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., and

SAMSUNG ELECTRONICS AMERICA, INC.,

Petitioners,

v.

ICASHE, INC.,

Patent Owner.

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Case IPR2025-00642

Patent No. 8,403,219

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**PATENT OWNER'S PRELIMINARY RESPONSE UNDER 35 U.S.C. §313 AND 37 C.F.R. §42.107**

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# PATENT OWNER'S EXHIBIT LIST

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|---|---|
| Ex. 2001 | Complaint for Patent Infringement, *iCashe, Inc. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.*, Civil Action No. 2:24-cv-00429, Dkt. 1 (June 6, 2024) |
| Ex. 2002 | Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.'s Answer and Defenses to Plaintiff's Complaint for Patent Infringement, *iCashe, Inc. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.*, Civil Action No. 2:24-cv-00429, Dkt. 25 (October 1, 2024) |
| Ex. 2003 | Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.'s Invalidity Contentions, *iCashe, Inc. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.*, Civil Action No. 2:24-cv-00429, (November 20, 2024) |
| Ex. 2004 | Order, *iCashe, Inc. v. Samsung Electronics Co., Ltd. and Samsung Electronics America*, Civil Action No. 2:24-cv-00429, Dkt. 38 (May 1, 2025) |
| Ex. 2005 | Affidavit of Service of Complaint, *iCashe, Inc. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.*, Civil Action No. 2:24-cv-00429, Dkt. 11 (June 17, 2024) |
| Ex. 2006 | Plaintiff iCashe, Inc.'s Notice of P.R. 3-1 Disclosures and P.R. 3-2 Production, *iCashe, Inc. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.*, Civil Action No. 2:24-cv-00429, Dkt. 16 (September 5, 2024) |
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## I. PRELIMINARY STATEMENT

Pursuant to 37 C.F.R. § 42.107, Patent Owner iCashe, Inc. ("iCashe") submits this Preliminary Response to the Petition for *Inter Partes* Review ("IPR") of U.S. Patent No. 8,403,219 (the "'219 patent"). Paper 2 ("Petition"). Petitioners Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, "Petitioners") challenge the validity of claims 1-6 of the '219 patent. For the reasons identified in Patent Owner's Memorandum in Support of Discretionary Denial, institution should be discretionarily denied pursuant to 35 U.S.C. § 314. Paper 7 ("Discretionary Denial Memorandum"). Namely, (1) the district court trial in the related litigation will precede a final written decision by five months; (2) Samsung waited more than nine months to file its petitions for *inter partes* review; (3) the district court denied Samsung's motion to stay and will likely reject a renewed motion; (4) *inter partes* review will not moot the district court proceedings; (5) the petition relies on extensive expert testimony; and (6) Samsung delayed challenging the '219 patent for over twelve years.

In addition to the reasons identified in Patent Owner's Discretionary Denial Memorandum, *inter partes* review should not be instituted because the Petition fails to establish a reasonable likelihood that any of the challenged claims are unpatentable. The combinations asserted in the Petition do not disclose all of the limitations of the challenged claims, as discussed below and confirmed in the

Declaration of Marc E. Levitt, Ph.D.—who worked as a POSITA in the field at the time of the inventions. In addition, the Petition advances unsupported arguments that a POSITA would have been motivated to combine references that address different technical issues and defeat each other's goals. Accordingly, Patent Owner requests that the Board deny institution of *inter partes* review.

## II. FACTUAL BACKGROUND OF THE '219 PATENT

### A. State of the art at the time of invention

Devices that communicate using RF communications, such as near field communication (NFC) devices, traditionally operate in either a passive mode or an active mode. Ex. 2031, ¶ 39. A passive RF device is characterized by the fact that it does not generate its own RF field; it relies instead upon an interrogating RF field generated by an active device. Ex. 2031, ¶ 40. To communicate with the active device, the passive device modulates and reflects back the signal received from the active device. *Id.* Passive devices are typically not powered. *Id.* Instead, the passive device builds a charge from the active device's signal in order to modulate and return the active device's signal. *Id.*

In contrast to passive devices, active devices are typically connected to a power source and generate an RF signal. *Id.* at ¶ 41. An active device communicates by transmitting its own generated signal to another device, rather than modulating a received signal. *Id.*

**B. Overview of the ’219 patent**

The inventors of the ’219 patent developed an innovative technology that that advanced the state of the art when filed. In 2005, with the prevalence of mobile phones growing rapidly across the world, inventors Dr. Narendra, Mr. Tadepalli, and Mr. Spitzer envisioned a future in which mobile phones would replace consumers’ wallets. They set out to invent a mechanism for consumers to use their phones, instead of cash, checks, or credit cards, to complete point-of-sale transactions. The ’219 patent claims are directed to circuitry for high-performance communications between mobile devices and point-of-sale payment terminals to facilitate speedy mobile contactless payments—a technology that is today commonly referred to as “tap to” functionality. *Id.* at ¶ 45.

The ’219 patent inventors also recognized that their solution would need to interface with existing point-of-sale infrastructure in order to maximize adoption. Ex. 2031, ¶ 46. In 2005, point-of-sale terminals relied primarily on magnetic stripe readers through which consumers would physically swipe a credit card with a magnetic stripe.[1] Ex 1001, 1:22-25; Ex. 2031, ¶ 47. The inventors therefore sought

[1] In 2005, while magnetic stripe cards and readers were prevalent, smartcards, i.e., those that were the shape and form of a magnetic stripe card, but were embedded

to develop apparatuses, systems, and methods through which a mobile phone could securely communicate with a traditional magnetic stripe reader to affect a transaction in a contactless manner and without a physical card swipe. *See, e.g.*, 1001, 3:3-6, 4:17-22, 4:64-67; Ex. 2031, ¶ 47. Further, the inventors sought to implement these inventions with an internal power source—that is, where the mobile phone could power these communications, rather than being powered by an external source. *See* Ex. 1001, 7:12-21; Ex. 2031, ¶ 48.

The '219 patent, entitled "Apparatus with smartcard circuitry powered by a mobile device," was filed as U.S. Pat. App. No. 13/651,365 on October 12, 2012. The '219 patent claims priority to the original patent in the priority chain, U.S. Pat. No. 7,581,678, the application for which was filed on February 22, 2005 as U.S. Pat. App. No. 11/063,291.

The Petition challenges 6 claims of the '219 patent: 1 independent claim (claim 1) and 5 dependent claims (claims 2-6). Claim 1 of the '219 patent recites:

[1.pre] An apparatus with a compatible interface in a mobile phone,

[1.a] the apparatus including smartcard circuitry accessible by the mobile phone,

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with a small microprocessor that interacted with a different type of coordinating reader, were also becoming more common. Ex. 2031, ¶ 47; Ex. 1001, 3:40-44.

[1.b] the smartcard circuitry including a point-of-sale interface to communicate with a point-of-sale terminal,

[1.c] wherein the point-of-sale interface receives power from the mobile phone. Ex. 1001, 16:17-22.

The ’219 patent is entitled “Apparatus with smartcard circuitry powered by a mobile device.” The inventions claimed in the ’219 patent improved the process of effectuating financial transactions by integrating an electronic transaction card into a mobile device. *Id.* at 2:16-22. Prior to the ’219 patent, financial transactions required an electronic transaction card, like a credit card, to be swiped through a card reader, such that “[w]hen the card is swiped through a magnetic card reader, the information is transferred to the magnetic card reader to perform a transaction.” *Id* at 1:22-25. Rather than requiring a physical swipe, the ’219 patent contemplates implementing the invention by “emulat[ing] the swipe of a credit card.” *E.g., id* at 3:2-5.

Additionally, the ’219 patent discloses the use of “smartcard interfaces on electronic transaction cards.” *Id* at 1:54-58, 11:8-10. These communications, stripe emulation or smart card, are used to effectuate transactions, including financial transactions, among other types. *See id* at 3:40-47. In this way, “intelligent device 102 may program electronic transaction card 104 to operate as a credit card, a debit card, or the like.” *Id* at 3:54-56.

In the ’219 patent, the intelligent electronic device is a mobile phone. *Id* at 16:16-22 (claim 1). The electronic transaction card of the ’219 patent need not have a particular form factor, as long as it is compliant with integration within the phone. *Id* at 4:8-22. The stripe on the card embodiment need not be visible, such as where “circuitry may be included within electronic transaction card 106 to produce the time-varying magnetic field and no visible indication may be present on an external face of electronic transaction card 104.” *Id* at 3:12-15. Indeed, “in some embodiments of the present invention, transactions may utilize smartcard interfaces on electronic transaction cards in addition to, or in lieu of, stripes that emit time-varying magnetic fields.” *Id* at 3:48-51.

The ’219 patent further describes that the smartcard functionality of the electronic transaction card is powered by the mobile phone. *See* Ex. 1001 (54) (“Apparatus with smartcard circuitry powered by a mobile device”), 16:21-22 (“wherein the point-of-sale interface receives power from the mobile phone”); *see also id.* at 11:1-10. The ’219 patent describes various mechanisms for deriving power from the mobile phone itself to power the smartcard functionality:

> Electronic transaction card 300 may include one or more power sources (not shown). For example, electronic transaction card 300 may include a battery or a capacitor such as a supercapacitor. In some embodiments, a rechargeable battery may be included. The rechargeable battery may accept a charge from an add-on slot in an intelligent electronic device.

> In some embodiments, a capacitor may accept a charge from an intelligent electronic device. The capacitor may provide power to electronic transaction card 300 for enough time to perform a transaction.

*Id.* at 7:12-21.

## III. CLAIM CONSTRUCTION

Petitioners do not request construction of any claim terms from the '219 patent. Pet. at 14. Patent Owner does not believe that any claim terms require express construction to deny institution. Accordingly, the claims should be given their ordinary and customary meaning in light of the specification and prosecution history, as understood by a person of ordinary skill in the art. 37 C.F.R. § 100(b); *Phillips v. AWH Corp*., 415 F.3d 1303 (Fed. Cir. 2005).

## IV. PERSON OF ORDINARY SKILL IN THE ART

For the purposes of these preliminary proceedings, Patent Owner does not dispute the level of skill for a person of ordinary skill in the art ("POSITA") other than Petitioner's assertion that a POSITA must have specific experience in "the field of electronic devices used for transactions" rather than electronic devices more generally. Ex. 1003, ¶ 51. Patent Owner does not waive, however, any argument regarding the proper level of skill, and further reserves the right to later advance additional arguments.

## V. THE PETITION DOES NOT ESTABLISH A REASONABLE LIKELIHOOD THAT THE APPLIED REFERENCES RENDER THE CHALLENGED CLAIMS UNPATENTABLE

The Petition does not establish a reasonable likelihood that Fox alone (Ground 1) or in combination with Takekawa (Ground 2) discloses all of the limitations of any '219 patent claim, or that a POSITA would be motivated to combine the references. The Board should not institute trial for many reasons including, but not limited to:

A. Fox does not teach a "point-of-sale interface receives power from the mobile phone." *See* Section V.C.2.a.i.

B. The Petition does not establish a reasonable likelihood of establishing that a POSITA would have modified Fox with Takekawa. *See* Section V.D.2.

The Board should not institute trial on either Ground.

### C. The Petition Does Not Establish a Reasonable Likelihood that Fox With or Without Skill in the Art Renders Unpatentable Claims 1-6 (Ground 1)

The Petition has not demonstrated a reasonable likelihood of success that Petitioner will prevail on any claim challenged in Ground 1 for the following reasons, summarized in section V and described in detail below.

#### 1. Overview of Fox

U.S. Patent No. 5,943,624 to Fox (Ex. 1009 or "Fox") is entitled "Contactless Smartcard for Use in Cellular Telephone." The invention of Fox

incorporates electronics associated with a smartcard into the housing of a cellular telephone. Ex. 1009 at Abstract. Unlike the '219 patent, Fox does not contemplate powering smartcard circuitry via a mobile phone. Ex. 2031, ¶ 56. Rather, Fox merely contemplates passive smartcard circuitry housed within a phone and operable to communicate with a smartcard reader. *See, e.g.*, Ex. 1009, Abstract, 3:26-4:2; Ex. 2031, ¶ 56.

Fox articulates a number of disadvantages associated with traditional plastic smartcards. As articulated in the Fox specification, it is disadvantageous to need to insert a smartcard into an external reader such as a point-of-sale system or an ATM. Ex. 1009, 1:9-30. Fox describes that smartcard functionality in a "plastic-type credit card presents additional problems." *Id.* at 1:31-45. For example, the flexibility required to prevent breakage of the card in a wallet may lead to damage to incorporated electronics necessary for the smartcard functionality. *Id.* Further, smartcards in the form of a credit card may be easily lost. Fox therefore explains that its advantage is to "incorporate the electronics associated with a smart card into an alternative housing arrangement so as to overcome problems and disadvantages associated with flexible plastic smartcards," and that "[a]dditionally, it would be desirable to provide a smartcard that does not require contact with an external reader in order to perform a transaction." *Id.* at 1:46-1:52.

Thus, Fox teaches standard, unmodified smartcard functionality incorporated into a cellular phone alongside—and entirely distinct from—cellular phone functionality. *See, e.g.*, Ex. 1009, 2:13-16, 2:44-3:1, 4:42-46, FIG. 3, FIG 4; Ex. 2031, ¶59. Fox repeatedly demonstrates that cellular functionality and smartcard functionality are separate systems within the cellular phone. *See id* at 2:13-16 ("Cellular telephone 10 includes cellular telephone circuitry and smartcard circuitry (shown in block form in FIG. 2 and in detailed block form in FIGS. 3 and 4) for performing both a cellular telephone function and a smartcard function."); *id* at 2:30-33 ("Cellular telephone 10 includes casing 12 for housing the electronics for implementing both a smartcard function and a cellular telephone function as will be described and shown in more detail with respect to FIG. 2."); *see also id* at 2:44-3:1.

Indeed, Fox makes clear that these two functions are performed by separate circuitry within the cellular phone. *See id* at 3:27-31 ("The present invention provides a cellular telephone that incorporates the electronic circuitry for implementing both a cellular telephone function and a smartcard function functions via smartcard circuitry 42 and cellular telephone circuitry 46, respectively."). Fox details the smartcard functionality in Figure 3 and the cellular functionality in Figure 4.

The cellular circuitry and the smartcard circuitry are also powered by different systems. According to Fox, the cellular functionality is powered by the battery of the mobile phone. *See id* at 4:3-8 ("Cellular telephone circuitry 46 is powered via battery and power conditioner 54 which comprises a battery 130 and a power control 132."); FIG. 4. This is demonstrated with reference to Figure 4, where the battery and power conditioner 54 (highlighted in red below) is illustrated with respect to the cellular telephone circuitry 46 (highlighted in yellow below) that it powers.

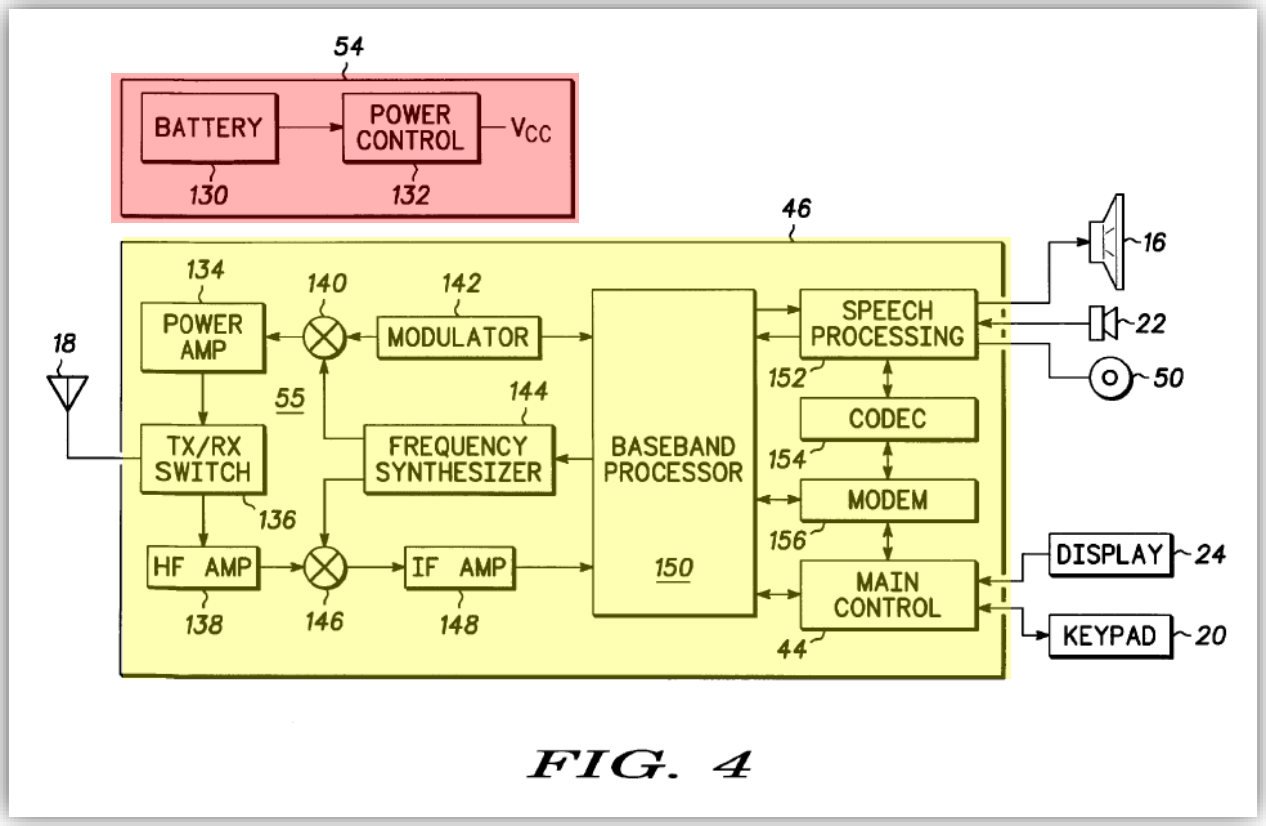
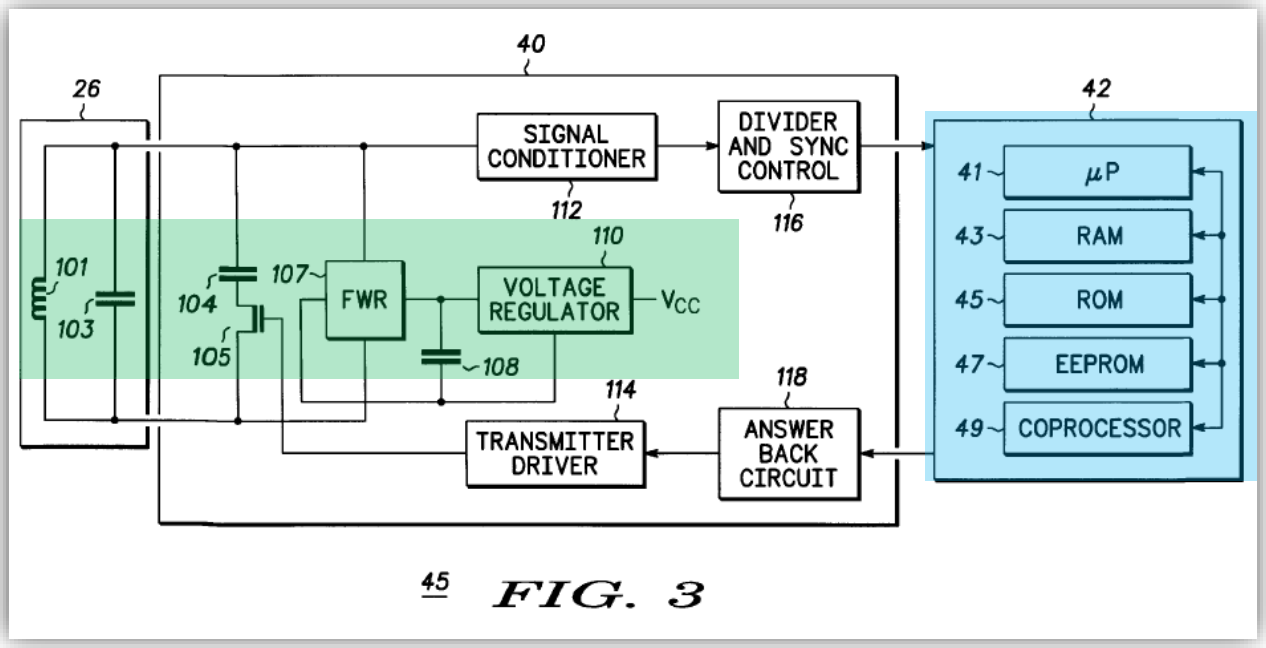



FIG. 4

*Id.* at Fig 4 (coloring added).

Separately, Fox's smartcard functionality receives its power from an interrogating RF signal, and does not receive power from the mobile phone battery, as a POSITA would expect for the unmodified smartcard technology. As Fox describes, "antenna 26 may take the form, for example, of capacitor 103 and a wire such as inductor 101," which together "form a tuned circuit that is resonant at the desired frequency of information and/or power transmission into the smartcard." *Id.* at 3:49-53. More, a "[p]ower supply voltage Vcc is generated via full-wave rectifier (FWR) 107." *Id* at 3:66-4:1. The rectified voltage is then filtered and regulated by voltage regulator 110. *Id* at 4:1-2. This is illustrated with reference to Figure 3, where the antenna 26, full-wave rectifier (FWR) 107, voltage regulator 110, and power supply voltage Vcc is shown (collectively, highlighted in green, as part of smart card RF interface 40) in connection with the smartcard logic function 42 (highlighted in blue).




45 FIG. 3

*Id.* at FIG. 3 (coloring added).

Fox describes how the smartcard circuitry is powered by an interrogating RF field. "Generally, the smartcard function within cellular telephone 10 is interrogated or updated by a smartcard infrastructure using an RF field that is received by the integral smartcard antenna 26 whereby antenna 26 may be the same or separate from antenna 18 associated with the cellular telephone function." *Id* at 5:1-6. As Fox explains, "[w]hen a user desires to initiate a smartcard function with a corresponding RF reader, the user may, for example, cause cellular telephone 10 to come into the RF power range associated with RF interface 40 so that communication between the reader and cellular telephone 10 may be facilitated." *Id* at 5:13-18.

### 2. The Petition Does Not Establish that Fox Discloses All Limitations of the Challenged Claims

#### a. Claim 1

##### i. Fox alone or in combination with skill in the art does not disclose "wherein the point-of-sale interface receives power from the mobile phone"

The Petition has not established a reasonable likelihood that Fox alone or in combination with skill in the art discloses "wherein the point-of-sale interface receives power from the mobile phone." *See* Pet. at 30-31.

As described above, a major advance of the '219 patent—as named in its title and as explicitly claimed—was that the smartcard circuitry within the mobile phone was powered by the mobile phone itself and not by an RF field emanated by another device. Ex. 1001, (54); 7:12-21; 16:20-22; Ex. 2031, ¶ 65. That is, the '219 patent claims an active system. Ex. 2031, ¶ 65. Other efforts to incorporate smartcard functionality into mobile phones at the time of invention produced only passive systems requiring the RF field to power the smartcard circuitry. *Id*.

Fox is one of those prior art systems, where smartcard circuitry (and the smartcard functionality it enables) is powered by introducing the mobile phone into an RF field and receiving power from that field. *See* Ex. 1009, 3:49-4:2 ("Smartcard antenna 26 may take the form, for example, of capacitor 103 and a wire such as inductor 101. These two components form a tuned circuit that is resonant at the desired frequency of information and/or ***power transmission into***

***the smartcard***.") (emphasis added); *id* at 5:1-18 ("Generally, the smartcard function within cellular telephone 10 is interrogated or updated by a smartcard infrastructure using an RF field that is received by the integral smartcard antenna 26 whereby antenna 26 may be the same or separate from antenna 18 associated with the cellular telephone function. … ***When a user desires to initiate a smartcard function with a corresponding RF reader, the user may, for example, cause cellular telephone 10 to come into the RF power range associated with RF interface 40*** so that communication between the reader and cellular telephone 10 may be facilitated.") (emphasis added); FIG 3; FIG. 5.

Petitioners' assertion that the smartcard circuitry is powered by the battery and power conditioner of Fox is contrary to both Fox's express disclosure and a POSITA's understanding. *See* Pet., 30-31 (citing Ex. 1009, 4:3-8; Ex. 1003, ¶ 81). Fox ***only*** describes the battery and power conditioner 54 in connection with the cellular functionality. Ex. 1009, 4:3-8. Fox refers to Figure 4 as "a more detailed block diagram… illustrating the ***electronic circuitry of cellular circuitry 46***," i.e., the separate cellular circuitry and functionality ***distinct from*** the smartcard circuitry 45 depicted in Figure 3. Ex. 1009, 4:3-5 (emphasis added). Fox gives no indication that the battery and power conditioner 54 powers the smartcard circuitry

45.[2] Ex. 2031, ¶ 67. Likewise, Fox describes the smartcard circuitry 45 as ***only*** receiving power from an interrogating RF field. Ex. 1009, 5:1-17; *see also id.*at 3:66-4:2. Nothing in Fox discloses powering the smartcard interface, including 40 the RF interface, from the battery—quite the opposite, as in FIG 3. *See id* at 3:66-4:2 (description of powering of smartcard functionality). Fox discloses no smart card functionality other than smartcard function 45, smartcard logic function 42,

[2] To the extent Petitioners rely on Figure 2 to demonstrate that the battery and power conditioner 54 powers the smartcard circuitry 42, that is not how a POSITA would understand Figure 2 in view of the state of the art and the express disclosures of Fox. Ex. 2031, ¶ 70. Rather, a POSITA would understand smartcard functionality to be powered by an RF signal regulated by voltage regulator 110 of Figure 3. *See supra*. If anything within the smartcard of Figure 2 is powered by the battery and power conditioner 54 at all, it would be the display and audio capabilities. *Id.*; Ex. 1009, 4:56-67. These functions are not part of the RF interface (40) and are solely subfunctions of the smartcard logic functions within 42, although not shown in Figure 3. Ex. 2031, ¶ 70. It would be well known by a POSITA that this display and audible functionality are not part of a typical smartcard functionality and non-standard functionality could require external power. *Id.*

and smartcard RF interface 40 of FIG. 3, all of which are powered by the interrogating RF field.

A POSITA would understand Fox to only disclose standard prior art technology—where the smartcard function 45 (composed of smartcard RF interface 40 and smartcard logic 42) of Fox is powered by the RF circuit. Ex. 2031, ¶ 68. In describing the RF interface 40 and smartcard circuitry 42, Fox's specification only discusses the power supply voltage Vcc generated from the full-wave rectifier 107 and regulated by voltage regulator 110, which a POSITA would understand to be a passive system. *Id.*; Ex. 1009, 3:49-4:2.

A POSITA would understand Fox to teach that battery and power conditioner 54 powers ***only*** the cellular telephone circuitry 46. Ex. 2031, ¶ 69. Nor is Petitioner's expert correct that power control 132, a component within battery and power conditioner 54, powers the smartcard circuitry 40. Ex. 1003, ¶ 81. Instead, as described in Fox's specification, smartcard circuitry 40 is powered via a different component—including voltage regulator 110, which receives power from the RF field into which cellular telephone 10 is introduced. *See* Ex. 2031, ¶ 69; Ex. 1009, 3:35-4:2; *id* at 5:1-18; FIG. 3.

At bottom, Fox discloses a system with distinct cellular and smartcard circuitries and functionalities. Each of those is depicted in its own figure (Figure 3 and Figure 4) and powered by separate sources, as described in the specification.

The smartcard circuitry 40 is powered by an external RF signal—and does not "receive power from the mobile phone" as claimed in all challenged claims of the '219 patent. Thus, Fox cannot anticipate or render obvious the claims of the '219 patent.

#### b. Claims 2-6

Claims 2 through 6 are dependent claims that depend from claim 1. Ex. 1001, 16:17-34. Because Fox does not disclose claim 1, it cannot disclose the more specific claims 2-6. *See, e.g.*, *Ortho-McNeil Pharm., Inc. v. Mylan Lab'ys, Inc*., 520 F.3d 1358, 1365 (Fed. Cir. 2008) ("[D]ependent claims are nonobvious if the independent claims from which they depend are nonobvious." (quoting *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992)).

### D. The Petition Does Not Establish a Reasonable Likelihood that Fox in View of Takekawa Renders Unpatentable Claims 1-6 (Ground 2)

The Petition has not demonstrated a reasonable likelihood of success that Petitioner will prevail on any claim challenged in Ground 2 for the following reasons, summarized in section V and described in detail below.

#### 1. Overview of Takekawa

U.S. Patent App. Pub. No. 2005/0015275 entitled "Information Processing Device and Information Processing Terminal" to Takekawa et al. (Ex. 1020 or "Takekawa") is directed to "an information processing device such as an IC card that is capable of retaining data in a secure manner" which is inserted into "an

information processing terminal such as a portable telephone." Ex. 1020, [0002]. Prior art IC cards required software necessary to carry out the functions related to the data stored on the IC card to be downloaded "via a network" from service providers. *Id* at [0006]-[0007]. The invention of Takekawa involves that software being present on the portable, removable IC card. *Id* at [0016]-[0017], [0083]-[0084].

**2. The Petition Does Not Establish that a POSITA Would Have Either a Reason to Combine Fox and Takekawa or an Expectation of Success from the Combination**

To support an obviousness challenge, "[t]he petitioner must . . . articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). The petitioner must demonstrate both that a POSITA (1) would have had a reason to combine the asserted references, and (2) would have had a reasonable expectation of success from doing so. *Honeywell Int'l Inc. v. Mexichem Amanco Holding S.A. DE C.V.*, 865 F.3d 1348, 1355 (Fed. Cir. 2017) (quoting *Redline Detection, LLC v. Star Envirotech, Inc.*, 811 F.3d 435, 449 (Fed. Cir. 2015)).

Here, Petitioners cannot articulate any basis for combining Fox with Takekawa. Petitioners fail to demonstrate any motivation a POSITA would have had to combine the references. Specifically, the Petition contends that "[t]o the extent it is argued further disclosure is required for 'an apparatus' (all claims) …

and for "an apparatus including software to be installed on the mobile phone' (claim 6), Takekawa discloses 'an apparatus' (*e.g.*, 'IC card') including software to be installed on a mobile phone…." Pet., 43-44. Petitioner further argues that "[a] POSITA would have been motivated to apply Takekawa's teaching of using a removable smart card to Fox's smartcard device to advantageously allow a user to switch the smartcard device between devices." Pet., 45. But Petitioner fails to address several fundamental, contradictory differences between the references that would discourage a POSITA from making the proposed combination. Instead, Petitioners rely solely on impermissible hindsight, using the '219 claims as a roadmap. *See Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1069 (Fed. Cir. 2018) (finding that a reference's "statements regarding preferences are relevant to a finding regarding whether a skilled artisan would be motivated to combine that reference with another reference" and must be considered to avoid hindsight bias).

In particular, the Petition fails to recognize that the goals of Fox and Takekawa are contrary to each other. Fox seeks to address problems caused by "smartcards housed within a plastic card." Ex. 1009, 1:12. A problem with these portable smartcards is that "small plastic smartcards are easy to misplace, lose, or steal thereby resulting in the user being without their smartcard as well as a third party having unauthorized access to their smartcard." *Id* at 1:42-45. "Accordingly,"

Fox teaches, "it would be desirable to incorporate the electronics associated with a smartcard into an alternate housing arrangement so as to overcome problems and disadvantages associated with flexible plastic smartcards." *Id* at 1:46-49. Fox repeatedly teaches that "integration of a contactless smartcard into a cellular telephone function provides … enhanced security from theft or loss." *Id* at 2:18-23; *see also id* at 3:26-34 ("The present invention provides a cellular telephone that … allows the smartcard electronics to be protected from damage by the housing associated with the cellular telephone and also decreases the likelihood that the smartcard will be lost or stolen."). A POSITA would therefore understand that an important objective of Fox would be to have non-removable, non-portable smartcard circuitry, in order to prevent that circuitry from being lost, stolen, or damaged. Ex. 2031, ¶ 79.

On the other hand, the goal of Takekawa is to create a portable IC card that holds important data and software separate from a mobile phone, which can then be inserted into (and therefore also removed from and stored separately from) a mobile phone. Ex. 2031, ¶ 80; Ex. 1020, [0016]-[0017], [0083]-[0084].

A POSITA would not be motivated to combine a system seeking to avoid portable cards that can get lost, stolen, or misused by "integrating" a smartcard into a mobile phone (Fox), with a system that touts a portable IC card loaded with data and software (Takekawa) that itself could be lost or stolen. Ex. 2031, ¶ 81.

Nor does the combination of Takekawa with Fox teach limitation [1.c], "wherein the point-of-sale interface receives power from the mobile phone." *See* Pet. at 43-48 (including argument as to Takekawa's disclosure of installing software on a mobile phone and combination with Fox's telecommunications device, but saying nothing about limitations other than claims [1.pre] and [6]). Because Takekawa cannot cure the "receives power from the mobile phone" shortfall of Fox, and because Takekawa and Fox have incompatible purposes and goals, a POSITA would not be motivated to combine these two references. Ex. 2031, ¶¶ 77-85.

## VI. SECONDARY CONSIDERATIONS

For the foregoing reasons, Petitioners have failed to establish a reasonable likelihood that any of the challenged claims is unpatentable, and institution should be denied on the basis of those reasons alone. Patent Owner acknowledges that Petitioners have attempted to rebut arguments regarding secondary considerations, also known as objective indicia of nonobviousness. *See* Pet., 49. Patent Owner does not waive its rights to address objective indicia of nonobviousness later in these proceedings.

## VII. CONCLUSION

The Petition does not establish a reasonable likelihood that any of the challenged claims is unpatentable. Institution should be denied.

Dated: July 16, 2025

Respectfully Submitted,

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**WORD-COUNT CERTIFICATE**

The undersigned certifies that the foregoing Patent Owner's Preliminary Response complies with the type-volume limitation of 37 C.F.R. § 42.24(a) and (b) and contains 4,648 words in 14-point Times New Roman font as calculated by the word count feature of Microsoft Office. This word count is inclusive of all text and footnotes but does not include the table of contents, table of authorities, certificates or service or word count, or appendix of exhibits or claim listing.

Dated: July 16, 2025

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## CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing Patent Owner's Preliminary Response was served on July 16, 2025, by electronic mail to Petitioners' counsel at the following addresses indicated in Petitioners' Mandatory Notices:

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