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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GABOR BAJKO, TEEMU ILMARI SAVOLAINEN,
PASI ISMO ERONEN, and LARS RENE EGGERT

Appeal 2015-007158
Application 13/143,080
Technology Center 2400

Before ROBERT E. NAPPI, KALYAN K. DESHPANDE, and
DAVID M. KOHUT, *Administrative Patent Judges*.

DESHPANDE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE¹

Appellants seek review under 35 U.S.C. § 134(a) of the Examiner's Final Rejection of claims 40–60.² We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

We AFFIRM.

¹ Our Decision makes reference to Appellants' Reply Brief ("Reply Br.," filed July 28, 2015), and Appeal Brief ("App. Br.," filed February 13, 2015), and the Examiner's Answer ("Ans.," mailed May 28, 2015) and Final Office Action ("Final Act.," mailed July 8, 2014).

² Claims 1–39 were cancelled previously.

INVENTION

Appellants' invention is directed to methods, apparatuses, and computer program products for facilitating randomized port allocation. Spec. 1:2–4.

An understanding of the invention can be derived from a reading of exemplary claim 40.

40. An apparatus, comprising:
at least one processor; and

at least one memory including computer program code, the at least one memory and computer program code configured to, with the at least one processor, cause the apparatus to at least:

receive a port allocation message comprising an encryption key, an initial input value, and a value indicating a total number of ports allocated to the apparatus for communication on a network; and

calculate at least one port allocated to the apparatus with an encryption function based at least in part upon the encryption key and initial input value.

REFERENCES

Takeda et al.	US 2004/0139228 A1	July 15, 2004
Batifoulier et al.	US 8,327,100 B2	Dec. 4, 2012
Anderson et al.	US 8,429, 393 B1	Apr. 23, 2013
Henry C. J. Lee & Vrizlynn L. L. Thing, <i>Port Hopping for Resilient Networks</i> , Institute for Infocomm Research, IEEE (2004). (“Lee”).		

REJECTIONS

Claims 40, 41, 43–46, 48–54, 56–58, and 60 stand rejected under 35 U.S.C. § 103 (a) as unpatentable over Lee and Anderson. Final Act. 3–10.

Claims 42, 47, 55, and 59 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee, Anderson, Batifoulier, and Takeda. Final Act. 10–14.

ISSUE

The issue of whether the Examiner erred in rejecting claims 40–60 turns on whether Lee teaches (1) receiving both an “encryption key” and an “initial input value” in a port allocation message; and (2) an apparatus that calculates “at least one port allocated to the apparatus.”

ANALYSIS

Claims 40, 41, 43–46, 48–54, 56–58, and 60 rejected under 35 U.S.C. § 103 (a) as unpatentable over Lee and Anderson

Appellants argue that Lee fails to teach receiving both an “encryption key” and an “initial input value” in a port allocation message, as recited in independent claims 40, 45, 52, 53, 54, and 58. Apr. Br. 11–12; Reply Br. 6–7. Appellants argue that Lee teaches a key and time slot number, and that the Examiner finds that Lee’s time slot number meets the claimed initial input value; however, Appellants “disagree with the Examiner’s characterization of Lee because Lee’s client only receives a key from the server.” App. Br. 11–12 (citing Lee 2–3; Final Act. 4); Reply Br. 6–7. Accordingly, Appellants argue that “there is no indication that the client also receives a time slot number from the server as asserted by the Examiner.” App. Br. 12; Reply Br. 6–7.

We disagree with Appellants. Claim 40 recites “receiv[ing] a port allocation message comprising . . . an initial input value.” Claim 40, however, does not specify that the message or initial input value is received

from the server. Accordingly, under the broadest reasonable interpretation in light of the Specification, this limitation encompasses any received message that includes an initial input value, regardless of its origination.

The Examiner finds that Lee teaches a dynamic port hopping method to solve fixed port attacks. Ans. 4 (citing Lee 1). The Examiner further finds that Lee teaches receiving a cryptographic key k which corresponds to the claimed encryption key, and a time slot number i which corresponds to the claimed initial input value. *Id.*; Lee 2. The Examiner finds that Lee teaches “calculat[ing] a random port number P_i by using a [function] based on the cryptographic key k and the time slot number i .” *Id.*; Lee 2. That is, the apparatus or client receives the shared secret key and time slot number in order to calculate the port number. Lee 2. Accordingly, Lee teaches receiving a message that includes an encryption key and an initial input value or time slot number, as required under the broadest reasonable interpretation.

Appellants further argue that Lee fails to teach an apparatus that calculates “at least one port allocated to the apparatus,” as recited in independent claims 40, 52, and 54, and similarly recited in independent claims 45, 53, and 58. Apr. Br. 12–14. Reply Br. 7–9. Appellants argue that Lee teaches an apparatus that calculates ports allocated to the server, whereas the claims require the ports to be allocated to the apparatus. App. Br. 13 (citing Lee 2).

We disagree with Appellants. As discussed above, Lee discloses “calculat[ing] a random port number P_i by using a [function] based on the cryptographic key k and the time slot number i .” Ans. 4; Lee 2. The Examiner further finds that “Lee discloses ‘when a client needs to

communicate with the server, it will determine the server's current port number P_i using the shared key k and the time slot number i .” *Id.* at 6–7 (quoting Lee 2). That is, at least one port is calculated and allocated to the apparatus or client in order for the client and server to communicate. Lee 2. Accordingly, Lee teaches calculating “at least one port allocated to the apparatus.”

Claims 42, 47, 55, and 59 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee, Anderson, Batifoulier, and Takeda

Appellants do not argue claims 42, 47, 55, and 59 separately.

Accordingly, we sustain the Examiner's rejection for the reasons discussed above.

CONCLUSION

The Examiner did not err in rejecting 40, 41, 43–46, 48–54, 56–58, and 60 under 35 U.S.C. § 103(a) as unpatentable over Lee and Anderson.

The Examiner did not err in rejecting claims 42, 47, 55, and 59 under 35 U.S.C. § 103(a) as being unpatentable over Lee, Anderson, Batifoulier, and Takeda.

DECISION

To summarize, the rejections of claims 40–60 are affirmed.

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

Appeal 2015-007158
Application 13/143,080

AFFIRMED