UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HTC CORPORATION and HTC AMERICA, INC.,
Petitioner,

v.

ANCORA TECHNOLOGIES INC.,
Patent Owner.

Case CBM2017-00054
Patent 6,411,941 B1

Before JONI Y. CHANG, RAMA G. ELLURU, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

ELLURU, *Administrative Patent Judge.*

DECISION
Denying Institution of Covered Business Method Patent Review
37 C.F.R. § 42.208

HTC Corporation and HTC America, Inc. (collectively "Petitioner") filed a Petition (Paper 1, "Pet.") seeking to institute a covered business method patent review of claims 1–19 of U.S. Patent No. 6,411,941 B1 (Ex. 1001, "the '941 patent"). Patent Owner, Ancora Technologies Inc. filed a Patent Owner Preliminary Response ("Prelim. Resp."). Paper 6. For the reasons discussed below, Petitioner has not demonstrated that the '941 patent is eligible for a covered business method patent review under section 18 of the AIA.

I. BACKGROUND

A. The '941 Patent (Ex. 1001)

The '941 patent is titled "Method of Restricting Software Operation Within a License Limitation." The disclosed method is directed to "[a] method of restricting software operation within a license limitation that is applicable for a computer having a first non-volatile memory area, a second non-volatile memory area, and a volatile memory area." Ex. 1001, Abstract.

The specification explains that numerous methods have been disclosed for identifying and restricting the unauthorized software program's operation. *Id*. at 1:11–13. The prior art methods include software and hardware based products. *Id*. at 1:19–32. Software based products validate authorized software usage by writing a license signature onto the computer's volatile memory, such as a hard disk. *Id*. at 1:19–21. According to the specification, however, the prior art software products "are very vulnerable to attack at the hands of skilled system's programmers (e.g. 'hackers')" and "also subject to the physical instabilities of their volatile memory media." *Id*. at 1:21–26. Hardware based products "validate authorized software

usage by accessing a dongle that is coupled e.g. to the parallel port of the P.C." *Id*. at 1:27–29. According to the specification, however, the prior art hardware products "are expensive, inconvenient, and not particularly suitable for software that may be sold by downloading (e.g. over the internet)." *Id*. at 1:29–32.

The '941 patent discloses a software access restriction "method [that] strongly relies on the use of a key and of a record, which have been written into the non-volatile memory of a computer." *Id*. at 1:38–42. The specification explains that the "key" constitutes "a unique identification code for the host computer" and is "stored in a non-volatile portion of the BIOS, [and] it cannot be removed or modified." *Id*. at 1:47–51. Further, "each application program that is to be licensed to run on the specified computer, is associated with a license record." *Id*. at 1:52–54. "The license record may be held in either encrypted or explicit form." *Id*. at 1:56–57. According to the disclosed method, there is a "an initial license establishment procedure, where a verification structure is set in the BIOS so as to indicate that the specified program is licensed to run on the specified computer." *Id*. at 1:59–62. The disclosed method encrypts "the license record (or portion thereof) using said key (or portion thereof) exclusively or in conjunction with other identification information) as an encryption key." *Id*. at 1:62–65. The resulting encrypted data also is stored in a second non-volatile section of the BIOS, e.g. E^2PROM, or the ROM. *Id*. at 1:65–2:1 Moreover, "the data in the second non-volatile memory may optionally be erased or modified," in order to enable to add, modify or remove licenses. *Id*. at 2:1–5.

The specification states that:

> [a]n important advantage in utilizing non-volatile memory such as that residing in the BIOS is that the required level of system programming expertise that is necessary to intercept or modify commands, interacting with the BIOS, is substantially higher than those needed for tampering with data residing in volatile memory such as hard disk.

Id. at 3:4–9.

In addition, "there is a much higher cost to the programmer, if his tampering is unsuccessful, i.e. if data residing in the BIOS (which is necessary for the computer's operability) is inadvertently changed by the hacker." *Id*. at 3:10–13.

The specification describes the process of verifying a license as follows:

> [W]hen a program is loaded into the memory of the computer, a so called license verifier application, that is a priori running in the computer, accesses the program under question, retrieves therefrom the license record, encrypts the record utilizing the specified unique key (as retrieved from the ROM section of the BIOS) and compares the so encrypted record to the encrypted records that reside in the E^2PROM.

Id. at 2:12–19.

"In the case of [a] match, the program is verified to run on the computer." *Id*. at 2:19–20.

> If on the other hand the sought encrypted data record is not found in the E^2PROM database, this means that the program under question is not properly licensed and [an] appropriate application define[d] action is invoked (e.g. informing to the

> user on the unlicensed status, halting the operation of the program under question etc.).

Id. at 2:20–26.

The specification further discloses that further action[] "includes the step of: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency." *Id*. at 6:39–41. Also:

> '[r]estricting the program's operation with predetermined limitations' may include actions such as erasing the software in volatile memory, warning the license applicant/user, placing a fine on the applicant/user through the billing service charges collected at the license bureau (if applicable), or scrambling sections of the BIOS of the computer (or of functions interacting therewith).'

Id. at 6:46–51.

B. Illustrative Claim

Petitioner challenges claims 1–19 of the '941 patent, of which claims 1 and 18 are independent. Claim 1 illustrates the subject matter:

> 1. A method of restricting software operation within a license for use with a computer including an erasable, non-volatile memory area of a BIOS of the computer, and a volatile memory area; the method comprising the steps of:
>
> selecting a program residing in the volatile memory,
>
> using an agent to set up a verification structure in the erasable, non-volatile memory of the BIOS, the verification structure accommodating data that includes at least one license record,
>
> verifying the program using at least the verification structure from the erasable non-volatile memory of the BIOS, and
>
> acting on the program according to the verification.

Id. at 6:59—7:4

C. Related Proceedings

Petitioner identifies several district court cases and a Federal Circuit case involving the ’941 patent. Pet. 1–2. In addition, Petitioner identifies CBM2016-00023, which challenged claims of the ’941 patent, but was terminated before a Decision on Institution was issued (CBM2016-00023, Paper 7) and *Ex Parte* Reexamination No. 90/010,560. Pet. 2.

D. Real Party-in-Interest

The Petition identifies HTC Corporation and HTC America, Inc. as the real parties-in-interest. Pet. 1.

E. Grounds Asserted

The Petition challenges the ’941 patent claims as directed to unpatentable subject matter under 35 U.S.C. § 101, indefinite under 35 U.S.C. § 112, ¶ 2, lack written description under § 112, ¶ 1, and as anticipated by and obvious in light of asserted prior art. *Id*. at 1.

II. ANALYSIS

A. Claim Construction

While Petitioner presents constructions for several claim terms, no terms require express construction for purposes of this Decision.

B. Covered Business Method Patent

Section 18 of the AIA provides for the creation of a transitional program for reviewing covered business method patents. A “covered business method patent” is a patent that “claims a method or corresponding

apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions." AIA § 18(d)(1); *see* 37 C.F.R. § 42.301(a). A patent need have only one claim directed to a covered business method to be eligible for review. *See* Transitional Program for Covered Business Method Patents—Definitions of Covered Business Method Patent and Technological Invention; Final Rule, 77 Fed. Reg. 48,734, 48,736 (Aug. 14, 2012) ("CBM Rules") (Comment 8).

1. Technological Invention

The AIA excludes from covered business method patent review patents for a "technological invention." AIA § 18(d)(1). To determine whether a patent is for a "technological invention," we consider "whether the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art; and solves a technical problem using a technical solution." 37 C.F.R. § 42.301(b).

Petitioner asserts that the '941 patent is not directed to a technical problem, but rather addresses the "'the grand proliferation of illegally copied software.'" Pet. 14 (citing Ex. 1001, 1:14–15). Acknowledging that the "[c]laimed method restricts the operation of software," Petitioner contends that "piracy is a 'business problem'—not a technical one." *Id*. (citing non-precedential PTAB decisions). Petitioner also argues that the claimed method replaces the use of expensive and inconvenient prior art hardware, and that "expense and inconvenience are not technical problems." *Id*. at 16 (citing Ex. 1001, 1:29–32).

Petitioner further argues that the ’941 patent claims do not solve a technical problem with a technical solution. *Id*. at 15. Petitioner contends that the ’941 patent’s solution to the disclosed “business problem” is “fundamentally organizational, not technical.” *Id*. According to Petitioner, the ’941 patent “describes and claims organizational choices for the locations where a key and license-record should be stored.” *Id*. Petitioner asserts that the storage of a key and license-record in specific locations is not a technical solution, “but the mere rearrangement of which data is stored in which memory areas.” *Id*. (citation omitted).

Lastly, Petitioner argues that the ’941 patent discloses “conventional” elements. *Id*. Specifically, Petitioner asserts that “[t]he alleged invention is not directed to any new computer technology, but rather to storing particular information in a particular conventional memory to provide conventional benefits.” *Id*. Petitioner expounds, contending that claims 1, 2, and 10 merely recite using or combining “known technologies to achieve predictable results.” *Id*. at 16–20. As an example, Petitioner notes that claim 1 recites “a computer including an erasable, non-volatile memory area of a BIOS of the computer, and a volatile memory area.” *Id*. at 17.

Patent Owner responds that the claims of the ’941 patent solve a technical problem—“the vulnerability of license authentication data using conventional data storage techniques to [verify] unauthorized modification,” using a technical solution—“setting up a verification structure in non-volatile memory of the BIOS not ordinarily considered to be a storage medium.” Prelim. Resp. 17–18 (citation omitted). Specifically, Patent Owner contends that the fundamental operation of a given computer is changed, and “the nonvolatile BIOS memory is used as a novel and less-

hackable structure for setting up the claimed verification structure to perform software verification operations." *Id*. at 18. For the reasons discussed below, Petitioner has not sufficiently persuaded us that the "technological invention" exception to a covered business method patent review does not apply to the '941 patent.

Petitioner asserts that the '941 discloses a method to restrict the operation of software in order to address piracy, which Petitioner contends is a "'business problem,'" not a technical one, and that the claimed method merely replaces "the use of expensive and inconvenient prior art hardware." Pet. 14, 16. As Patent Owner argues, however, Petitioner's misidentifies the problem addressed by the claims. Prelim. Resp. 19–20. The "problem" the '941 patent seeks to address is the technical problems resulting from the vulnerability of license authentication and software restriction using conventional data storage techniques—software based products that are vulnerable to hacking and hardware based products that are expensive, inconvenient, and not suitable for downloaded software. Ex. 1001, 1:19–32. In other words, the claims of the '941 patent recite a technological improvement to problems arising in prior art software and hardware methods of restricting an unauthorized software program's operation.
Thus, we determine the disclosed method addresses a "technical problem."

We further determine that the disclosed method's solution to address the technical problem is technical. Petitioner argues that the '941 patent solution is "fundamentally organizational, not technical" because it "claims organizational choices for the locations where a key and license-record should be stored." Pet. 15. Petitioner avers that the storage of the key and license-record in specific locations is the "mere rearrangement of which data

is stored in which memory areas." *Id*. (citation omitted). Petitioner's "organizational" argument is unavailing because the '941 patent not only changes the location to store data—license-record and key—but the disclosed method also varies the type of medium used—non-volatile media instead of prior art volatile memory. *See* Prelim. Resp. 20. Specifically, the disclosed method modifies the BIOS, which the '941 patent contends results in reduced vulnerability to "hackers." *See* Ex. 1001, 1:44–2:46. As the '941 specification explains:

> [a]n important advantage in utilizing non-volatile memory such as that residing in the BIOS is that the required level of system programming expertise that is necessary to intercept of modify commands, interacting with the BIOS, is substantially higher than those needed for tampering with data residing in volatile memory such as [a] hard disk.

Ex. 1001, 3:4–9. "Furthermore, there is a much higher cost to the programmer, if his tampering is unsuccessful, i.e. if data residing in the BIOS (which is necessary for the computer operability) is inadvertently charged by the hacker." *Id*. at 3:9–13. Thus, we are sufficiently persuaded that the '941 patent's solution to the addressed problem is rooted in technology, and thus, is a "technical solution."

Lastly, Petitioner has not sufficiently persuaded us that the '941 patent recites a technological solution that is *not* novel and nonobvious for purposes of satisfying the "technological invention" exception in § 42.301(b). Petitioner contends that "[t]he alleged invention is not directed to any new computer technology, but rather to storing particular information in a particular conventional memory to provide conventional benefits." Pet. 15. Similarly, Petitioner contends that claims 1, 2, and 10 recite "known

technologies to achieve predictable results." *Id*. at 16. For example, Petitioner asserts that "'a computer including an erasable, non-volatile memory area of a BIOS of the computer, and a volatile memory area'" (*id*. at 17 (citing Ex. 1001, 1:46–48)) and "'a unique identification code'" (*id*. (citing Ex. 1001, 1:48–51)) were conventional. Petitioner's contentions address individual claim elements, but not the claims as a whole, as required by § 42.301(b). As an example, Patent Owner contends the use of the non-volatile BIOS memory to store the license-record was novel and nonobvious for § 42.301(b) purposes. Prelim. Resp. 22–26. Specifically, Patent Owner contends that "the use of non-volatile BIOS memory for license key storage was unexpected, inventive, and demanded an unusual degree of skill to implement—as manifested by the technological features of the invention." *Id*. at 22. Petitioner, however, does not address the technological feature of storing the license-record and key in the nonvolatile memory of the BIOS as opposed to volatile memory, such as a hard disk, but rather refers to the individual elements of the claims without considering the claims as a whole, as required by § 42.301(b). *See id*.; Prelim. Resp. 25–26. Petitioner's argument is, thus, unavailing.

We are persuaded, therefore, that the exclusion for a "technological invention" applies in this case. Accordingly, we conclude that based on the current record, the '941 patent is not a covered business method patent eligible for review.

C. CONCLUSION

In view of the foregoing, we conclude that the '941 patent is not a covered business method patent under AIA § 18(d)(1), and thus, is not

eligible for review using the transitional covered business method patent review program.

III. ORDER

For the reasons given, it is,

ORDERED that a covered business method patent review is *denied*.

PETITIONER:

Irfan A. Lateef
Brian C. Claassen
KNOBBE, MARTENS, OLSON & BEAR, LLP
2ial@knobbe.com
2bcc@knobbe.com
BoxHTC57@knobbe.com

PATENT OWNER:

John P. Rondini
John S. LeRoy
Marc Lorelli
Mark A. Cantor
BROOKS KUSHMAN P.C.
jrondini@brookskushman.com
jleroy@brookskushman.com
mlorelli@brookskushman.com
mcantor@brookskushman.com
ANCC0114CBMR1@brookskushman.com