

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SQUARE, INC.
Petitioner,

v.

4361423 CANADA INC.,
Patent Owner.

IPR2019-01627
Patent 8,281,998 B2

Before JAMESON LEE, ROBERT J. WEINSCHENK, and
KEVIN C. TROCK, *Administrative Patent Judges*.

LEE, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

Square Inc. (“Petitioner”) filed a Petition for *inter partes* review of claims 1–3, 6, 10, 12, 14–17, and 19 (“challenged claims”) of U.S. Patent No. 8,281,998 B2 (Ex. 1001, “the ’998 patent”). Paper 2 (“Pet.”). Patent Owner filed a Preliminary Response. Paper 7. We instituted review on March 31, 2020. Paper 13 (“Decision on Institution”). 4361423 Canada Inc. (“Patent Owner”) filed a Patent Owner Response. Paper 21 (“PO Response”).¹ Petitioner filed a Reply. Paper 26. Patent Owner filed a Sur-Reply. Paper 27. Oral hearing was consolidated with the oral hearings in IPR2019-01625 and IPR2019-01629, and was held on January 27, 2021. A copy of the hearing transcript has been entered into the record as Paper 35 (“Tr.”).

Petitioner has proved by a preponderance of the evidence that claims 1–3, 6, 10, 12, 14–17, and 19 of the ’998 patent are unpatentable.

B. *Real Parties-in-Interest*

Each party identifies itself as the only real party in interest. Pet. 4; Paper 5, 2.

C. *Related Matters*

The parties indicate the ’998 patent is the subject of: *4361423 Canada Inc. v. Square, Inc.*, No. 4:19-cv-04311 (N.D. Cal.). Pet. 4; Paper 5, 2.

¹ The Patent Owner Response filed as Paper 21 does not include page numbers. Patent Owner filed a Corrected Patent Owner Response including page numbers. Paper 34. Hereinafter, citations to the Patent Owner Response are to the Corrected Patent Owner Response filed as Paper 34.

Petitioner indicates that the '998 patent is the subject of another petition for *inter partes* review in IPR2019-01628. Pet. 5.²

D. The '998 patent

The '998 patent relates to an apparatus and system “for commercial transactions using a transaction card via a communication device in audio communication with a remote processor assembly.” Ex. 1001, 2:17–20. It is also related to a method “for commercial transactions using a transaction card via a communication device.” *Id.* at 2:21–23. Specifically, the '998 patent describes a transaction apparatus, such as a portable point of sale (“POS”) device, linked to a communication device, such as a mobile phone. *Id.* at 5:52–53, 5:66–6:2; 7:19–24. Figure 2 illustrates an embodiment of an assembly according to the '998 patent and is reproduced below.

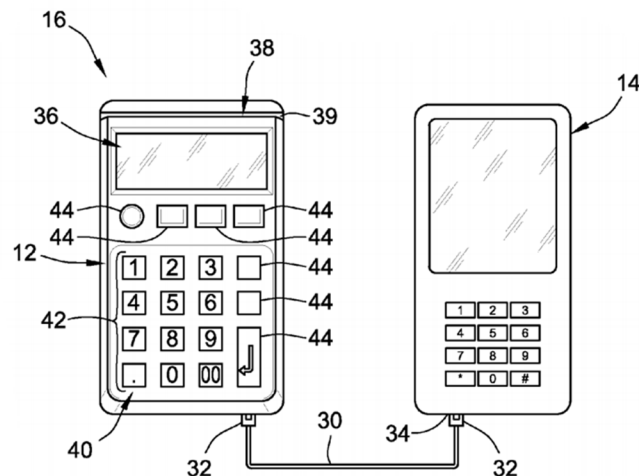


FIG. 2

² The Petition in IPR2019-01628 challenges the same claims as the challenged claims in this proceeding. We declined to institute review in IPR2019-01628. IPR2019-01628, Paper 14.

Figure 2 shows a front view of a transaction/communication assembly according to an embodiment of the '998 patent. *Id.* at 5:22–24.

Assembly 16 includes POS device 12 linked to a communication device in the form of mobile phone 14 via cable 30. *Id.* at 7:19–24. POS device 12 includes input device 38 such as card reader slot 39 for swiping or inserting transaction card 24 and capturing information from the transaction card. *Id.* at 7:31–34. The '998 patent explains that a user swipes card 24 through slot 39, and that analog information on magnetic strip 46 on card 24 is captured by an analog signal reader such as magnetic strip reader 52, and transferred to MCU 50 (microcontroller unit). *Id.* at 7:42–45, 7:56–59.

MCU 50 converts the information into an analog audio signal and transmits it via an analog communication link such as cable 30 to the communication device such as mobile phone 14. *Id.* at 7:65–8:4. Optionally, MCU 50 may encrypt the data. *Id.* at 7:61–63. The communication device then transmits the information to transaction server 18 for processing. *Id.* at 8:5–6. The transaction server decrypts the received signal, converts it to a digital signal, and sends it to remote processor 20 for validation. *Id.* at 8:6–8. Remote processor 20 can reject or accept the requested transaction and send a message to transaction server 18 to indicate that determination. *Id.* at 8:10–13. Transaction server 18, after receiving the message from remote processor 20, converts the received information to an audio signal and sends it back to mobile phone 14. *Id.* at 8:15–18.

Claims 1, 10, 12, 14, 17, and 19 of the challenged claims are independent. Independent claims 1 and 12 are illustrative. Claim 1 is drawn to an apparatus for effecting commercial transactions between an input device and a remote transaction server using a transaction card. *Id.* at 11:48–12:3. Claim 12 is drawn to a portable card reader device for reading a

card having magnetically recorded information stored on a magnetic strip incorporated into the card. *Id.* at 13:24–40. Claims 1 and 12 are reproduced below.

1[P]. An apparatus for effecting commercial transactions between an input device and a remote transaction server using a transaction card, said apparatus comprising:

- [A] an input device for capturing information from the transaction card;
- [B] a controller for converting the captured card information into an encrypted audio signal having an analog audio format suitable for transmission to an analog hands-free jack of a mobile communication device; and
- [C] a communication link for coupling said input device to an analog hands-free jack of a mobile communication device for the transmission of said encrypted analog-audio-format signals therebetween;
- [D] wherein when said input device captures the card information, said controller converts the card information into said encrypted analog-audio-format signal and transmits said converted signal via said communication link to said mobile communication device; and
- [E] wherein said mobile communication device automatically transmits the captured card information to the remote transaction server and receives transaction validation information from said remote transaction server.

Id. at 11:48–12:3 (clause headings in brackets added).

12. A portable card reader device for reading a card having magnetically recorded information stored on a magnetic strip incorporated into the card, the device comprising:

- a read head for sensing magnetically recorded information stored on a magnetic strip incorporated into a card and for producing an encrypted analog

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