

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS  
AMERICA, INC., SAMSUNG RESEARCH AMERICA, INC.,  
Petitioner,

v.

DYNAMICS, INC.,  
Patent Owner.

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Case IPR2020-00502  
Patent 10,032,100 B2

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Before TREVOR M. JEFFERSON, GEORGIANNA W. BRADEN, and  
JON M. JURGOVAN, *Administrative Patent Judges*.

JEFFERSON, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Petitioner, Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Research America, Inc., filed a Petition requesting *inter partes* review of claims 1–20 of U.S. Patent No. 10,032,100 B2 (Ex. 1001, the “’100 Patent”). Paper 1 (“Petition” or “Pet.”). Patent Owner, Dynamics Inc., filed a Preliminary Response to the Petition. Paper 8 (“Prelim. Resp.”). On August 12, 2020, we instituted *inter partes* review of claims 1–20 of the ’100 Patent. Paper 34 (“Dec.”).

Following institution, Patent Owner filed its Response to the Petition. Paper 41 (“PO Resp.”). On January 29, 2021, Petitioner filed a Reply to Patent Owner’s Response, and on March 9, 2021, Patent Owner filed a Sur-Reply. Paper 44 (“Reply”); Paper 45 (“Sur-Reply”).

An Oral Hearing took place on May 12, 2021. The Hearing Transcript is included in the record. Paper 53 (“Tr.”).

After considering the parties’ arguments and supporting evidence, we determine that Petitioner has proved by a preponderance of the evidence that claims 1–16 are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d) (2019).

## II. BACKGROUND

### A. *Related Proceedings*

Petitioner informs us of one pending district court proceedings based on the ’100 Patent that involves Petitioner, *Dynamics Inc. v. Samsung Elecs. Co., Ltd. et al.*, Case No. 1:19-cv-6479 (S.D.N.Y.), filed July 12, 2019, which was stayed on September 4, 2019. Pet. 71–72. Petitioner also informs us of one proceeding pending before the International Trade

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Commission (“ITC”), *In re Certain Mobile Devices With Multifunction Emulators*, Inv. No. 337-TA-1170 (U.S.I.T.C.), filed July 12, 2019. *Id.*

Patent Owner informs us of the same pending proceedings listed above. Paper 6 (Patent Owner’s Mandatory Notices), 2–3.

### *B. The ’100 Patent*

The ’100 Patent was filed on April 25, 2016, issued on July 24, 2018, from a continuation filed July 25, 2012, and is titled “Cards and Devices with Multifunction Magnetic Emulators and Methods for Using Same.” Ex. 1001, codes (22), (45), (54). The ’100 Patent relates to

A payment card (e.g., credit and/or debit card) is provided with a magnetic emulator operable of communicating information to a magnetic stripe reader. Information used in validating a financial transaction is encrypted. . . . Such dynamic information may be communicated using such an emulator such that a card may be swiped through a magnetic stripe reader—yet communicate different information based on time. An emulator may receive information as well as communicate information to a variety of receivers (e.g., an RFID receiver).

Ex. 1001, Abstract. The ’100 Patent discloses “[a] card is provided, such as a credit card or security card, that may transmit information to a magnetic stripe reader via a magnetic emulator.” *Id.* at 1:28–36.

The ’100 Patent states that “[t]he magnetic emulator may be, for example, a circuit that emits electromagnetic fields operable to electrically couple with a read-head of a magnetic stripe reader such that data may be transmitted from the circuit to the magnetic stripe reader.” *Id.* at 1:30–34. The ’100 Patent further states that the magnetic emulator may also “be operated to electrically couple, and transmit data to, a device using a Radio Frequency Identification (RFID) protocol.” *Id.* at 2:9–16. The ’100 Patent

specification further states that the magnetic emulator may be swiped through a magnetic stripe reader to communicate data, “placed outside and within the proximity of (e.g., 0.25 inches) the read-head.” *See id.* at 2:2–6, 4:29–33.

Figure 7 shows the electrical coupling between a card and a reader of the invention.

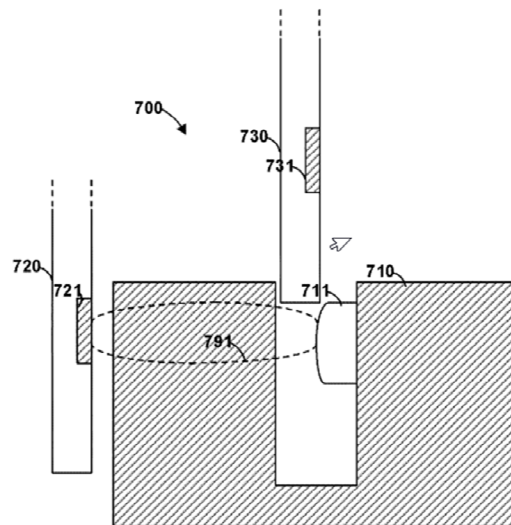


FIG. 7

Figure 7 depicts “cards 720 and 730 as well as magnetic stripe reader 710. Read-head housing 711 may be included on a wall of a trough of magnetic stripe reader 710.” *Id.* at 8:24–27. Card 720 shows emulator 721 that provides electromagnetic field 791 capable of transmitting through the housing of the magnetic stripe reader 710, thus card 720 may be outside of the reader and operable to communicate through the outer wall of a thickness of a quarter inch or more. *Id.* at 8:29–39.

The '100 Patent describes that the invention could be implemented in devices other than cards, such as “a portable telephonic device, portable media player, or any type of electronic device.” *Id.* at 2:48–51, 12:32–34. Figure 12 shows a personal electric device in accordance with the invention. *Id.* at 3:35–37.

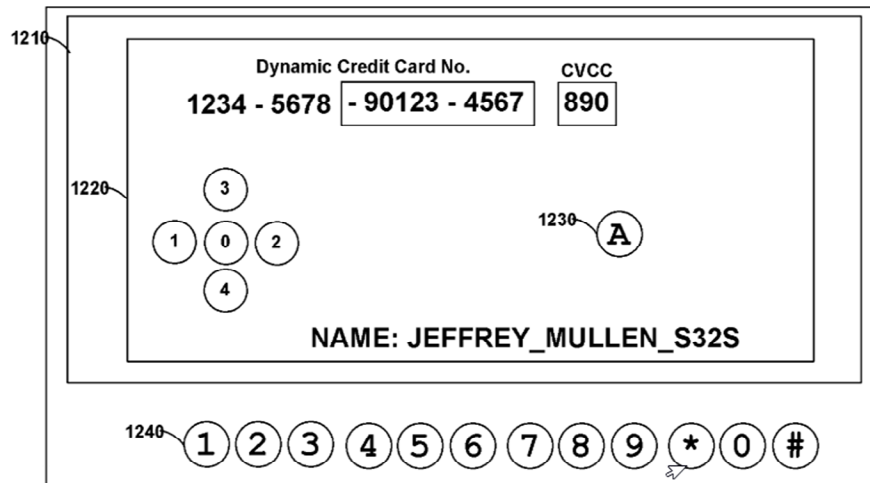


FIG. 12

Figure 12 shows personal electronic device 1200, with user inputs 1240, display 1210, and virtual card 1220. *Id.* at 12:37–40. “Personal electronic device 1200 may communicate to a card reader such as . . . an RFID reader.” *Id.* at 12:45–46.

### C. Illustrative Claims

Claims 1 and 12 are independent and illustrative.

1. A device comprising:
  - a circuit operable to emit an electromagnetic field and to electrically couple to, and transmit data to, a read-head located on a magnetic stripe reader; and
  - a processor for controlling the circuit,

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