 ¶¶ 147–148). Patent Owner does not dispute that Horie discloses this limitation.

We find that Horie discloses authenticating the transaction (processing for payment authorization), and if the purchase is authorized, contemporaneously (simultaneously) notifying the merchant and card user of the successful authorization. Ex. 1006 ¶¶ 43, 48–50; Ex. 1003 ¶¶ 147, 148. Accordingly, we find that Petitioner sufficiently shows that Horie discloses limitation 1[e].

g) Conclusion as to Claim 1

For the reasons outlined above, we find that Petitioner shows by a preponderance of the evidence that claim 1 is unpatentable as anticipated by Horie.

3. *Claim 2: The method according to claim 1, wherein the authorization request includes the account information and a monetary amount, and the notification to the communications*

device associated with the customer in an SMS message including the monetary amount.

Petitioner asserts Horie discloses a card authorization request including card number information and transaction details information. Pet. 28–29 (citing Ex. 1006 ¶¶ 46, 47; Ex. 1003 ¶ 151). Petitioner further asserts Horie discloses automatically notifying a user of a card payment transaction. *Id.* (citing Ex. 1006 ¶¶ 18, 20; Ex. 1003 ¶ 153). The notification includes payment amount and is displayed as text on the user’s mobile phone. *Id.* at 29–30 (citing Ex. 1006 ¶¶ 69, 79; Ex. 1003 ¶¶ 152, 153). Dr. Akl explains that “a POSITA would have understood that ‘text’ sent to a mobile phone would have typically been in the form of an SMS message, which was the most common format used at the time for the delivery of text-based transmissions of data to and from mobile phones.” *Id.* at 30 (citing Ex. 1003 ¶¶ 153–154; Ex. 1008, code (57), 1:53–63). Patent Owner does not dispute that Horie discloses this limitation.

We find that Horie discloses the authorization request includes card (account information) and transaction details (monetary amount) and the notification, in the form of text or SMS, includes the same monetary amount. Ex. 1006 ¶¶ 46, 47, 69, 69. Accordingly, we find that Petitioner shows by a preponderance of the evidence that claim 2 is unpatentable as anticipated by Horie.

E. Obviousness over Horie (Claims 1 and 2)

Because we determine that claims 1 and 2 are anticipated by Horie, we do not address Petitioner’s obviousness ground over Horie. *See Boston Sci. Scimed, Inc. v. Cook Gp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020) (“We agree that the Board need not address issues that are not necessary to the resolution of the proceeding.”).

F. Obviousness over Horie and Kobayashi (Claims 3–5)

Petitioner argues that dependent claims 3 and 4 (depending from claim 1) and independent claim 5 are unpatentable as obvious over Horie and Kobayashi. Pet. 32–46. As discussed above, Patent Owner did not file a response, but it remains Petitioner’s burden to show unpatentability. For the reasons set forth below, Petitioner has shown by a preponderance of the evidence that claims 3–5 would have been obvious over Horie and Kobayashi.

1. Kobayashi (Ex. 1007)

Kobayashi relates to a method and system for preventing unauthorized use of credit cards. Ex. 1007 ¶ 1. The method involves contacting a card user by mobile phone at a pre-registered phone number to confirm that the card user is using the card. *See id.* ¶ 14.

Figure 1 is reproduced below.

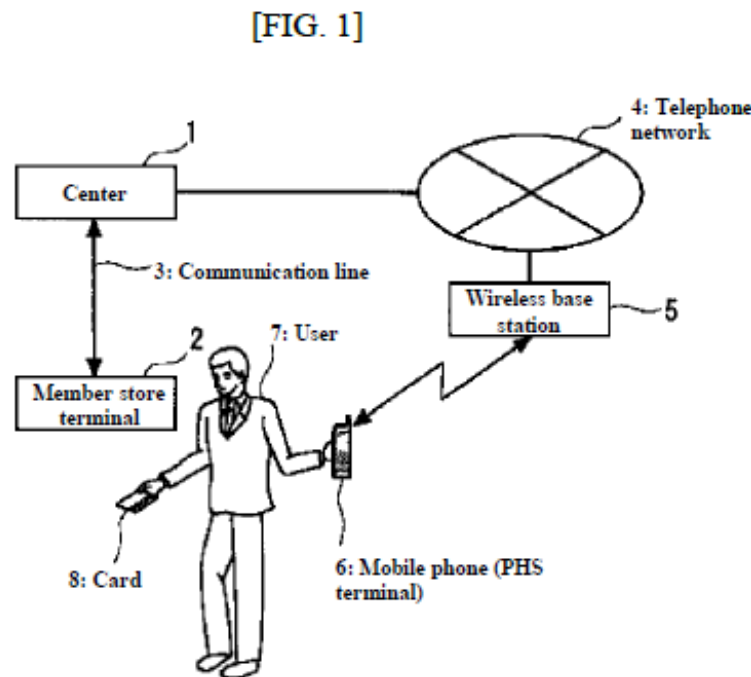


Figure 1 shows a schematic diagram of a transaction system. *Id.* ¶ 40. Figure 1 illustrates user 7 presenting card 8 to make a purchase at member store terminal 2. *Id.* ¶ 42. Member store terminal 2 sends card and sales information to center 1 via communication line 3. *Id.* Center 1 searches for the user's pre-registered mobile phone number in a database and calls mobile phone 6 to authorize the purchase. *Id.* ¶¶ 43, 44, 57. User 7 responds to the incoming call and "enters the card acceptability input (number and #, etc. agreed with the card company)." *Id.* ¶¶ 58, 60. User 7 may provide previously determined input information indicating whether the card can be used, "for example 1 for usable and 0 for unusable." *Id.* ¶ 60. Center 1 "judges the card usage permission information transmitted" from mobile phone 6, determines whether the card can be used, and notifies member store terminal 2 of the usage permission. *Id.* ¶ 61.

2. Reason to Combine Horie and Kobayashi

Petitioner asserts that one of ordinary skill in the art would have been motivated to combine Horie and Kobayashi, specifically to improve Horie's confirmation option. Pet. 18–21. For example, Petitioner asserts Horie discloses sending a card transaction notification to a user device, with the option to issue a transaction cancellation request. *Id.* at 19 (citing Ex. 1006 ¶ 73). But, Petitioner notes that Horie does not disclose details on cancelling a transaction. *Id.* So Petitioner asserts that one of skill in the art would have looked to Kobayashi's known techniques for preventing fraudulent transactions. *Id.* (citing Ex. 1003 ¶¶ 72–73). Specifically, Petitioner cites to Kobayashi's method for verifying user identity, by notifying a user of a transaction using a pre-registered mobile phone number. *Id.* (citing Ex. 1007 ¶ 57; Ex. 1003 ¶ 74). In response, the user indicates whether or not the card can be used by entering a number determined at the time of card creation

and a predetermined operation button. *Id.* at 19–20 (citing Ex. 1007 ¶¶ 60, 61; Ex. 1003 ¶¶ 73–74).

Petitioner contends that implementing Kobayashi’s fraud prevention interface with Horie applies a known technique to improve a similar system in the same way. *Id.* at 20 (Ex. 1003 ¶¶ 75, 76). Petitioner concludes that, given the similarity between Horie and Kobayashi, one of ordinary skill in the art would have had a reasonable expectation of success in combining the disclosures. *Id.* at 20–21 (Ex. 1003 ¶¶ 75, 76).

Patent Owner does not dispute Petitioner’s arguments to combine Horie and Kobayashi.

We find that Petitioner has sufficiently shown a reason to combine Horie and Kobayashi, to apply a known technique of fraud prevention to improve a similar system for credit card payment. *See KSR*, 550 U.S. at 417 (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”). We also find that Petitioner sufficiently shows a reasonable expectation of success in doing so given the similarity of the disclosures. That is one of ordinary skill in the art would have expected Kobayashi’s technique to work in Horie’s method. *See* Ex. 1003 ¶ 75. Accordingly, we find that Petitioner shows by a preponderance of the evidence that a POSITA would have been motivated to combine Horie and Kobayashi with a reasonable expectation of success.

3. *Claim 3: The method according to claim 1, which further comprises prompting the customer to return a response to the*

notification and authorizing the purchase only when a proper response is returned.

Petitioner asserts Horie teaches notifying the user during the card authentication process to allow for issuing a transaction cancellation request to the authentication host via the mobile phone. Pet. 32–33 (citing Ex. 1006 ¶ 73; Ex. 1003 ¶ 159). Petitioner further asserts Kobayashi teaches verifying user identity by automatically dialing the user’s mobile phone to obtain a response from the user. *Id.* at 33–34 (citing Ex. 1007 ¶¶ 57, 58; Ex. 1003 ¶ 160). Petitioner asserts Kobayashi teaches the user responds by entering a card acceptability input and input information indicating whether the card can be used or not; then authorizing the purchase based on the user’s input. *Id.* at 34–35 (citing Ex. 1007 ¶¶ 60, 69, 70; Ex. 1033 ¶ 162). Patent Owner does not dispute Petitioner’s argument as to claim 3.

We find that Kobayashi teaches notifying (prompting) the user (customer) to return a user input (response) and authorizing the purchase only when the customer returns a proper response. *See* Ex. 1007 ¶¶ 60, 69, 70; Ex. 1003 ¶ 162. Accordingly, we determine that Petitioner shows by a preponderance of the evidence that claim 3 would have been obvious over Horie and Kobayashi.

4. *Claim 4: The method according to claim 3, wherein the response includes a personal identifier associated with the customer.*

Petitioner asserts Kobayashi teaches a response, i.e., acceptability input, that may include “number and #, etc. agreed with the card company.” Pet. 35–36 (citing Ex. 1007 ¶ 60; Ex. 1003 ¶ 167). Petitioner asserts Kobayashi’s teaching of a user number agreed with the card company corresponds to a personal identifier associated with the customer, e.g., card number or PIN. *Id.* at 36. Petitioner asserts that “[t]he card company would

keep this number on file and when the customer provides it during the authentication process, the card company would use it to verify the identity of the customer, making ‘number and #’ a personal identifier.” *Id.* (citing Ex. 1003 ¶ 167). Patent Owner does not dispute Petitioner’s argument as to claim 4.

We find that Kobayashi teaches a previously registered number (personal identifier) that identifies (is associated with) the customer. Ex. 1007 ¶ 60; Ex. 1003 ¶ 167. Accordingly, we determine that Petitioner shows by a preponderance of the evidence that claim 4 would have been obvious over Horie and Kobayashi.

5. *Independent Claim 5*

a) *Preamble: A charge card processing method, which comprises:*

Petitioner contends that, to the extent the preamble is limiting, Horie teaches a method of notifying card usage status that automatically notifies a card user of a card payment transaction. Pet. 36–37 (citing Ex. 1006 ¶ 1, Fig. 9; Ex. 1003 ¶ 169). Patent Owner does not dispute that Horie discloses the preamble of claim 5.

We find that Horie discloses a charge card processing method. *See* Ex. 1006 ¶ 1. Accordingly, we find that, to the extent the preamble is limiting, Petitioner sufficiently shows that Horie teaches the preamble of claim 5.

b) *5[a] inputting a transaction request to a stationary merchant terminal disposed at a merchant location;*

Petitioner asserts Horie teaches using card 10 for a payment transaction at a card transaction terminal (CAT 1) in a card handling store. Pet. 37 (citing Ex. 1006 ¶¶ 39, 44). Petitioner further asserts that Horie

distinguishes between a CAT and wireless CAT. *Id.* at 37–38 (citing Ex. 1006 ¶ 39). Dr. Akl explains that one of ordinary skill in the art would have recognized that CAT 1 installed in a store would be connected by wired landline, as opposed to a wireless CAT. *Id.* (citing Ex. 1003 ¶¶ 172–173). Patent Owner does not dispute that Horie teaches limitation 5[a].

We find that Horie teaches inputting a payment transaction (transaction request) at a card transaction terminal disposed at a merchant location (stationary merchant terminal). Ex. 1006 ¶¶ 39, 44; Ex. 1003 ¶ 173. Accordingly, we find that Petitioner sufficiently shows that Horie teaches limitation 5[a].

- c) 5[b] processing the transaction request with the merchant terminal, including a transmission of a first authorization request to a remote processing facility and receipt of a notification that authorization has been accepted or declined;*

Petitioner asserts Horie teaches the card transaction terminal device sends an authentication processing request to a card authentication host. Pet. 38–40 (citing Ex. 1006 ¶¶ 52–54). Specifically, Petitioner identifies Horie’s credit authentication host 5a and bank (debit card) authentication host 6a as remote processing facilities because the authentication hosts are located in different sites than the card transaction terminal. *Id.* at 38–39 (citing Ex. 1006 ¶ 39, Fig. 1; Ex. 1003 ¶¶ 175, 176). Petitioner asserts that Horie discloses the authentication host performs the authentication process and sends a signal (receipt) to the card transaction terminal indicating that authentication is successful or not. *Id.* at 40–43 (citing Ex. 1006 ¶¶ 53–56, Fig. 3; Ex. 1003 ¶¶ 177–178). Patent Owner does not dispute that Horie teaches limitation 5[b].

We find that Horie teaches a merchant terminal transmitting an authentication processing request (authorization request) to a card

authentication host (remote processing facility) that responds by notifying that authorization has been accepted or declined. Ex. 1006 ¶¶ 52–54; Ex. 1003 ¶ 178. Accordingly, we find that Petitioner sufficiently shows that Horie teaches limitation 5[b].

- d) 5[c] transmitting a second authorization request from a remote processing facility¹⁵ to a mobile communications device of a customer associated with the requested transaction through a cellular network; and*

Petitioner asserts Horie teaches sending a notification to the user during the card authentication process, making it possible to issue a transaction cancellation request to the authentication host via a mobile phone. Pet. 41–42 (citing Ex. 1006 ¶¶ 57, 73). Petitioner asserts Horie’s transaction cancellation request corresponds to a second authorization request, because the user can cancel the transaction in response to an authentication request from the authentication host (remote processing facility, *see* limitation 5[b]). *Id.* at 42 (citing Ex. 1003 ¶ 180). Petitioner further asserts Horie teaches sending the request “from the server to the cell phone via a cellular network.” *Id.* at 42–43 (citing Ex. 1006, Fig. 1).

Additionally, Petitioner asserts Kobayashi teaches a second authorization request where the card company calls the customer to authorize a card transaction. *Id.* at 43–44 (citing Ex. 1007 ¶¶ 52, 60; Ex. 1003 ¶¶ 181, 182). The user responds by entering a card acceptability

¹⁵ Claim 5 twice recites “a remote processing facility.” Ex. 1001, 6:26, 30–31. Petitioner explains that this “is an obvious typographical error” and that the second recitation of “a remote processing facility” refers to the first-recited “remote processing facility.” Pet. Reply 9 (responsive to Inst. Dec. 27 n. 16). We agree.

input number from a mobile phone. *Id.* Patent Owner does not dispute that the combination of Horie and Kobayashi teaches limitation 5[c].

We find that Horie and Kobayashi teach sending transaction information in a second authorization request to a customer’s mobile device through a cellular network. Ex. 1006 ¶ 57; Ex. 1007 ¶ 60; Ex. 1003 ¶ 182. We also find Petitioner sufficiently shows that Horie’s authentication host that sends an authentication request via the server to the cell phone qualifies as “a remote processing facility,” for both steps 5[b] and 5[c]. Accordingly, we find that Petitioner sufficient shows that the combination of Horie and Kobayashi teaches limitation 5[c].

- e) *5[d] authorizing the requested transaction only if authorization has been accepted for the first authorization request and a proper response has been received by the remote processing facility to the second authorization request.*

Petitioner asserts that Horie teaches “a ‘first authorization request’ because in the process the card transaction terminals located in the merchant stores communicate with the authentication hosts, asking for authorization for the purchase.” Pet. 46 (citing Ex. 1003 ¶ 185); *see also id.* at 44–45 (citing Ex. 1006 ¶¶ 44, 73; Ex. 1003 ¶¶ 184–185). Petitioner asserts that Kobayashi teaches “a ‘second authorization request’ and a ‘proper response’ because . . . the card center calls the card holder and provides ‘guidance’ on the transaction,” i.e., whether the card can be used or not. *Id.* at 46 (citing Ex. 1003 ¶ 186); *see also id.* at 45–46 (citing Ex. 1007 ¶¶ 57, 58, 60, 61). Dr. Akl explains that the first authorization request “would have been processed only if a proper (e.g., a ‘yes’) response was received.” Ex. 1003 ¶ 186. Patent Owner does not dispute that Horie teaches limitation 5[d].

We find that the combination of Horie and Kobayashi teaches authorizing the transaction only if authorized by the authentication host and

the card user. Ex. 1006 ¶¶ 44, 73; Ex. 1007 ¶¶ 57, 58, 60, 61; Ex. 1003 ¶ 186. Accordingly, we find that Petitioner sufficiently show that the combination of Horie and Kobayashi teaches limitation 5[d].

f) Conclusion as to Claim 5

For the reasons outlined above, we determine that Petitioner has shown by a preponderance of the evidence that claim 5 would have been obvious over Horie and Kobayashi.

G. Anticipation by Kano (Claims 6 and 7)

Petitioner argues that Kano anticipates claims 6 and 7. Pet. 46–57. As discussed above, Patent Owner did not file a response, but it remains Petitioner’s burden to show unpatentability. We find that Petitioner has shown by a preponderance of the evidence that claims 6 and 7 are anticipated by Kano.

1. Kano (Ex. 1011)

Kano relates to a commercial transaction method and system used to pay for products at stores with a mobile phone. Ex. 1011, 7:51–7:3.

Figure 10, reproduced below, illustrates a method disclosed by Kano.

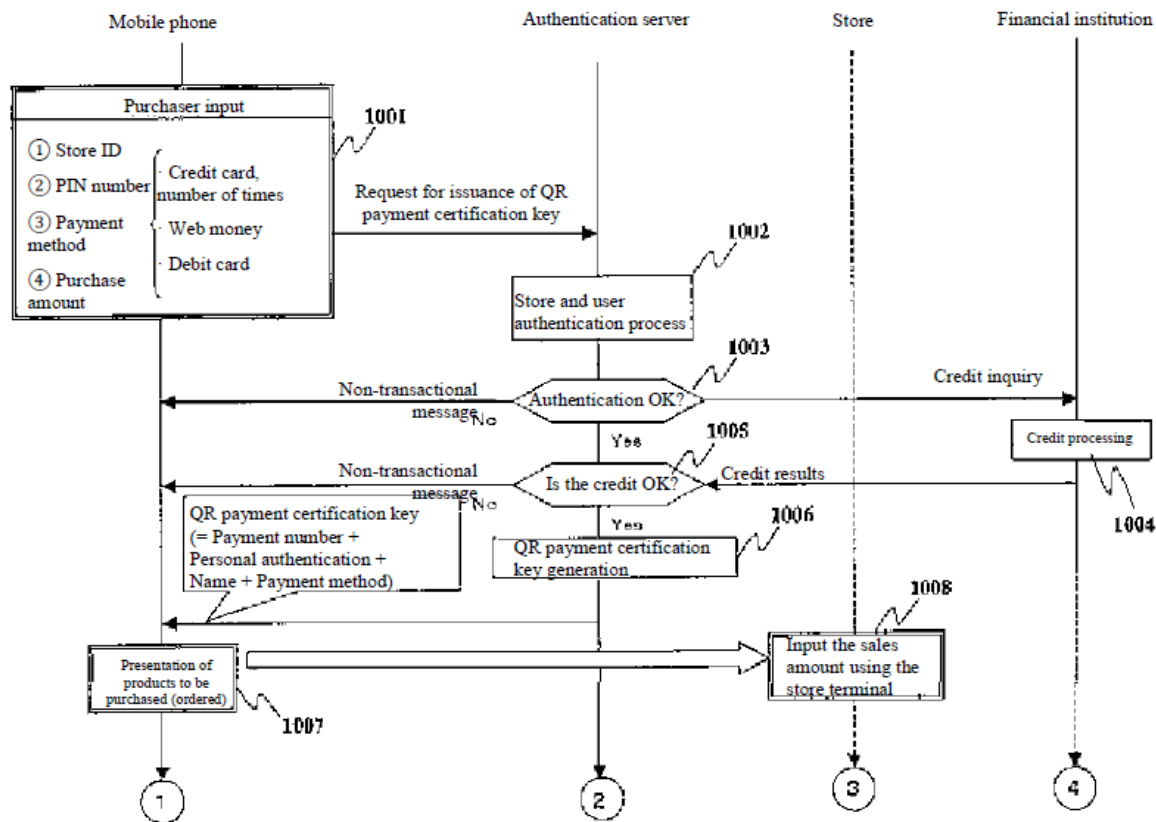


Figure 10 illustrates a flowchart for a method of purchasing a product at a store using a mobile phone. Ex. 1011, 13:31–32. The method begins with the user/purchaser setting mobile phone 1 to “mobile shopping mode.” *Id.* at 14:33–39. The user then inputs store identification, personal identification, payment method, and purchase price (purchaser input 1001) into mobile phone 1. *Id.* The mobile phone transmits purchaser input 1001 to authentication server 2 as a right arrow labeled “request for issuance of QR payment certification key.” *Id.* at 13:46–47. The authentication server authenticates store 3 and the user (step 1002). *Id.* at 13:48–49. Authentication includes searching a store database to check if the store is registered and searching a user database to check if the user is registered by PIN and credit card number. *Id.* at 13:50–55.

The server accepts authentication where the store and user are registered, and denies authentication where the store and user are not

registered (“Authentication OK?” (1003)). *Id.* at 14:4–6. If authentication is accepted, the authentication server sends a credit inquiry to financial institution 4. *Id.* at 14:7–8. The financial institution conducts credit processing (1004) and returns credit results to the authentication server (“Is the credit OK?” (1005)). *Id.* at 14:8–9. If “No,” the authentication server sends a non-transactional message to the mobile phone. *Id.* at 14:10–11. If “Yes,” the authentication server generates a QR payment certification key (1006) that “consists of at least information on the approval number, personal identification, name, and the method of authorization.” *Id.* at 14:10–15. The authentication server then sends the QR payment certification key (1006) to the mobile phone. *Id.*

At the store, “[t]he user presents the pre-selected desired product to the store staff at the store terminal [] and places an order for the desired product (step 1007). The store staff enters the price of the desired purchase item using the store terminal (step 1008).” *Id.* at 14:20–22. Separately, the user presents the QR code displayed by the mobile phone. *Id.* at 14:23–24.

The next part of the method is illustrated in Figure 11, reproduced below.

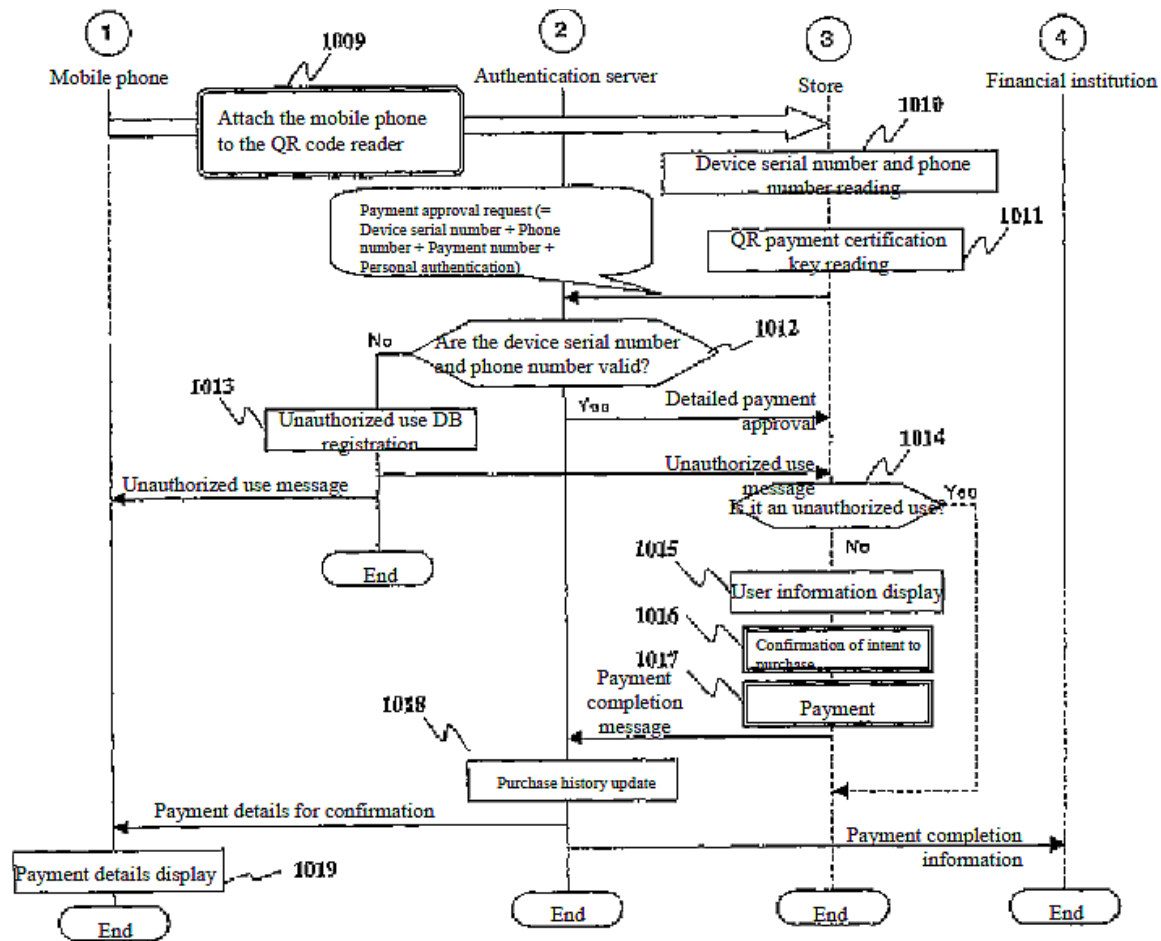


Figure 11 illustrates a flowchart for a method of purchasing a product using a mobile phone. Ex. 1011, 13:31–32. The user attaches the mobile phone to the QR code reader at the store terminal (1009). *Id.* at 14:23–28. The store terminal reads the mobile phone serial number and phone number (1010) and QR certification key (1011) and sends a payment approval request to the authentication server. *Id.* at 14:28–36. The authentication servers confirms that the device serial number and phone number are valid (1012), and if “Yes,” sends a detailed payment approval to the store. *Id.* at 14:47–50. The store then confirms payment (1017) and sends a payment completion message to the authentication server that sends confirmation payment details to the mobile phone. *Id.* at 14:54–59. The mobile phone displays the payment details to the user (1019) to end the process. *Id.* at Fig. 11.

2. *Independent Claim 6*

a) *Preamble: A charge card processing method, which comprises:*

Petitioner asserts that, to the extent the preamble is limiting, Kano discloses a method of performing a commercial transaction for payment of products using terminals connected to a network. Pet. 46–47 (citing Ex. 1011, 6:51–7:3; Ex. 1003 ¶¶ 188–189). Petitioner does not expressly reference a charge card when discussing the preamble. *See id.* Instead, Petitioner appears to rely on testimony from Dr. Akl, who cites to Kano’s disclosure of credit card payment for the payment method. Ex. 1003 ¶ 189 (citing Ex. 1011, 13:39–41). Nevertheless, Petitioner asserts that Kano discloses a charge card payment (credit or debit) when discussing the body of claim 6. *See* Pet. 47 (citing Ex. 1011, 13:39–41). Patent Owner does not dispute that Kano discloses the preamble.

To the extent the preamble is limiting, we find that Kano discloses a charge card processing method. Ex. 1011, 13:39–41; Ex. 1003 ¶ 189. Accordingly, we find that Petitioner sufficiently shows that Kano discloses the preamble of claim 6.

b) *[6a] preauthorizing an imminent given transaction by transmitting a preauthorization for the imminent given transaction from a customer to a financial authorization system;*

Petitioner asserts Kano discloses a mobile shopping mode for a mobile phone. Pet. 47 (citing Ex. 1011, 13:33–37). To make a purchase, the purchaser uses the mobile shopping mode to enter transaction information including store ID, personal ID, payment method, and product purchase price (step 1001). *Id.* at 47–48 (citing Ex. 1011, 13:31–37, Fig. 10). The mobile phone transmits the inputted information as a QR authorized

certification key issuance request to an authentication server. *Id.* (citing Ex. 1011, 13:46–47, Fig. 10). Petitioner asserts Kano’s method discloses “preauthorization” because the user, by inputting transaction information, provides “the card center with authorization to approve a purchase of specific items before the transaction with the store has occurred or even started, the very essence of preauthorization.” *Id.* at 49 (citing Ex. 1003 ¶ 192). Patent Owner does not dispute that Kano discloses limitation 6[a].

We find that Kano discloses a user (customer) transmitting purchase (imminent transaction) information (preauthorization) to an authentication server (financial authorization system) before purchasing an item. Ex. 1011, 13:31–37, Fig. 10; Ex. 1003 ¶¶ 191–192. Accordingly, we find that Petitioner sufficiently shows that Kano discloses limitation 6[a].

c) [6b] subsequently inputting a transaction request concerning the given transaction at a merchant terminal disposed at a merchant location;

Petitioner asserts Kano discloses the user presents the preselected desired item listed in the QR authorized certification key at the store terminal and places an order for the product (step 1007). Pet. 49–50 (citing Ex. 1011, 14:12–15, 14:20–22; Ex. 1003 ¶ 194). Petitioner further asserts Kano discloses that the store staff enters the price of the desired purchase item at the store terminal. *Id.* at 50 (citing Ex. 1011, 14:20–22; Ex. 1003 ¶ 194). Patent Owner does not dispute that Kano discloses limitation 6[b].

We find that Kano discloses entering a purchase request (transaction request) at a merchant location for the desired purchase item (given transaction) after (subsequently) requesting the QR authorized certification key. Ex. 1011, 14:12–15, 14:20–22; Ex. 1003 ¶ 194. Accordingly, we find that Petitioner sufficiently shows that Kano discloses limitation 6[b].

- d) [6c] processing the transaction request at the merchant terminal, including a transmission of an authorization request for the given transaction to the financial authorization system;*

Petitioner asserts Kano discloses the user inserts the mobile phone to display the QR authorized certification key at a QR reader attached to store terminal (step 1009). Pet. 51–52 (citing Ex. 1011, 14:23–27, Fig. 11). The QR reader reads the QR authorized certification key, the mobile phone serial number, and the mobile phone number and forwards the information to the store terminal. *Id.* Petitioner asserts Kano discloses the store terminal then sends the QR and mobile phone information to the authentication server as a payment approval request. *Id.* (citing Ex. 1011, 14:28–30, Fig. 11; Ex. 1003 ¶ 196).

Petitioner asserts Kano’s “QR code serves as a transaction request because it provides the store terminal with information about a payment method and the specific items are included in the QR authorization code.” *Id.* at 52 (citing Ex. 1003 ¶ 1003). Petitioner asserts “Kano also discloses ‘an authorization request’ because in the method the store terminal sends all the information gathered from the QR code scan to an authentication server ‘as a payment approval request.’” *Id.* at 52–53 (citing Ex. 1003 ¶ 197).

Patent Owner does not dispute that Kano discloses limitation 6[c].

We find that Kano discloses the store (merchant) terminal processes a transaction request by transmitting a payment approval request (authorization request) to an authentication server (financial authorization system). Ex. 1011, 14:28–30, Fig. 11; Ex. 1003 ¶¶ 196–197. Accordingly, we find that Petitioner sufficiently shows that Kano discloses limitation 6[c].

- e) [6d] transmitting a response to the authorization request from the financial authorization system to the merchant terminal, and thereby authorizing the transaction request at the*

merchant's if the preauthorization from the customer is available in the financial authorization system, and otherwise contacting the customer for authorization or declining the authorization request.

Petitioner asserts Kano discloses that the authentication server receives a payment approval request, then confirms whether the mobile phone serial number and phone number are legitimate against the user information in a database(step 1012). Pet. 53–54 (citing Ex. 1011, 14:35–50). Petitioner asserts Kano discloses that if the numbers are not legitimate, the store terminal displays the user as an unauthorized user and terminates the process. *Id.* at 53 (citing Ex. 1011, 14:44–45; Ex. 1003 ¶ 199). If the numbers are legitimate, the authentication server recognizes whether the QR authorized certification key is genuine. *Id.* at 53–54 (citing Ex. 1011, 14:47–50). Petitioner asserts Kano discloses the authentication server then returns the detailed settlement approval to the store terminal, the store terminal displays the detailed authorization information to the user, and the user confirms the transaction. *Id.* (citing Ex. 14:47–50, 14:54–59; Ex. 1003 ¶ 200).

Petitioner asserts “Kano therefore discloses ‘transmitting a response to the authorization request’ because the authentication server will either return an ‘unauthorized use message’ or a ‘detailed settlement approval.’” *Id.* at 55 (citing Ex. 1003 ¶ 199). Petitioner also asserts Kano discloses “authorizing if the preauthorization is available in the financial system, because” “[t]he QR code, if genuine, is one that is generated as a result of the customer providing preauthorization for the products he or she wishes to purchase.” *Id.* at 55–56.

Patent Owner does not dispute that Kano discloses limitation 6[d].

We find that Kano discloses the authentication server (financial authorization system) confirms the QR authorized certification key (preauthorization) in response to the payment approval request (authorization request) from the merchant terminal, thereby authorizing the transaction. Ex. 1011, 14:35–50; Ex. 1003 ¶ 200. Accordingly, we find that Petitioner sufficiently shows that Kano discloses limitation 6[d].

f) Conclusion as to Claim 6

For the reasons outlined above, we find that Petitioner shows by a preponderance of the evidence that claim 6 is unpatentable as anticipated by Kano.

3. *Claim 7: The method according to claim 6, wherein the preauthorization from the customer includes a maximum amount to be authorized for the transaction and a time period within which the preauthorization is valid.*

Claim 7 requires two limitations for the preauthorization: a maximum amount and a valid time period. First, Petitioner asserts Kano discloses a maximum amount to be authorized in the form of a purchase price. *See* Pet. 56. Specifically, Petitioner asserts Kano discloses the purchaser enters a purchase price of the product, that is included in the QR authorization certification key. *Id.* (citing Ex. 1011, 3:33–37, 14:12–15; Ex. 1003 ¶ 203). Second, Petitioner asserts that Kano discloses a valid time period by disclosing that the QR authorized certification “is automatically deleted after a predetermined period of time.” *Id.* at 56–57 (citing Ex. 1011, 15:7–8; Ex. 1003 ¶¶ 203–204).

Patent Owner does not dispute that Kano discloses claim 7.

We find that Kano discloses the QR authorized certification key (preauthorization from the customer) includes a maximum authorized amount (price of the product) and valid time period (deleted after a

predetermined period of time). Ex. 1011, 3:33–37, 15:7–8; Ex. 1003 ¶¶ 203–204. Accordingly, we find that Petitioner shows by a preponderance of the evidence that claim 7 is unpatentable as anticipated by Kano.

H. *Obviousness over Kano (Claims 6 and 7)*

Because we determine that claims 6 and 7 are anticipated by Kano, we do not address Petitioner’s obviousness ground over Kano. *See Boston Sci. Scimed*, 809 F. App’x at 990.

IV. CONCLUSION

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1, 2	102	Horie	1, 2	
1, 2	103	Horie ¹⁶		
3–5	103	Horie, Kobayashi	3–5	
6, 7	102	Kano	6, 7	
6, 7	103	Kano ¹⁷		
Overall Outcome			1–7	

V. ORDER

In consideration of the foregoing, it is hereby

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1–7 of the ’706 Patent are unpatentable; and

¹⁶ We do not reach this challenge because we determine that Petitioner has shown claims 1 and 2 to be unpatentable on other grounds.

¹⁷ We do not reach this challenge because we determine that Petitioner has shown claims 6 and 7 to be unpatentable on other grounds.

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.

IPR2024-00369
Patent 7,954,706 B2

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