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

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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 nonvolatile section of the BIOS, e.g. E²PROM, 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 E²PROM.

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 E²PROM 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.



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