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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JACOB GRUNDTVIG REFSTRUP

Appeal 2015-002983
Application 12/994,979
Technology Center 2600

Before MAHSHID D. SAADAT, ROBER E. NAPPI, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 2, and 16–33, which are all the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] According to Appellant, the real party in interest is Hewlett-Packard Development Company (App. Br. 2).

STATEMENT OF THE CASE

Introduction

Appellant's disclosed invention relates to printing systems including replaceable printer components having on-board memory to communicate information to a printer (Spec. 1:19–24).

Exemplary claim 1 under appeal reads as follows:

> 1. A printing system to receive a replaceable printer component, said printing system comprising:
>
> a printer controller;
>
> a first memory device storing a first secret; and
>
> a communication link configured to communicatively link the replaceable printer component to the printer controller when the replaceable printer component is installed in a printing system,
>
> wherein the printer controller of the printing system is programmed to request a component session-key identifier, based on a second secret, from the replaceable printer component.

The Examiner's Rejection

Claims 1, 2, and 16–33 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kimura (US 2007/0160204 A1; July 12, 2007) and Walmsley (US 7,246,098 B1; July 17, 2007) (*see* Final Act. 4–10).

ANALYSIS

Claim 1

The Examiner finds Kimura discloses the recited elements of the printing system recited in claim 1 except for "wherein the printer controller of the printing system is programmed to request a component session-key

identifier, based on a second secret, from the replaceable printer component," for which the Examiner relies on Walmsley (Final Act. 4–6). The Examiner specifically finds Walmsley teaches the recited printer controller as system 21, in Figure 2, which requests a component session-key identifier as challenge 24 from consumable 22 and returns response 26 based on a second secret in chip 20 (Final Act. 5).

Appellant argues the proposed combination does not teach or suggest "printer controller of the printing system is programmed to request a component session-key identifier, based on a second secret, from the replaceable printer component" because Walmsley "does not distinguish between sessions or use a session-key or session-key identifier" (App. Br. 10–11 (citing Walmsley col. 29, l. 56 – col. 30, l. 3)). Referring to Figure 2 of Walmsley, Appellant asserts

> Walmsley then describes Protocol 3 in which, as described in the Abstract, a "random number is encrypted using a first key and sent to an untrusted chip. In the untrusted chip it is decrypted using a secret key and re-encrytped together with a data message read from the untrusted chip. This is decrypted so that a comparison can be with the generated random number and the read data message."

(App. Br. 12 (citing Walmsley Abstract)).

In response, the Examiner further finds the recited "session-key identifier" is not explicitly defined in Appellant's disclosure and explains that "a 'response' which can contain <u>the message, a random number and a time stamp</u> is functionally equivalent to the Applicant's use of the term 'session-key identifier'" (Ans. 4). The Examiner also finds "Walmsley discloses 'wherein the printer controller of the printing system (Fig. 2, element 21) is programmed to request a component session-key identifier

(Fig. 2; challenge 24 and response 26), based on a second secret (contained in second authentication chip 20), from the replaceable printer component (consumable 22)" (*id.*).

We are not persuaded by Appellant's contention that the Examiner erred because the rejection is based on the broadest reasonable interpretation of the phrase "request a component session-key identifier, based on a second secret," as recited in claim 1. Additionally, as found by the Examiner (Ans. 4), to the extent Appellant's disclosure defines a component session-key identifier as a component that, along with the request for a session, is used to generate a session-key to be passed on to the printer controller (*see e.g.*, Spec. ¶¶ 16, 26), Walmsley's challenge 24 and response 26 meet the recited "component session-key identifier, based on a second secret."

Furthermore, Appellant attempts to individually distinguish Walmsley and Kimura, rather than addressing the combined teachings of the references (*see* App. Br. 9–13). Each reference must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole. *See In re Keller,* 642 F.2d 413, 425 (CCPA 1981) ("The test for obviousness is not . . . that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art."). In *KSR*, the Supreme Court criticized a rigid approach to determining obviousness based on the disclosures of individual prior art references, with little recourse to the knowledge, creativity, and common sense that a skilled artisan would have brought to bear when considering combinations or modifications. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 415–422 (2007); *see also Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013).

As found by the Examiner (Ans. 2–3), the cited portions of Walmsley in columns 29 and 30 describe an authentication process that includes requesting a component session-key identifier based on a second key. The Examiner specifically explains the authentication process of Walmsley provides a more secure process in combination with the authentication method of Kimura (Ans. 5–6).

Accordingly, Appellant's arguments have not persuaded us that the Examiner erred in finding the combination of Kimura and Walmsley teaches or suggests the disputed limitations of claim 1. We therefore sustain the 35 U.S.C. § 103(a) rejections of claim 1.

Claim 27

Appellant contends the Examiner erred in rejecting claim 27 over the combination of Kimura and Walmsley based on the same reasons stated for claim 1 and further adds that neither reference teaches or suggests "with a printer controller of the printing system, requesting, from the replaceable printer component, a component session-key identifier *corresponding to a component session-key that is based on a second secret that is associated with the replaceable printer component*" (App. Br. 13–14) (emphasis original). The Examiner explains the combination of Kimura and Walmsley teaches or suggests the method steps of claim 27 because the operation resulting from combining the references meets the disputed claim limitation (Ans. 5–6). The Examiner finds Walmsley specifically teaches the recited printer controller as element 21 shown in Walmsley's Figure 2 and the recited component session-key identifier as the challenge 24 and response 26, shown in Walmsley's Figure 2 (Ans. 6). Additionally, the Examiner finds Walmsley's Figure 2 discloses the recited "based on a second secret"

from "the replaceable printer component" as the secret contained in authentication chip 20 within the consumable 22 (*id.*).

We are not persuaded that the Examiner erred. We agree with and adopt as our own the findings and reasoning of the Examiner. Contrary to Appellant's assertion, the Examiner did not simply rely on the findings related to the limitations recited in claim 1, but mapped the recited limitations of claim 27 to the teachings of the applied prior art (Final Act. 10; Ans. 5–6). We, thus, sustain the Examiner's obviousness rejection of claim 27 in view of Kimura and Walmsley.

Remaining Claims

Appellant contends the patentability of the remaining claims based on arguments similar to those presented for claim 1 (App. Br. 14–23). The Examiner has provided sufficient findings and comprehensive response to the arguments raised for each claim, which we agree with and adopt as our own (*see* Ans. 6–17). Accordingly, we are not persuaded by Appellant's arguments that the Examiner erred in finding the combination of Walmsley with Kimura teaches or suggests the recited features of these claims and sustain their rejections under 35 U.S.C. § 103(a).

DECISION

We affirm the decision of the Examiner to reject claims 1, 2, and 16–33.

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).

<u>AFFIRMED</u>