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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NEERAJ BHATIA and JEREMY O'DONOGHUE¹

Appeal 2018-003508
Application 13/931,708
Technology Center 2400

Before ROBERT E. NAPPI, JENNIFER S. BISK, and
JENNIFER L. McKEOWN, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the final rejection of claims 1 through 4, 6 through 17, 19 through 30, and 32 through 40. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

INVENTION

The invention is directed to a communications apparatus, which has a secure element in which a portion of the secure element is integrated into a system on chip (SoC). Abstract and Paragraph 1 of Appellant's

¹ We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as the assignee Qualcomm Incorporated. Appeal Br. 4.

Specification. Claim 1 is illustrative of the invention and is reproduced below:

1. An apparatus for communications, comprising:
 - a secure element (SE) that comprises a processor, random access memory (RAM), and non-volatile memory (NVM), wherein the SE further comprises a secured component and an unsecured component, wherein the secured component is integrated into a system on chip (SoC) forming a near field communication controller (NFCC) or a mobile station modem (MSM) of the apparatus, wherein the unsecured component and the secured component are coupled through an interface, and wherein the SE is configured to:
 - receive a request to access an application stored on the SE that is accessible through information stored in the SE;
 - retrieve from the secured component of the SE a first portion of the information associated with the application wherein the secured component comprises the processor and the RAM;
 - obtain from the unsecured component of the SE a second portion of the information associated with the application, wherein the second portion of the information comprises computer executable code for the application stored in the NVM within the unsecured component; and
 - facilitate access to the application using the first retrieved portion of the information to enable access to the second obtained portion of the information.

REJECTION AT ISSUE²

The Examiner has rejected claims 1 through 4, 6 through 17, 19 through 30, and 32 through 40 under 35 U.S.C. § 103(a) as being

² Throughout this Opinion, we refer to the Appeal Brief, filed October 19, 2017 (“Appeal Br.”), the Examiner’s Answer, mailed December 8, 2017 (“Answer”), and the Final Office Action, mailed May 22, 2017 (“Final Act.”).

unpatentable over Guthery (US 2010/0230490 A1; published Sept. 16, 2010) and Rhoads (US 2002/0114492 A1; published Aug. 22, 2002). Answer 3–10.

ANALYSIS

We have reviewed Appellant’s arguments in the Briefs, the Examiner’s rejections, and the Examiner’s response to Appellant’s arguments. Appellant’s arguments have not persuaded us of error in the Examiner’s rejections of claims 1 through 4, 6 through 8, 11 through 17, 19 through 21, 24 through 30, 32 through 34, and 37 through 40 under 35 U.S.C. § 103(a), however reverse the rejection under 35 U.S.C. § 103(a) of claims 9, 10, 22, 23, 35, and 36.

Rejections under 35 U.S.C. § 103(a)

With respect to independent claim 1, Appellant argues that the combination of Guthery and Rhoads does not teach the claimed features of: a) the secure element comprises a secured component and an unsecured component; b) the secured element is integrated into a system on a chip forming a near field controller or a mobile station modem; and c) obtaining from the unsecured component of the secured element a portion of the information associated with an application. Appeal Br. 9–13. In these arguments the Appellant equates Guthery’s Secure Access Module (SAM) item 116 to the claimed secured element and asserts that Guthery does not teach features a)–c) above as found by the Examiner. *Id.* Further, Appellant, similarly equating Guthery’s SAM to the claimed secured element, argues that the Examiner has not provided an adequate rationale for combining the teaching of Guthery and Rhoads. Appeal Br. 14–15.

With respect to feature a) the Examiner finds that Guthery teaches a secured element with a secured component and an unsecured component. Specifically, the Examiner equates Guthery's card-accessing device item 104 with Appellant's claimed secure element and finds that the card access device includes a secure element, item 124 (equated to the claimed secure component) and an unsecured processor and memory items 108, 112 (equated to the claimed unsecured component). Answer 10–11 (citing Guthery, Fig. 1, ¶¶ 24, 26). We concur with the Examiner's claim interpretation and findings with regard to Guthery. As discussed above, Appellant's arguments are premised upon the claimed secure element being equated to Guthery's secured access module. We do not consider claim 1 to require such a mapping nor has Appellant persuaded us that the Examiner's mapping of the claimed secure element with the card access device is unreasonable. Thus, Appellant's arguments have not persuaded us the Examiner erred in finding the combination of the references teach that the secure element comprises a secured component and an unsecured component.

With respect to feature b) the Examiner finds that Guthery teaches a secured element is integrated into a system on a chip forming a near field controller or a mobile station modem. Answer 11 (citing Guthery, Fig. 1, ¶¶ 22, 27). We concur with the Examiner's finding. We are not persuaded by Appellant's arguments that the Examiner's reliance on paragraph 22 of Guthery, which teaches that the portable card, item 148, can include a Near Field Communications enabled device, is erroneous as the card is not part of the system on the chip. Appeal Br. 11–12. While we concur with Appellant that paragraph 22 of Guthery discusses the card as being a near field

communications enabled device, this does not persuade us of error. The card access device (which the Examiner equates to the secure element system on a chip) communicates wirelessly with the card (near field communication enabled) via card interface item 132 and/or 120, thus; suggesting that the communications interface is a near field controller or a mobile station modem. *See* Guthery ¶¶ 31–33. Accordingly, Appellant’s arguments have not persuaded us the Examiner erred in finding the combination of the references teaches or suggests a secured element is integrated into a system on a chip forming a near field controller or a mobile station modem.

With respect to feature c) the Examiner finds that Guthery teaches obtaining from the unsecured component of the secured element a portion of the information associated with an application. Answer 11 (citing a quote from Guthery, ¶ 53). Appellant argues that none of the cited portions of Guthery describes obtaining portions of the information from an unsecured component. Appeal Br. 12. We concur with the Examiner and note the language quoted by the Examiner is not in paragraph 53 of Guthery but rather in paragraph 47. Guthery paragraph 47 states “then the SAM 116 may relinquish control of the transaction from to the unsecure environment of the card-accessing device such that the next step of the transaction can be completed by the processor 108 residing within the unsecure environment.” Appellant’s arguments have not identified why this teaching does not meet the disputed claim limitation, accordingly, we are not persuaded the Examiner erred in finding the combination of the references teaches or suggests an obtaining from the unsecured component of the secured element a portion of the information associated with an application.

With regard to the rationale to combine the references, Appellant states:

In particular, since Rhoads does not disclose or suggest any alternative integrated circuit or operation thereof, the combined system would still relinquish control of the transaction from the Secure Access Module to an unsecure environment of the card-accessing device as described in Guthery. Therefore, even if the unsecure environment of the card-accessing device were modified to employ the steganographic techniques of Rhoads, the combined system would not “obtain from the unsecured component of the SE a second portion of the information associated with the application, wherein the second portion of the information comprises computer executable code for the application stored in the NVM within the unsecured component,” as recited in claim 1 because control has been relinquished to the unsecure environment outside of any secure element. That is, because the system of Guthery relinquishes control of the transaction from the SAM to an unsecured environment, even if the data were steganographically encoded, the processor 108 is unsecure, so the SAM of Guthery would not obtain data from the processor 108 because any such data would be unsecure.

Appeal Br. 14–15.

We are not persuaded of error by this argument as it is not commensurate with the Examiner’s claim interpretation and does not address the Examiner’s rationale to combine. As with the other arguments discussed above, Appellant’s rationale to combine argument is premised upon the claimed secure element being equated to Guthery’s secured access module. As discussed above, we concur with the Examiner’s claim interpretation equating Guthery’s card-accessing device (item 104) with the claimed secure element. Thus, the Examiner’s combination is adding Rhodes stenographic

operation to Guthery's card accessing device (not the secure access module as argued by Appellant) to make it more difficult for hackers to gain access to the content. Answer 10–14; Final Act. 5–6. As such, we are not persuaded the Examiner erred in combining the teachings of Guthery and Rhodes. Accordingly, we sustain the Examiner's rejection of claim 1 and claims 2 through 4, 6, 7, 11 through 17, 19, 20, 24 through 30, 32, 33, and 37 through 40, which are not separately argued and thus grouped with claim 1.

Dependent claims 8 through 10, 21 through 23, and 34 through 36

Appellant argues that the Examiner's rejection of these claims erroneously asserts that Guthery teaches a) the footprint of the secure element is minimized by integrating only the secured component into the system on chip (claim 8); b) the secure component of the secure element is less than or equal to 65nm (claim 9); and c) the security shielding for the secured component includes one or more existing metal layer associated with the system on the chip. Appeal Br. 15–16.

The Examiner cites to paragraph 9 of Guthery as teaching the limitations of claims 8 through 10, 21 through 23, and 34 through 36, and asserts that the limitations are a design choice. Final Act. 8, 10; Answer 20.

Appellant's arguments have not persuaded us of error with respect to the Examiner's rejection of claims 8, 21, and 34. Each of these claims recites the footprint of the secure element is minimized by integrating only the secured component into the system on chip. As discussed above, the Examiner has equated Guthery's secure element (item 124) with Appellant's claimed secure element. Guthery Figure 1, paragraphs 27 and 31 suggest that the secure element (item 134) may be the only device on the chip as the

interfaces may be in the card accessing device. Accordingly, we find that Guthery teaches or suggest the limitations of claims 8, 21, and 34.

Regarding claims 9, 10, 22, 23, 35, and 36, which recite the secure component of the secure element is less than or equal to 65nm or wherein the security shielding for the secured component includes one or more existing metal layer associated with the system on the chip. We have reviewed the teachings of Guthery and do not find sufficient evidence to support the Examiner’s finding that these features are taught or suggested by Guthery, nor do we find that the Examiner has provided sufficient rationale or evidence to show that they represent obvious design choices.

CONCLUSION

The Examiner’s decision rejecting claims 1 through 4, 6 through 17, 19 through 30, and 32 through 40 is affirmed–in–part.

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–4, 6–17, 19–30, 32–40	103 (a)	Guthery and Rhoads	1–4, 6–8, 11–17, 19–21, 24–30, 32–34, 37–40	9, 10, 22, 23, 35, 36.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART