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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VIJAYAKUMAR PANDIARAJAN, WILLIAM DAKOTA
COMMONS, SIVA PATNAM, JAYANT GHOSHAL, and
RAMAKRISHNA KANNAMANGALAM

Appeal 2018-008915
Application 14/137,710
Technology Center 3600

Before JON M. JURGOVAN, KARA L. SZPONDOWSKI, and
MICHAEL M. BARRY, *Administrative Patent Judges*.

BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the Examiner's decision to reject claims 1–4, 6, 7, 12, 13, 15, 16, and 18–27, which are all of the claims pending. Final Act. 1; Appeal Br., Claims App'x

¹ We refer herein to the Appeal Brief filed Mar. 31, 2018 with the Claims Appendix as revised May 16, 2018 (“Appeal Br.”), the Answer mailed July 27, 2018 (“Ans.”), the Reply Brief filed Sept. 19, 2018, the Final Office Action mailed Nov. 8, 2017 (“Final Act.”), and the Specification filed Dec. 20, 2013 (“Spec.”).

² We use “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Verizon Communications Inc. and its subsidiary companies. Appeal Br. 3.

3–8 (identifying claims 5, 8–11, 14, and 17 as cancelled). We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

Introduction

Appellant’s Specification describes that “NFC [near-field communication] communications are susceptible to eavesdropping” but that “[q]uick-response (QR) codes[, which] are two-dimensional bar codes that can encode information” and whose “reading [] requires a direct line of sight,” are not so susceptible. Spec. ¶¶ 2, 3, 4 (“A QR code can thus be kept secure by limiting the period of time it is displayed or exposed, and/or monitoring the line-of-sight to the QR code.”). The invention “relate[s] to dynamic generation of quick-response (QR) codes for secure communication to/from a mobile device.” Spec. ¶ 15.

Claim 1 is illustrative of the claims on appeal:

1. A method comprising:

receiving, in a mobile device executing a retail application, selection of a product or service by a user of the mobile device;

generating, in the mobile device and based on the received user selection of the product or service, a first quick response (QR) code encoding identification of the selected product or service, identification of a user account of the user of the mobile device, and a location at which the QR code is being encoded;

providing a search function, in the mobile device, for locating one or more retail kiosks within a specific geographical location of the mobile device;

reading, using a camera of the mobile device, a second QR code displayed by a retail kiosk selected by the user from the one or more retail kiosks, the second QR code encoding an encryption key;

processing, in the mobile device, the second QR code read using the camera in order to extract the encryption key encoded in the second QR code;

encrypting, in the mobile device, the first QR code into an encrypted QR code using the encryption key extracted from the second QR code read by the camera; and

displaying, by the mobile device, the encrypted QR code in a format to be communicated to a QR reader of the retail kiosk associated with the retail application;

wherein the retail kiosk is configured to extract the location at which the first QR code was encoded from the encrypted QR code to verify that the first QR code was encoded within a particular geographical area of the retail kiosk, before authenticating a transaction based on the encrypted QR code.

App. Br., Claims App'x 3.

References and Rejections

The Examiner relies on the following references:

Name³	Number	Published
Deffeyes	US 5,001,754	Mar. 19, 1991
Hart	US 2008/0243702 A1	Oct. 2, 2008
Peyran	US 2009/0071972 A1	Mar. 19, 2009
Taylor	US 2009/0248538 A1	Oct. 1, 2009
Rose	US 2010/0049615 A1	Feb. 25, 2010
Black	US 2012/0124365A1	May 17, 2012
Richard	US 2012/0253913 A1	Oct. 4, 2012
Paulson-Ellis	US 2013/0013390 A1	Jan. 10, 2013
Wong	US 2013/0024299 A1	Jan. 24, 2013

³ All reference citations are to the first listed inventor's surname.

Sabin	US 2013/0111208 A1	May 2, 2013
Torkkel	US 2013/0159699 A1	Jun. 20, 2013
Kobylkin	US 2013/0166441	Jun. 27, 2013

The Examiner rejected claims 1–4, 6, 7, 12, 13, 15, 16, and 18–27 under 35 U.S.C. § 112(b) as indefinite. Final Act. 2–3.

The Examiner rejected claims 1, 7, 12, 15, 16, 18, 22, 23, 26, and 27 under 35 U.S.C. § 103 as obvious over the combined teachings of Richard, Torkkel, Black, Sabin, Taylor, and Rose. Final Act. 4–18.

The Examiner rejected each of claims 2–4, 6, 13, 19–21, 24, and 25 as obvious over the combined teachings of Richard, Torkkel, Black, Sabin, Taylor, Rose, and a septenary reference. Final Act. 18–26.

ANALYSIS

A. Indefiniteness

The Examiner determines claim 1’s wherein clause renders the claim indefinite for two reasons: (1) the antecedent basis for “the retail kiosk” is unclear (Final Act 3; Ans. 4–5); and (2) “authenticating a transaction” is unclear because its performance is not tied to any component recited in the claim (Final Act. 3; Ans. 5–6). We agree with Appellant that the Examiner errs. *See* Appeal Br. 7; Reply Br. 3.

Claim 1’s recitation of “a retail kiosk selected by the user from the one or more retail kiosks” clearly provides antecedent basis for “the retail kiosk.” With respect to “authenticating a transaction” not being tied to a component recited in the claim, this affects the breadth of the claim, not its clarity. *In re Miller*, 441 F.2d 689, 693 (CCPA 1971) (explaining that “breadth is not to be equated with indefiniteness”).

Accordingly, we do not sustain the indefiniteness rejection of claim 1 and its dependent claims 2–4, 6, 7, and 21–23, which stand rejected on this ground based solely on dependency from claim 1.

The Examiner rejects claim 12 as indefinite because “it is unclear which one of the previously recited devices for processing a payment transaction to ‘the device for processing a payment transaction’ in the last wherein clause.” Final Act. 3; *see also* Ans. 6. We agree with Appellant the Examiner errs. *See* Appeal Br. 8–9; Reply Br. 3–4.

From an antecedent basis perspective, claim 12 first recites that there are “one or more devices for processing a payment transaction” and then that a second QR code is displayed “by one of” those devices. Claim 12 then refers multiple times (including in the wherein clause) to “the device for processing a payment transaction.” It is clear that these subsequent references are to the “one of the one or more devices for processing a payment transaction” that displayed the second QR code.

Therefore, we do not sustain the indefiniteness rejection of claim 12 and its dependent claims 13, 15, 24, and 25, which stand rejected on this ground based solely on dependency from claim 12.

In rejecting claim 16 as indefinite, the Examiner determines “[i]t is unclear what is verifying the location” in the step of “verifying that the location at which the second QR code was encoded is within a particular geographical area of a location of the device for processing the payment transaction.” Final Act 3;⁴ Ans. 7. Not requiring performance of the verifying step by a particular device does not render the claim unclear; it is

⁴ An alternative basis in Final Action for rejecting claim 16 as indefinite was withdrawn in the Answer. *See* Ans. 6.

simply a broader recitation than limiting the step's performance to a particular device. *In re Miller*, 441 F.2d at 693.

Thus, we do not sustain the indefiniteness rejection of claim 16 and its dependent claims 18–20, 26, and 27, which stand rejected on this ground based solely on dependency from claim 16.

B. Obviousness

In rejecting claim 1 as obvious, the Examiner finds the combined disclosures of Richard and Rose teach or suggest the step of “generating, in the mobile device . . . a first quick response (QR) code encoding identification of the selected product or service, identification of a user account of the user of the mobile device, and a location at which the QR code is being encoded,” as recited. In particular, the Examiner finds Richard teaches all limitations of the generating step except for the requirement for encoding into the first QR code “a location at which the QR code is being encoded,” which the Examiner finds Rose teaches. Final Act. 4 (citing Richard ¶¶ 62, 68), 8–10 (citing Rose ¶¶ 62–63). The Examiner explains that

[a]lthough Rose does not disclose the use of QR codes, Rose does disclose the use of location data of a mobile device to authenticate the user of the device based on proximity of the mobile device to the retail location (see paragraphs [0062]-[0063]). Although Rose discloses that the mobile device location is monitored as it moves from place to place, it is still capturing location data of the mobile device at specific times. It is just doing it over and over again.

Ans. 7–8.

As Appellant responds, however, and we agree, the Examiner errs by not sufficiently explaining how or why Rose's teaching of using a mobile

device’s current location, in view of the other cited art, teaches or suggests using the location at which a QR code was encoded. *See* Reply Br. 4–7; *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (explaining it is the Examiner’s burden to articulate a “rational underpinning to support the legal conclusion of obviousness”); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *Kahn*). In other words, the record before us does not support a determination that the relied-upon disclosure in Rose of using a mobile device’s location renders obvious using a location at which a QR code (or something an ordinarily skilled artisan would have recognized as comparable to a QR code) is being encoded by the mobile device, as recited.

Accordingly, we do not sustain the § 103 rejection of claim 1. For the same reason we do not sustain the § 103 rejection of independent claims 12 and 16, both of which recite limitations commensurate with claim 1’s disputed limitations and stand rejected on the same basis. We also, accordingly, do not sustain the § 103 rejection of the dependent claims 2–4, 6, 7, 13, 15, and 18–27.

CONCLUSION

In summary:

Claim(s) Rejected	35 U.S.C.	Reference(s)/ Basis	Reversed
1–4, 6, 7, 12, 13, 15, 16, 18–27	§ 112(b)	Indefiniteness	1–4, 6, 7, 12, 13, 15, 16, 18–27
1, 7, 12, 15, 16, 18, 22, 23, 26, 27	§ 103	Richard, Torkkel, Black, Sabin, Taylor, Rose	1, 7, 12, 15, 16, 18, 22, 23, 26, 27

Claim(s) Rejected	35 U.S.C.	Reference(s)/ Basis	Reversed
2–4, 13	§ 103	Richard, Torkkel, Black, Sabin, Taylor, Rose, Paulson- Ellis, Wong	2–4, 13
6	§ 103	Richard, Torkkel, Black, Sabin, Taylor, Rose, Kobylkin	6
19, 20	§ 103	Richard, Torkkel, Black, Sabin, Taylor, Rose, Peyran	19, 20
21	§ 103	Richard, Torkkel, Black, Sabin, Taylor, Rose, Hart	21
24	§ 103	Richard, Torkkel, Black, Sabin, Taylor, Rose, Hart	24
25	§ 103	Richard, Torkkel, Black, Sabin, Taylor, Rose, Deffeyes	25
Overall Outcome			1–4, 6, 7, 12, 13, 15, 16, 18–27

REVERSED