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We affirm.

1 Appellants identify Honeywell International Inc. as the real party in interest. App. Br. 3.
Introduction

Appellants describe the disclosed invention as a secure digital (SD) card that may be programmed with a unique card identification register (CID) value during a manufacture of the card. The CID value cannot necessarily be changed by a card host such as a computing device. A securely signed license may be generated with the CID value, or a hash of the CID value, as part of the license’s plaintext. The securely signed license’s plaintext cannot be modified without detection. The license may be stored on the card with the CID value. The card may be installed in virtually any computing device that supports the card. The card may be easily removed from the computing device and installed in another computing device or be placed in a storage mechanism. The license may be treated as portable like the card.

Spec. 1:11–23

Claims 1, 5, and 14 are independent, of which claim 1 is illustrative:

1. A card system comprising:
   
a secure digital (SD) card having a unique card identification register value that is programmed into the SD card during a manufacturing of the secure digital card; and

   a license stored on the SD card with the card identification register value during manufacture of the SD card; and

   wherein:

   the license is generated using the card identification register value, or a hash of the card identification register value, as part of a plaintext of the license in a secure signing process;

   the license is a secure software license;

   unique is one or less than one out of one hundred;

   the license is portable from a first computing device to a second, different computing device; and
the license is usable in both the first and second computing devices.

App. Br. 22 (Claims App’x).

Rejection and References


ANALYSIS

We have reviewed the rejections in light of Appellants’ contentions. Appellants waive unmade arguments. 37 C.F.R. § 41.37(c)(1)(iv); see also Ex parte Frye, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (cited with approval in In re Jung, 637 F.3d 1356, 1365 (Fed. Cir. 2011)). We disagree with Appellants’ conclusions. Instead, as consistent with our discussion below, we adopt the Examiner’s findings and reasons as set forth in the Final Office Action from which this appeal is taken and as set forth in the Answer. We concur with the Examiner’s conclusions. We highlight the following for emphasis.

Generating the License using the Card Identification Register Value as part of a Plaintext of the License

In rejecting claim 1, the Examiner found Harada teaches (inter alia) that “the license is generated using the card identification register value . . . as part of a plaintext of the license in a secure signing process,” as recited. Final Act. 5 (citing Harada ¶¶ 32, 44–46, 49–51, Figs. 1, 2). Appellants contend the Examiner erred in this finding because “[n]owhere does Harada
appears to each or suggest that the license information is generated using the

card identification register value . . . as part of a plaintext of the license in a
secure signing process as currently claimed.” App. Br. 8; see also id. at 9
(“While Harada appears to disclose that the identification information
uniquely identifies the removable medium with the computer, there is not
mention of the use of any portion of the card identification register value as
a part of the plaintext of the license.”).

The Examiner responds by finding that an ordinarily skilled artisan
would have understood Harada discloses “license information in the
recording medium [SD card] that has a unique identification information”
and by explaining that the “Examiner interpreted the unique identification
information or the unique identification number of the card as the plain text
on the license.” Ans. 4 (citing Harada ¶¶ 44, 51) (brackets in original).
Appellants reply that in the disclosure of Harada upon which the Examiner
relies, “[t]here is no mention of what the license is or how it is generated.”
Reply Br. 2 (emphasizing claim 1 requires “using a portion of the card
identification register value . . . as a part of the plaintext of the license”).

Appellants’ argument is unpersuasive. Harada teaches that a
removable medium, e.g., an SD card (Harada ¶ 4), includes license
information, part of which is “identification information uniquely
determining the removable information recording medium” (Harada ¶ 51)
(hereafter, Harada’s “unique ID”). An ordinarily skilled artisan, who is “a
person of ordinary creativity, not an automaton” (KSR Int’l Co. v. Teleflex
Inc., 550 U.S. 398, 421 (2007)), would, thus, have understood Harada’s use
of a removable device’s unique ID as part of a license teaches claim 1’s
recited requirements for “using a portion of the card identification register value . . . as a part of the . . . license.”

The artisan further would have understood Harada teaches or suggests using the unique ID value “as part of the plaintext of the license,” as recited. Prior art references are to be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (internal quotations and citation omitted). In that regard, “it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826 (CCPA 1968).

Here, the artisan would have recognized Appellants’ Specification provides no special meaning or explanation for “plaintext” and, therefore, would have understood “plaintext” to encompass its plain and ordinary meaning of “unencrypted text.” Harada is silent about possible encryption of its unique ID, and artisans of ordinary skill would have understood this disclosure accordingly teaches storing that part of the license information as plaintext.

Accordingly, Appellants do not persuade us the Examiner errs in finding Harada teaches or suggests “the license is generated using the card identification register value, or a hash of the card identification register value, as part of a plaintext of the license in a secure signing process,” as recited in claim 1. See Final Act. 5; Ans. 3–4.

*A License Stored on the SD Card During Manufacture of the Card*

Appellants contend that “none of the cited references appears to teach or suggest the license is stored on the SD card during manufacturing of the

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2 See, e.g., www.merriam-webster.com/dictionary/plaintext (last accessed May 21, 2019). We note “plaintext” is an antonym of “ciphertext.” *Id.*
SD card,” as recited in claim 1. App. Br. 10; see also Reply Br. 2–3 (concluding “[t]he Examiner’s interpretation of the code of Widergren as a license extends well beyond the broadest reasonable interpretation of the claims”). This argument is unpersuasive. As the Examiner responds, however, and we agree:

Together Harada and Widergren teach[] this limitation. Harada . . . teaches [an] SD card having a license information that includes a unique identification information [card identification register value], but Harada does not expressly teach that the license is programmed into the SD card during the manufacture of the SD card.

Widergren reference teaches this limitation. Widergren . . . teaches during manufacture of the card, the manufacturer assigns a code (Examiner interpreted code as the license herein), that is stored in a register which is programmed into the card during manufacture . . . .

As such the combination of both Harada and Widergren teaches the above mentioned claimed limitation.

Ans. 5 (citing Harada ¶¶ 32, 44–46, 49–51, Figs. 1, 2; Widergren ¶¶ 2, 18, Figs. 1, 2).

In particular, we agree with the Examiner that an ordinarily skilled artisan would have understood Widergren teaches assigning license information during manufacture, as recited, by its disclosure of assigning, during manufacture, of unique codes or numbers to cards that are used to determine whether “the programs 60, 70 will optionally decode, not decode and/or decrypt the content stored on the card.” Widergren ¶ 18. Widergren explains the use of the code stored during manufacturing provides licensing functionality, such as “serv[ing] to discourage unauthorized copying of programs 60, 70 and files 50 from card to card.” Id.
Motivation to Modify Lee Based on Harada and Widergren

In rejecting claim 1, the Examiner modified the teachings of Lee based on the teachings of Harada and Widergren to arrive at the claimed invention. *See* Final Act. 4–6. Appellants contend the Examiner erred in this combination because there would appear to be no reason or suggestion to modify the system of Lee to embed the license at the time of manufacture of the mobile storage device. Such a modification would appear to render the system of Lee unsatisfactory for its intended purpose. Namely, a license embedded at the time of manufacture may not cover the content on the device as content on portable phones, computers, or digital cameras tends to vary from user to user. . . .

. . . . While the SD card of Lee appears to be movable, it is unclear how one would be able to predict at the time of manufacture what licenses a user in the disclosure of Lee would require. The Appellant respectfully asserts that if one is acquiring a license for content on and specific to a particular device, there is no way to place said license on the SD card at the time of manufacture of the SD card.

App. Br. 11.

The Examiner responds that one use of Lee’s invention can be to have all software on the portable device be licensed at the time of manufacture of the SD device. *Ans.* 5. Appellants reply with three arguments:

[1] It is unreasonable to assume that a license for one type of software can or will be used for another type of software.

[2] Further, the Appellant respectfully asserts that interpreting the Lee reference to include a license for all content (e.g., apps, music, movies, software, and so on) that could conceivably be desired to be used by the owner of a mobile device is impractical, unreasonable, and too costly.
[3] Further, Lee would appear to teach away from a device including “all content” as the mobile device is used to retrieve a license from the license provider.

Reply Br. 3–4. These arguments are unpersuasive.

Regarding the unreasonableness of assuming “a license for one type of software can or will be used for another type of software” (Reply Br. 3), this is not a necessary assumption by the Examiner. The Examiner determined that the license approach of Lee, modified as proposed by the teachings of Harada and Widergren, “meets the claimed limitations” under the broadest reasonable interpretation. Ans. 5. We agree with the Examiner. Lee teaches an SD card with a license that is portable between computing devices, with an authentication procedure that results in “receiving a license from the license provider; and transmitting the license to the portable storage device.” See Lee ¶¶ 57–61, Figs. 7, 8, claim 1 (quoting the last two steps). We note that within the scope of Appellants’ claim 1, it is unnecessary for the license to be for multiple items on the SD card.

Regarding issues such as impracticality or costliness, “[t]hat a given combination would not be made by businessmen for economic reasons does not mean that persons skilled in the art would not make the combination because of some technological incompatibility. Only the latter fact would be relevant.” In re Farrenkopf, 713 F.2d 714, 718 (Fed. Cir. 1983) (citing Orthopedic Equip. Co. v. U.S., 702 F.2d 1005, 1013 (Fed. Cir. 1983)); see also Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1328 (Fed. Cir. 2008) (“market-force skepticism also lacks the requisite nexus to the claimed invention” and therefore does not show non-obviousness). The combination as proposed by the Examiner would have been useful for a single licensed content provider for providing licensed content on an SD
card to allow use of the licensed content on different machines by moving the SD card between the machines. Appellants do not persuade us that such a scenario was impractical or likely to be excessively costly, etc.

As for teaching away, this requires a reference to actually criticize, discredit, or otherwise discourage the claimed solution. See *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) ("The prior art’s mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed."). Appellants specifically argue “Lee would appear to teach away from a device including ‘all content’ as the mobile device is used to retrieve a license from the license provider.” Reply Br. 4. This is unpersuasive. The fact that the Examiner’s modification of Lee based on the teachings of Harada and Widergren results in changed (and in some regard diminished) functionality for Lee does not amount to a teaching away. The loss of Lee’s functionality of having a mobile device retrieve a license is offset by the benefit of providing a turnkey SD device that has the license provided at the time of manufacturing. Appellants point to no passage of Lee that amounts to a criticism, discrediting, or other discouragement of the modifications proposed by the Examiner.

Further, Appellants do not point to any evidence of record that the combination would be “uniquely challenging or difficult for one of ordinary skill in the art” or “represented an unobvious step over the prior art.” *Leapfrog Enters. Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 418–19). Nor have Appellants provided objective evidence of secondary considerations which our reviewing court guides “operates as a beneficial check on hindsight.” *Cheese Sys., Inc. v.*
Tetra Pak Cheese and Powder Sys., 725 F.3d 1341, 1352 (Fed. Cir. 2013).
We are persuaded the claimed subject matter exemplifies the principle that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” KSR, 550 U.S. at 416.

Conclusion

For the foregoing reasons, we sustain the 35 U.S.C. § 103(a) rejection of claim 1 and its dependent claims 2 and 3, for which Appellants offer no separate arguments. For the same reasons, we also sustain the § 103(a) rejection of independent claims 5 and 14, for which Appellants make essentially the same arguments as for claim 1 (see App. Br. 12–21), and their dependent claims 6, 7, 9–13, and 15–22, for which Appellants offer no separate arguments.

DEcision

We affirm the Examiner’s 35 U.S.C. § 103(a) rejection of claims 1–3, 5–7, and 9–22.

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).

AFFIRMED