

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

RFCYBER CORP.,
Patent Owner.

IPR2021-00981
Patent 9,240,009 B2

Before PATRICK R. SCANLON, KEVIN W. CHERRY, and
KRISTI L. R. SAWERT, *Administrative Patent Judges*.

CHERRY, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Samsung Electronics America, Inc. and Samsung Electronics Co., Ltd. (“Petitioner”) filed a petition to institute *inter partes* review of claims 1–17 of U.S. Patent No. 9,240,009 B2 (Ex. 1001, “the ’009 patent”). Paper 1 (“Pet.”). RFCyber Corp. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). On our authorization, Petitioner filed a Reply to Patent Owner’s Preliminary Response. Paper 8 (“Reply”). Patent Owner filed a Sur-Reply. Paper 9 (“Sur-Reply”).

We have authority under 35 U.S.C. § 314 to determine whether to institute an *inter partes* review. The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” The Supreme Court has held that the Board, in a decision to institute under 35 U.S.C. § 314(b), may not institute review on less than all claims challenged in the petition. *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1355–56 (2018). Moreover, in accordance with our rules, “[w]hen instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.108(a) (2020); *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (interpreting the statute to require “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

Applying those standards, and upon considering the Petition, the Preliminary Response, the Reply, the Sur-Reply, and the evidence of record, we determine the information presented shows a reasonable likelihood that

Petitioner would prevail in establishing the unpatentability of at least one of the challenged claims of the '009 patent. Accordingly, we institute an *inter partes* review of all challenged claims (i.e., claims 1–17) of the '009 patent, based on the grounds asserted in the Petition.

II. BACKGROUND

A. Related Matters

The parties identify the following district-court proceedings as related matters involving the '009 patent: *RF Cyber Corp. v. Google LLC*, No. 2:20-cv-00274 (EDTX); *RF Cyber Corp. v. LG Electronics, Inc.*, No. 2:20-cv-00336 (EDTX); and *RF Cyber Corp. v. Samsung Electronics Co.*, 2:20-cv-00335 (EDTX). Pet. 2; Paper 4, 1–2 (Patent Owner's Mandatory Notices). The parties also identify the following Board proceedings involving petitioner Google LLC and related patents: IPR2021-00954 (U.S. Patent No. 8,448,855 B1); IPR2021-00955 (U.S. Patent No. 9,189,787 B1); IPR2021-00956 (U.S. Patent No. 9,240,009 B2); IPR2021-00957 (U.S. Patent No. 8,118,218 B2); PGR2021-00028 (U.S. Patent No. 10,600,046 B2); and PGR2021-00029 (U.S. Patent No. 10,600,046 B2). Pet. 2–3; Paper 4, 1. Petitioner also identifies the following Board proceedings involving the '009 patent or related patents, filed by petitioner: IPR2021-00978 (U.S. Patent No. 8,448,855 B1); IPR2021-00979 (U.S. Patent No. 8,118,218 B2); IPR2021-00980 (U.S. Patent No. 9,189,787 B1); and IPR2021-00981 (U.S. Patent No. 9,240,009 B2). Pet. 3–4; Paper 4, 2–3.

B. Real Parties in Interest

Petitioner identifies its real parties in interest as Samsung Electronics America, Inc. and Samsung Electronics Co., Ltd. Pet. 2.

Patent Owner identifies RFCyber Corp. as its real party in interest.
Paper 4, 1.

C. Overview of the '009 patent

The '009 patent relates to commerce over networks, and more specifically, techniques for personalizing a secure element and provisioning an application such as an electronic purse that can be used in portable devices configured for both electronic commerce (a.k.a., e-commerce) and mobile commerce (a.k.a., m-commerce). Ex. 1001, (57), 1:18–24.

The '009 patent states that there is a “need to provide techniques to personalize a secure element in a contactless smart card or an NFC (Near Field Communication)-enabled mobile device so that such a device is so secured and personalized when it comes to financial applications or secure transactions.” *Id.* at 2:10–14. Although closed systems—such as smart card technology—existed, they were “difficult to be expanded into other areas such as e-commerce and m-commerce” because “stored values and transaction information are stored in data storage of each tag that is protected by a set of keys,” which keys must be “delivered to the card for authentication before data can be accessed during a transaction.” *Id.* at 1:33–40. According to the '009 patent, this required delivery of keys “makes systems using such technology difficult to be expanded to an open environment such as the Internet for e-commerce and/or wireless networks for m-commerce as the delivery of keys over a public domain network causes security concerns.” *Id.* at 1:40–44. The '009 patent purports to overcome the limitations of the prior art by providing “techniques for personalizing secure elements in NFC devices to enable various secure

transactions over a network (wired and/or wireless network).” *Id.* at 2:31–34.

Figure 1A, reproduced below, provides a schematic view of one embodiment of the ’009 patent.

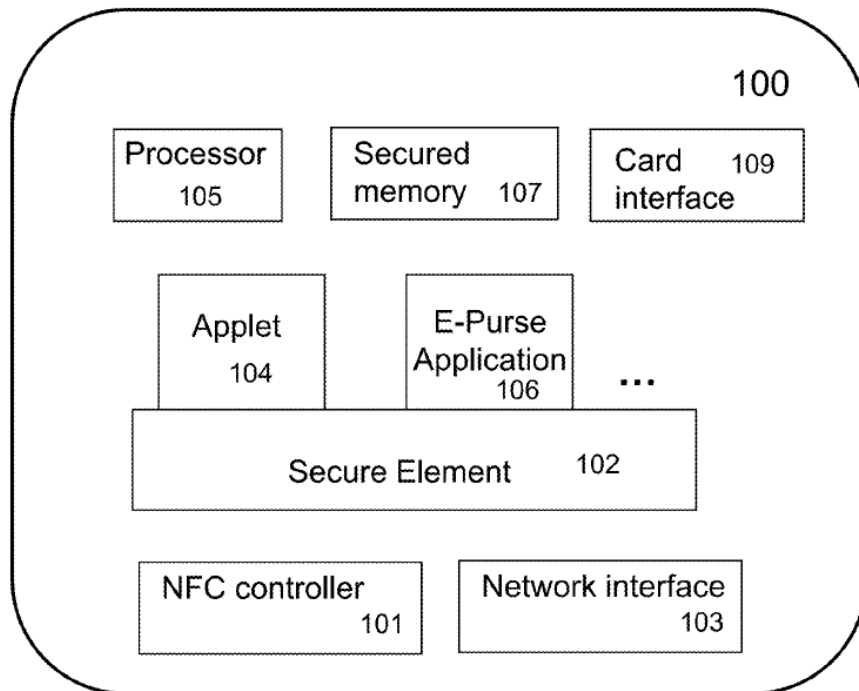


FIG. 1A

FIG. 1A shows a simplified architecture diagram of computing device 100 according to one embodiment of the ’009 patent. Ex. 1001, 4:35–36.

As shown in Figure 1A, mobile device 100 includes near field communication (NFC) controller 101 that enables device 100 to interact with another device wirelessly to exchange data with. *Id.* at 6:40–42. A user may use mobile device 100 as an e-purse or a wallet to pay for a purchase or an admission. *Id.* at 6:43–44. In operation, the e-purse is controlled by secure element (SE) 102. *Id.* at 6:44–46. According to the ’009 patent, “SE 102 enables mobile device 100 to perform financial transaction, transport ticketing, loyalty, physical access control, and other

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