VENABLE, BAETJER, HOWARD & CIVILETTI, LLP
*Including professional corporations*

1100 New York Avenue, N.W., Suite 300 East
Washington, D.C. 20005-3955
(202) 414-4000, Fax (202) 414-4040
Telex 64267
www.venable.com

OFFICES IN

MARYLAND
WASHINGTON, D.C.
VIRGINIA

VENABLE
ATTORNEYS AT LAW

jc595 U.S. PTO 10/01/98

jc135 U.S. PTO 09/164777 10/01/98

October 1, 1998

Assistant Commissioner for Patents
Washington, D.C. 20231

Re: New Patent Application
Inventor(s): Miki MULLOR and Julian VALIKO
Attorney Docket: REINC 4237.01

Sir:

Please find attached hereto an application for patent which includes:

Specification, Claims, Declaration, Power of Attorney.

A certified copy of Israel Application No. 124571 filed May 21, 1998, the priority of which is claimed herewith under 35 U.S.C. 119.

Verified Declaration Statement showing Small Entity Status:

Formal Drawings: Figures 1 and 2 (2 sheets)

Fee (see formula below) check enclosed.

Basic Fee $395/790..... $ 395.00

Additional Fees:

Total number of claims in excess of 20 * times $11/22 $ 0.00

Number of independent claims 1
in excess of 3: * times $41/82..... $ 0.00
An assignment is likewise enclosed; Recording Fee $40. $ 40.00
TOTAL FEES FOR THE ABOVE APPLICATION... $ 435.00

In the event there is attached hereto no check, or a check for an insufficient amount, please charge the fee to our Account No. 19-3700 and notify us accordingly.

Respectfully submitted

Robert Kinberg

Robert Kinberg,
Registration No. 26,924

RK:boa

Attorney's
Docket No.

Applicant or Patentee: _____
Serial or Patent No.: _____
Filed or Issued: _____
For: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) and 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am

[ ] the owner of the small business concern identified below:
[X] an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN M.Y.P.D. TECHNOLOGIES LTD.
ADDRESS OF CONCERN c/o Keren-Shechter Law Firm, 21 Har Sinai Street, Tel-Aviv 65816, Israel

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION by inventor(s) Miki MULLOR and Julian VALIKO described in

[x] the application filed herewith
[ ] application serial no. _____, filed _____.
[ ] patent no. _____, issued _____.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME _____
ADDRESS _____
[ ] INDIVIDUAL [ ] SMALL BUSINESS CONCERN [ ] NONPROFIT ORGANIZATION

NAME _____
ADDRESS _____
[ ] INDIVIDUAL [ ] SMALL BUSINESS CONCERN [ ] NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change of status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING X Miki Mullor JULIAN VLAIKO
TITLE OF PERSON SIGNING X Manager Manager
ADDRESS OF PERSON SIGNING X 3 Zeelon Ramat-hasharon

SIGNATURE X [signature] DATE 1/23/98

# Method of Restricting Software Operation within A License Limitation

## FIELD OF THE INVENTION

This invention relates to a method and system of identifying and restricting an unauthorized software program's operation.

## BACKGROUND OF THE INVENTION

Numerous methods have been devised for the identifying and restricting of unauthorized software program's operation. These methods have been primarily motivated by the grand proliferation of illegally copied software, which is engulfing the marketplace. This illegal copying represents billions of dollars in lost profits to commercial software developers.

Software based products have been developed to validate authorized software usage by writing a license signature onto the computer's volatile memory (e.g. hard disk). These products may be appropriate for restricting honest software users, but they are very vulnerable to attack at the hands of skilled system's programmers (e.g. "hackers"). These license signatures are also subject to the physical instabilities of their volatile memory media.

Hardware base products have also been developed to validate authorized software usage by accessing a dongle that is coupled e.g. to the parallel port of the P.C. These units are expensive, inconvenient, and not particularly suitable for software that may be sold by downloading (e.g. over the internet).

There is accordingly a need in the art to provide for a system and method that substantially reduce or overcome the drawbacks of hitherto known solutions.

## SUMMARY OF THE INVENTION

The present invention relates to a method of restricting software operation within a license limitation. This method strongly relies on the use of a key and of a record, which have been written into the non-volatile memory of a computer.

For a better understanding of the underlying concept of the invention, there follows a specific non-limiting example. Thus, consider a conventional computer having a conventional BIOS module in which a key was embedded at the ROM section thereof, during manufacture. The key constitutes, effectively, a unique identification code for the host computer. It is important to note that the key is stored in a non-volatile portion of the BIOS, i.e. it cannot be removed or modified.

Further, according to the invention, each application program that is to be licensed to run on the specified computer, is associated with a license record; that consists of author name, program name and number of licensed users (for network). The license record may be held in either encrypted or explicit form.

Now, there commences 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. This is implemented by encrypting the license record (or portion thereof) using said key (or portion thereof) exclusively or in conjunction with other identification information) as an encryption key. The resulting encrypted license record is stored in another (second) non-volatile section of the BIOS, e.g. $E^2$PROM (or

the ROM). It should be noted that unlike the first non-volatile section, the data in the second non-volatile memory may optionally be erased or modified (using $E^2$PROM manipulation commands), so as to enable to add, modify or remove licenses. The actual format of the license may include a string of terms that correspond to a license registration entry (e.g. lookup table entry or entries) at a license registration bureau (which will be further described as part of the preferred embodiment of the present invention).

Having placed the encrypted license record in the second non-volatile memory (e.g. the $E^2$PROM), the process of verifying a license may be commenced. Thus, when 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 $E^2$PROM. In the case of match, the program is verified to run on the computer. If on the other hand the sought encrypted data record is not found in the $E^2$PROM database, this means that the program under question is not properly licensed and appropriate application define action is invoked (e.g. informing to the user on the unlicensed status, halting the operation of the program under question etc.)

Those versed in the art will readily appreciate that any attempt to run a program at an unlicensed site will be immediately detected. Consider, for example, that a given application, say Lotus 123, is verified to run on a given computer having a first identification code (k1) stored in the ROM portion of the BIOS thereof. This obviously requires that the license record (LR) of the application after having been encrypted using k1 giving rise to $(LR)_{k1}$ is stored in the $E^2$PROM of the first computer.

Suppose now that a hacker attempts to run the specified application in a second computer having a second identification code (k2) stored in the

ROM portion of the BIOS thereof. All or a portion the database contents (including of course $(LR)_{k1}$ ) that reside in the $E^2$PROM portion in the first computer may be copied in a known *per se* means to the second computer. It is important to note that the hacker is unable to modify the key in the ROM of the second computer to K1, since, as recalled, the contents of the ROM is established during manufacture and is practically invariable.

Now, when the application under question is executed in the second computer, the license verifier retrieves said LR from the application and, as explained above, encrypts it using the key as retrieved from the ROM of the second computer, i.e <u>k2</u> giving rise to encrypted license record $(LR)_{k2}$. Obviously, the value $(LR)_{k2}$ does not reside in the $E^2$PROM database section of the second computer (since it was not legitimately licensed) and therefore the specified application is invalidated. It goes without saying that the data copied from the first (legitimate) computer is rendered useless, since comparing $(LR)_{k2}$ with the copied value $(LR)_{\tilde{k}1}$ results, of course, in mismatch.

The example above is given for clarity of explanation only and is by no means binding.

In its broadest aspect, the invention provides for a method of restricting software operation within a license limitation including; for a computer having a first non-volatile memory area, a second non-volatile memory area, and a volatile memory area; the steps of: selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification.

An 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. 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's operability) is inadvertently changed by the hacker. This is too high of a risk for the ordinary software hacker to pay. Note that various recognized means for hindering the professional-like hacker may also be utilized (e.g. anti-debuggers, etc.) in conjunction with the present invention.

In the context of the present invention, a "computer" relates to a digital data processor. These processors are found in personal computers, or on one or more processing cards in multi-processor machines. Today, a processor normally includes a first non-volatile memory, a second non-volatile memory, and data linkage access to a volatile memory. There are also processors having only one non-volatile memory or having more than two non-volatile memories; all of which should be considered logically as relating to having a first and a second non-volatile memory areas. There are also computational environments where the volatile memory is distributed into numerous physical components, using a bus, LAN, etc.; all of which should logically be considered as being a volatile memory area.

According to the preferred embodiment of the present invention, there is further provided a license authentication bureau which can participate in either or both of:

(i) establishing the license record in the second non-volatile memory; and

(ii) verifying if the key and license record in the non-volatile memory(s) is compatible with the license record information as extracted from the application under question.

The bureau is a telecommunications accessible processor where functions such as formatting, encrypting, and verifying may be performed. Performing these or other functions at the bureau helps to limit the

understanding of potential software hackers; since they can not observe how these functions are constructed. Additional security may also be achieved by forcing users of the bureau to register, collecting costs for connection to the bureau, logging transactions at the bureau, etc.

According to one example of using the bureau, setting up a verification structure further includes the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as the encryption key; and transferring, from the bureau to the computer, the encrypted license-record.

According to another example of using the bureau, verifying the program further includes the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license-verification including an identification of the computer, the encrypted license-record for the selected program from the second non-volatile memory, and the licensed-software-program's license-record contents; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

The actual key that serves for identifying the computer may be composed of the pseudo-unique key exclusively, or, if desired, in combination with information, e.g. information related to the registration of the user such as e.g. place, telephone number, user name, license number, etc. In the context of the present invention, a "pseudo-unique" key may relate to a bit string which uniquely identifies each first non-volatile memory. Alternately the "pseudo-unique" key may relate to a random bit string (or to an assigned bit string) of sufficient length such that: there is an acceptably low probability of

a successful unauthorized transfer of licensed software between two computers, where the first volatile memories of these two computers have the same key.

It should be noted that the license bureau might maintain a registry of keys and of licensed programs that have been registered at the bureau in association with these keys. This registry may be used to help facilitate the formalization of procedures for the transfer of ownership of licensed software from use on one computer to use on another computer.

Constructing the key in the manner specified may hinder the hacker in cracking the proposed encryption scheme of the invention, in particular when the establishment of the license record or the verification thereof is performed in the bureau. Those versed in the art will readily appreciate that the invention is by no means bound by the data, the algorithms, or the manner of operation of the bureau. It should be noted that the tasks of establishing and/or verifying a license record may be shared between the bureau and the computer, done exclusively at the computer, or done exclusively at the bureau. The pseudo-unique key length needs to be long enough to hinder encryption attack schemes. The establishing of the key may be done at any time from the non-volatile memory's manufacture until an attempted use of an established license-record in the non-volatile memory. The key is used for encryption or decryption operations associated with license-records. In principle, the manufacturer of the licensed-software-program may specify the license-record format and therefore different formats may, if desired, be used for respective applications.

According to the preferred embodiment of the present invention, the pseudo-unique key is a unique-identification bit string that is written onto the first non-volatile memory by the manufacturer of the is memory media.

According to one, non-limiting, preferred embodiment of the present invention, the first non-volatile memory area is a ROM section of a BIOS; the

second non-volatile memory area is a $E^2$PROM section of a BIOS; and the volatile memory is a RAM e.g. hard disk and/or internal memory of the computer .

The present invention also relates to a non-volatile memory media used as a BIOS of a computer, for restricting software operation within a license limitation, wherein a pseudo-unique key is established.

According to the preferred embodiment of the non-volatile memory media of the present invention, the pseudo-unique key is established in a ROM section of the BIOS.

## BRIEF DESCRIPTION OF THE DRAWINGS:

In order to understand the invention and to see how it may be carried out in practice, a preferred embodiment will now be described, by way of non-limiting example only, with reference to the accompanying drawings, in which:

Fig. 1 is a schematic diagram of a computer and a license bureau; and

Fig. 2 is a generalized flow chart of the sequence of operations performed according to one embodiment of the invention.

## DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

A schematic diagram of a computer and a license bureau is shown in Figure 1. Thus, a computer processor (1) is associated with input operations (2) and with output operations (3). This computer (processor) internally contains a first non-volatile memory area (4) (e.g. the ROM section of the BIOS), a second non-volatile memory area (5) (e.g. the $E^2$PROM section of the BIOS), and a volatile memory area (6) (e.g. the internal RAM memory of the computer).

The computer processor is in temporary telecommunications linkage with a license bureau (7).

The first non-volatile memory includes a pseudo-random identification key (8), which exclusively or in combination with other information (e.g. user name), is sufficient to uniquely differentiate this first non-volatile memory from all other first non-volatile memories. As specified before, said key constitutes unique identification of the computer.

The second non-volatile memory includes a license-record-area (9) e.g. for the containing of at least one encrypted license-record (e.g. three records 10-12). The volatile memory accommodates a license program (16) having license record fields (13-15) appended thereto. By way of example said fields stand for Application name (e.g. Lotus 123), Vendor name (Lotus inc.), and no of licensed copies (1 for stand alone usage, >1 for number of licensed users for a network application).

Those versed in the art will readily appreciate that the license record is not necessarily bound to continuos fields. In fact, the various license content components of the data record may be embedded in various locations in the application. Any component may, if desired, be encrypted.

Each one of the encrypted license records (10-12) is obtained by encrypting the corresponding license record as extracted from program 16, utilizing for encryption the identification key (8).

In a typical, yet not exclusive, sequence of operation, a transaction/request is sent, by the computer to the bureau. This transaction includes the key (8), the encrypted license-records (10-12), contents from the license program used in forming a license record (e.g. fields 13-15), and other items of information as desired.

The bureau forms the proposed license-record from the contents, encrypts (utilizing predetermined encryption algorithm) the so formed license-record using the key (8), and compares the so formed encrypted

license-record with the license-records (10-12). The bureau generates an overlay according to the result of the comparison indication successful comparison, non-critical failure comparison and critical failure comparison.

The bureau returns the overlay which will direct the computer in subsequent operation. Thus, a success overlay will allow the license program to operate. A non-critical failure overlay will ask for additional user interactions. A critical failure overlay will cause permanent disruption to the computer's BIOS operations. Thus, software operation of the program is methodologically according to a license limitation restriction.

Those versed in the art will readily appreciate that the implementation as described with reference to Fig. 1 is by no means binding. Thus, by way of non-limiting example, the bureau, instead of being external entity may form part of the computer.

Attention is now directed to Fig. 2, showing a generalized flow chart of the sequence of operations performed according to one embodiment of the invention.

Thus, selecting (17) a program includes the step of: establishing a licensed-software-program in the volatile memory of the computer wherein the licensed-software-program includes contents used to form a license-record. These contents, be they centralize or decentralized, may include terms, identifications, specifications, or limitations related to the manufacturer of a software product, the distributor of a software product, the purchaser of a software product, a licensor, a licensee, items of computer hardware or components thereof, or to other terms and conditions related to the aforesaid.

Setting up (18) the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in the first non-volatile memory area; and establishing at least one license-record location in the first or the second nonvolatile memory area.

Establishing a license-record includes the steps of: forming a license-record by encrypting of the contents used to form a license-record with other predetermined data contents, using the key; and establishing the encrypted license-record in one of the at least one established license-record locations (e.g. 10-12 in Figure 1).

Verifying (19) the program includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the first or the second non-volatile memory area, using the key; and comparing the encrypted licensed-software-program's license-record contents with the encrypted license-record in the first or the second non-volatile memory area, or comparing the licensed-software-program's license-record contents with the decrypted license-record in the first or the second non-volatile memory area.

Acting (20) on the program includes the step of: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency. In this context "non-unity" relates to being unequal with respect to a specific equation (e.g. A=B+1); and "insufficiency" relates to being outside of a relational bound (e.g. A>B+1). "Restricting 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).

The present invention has been described with a certain degree of particularity but it should be understood that various modifications and alterations may be made without departing from the scope or spirit of the invention as defined by the following claims:

**CLAIMS:**

1. A method of restricting software operation within a license limitation comprising; for a computer having a first non-volatile memory area, a second non-volatile memory area, and a volatile memory area; the steps of: selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification.

2. A method according to claim 1, further comprising the step of: establishing a license authentication bureau.

3. A method according to claim 2, wherein setting up a verification structure further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as the encryption key; and transferring, from the bureau to the computer, the encrypted license-record.

4. A method according to claim 2, wherein verifying the program further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license-verification including an identification of the computer, the encrypted license-record for the selected program from the second non-volatile memory, and the licensed-software-program's license-record contents; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

5. A method according to claim 3 wherein the identification of the computer includes the pseudo-unique key.

6. A method according to claim 1 wherein selecting a program includes the step of: establishing a licensed-software-program in the volatile memory of the computer wherein said licensed-software-program includes contents used to form a license-record.

7. A method according to claim 1 wherein setting up the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in the first non-volatile memory area; and establishing at least one license-record location in the first or the second nonvolatile memory area.

8. A method according to claim 6 wherein establishing a license-record includes the steps of: forming a license-record by encrypting of the contents used to form a license-record with other predetermined data contents, using the key; and establishing the encrypted license-record in one of the at least one established license-record locations.

9. A method according to claim 1 wherein verifying the program includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the first or the second non-volatile memory area, using the key; and comparing the encrypted licensed-software-program's license-record contents with the encrypted license-record in the first or the second non-volatile memory area, or comparing the licensed-software-program's license-record contents with the decrypted license-record in the first or the second non-volatile memory area.

10. A method according to claim 1 wherein acting on the program includes the step of: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency.

11. A method according to claim 1 wherein the first non-volatile memory area is a ROM section of a BIOS.

12. A method according to claim 1 wherein the second non-volatile memory area is a $E^2$PROM section of a BIOS.

13. A method according to claim 1 wherein the volatile memory is a RAM.

14. A non-volatile memory media used as a BIOS of a computer, for restricting software operation within a license limitation, wherein a pseudo-unique key is established.

15. A non-volatile memory media according to claim 14 wherein the pseudo-unique key is established in a ROM section of the BIOS.

## ABSTRACT

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. The method includes the steps of selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification.

2/95b

DECLARATION FOR UNITED STATES PATENT APPLICATION, POWER OF ATTORNEY, DESIGNATION OF CORRESPONDENCE ADDRESS

Attorney Docket _____

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and that I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Method of Restricting Software Operation within a Licensed Limitation

the specification of which

[ x ] is attached hereto.

[ ] was filed on _____ as Application No. --Unknown--

and was amended on _____ [if applicable].

[ ] was filed under the Patent Cooperation Treaty on _____,

Serial No. _____, the United States of America being designated.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent, utility model, design or inventor's certificate listed below and have also identified below any foreign application(s) for patent, utility model, design or inventor's certificate having a filing date before that of the application(s) on which priority is claimed:

| Prior Foreign Application(s) | | | Priority Claimed | |
|---|---|---|---|---|
| Number | Country | Date Filed | Yes | No |
| 124571 | Israel | May 21, 1998 | X | |

I hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: George H. Spencer (Reg. No. 18,038), Norman N. Kunitz (Reg.No. 20,586), Robert J. Frank (Reg. No. 19,112), Gabor J. Kelemen (Reg. No. 21,016), Robert Kinberg (Reg. No. 26,924), John W. Schneller (Reg. No. 26,031), Ashley J. Wells (Reg. No. 29,847), Christopher H. Lynt (Reg. No. 33,619) Suite 300 East, 1100 New York Avenue, N.W., Washington, D.C. 20005-3955, Telephone: (202) 414-4000, Telefax: (202) 414-4040. Address all correspondence to SPENCER & FRANK, Suite 300 East, 1100 New York Ave., N.W., Washington, D.C. 20005-3955.

The undersigned hereby authorizes the U.S. attorneys named herein to accept and follow instructions from the undersigned's assignee, if any, and/or, if the undersigned is not a resident of the United States, the undersigned's domestic attorney, patent attorney or patent agent, as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorneys and the undersigned. In the event of a change in the person(s) from whom instructions may be taken, the U.S. attorneys named herein will be so notified by the undersigned.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature: X _____ Date: X 8/28/98, 1998.

Sole/First Inventor: Miki Mullor

Citizenship: Israeli

Residence and Post Office Address: 3, Zelon Street, Ramat Hasharon 47234, Israel

Signature: X _____ Date: X 8/28/98, 1998.

Second Inventor: Julian Valiko

Citizenship: Israeli

Residence and Post Office Address: 3, Zelon Street, Ramat Hasharon 47234, Israel

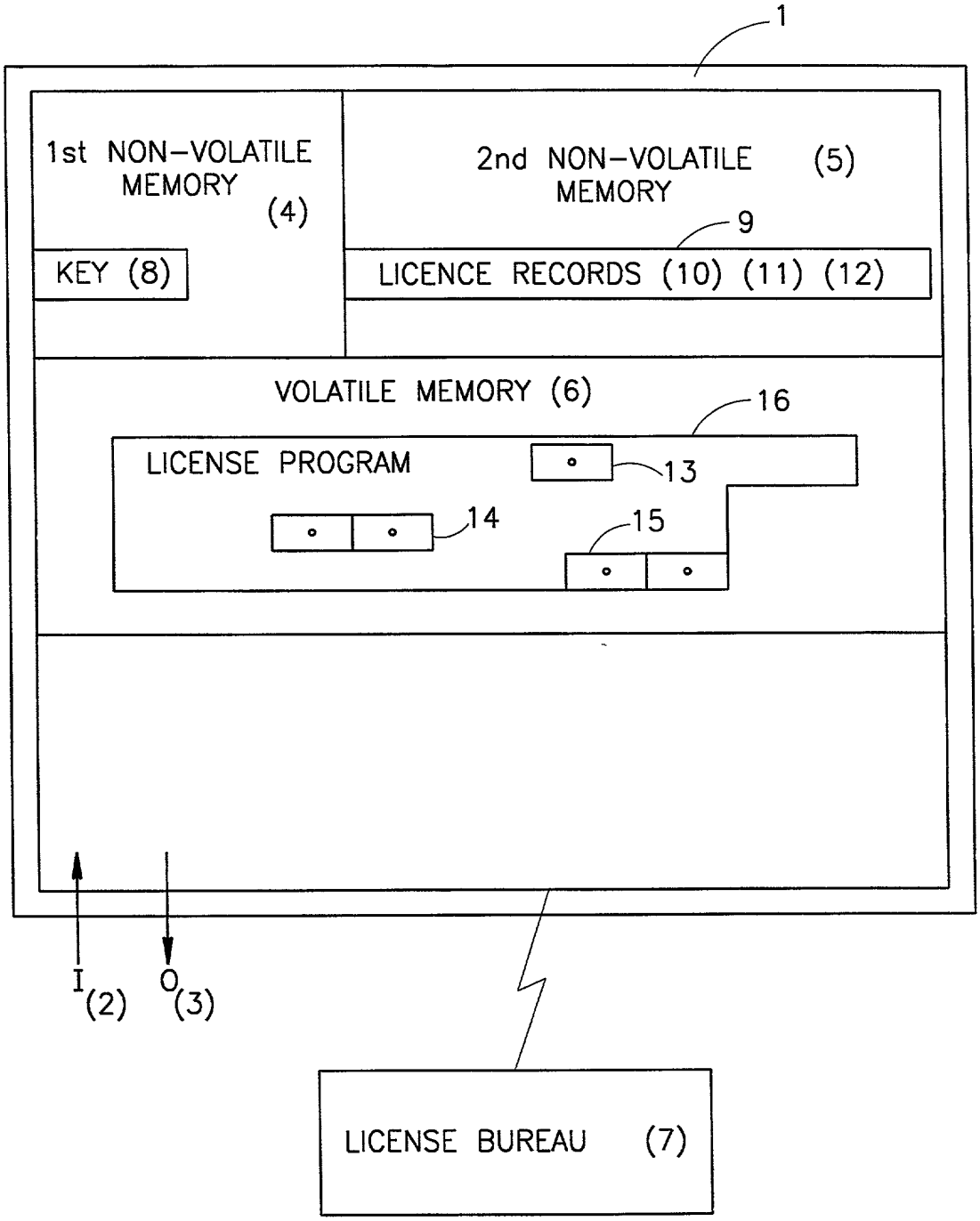
1
1st NON-VOLATILE MEMORY (4)
2nd NON-VOLATILE MEMORY (5)
9
KEY (8)
LICENCE RECORDS (10) (11) (12)
VOLATILE MEMORY (6)
16
LICENSE PROGRAM
13
14
15
I (2)
O (3)
LICENSE BUREAU (7)

FIG.1

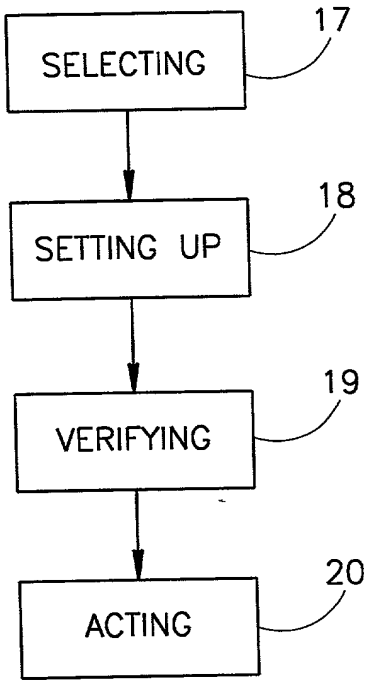


FIG.2

VENABLE, BETJER, HOWARD & CIVILETTI, LLP
Including professional corporations

1100 New York Avenue, N.W., Suite 300 East
Washington, D.C. 20005-3955
(202) 414-4000, Fax (202) 414-4040
Telex 64267
www.venable.com

OFFICES IN
MARYLAND
WASHINGTON, D.C.
VIRGINIA

VENABLE
ATTORNEYS AT LAW

595 U.S. PTO 10/01/98

JC135 U.S. PTO 09/164777 10/01/98

October 1, 1998

Assistant Commissioner for Patents
Washington, D.C. 20231

Re: New Patent Application
Inventor(s): Miki MULLOR and Julian VALIKO
Attorney Docket: REINC 4237.01

Sir:

Please find attached hereto an application for patent which includes:

Specification, Claims, Declaration, Power of Attorney.

A certified copy of Israel Application No. 124571 filed May 21, 1998, the priority of which is claimed herewith under 35 U.S.C. 119.

Verified Declaration Statement showing Small Entity Status:

Formal Drawings: Figures 1 and 2 (2 sheets)

Fee (see formula below) check enclosed.

Basic Fee $395/790..... $ 395.00

Additional Fees:

Total number of claims in excess of 20 * times $11/22 $ 0.00

Number of independent claims 1
in excess of 3: * times $41/82..... $ 0.00
An assignment is likewise enclosed; Recording Fee $40. $ 40.00
TOTAL FEES FOR THE ABOVE APPLICATION... $ 435.00

In the event there is attached hereto no check, or a check for an insufficient amount, please charge the fee to our Account No. 19-3700 and notify us accordingly.

Respectfully submitted

Robert Kinberg

Robert Kinberg,
Registration No. 26,924

RK:boa

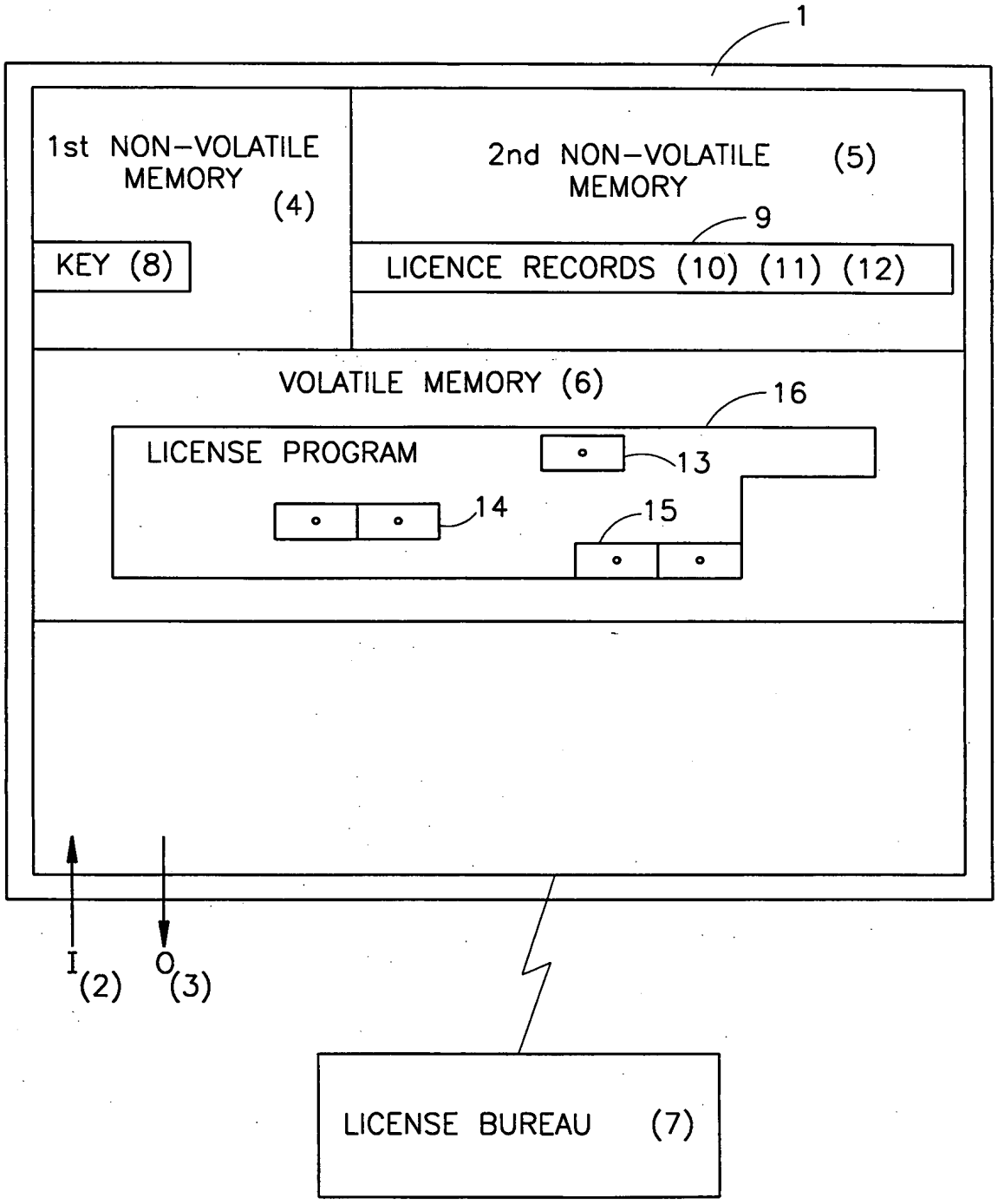
1
1st NON-VOLATILE MEMORY (4)
2nd NON-VOLATILE MEMORY (5)
9
KEY (8)
LICENCE RECORDS (10) (11) (12)
VOLATILE MEMORY (6)
16
LICENSE PROGRAM
13
14
15
I (2)
O (3)
LICENSE BUREAU (7)

FIG.1

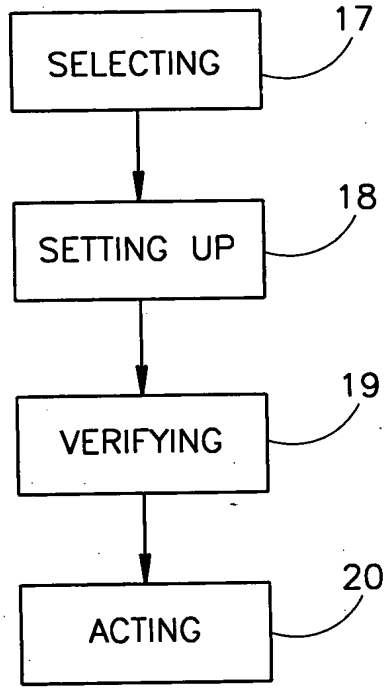


FIG.2

# Method of Restricting Software Operation within A License Limitation

## FIELD OF THE INVENTION

This invention relates to a method and system of identifying and restricting an unauthorized software program's operation.

## BACKGROUND OF THE INVENTION

Ins a1 Numerous methods have been devised for the identifying and restricting of unauthorized software program's operation. These methods have been primarily motivated by the grand proliferation of illegally copied software, which is engulfing the marketplace. This illegal copying represents billions of dollars in lost profits to commercial software developers.

Software based products have been developed to validate authorized software usage by writing a license signature onto the computer's volatile memory (e.g. hard disk). These products may be appropriate for restricting honest software users, but they are very vulnerable to attack at the hands of skilled system's programmers (e.g. "hackers"). These license signatures are also subject to the physical instabilities of their volatile memory media.

Ins a2 Hardware base products have also been developed to validate authorized software usage by accessing a dongle that is coupled e.g. to the parallel port of the P.C. These units are expensive, inconvenient, and not particularly suitable for software that may be sold by downloading (e.g. over the internet).

There is accordingly a need in the art to provide for a system and method that substantially reduce or overcome the drawbacks of hitherto known solutions.

## SUMMARY OF THE INVENTION

The present invention relates to a method of restricting software operation within a license limitation. This method strongly relies on the use of a key and of a record, which have been written into the non-volatile memory of a computer.

For a better understanding of the underlying concept of the invention, there follows a specific non-limiting example. Thus, consider a conventional computer having a conventional BIOS module in which a key was embedded at the ROM section thereof, during manufacture. The key constitutes, effectively, a unique identification code for the host computer. It is important to note that the key is stored in a non-volatile portion of the BIOS, i.e. it cannot be removed or modified.

Further, according to the invention, each application program that is to be licensed to run on the specified computer, is associated with a license record; that consists of author name, program name and number of licensed users (for network). The license record may be held in either encrypted or explicit form.

Now, there commences 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. This is implemented by encrypting the license record (or portion thereof) using said key (or portion thereof) exclusively or in conjunction with other identification information) as an encryption key. The resulting encrypted license record is stored in another (second) non-volatile section of the BIOS, e.g. $E^2$PROM (or

the ROM). It should be noted that unlike the first non-volatile section, the data in the second non-volatile memory may optionally be erased or modified (using $E^2$PROM manipulation commands), so as to enable to add, modify or remove licenses. The actual format of the license may include a string of terms that correspond to a license registration entry (e.g. lookup table entry or entries) at a license registration bureau (which will be further described as part of the preferred embodiment of the present invention).

Having placed the encrypted license record in the second non-volatile memory (e.g. the $E^2$PROM), the process of verifying a license may be commenced. Thus, when 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 $E^2$PROM. In the case of match, the program is verified to run on the computer. If on the other hand the sought encrypted data record is not found in the $E^2$PROM database, this means that the program under question is not properly licensed and appropriate application define action is invoked (e.g. informing to the user on the unlicensed status, halting the operation of the program under question etc.)

Those versed in the art will readily appreciate that any attempt to run a program at an unlicensed site will be immediately detected. Consider, for example, that a given application, say Lotus 123, is verified to run on a given computer having a first identification code (k1) stored in the ROM portion of the BIOS thereof. This obviously requires that the license record (LR) of the application after having been encrypted using k1 giving rise to $(LR)_{k1}$ is stored in the $E^2$PROM of the first computer.

Suppose now that a hacker attempts to run the specified application in a second computer having a second identification code (k2) stored in the

4

ROM portion of the BIOS thereof. All or a portion the database contents (including of course $(LR)_{k1}$ ) that reside in the $E^2$PROM portion in the first computer may be copied in a known *per se* means to the second computer. It is important to note that the hacker is unable to modify the key in the ROM of the second computer to K1, since, as recalled, the contents of the ROM is established during manufacture and is practically invariable.

Now, when the application under question is executed in the second computer, the license verifier retrieves said LR from the application and, as explained above, encrypts it using the key as retrieved from the ROM of the second computer, i.e <u>k2</u> giving rise to encrypted license record $(LR)_{k2}$. Obviously, the value $(LR)_{k2}$ does not reside in the $E^2$PROM database section of the second computer (since it was not legitimately licensed) and therefore the specified application is invalidated. It goes without saying that the data copied from the first (legitimate) computer is rendered useless, since comparing $(LR)_{k2}$ with the copied value $(LR)_{\tilde{k}1}$ results, of course, in mismatch.

The example above is given for clarity of explanation only and is by no means binding.

In its broadest aspect, the invention provides for a method of restricting software operation within a license limitation including; for a computer having a first non-volatile memory area, a second non-volatile memory area, and a volatile memory area; the steps of: selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification.

An 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. 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's operability) is inadvertently changed by the hacker. This is too high of a risk for the ordinary software hacker to pay. Note that various recognized means for hindering the professional-like hacker may also be utilized (e.g. anti-debuggers, etc.) in conjunction with the present invention.

In the context of the present invention, a "computer" relates to a digital data processor. These processors are found in personal computers, or on one or more processing cards in multi-processor machines. Today, a processor normally includes a first non-volatile memory, a second non-volatile memory, and data linkage access to a volatile memory. There are also processors having only one non-volatile memory or having more than two non-volatile memories; all of which should be considered logically as relating to having a first and a second non-volatile memory areas. There are also computational environments where the volatile memory is distributed into numerous physical components, using a bus, LAN, etc.; all of which should logically be considered as being a volatile memory area.

According to the preferred embodiment of the present invention, there is further provided a license authentication bureau which can participate in either or both of:

(i) establishing the license record in the second non-volatile memory; and

(ii) verifying if the key and license record in the non-volatile memory(s) is compatible with the license record information as extracted from the application under question.

The bureau is a telecommunications accessible processor where functions such as formatting, encrypting, and verifying may be performed. Performing these or other functions at the bureau helps to limit the

understanding of potential software hackers; since they can not observe how these functions are constructed. Additional security may also be achieved by forcing users of the bureau to register, collecting costs for connection to the bureau, logging transactions at the bureau, etc.

According to one example of using the bureau, setting up a verification structure further includes the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as the encryption key; and transferring, from the bureau to the computer, the encrypted license-record.

According to another example of using the bureau, verifying the program further includes the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license-verification including an identification of the computer, the encrypted license-record for the selected program from the second non-volatile memory, and the licensed-software-program's license-record contents; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

The actual key that serves for identifying the computer may be composed of the pseudo-unique key exclusively, or, if desired, in combination with information, e.g. information related to the registration of the user such as e.g. place, telephone number, user name, license number, etc. In the context of the present invention, a "pseudo-unique" key may relate to a bit string which uniquely identifies each first non-volatile memory. Alternately the "pseudo-unique" key may relate to a random bit string (or to an assigned bit string) of sufficient length such that: there is an acceptably low probability of

a successful unauthorized transfer of licensed software between two computers, where the first volatile memories of these two computers have the same key.

It should be noted that the license bureau might maintain a registry of keys and of licensed programs that have been registered at the bureau in association with these keys. This registry may be used to help facilitate the formalization of procedures for the transfer of ownership of licensed software from use on one computer to use on another computer.

Constructing the key in the manner specified may hinder the hacker in cracking the proposed encryption scheme of the invention, in particular when the establishment of the license record or the verification thereof is performed in the bureau. Those versed in the art will readily appreciate that the invention is by no means bound by the data, the algorithms, or the manner of operation of the bureau. It should be noted that the tasks of establishing and/or verifying a license record may be shared between the bureau and the computer, done exclusively at the computer, or done exclusively at the bureau. The pseudo-unique key length needs to be long enough to hinder encryption attack schemes. The establishing of the key may be done at any time from the non-volatile memory's manufacture until an attempted use of an established license-record in the non-volatile memory. The key is used for encryption or decryption operations associated with license-records. In principle, the manufacturer of the licensed-software-program may specify the license-record format and therefore different formats may, if desired, be used for respective applications.

According to the preferred embodiment of the present invention, the pseudo-unique key is a unique-identification bit string that is written onto the first non-volatile memory by the manufacturer of the is memory media.

According to one, non-limiting, preferred embodiment of the present invention, the first non-volatile memory area is a ROM section of a BIOS; the

second non-volatile memory area is a $E^2$PROM section of a BIOS; and the volatile memory is a RAM e.g. hard disk and/or internal memory of the computer .

The present invention also relates to a non-volatile memory media used as a BIOS of a computer, for restricting software operation within a license limitation, wherein a pseudo-unique key is established.

According to the preferred embodiment of the non-volatile memory media of the present invention, the pseudo-unique key is established in a ROM section of the BIOS.

## BRIEF DESCRIPTION OF THE DRAWINGS:

In order to understand the invention and to see how it may be carried out in practice, a preferred embodiment will now be described, by way of non-limiting example only, with reference to the accompanying drawings, in which:

Fig. 1 is a schematic diagram of a computer and a license bureau; and

Fig. 2 is a generalized flow chart of the sequence of operations performed according to one embodiment of the invention.

## DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

A schematic diagram of a computer and a license bureau is shown in Figure 1. Thus, a computer processor (1) is associated with input operations (2) and with output operations (3). This computer (processor) internally contains a first non-volatile memory area (4) (e.g. the ROM section of the BIOS), a second non-volatile memory area (5) (e.g. the $E^2$PROM section of the BIOS), and a volatile memory area (6) (e.g. the internal RAM memory of the computer).

The computer processor is in temporary telecommunications linkage with a license bureau (7).

The first non-volatile memory includes a pseudo-random identification key (8), which exclusively or in combination with other information (e.g. user name), is sufficient to uniquely differentiate this first non-volatile memory from all other first non-volatile memories. As specified before, said key constitutes unique identification of the computer.

Ins A3 The second non-volatile memory includes a license-record-area (9) e.g. for the containing of at least one encrypted license-record (e.g. three records 10-12). The volatile memory accommodates a license program (16) having license record fields (13-15) appended thereto. By way of example said fields stand for Application name (e.g. Lotus 123), Vendor name (Lotus inc.), and no of licensed copies (1 for stand alone usage, >1 for number of licensed users for a network application).

Ins A4 Those versed in the art will readily appreciate that the license record is not necessarily bound to continuos fields. In fact, the various license content components of the data record may be embedded in various locations in the application. Any component may, if desired, be encrypted.

Each one of the encrypted license records (10-12) is obtained by encrypting the corresponding license record as extracted from program 16, utilizing for encryption the identification key (8).

In a typical, yet not exclusive, sequence of operation, a transaction/request is sent, by the computer to the bureau. This transaction includes the key (8), the encrypted license-records (10-12), contents from the license program used in forming a license record (e.g. fields 13-15), and other items of information as desired.

Ins. A5 The bureau forms the proposed license-record from the contents, encrypts (utilizing predetermined encryption algorithm) the so formed license-record using the key (8), and compares the so formed encrypted

license-record with the license-records (10-12). The bureau generates an overlay according to the result of the comparison indication successful comparison, non-critical failure comparison and critical failure comparison.

The bureau returns the overlay which will direct the computer in subsequent operation. Thus, a success overlay will allow the license program to operate. A non-critical failure overlay will ask for additional user interactions. A critical failure overlay will cause permanent disruption to the computer's BIOS operations. Thus, software operation of the program is methodologically according to a license limitation restriction.

Those versed in the art will readily appreciate that the implementation as described with reference to Fig. 1 is by no means binding. Thus, by way of non-limiting example, the bureau, instead of being external entity may form part of the computer.

Attention is now directed to Fig. 2, showing a generalized flow chart of the sequence of operations performed according to one embodiment of the invention.

Thus, selecting (17) a program includes the step of: establishing a licensed-software-program in the volatile memory of the computer wherein the licensed-software-program includes contents used to form a license-record. These contents, be they centralize or decentralized, may include terms, identifications, specifications, or limitations related to the manufacturer of a software product, the distributor of a software product, the purchaser of a software product, a licensor, a licensee, items of computer hardware or components thereof, or to other terms and conditions related to the aforesaid.

Setting up (18) the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in the first non-volatile memory area; and establishing at least one license-record location in the first or the second nonvolatile memory area.

Establishing a license-record includes the steps of: forming a license-record by encrypting of the contents used to form a license-record with other predetermined data contents, using the key; and establishing the encrypted license-record in one of the at least one established license-record locations (e.g. 10-12 in Figure 1).

Verifying (19) the program includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the first or the second non-volatile memory area, using the key; and comparing the encrypted licensed-software-program's license-record contents with the encrypted license-record in the first or the second non-volatile memory area, or comparing the licensed-software-program's license-record contents with the decrypted license-record in the first or the second non-volatile memory area.

Acting (20) on the program includes the step of: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency. In this context "non-unity" relates to being unequal with respect to a specific equation (e.g. A=B+1); and "insufficiency" relates to being outside of a relational bound (e.g. A>B+1). "Restricting 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).

The present invention has been described with a certain degree of particularity but it should be understood that various modifications and alterations may be made without departing from the scope or spirit of the invention as defined by the following claims.

**CLAIMS:**

SUB A6 1. A method of restricting software operation within a license limitation comprising; for a computer having a first non-volatile memory area, a second non-volatile memory area, and a volatile memory area; the steps of: selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification.

2. A method according to claim 1, further comprising the step of: establishing a license authentication bureau.

SUB B2 3. A method according to claim 2, wherein setting up a verification structure further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as the encryption key; and transferring, from the bureau to the computer, the encrypted license-record.

4. A method according to claim 2, wherein verifying the program further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license-verification including an identification of the computer, the encrypted license-record for the selected program from the second non-volatile memory, and the licensed-software-program's license-record contents; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

5. A method according to claim 3 wherein the identification of the computer includes the pseudo-unique key.

6. A method according to claim 1 wherein selecting a program includes the step of: establishing a licensed-software-program in the volatile memory of the computer wherein said licensed-software-program includes contents used to form a license-record.

7. A method according to claim 1 wherein setting up the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in the first non-volatile memory area; and establishing at least one license-record location in the first or the second nonvolatile memory area.

8. A method according to claim 6 wherein establishing a license-record includes the steps of: forming a license-record by encrypting of the contents used to form a license-record with other predetermined data contents, using the key; and establishing the encrypted license-record in one of the at least one established license-record locations.

SUB B3

9. A method according to claim 1 wherein verifying the program includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the first or the second non-volatile memory area, using the key; and comparing the encrypted licensed-software-program's license-record contents with the encrypted license-record in the first or the second non-volatile memory area, or comparing the licensed-software-program's license-record contents with the decrypted license-record in the first or the second non-volatile memory area.

10. A method according to claim 1 wherein acting on the program includes the step of: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency.

11. A method according to claim 1 wherein the first non-volatile memory area is a ROM section of a BIOS.

14

12. A method according to claim 1 wherein the second non-volatile memory area is a $E^2$PROM section of a BIOS.

11 13. A method according to claim 1 wherein the volatile memory is a RAM.

14. A non-volatile memory media used as a BIOS of a computer, for restricting software operation within a license limitation, wherein a pseudo-unique key is established.

15. A non-volatile memory media according to claim 14 wherein the pseudo-unique key is established in a ROM section of the BIOS.

ADD A7

ADD B5

15

## ABSTRACT

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. The method includes the steps of selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification.

2/95b

DECLARATION FOR UNITED STATES PATENT APPLICATION; POWER OF ATTORNEY, DESIGNATION OF CORRESPONDENCE ADDRESS

Attorney Docket _____

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and that I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Method of Restricting Software Operation within a Licensed Limitation

the specification of which

[ X ] is attached hereto.

[ ] was filed on _____ as Application No. --Unknown--

and was amended on _____ [if applicable].

[ ] was filed under the Patent Cooperation Treaty on _____,

Serial No. _____, the United States of America being designated.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent, utility model, design or inventor's certificate listed below and have also identified below any foreign application(s) for patent, utility model, design or inventor's certificate having a filing date before that of the application(s) on which priority is claimed:

| Prior Foreign Application(s) | | | Priority Claimed | |
|---|---|---|---|---|
| Number | Country | Date Filed | Yes | No |
| 124571 | Israel | May 21, 1998 | X | |

I hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: George H. Spencer (Reg. No. 18,038), Norman N. Kunitz (Reg.No. 20,586), Robert J. Frank (Reg. No. 19,112), Gabor J. Kelemen (Reg. No. 21,016), Robert Kinberg (Reg. No. 26,924), John W. Schneller (Reg. No. 26,031), Ashley J. Wells (Reg. No. 29,847), Christopher H. Lynt (Reg. No. 33,619) Suite 300 East, 1100 New York Avenue, N.W., Washington, D.C. 20005-3955, Telephone: (202) 414-4000, Telefax: (202) 414-4040. Address all correspondence to SPENCER & FRANK, Suite 300 East, 1100 New York Ave., N.W., Washington, D.C. 20005-3955.

The undersigned hereby authorizes the U.S. attorneys named herein to accept and follow instructions from the undersigned's assignee, if any, and/or, if the undersigned is not a resident of the United States, the undersigned's domestic attorney, patent attorney or patent agent, as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorneys and the undersigned. In the event of a change in the person(s) from whom instructions may be taken, the U.S. attorneys named herein will be so notified by the undersigned.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature: X _____ Date: X 8/28/98, 1998.

Sole/First Inventor: Miki Mullor

Citizenship: Israeli

Residence and Post Office Address: 3, Zelon Street, Ramat Hasharon 47234, Israel

Signature: X _____ Date: X 8/28/98, 1998.

Second Inventor: Julian Valiko

Citizenship: Israeli

Residence and Post Office Address: 3, Zelon Street, Ramat Hasharon 47234, Israel

Attorney's Docket No.

Applicant or Patentee: _____
Serial or Patent No.: _____
Filed or Issued: _____
For: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) and 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am

[ ] the owner of the small business concern identified below:
[X] an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN M.Y.P.D. TECHNOLOGIES LTD.
ADDRESS OF CONCERN c/o Keren-Shechter Law Firm, 21 Har Sinai Street, Tel-Aviv 65816, Israel

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION by inventor(s) Miki MULLOR and Julian VALIKO described in

[x] the application filed herewith
[ ] application serial no. _____, filed _____.
[ ] patent no. _____, issued _____.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME _____
ADDRESS _____
[ ] INDIVIDUAL [ ] SMALL BUSINESS CONCERN [ ] NONPROFIT ORGANIZATION

NAME _____
ADDRESS _____
[ ] INDIVIDUAL [ ] SMALL BUSINESS CONCERN [ ] NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change of status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING X Miki Mullor JULIAN VLAIKO
TITLE OF PERSON SIGNING X Manager Manager
ADDRESS OF PERSON SIGNING X 3 Peelon Ramot-Hasharon
SIGNATURE X [signature] DATE 1/15/58

Best Available Copy

| SERIAL NUMBER | FILING DATE | CLASS | GROUP ART UNIT | ATTORNEY DOCKET NO. |
|---|---|---|---|---|
| 09/164,777 | 10/01/98 | 380 | 2766 | REIN04237.01 |

APPLICANT

MIKI MULLOR, RAMAT HASHARON, ISRAEL; JULIAN VALIKO RAMAT HASHARON, ISRAEL.

**CONTINUING DOMESTIC DATA**********
VERIFIED
none

**371 (NAT'L STAGE) DATA**********
VERIFIED
none

**FOREIGN APPLICATIONS**********
VERIFIED ISRAEL 124571 03/21/98

***** SMALL ENTITY *****

| Foreign Priority claimed 35 USC 119 (a-d) conditions met Verified and Acknowledged | STATE OR COUNTRY | SHEETS DRAWING | TOTAL CLAIMS | INDEPENDENT CLAIMS |
|---|---|---|---|---|
| ☒ yes ☐ no ☒ yes ☐ no ☐ Met after Allowance<br>Examiner's Initials Initials | ILX | 2 | 15 | 1 |

ADDRESS

~~SPENCER AND FRANK~~
~~SUITE 300 EAST~~
~~2100 NEW YORK AVENUE NW~~
~~WASHINGTON DC 20005-3955~~

Cust # 26694

#15

TITLE

METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSE LIMITATION

| FILING FEE RECEIVED | | |
|---|---|---|
| $395 | FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT NO. _____ for the following: | ☐ All Fees<br>☐ 1.16 Fees (Filing)<br>☐ 1.17 Fees (Processing Ext. of time)<br>☐ 1.18 Fees (Issue)<br>☐ Other _____<br>☐ Credit |

11

# PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 1997

Application or Docket Number: 09/164777

## CLAIMS AS FILED - PART I

SMALL ENTITY TYPE [A] 2 OR OTHER THAN SMALL ENTITY

| FOR | NUMBER FILED (Column 1) | NUMBER EXTRA (Column 2) | RATE | FEE | OR | RATE | FEE |
|---|---|---|---|---|---|---|---|
| BASIC FEE | | | | 395.00 | OR | | 790.00 |
| TOTAL CLAIMS | 15 minus 20 = | * | x$11= | | OR | x$22= | |
| INDEPENDENT CLAIMS | 1 minus 3 = | * | x41= | | OR | x82= | |
| MULTIPLE DEPENDENT CLAIM PRESENT | | | +135= | | OR | +270= | |
| | | | TOTAL | 395.00 | OR | TOTAL | |

* If the difference in column 1 is less than zero, enter "0" in column 2

## CLAIMS AS AMENDED - PART II

SMALL ENTITY OR OTHER THAN SMALL ENTITY

### AMENDMENT A

| | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA |
|---|---|---|---|---|
| Total | * 20 | Minus | ** 20 | = |
| Independent | * 2 | Minus | *** 3 | = |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM | | | | |

| RATE | ADDITIONAL FEE | OR | RATE | ADDITIONAL FEE |
|---|---|---|---|---|
| x$11= | | OR | x$22= | |
| x41= | | OR | x82= | |
| +135= | | OR | +270= | |
| TOTAL ADDIT. FEE | | OR | TOTAL ADDIT. FEE | |

### AMENDMENT B

| | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA |
|---|---|---|---|---|
| Total | * 23 | Minus | ** 20 | = 3 |
| Independent | * 2 | Minus | *** 3 | = |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM | | | | |

| RATE | ADDITIONAL FEE | OR | RATE | ADDITIONAL FEE |
|---|---|---|---|---|
| x$11= | 27 | OR | x$22= | |
| x41= | | OR | x82= | |
| +135= | | OR | +270= | |
| TOTAL ADDIT. FEE | 27 | OR | TOTAL ADDIT. FEE | |

### AMENDMENT C

| | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA |
|---|---|---|---|---|
| Total | * | Minus | ** | = |
| Independent | * | Minus | *** | = |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM | | | | |

| RATE | ADDITIONAL FEE | OR | RATE | ADDITIONAL FEE |
|---|---|---|---|---|
| x$11= | | OR | x$22= | |
| x41= | | OR | x82= | |
| +135= | | OR | +270= | |
| TOTAL ADDIT. FEE | | OR | TOTAL ADDIT. FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

U.S. PTO
JC135
09/164777
10/01/98

STATE PF ISRAEL

This is to certify that
nnexed bereto is a true
y of the documents as
nally deposited with
atent application
rs of which are
s on the first page
of .

זאת לתעודה כי
רצופים בזה העתקים
נכונים של המסמכים
שהופקדו לכתחילה
עם הבקשה לפטנט
לפי הפרטים הרשומים
בעמוד הראשון של
הנספח.

This 25 -08 1998 היום

מ. לסרי
ממונה על הפטנטים

רשם הפטנטים
Registrar of Patents

נתאשר
Certified

חוק הפטנטים, תשכ"ז – 1967
PATENTS LAW, 5727-1967

# בקשה לפטנט
Application For Patent

לשימוש הלשכה
For Office Use

| | |
|---|---|
| מספר: Number | 124571 |
| תאריך: Date | 21-05-1998 |
| הוקדם/נדחה: Ante/Post-dated | |

אני, (שם המבקש, מענו ולגבי גוף מאוגדת מקום התאגדותו)
I, (Name and address of applicant, and in case of body corporate-place of incorporation)

**מיקי מולאור** אזרח ישראלי, מרח' צאלון 3, רמת השרון 47234, ישראל
**Miki Mullor**, Israeli citizen, of 3 Zelon St., Ramat Hasharon 47234, Israel
**יוליאן וליקו**, אזרח ישראלי, מרח' צאלון 3, רמת השרון 47234, ישראל
**Julian Valiko**, Israeli citizen, of 3, Zelon St., Ramat Hasharon 47234, Israel

בעל אמצאה מכח היותנו ממציאים ששמה הוא
Owner, by virtue of Being inventors of an invention the title of which is

(בעברית)
(Hebrew)

## שיטה להגבלת פעולת תוכנה תוך הגבלת רשיון

(באנגלית)
(English)

## Method of restricting software operation within a licensed limitation

מבקש בזאת כי ינתן לי עליה פטנט
Hereby apply for a patent to be granted to me in respect thereof.

| * בקשת חלוקה Application of Division | * בקשת פטנט מוסף Appl. for Patent of Addition | דרישת דין קדימה* Priority Claim | | |
|---|---|---|---|---|
| מבקשת פטנט from application | * לבקשה/לפטנט to Patent/Appl. | מספר/סימן Number/Mark | תאריך Date | מדינת האיגוד Convention Country |
| No. מס' | No. מס' | | | |
| Dated מיום | dated מיום | | | |
| P.O.A.: To be filed | * יפוי כח: עוד יוגש | | | |

המען למסירת מסמכים בישראל
Address for Service in Israel

REINHOLD COHN AND PARTNERS
Patent Attorneys
P.O.B. 4060, Tel-Aviv

**C. 110713.5**

חתימת המבקש
Signature of Applicant

For the Applicants,
REINHOLD COHN AND PARTNERS
By : —

היום 20 בחודש May שנת 1998
This 20 of May of the year 1998

לשימוש הלשכה
For Office Use

טופס זה כשהוא מוטבע בחותם לשכת הפטנטים ומושלם במספר ובתאריך ההגשה, הנו אישור להגשת הבקשה שפרטיה רשומים לעיל.
This form, impressed with the Seal of the Patent Office and indicating the number and date of filing, certifies the filing of the application the particulars of which are set out above.

* מחק את המיותר
Delete whatever is inapplicable

שיטה להגבלת פעולת תוכנה תוך הגבלת רשיון

# Method of restricting software operation within a licensed limitation


Miki Mullor

Julian Valiko

מיקי מולאור

יוליאן וליקו


C.110713.5

# Method of Restricting Software Operation within A License Limitation

## FIELD OF THE INVENTION

This invention relates to a method and system of identifying and restricting an unauthorized software program's operation.

## BACKGROUND OF THE INVENTION

Numerous methods have been devised for the identifying and restricting of unauthorized software program's operation. These methods have been primarily motivated by the grand proliferation of illegally copied software, which is engulfing the marketplace. This illegal copying represents billions of dollars in lost profits to commercial software developers.

Software based products have been developed to validate authorized software usage by writing a license signature onto the computer's volatile memory (e.g. hard disk). These products may be appropriate for restricting honest software users, but they are very vulnerable to attack at the hands of skilled system's programmers (e.g. "hackers"). These license signatures are also subject to the physical instabilities of their volatile memory media.

Hardware base products have also been developed to validate authorized software usage by accessing a dongle that is coupled e.g. to the parallel port of the P.C. These units are expensive, inconvenient, and not

particularly suitable for software that may be sold by downloading (e.g. over the internet).

There is accordingly a need in the art to provide for a system and method that substantially reduce or overcome the drawbacks of hitherto known solutions.

## SUMMARY OF THE INVENTION

The present invention relates to a method of restricting software operation within a license limitation. This method strongly relies on the use of a key and of a record, which have been written into the non-volatile memory of a computer.

For a better understanding of the underlying concept of the invention, there follows a specific non-limiting example. Thus, consider a conventional computer having a conventional BIOS module in which a key was embedded at the ROM section thereof, during manufacture. The key constitutes, effectively, a unique identification code for the host computer. It is important to note that the key is stored in a non-volatile portion of the BIOS, i.e. it cannot be removed or modified.

Further, according to the invention, each application program that is to be licensed to run on the specified computer, is associated with a license record; that consists of author name, program name and number of licensed users (for network). The license record may be held in either encrypted or explicit form.

Now, there commences 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. This is implemented by encrypting the license record (or portion thereof) using said key (or portion thereof) exclusively or in conjunction with other identification

information) as an encryption key. The resulting encrypted license record is stored in another (second) non-volatile section of the BIOS, e.g. $E^2$PROM (or the ROM). It should be noted that unlike the first non-volatile section, the data in the second non-volatile memory may optionally be erased or modified (using $E^2$PROM manipulation commands), so as to enable to add, modify or remove licenses. The actual format of the license may include a string of terms that correspond to a license registration entry (e.g. lookup table entry or entries) at a license registration bureau (which will be further described as part of the preferred embodiment of the present invention).

Having placed the encrypted license record in the second non-volatile memory (e.g. the $E^2$PROM), the process of verifying a license may be commenced. Thus, when 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 $E^2$PROM. In the case of match, the program is verified to run on the computer. If on the other hand the sought encrypted data record is not found in the $E^2$PROM database, this means that the program under question is not properly licensed and appropriate application define action is invoked (e.g. informing to the user on the unlicensed status, halting the operation of the program under question etc.)

Those versed in the art will readily appreciate that any attempt to run a program at an unlicensed site will be immediately detected. Consider, for example, that a given application, say Lotus 123, is verified to run on a given computer having a first identification code (k1) stored in the ROM portion of the BIOS thereof. This obviously requires that the license record (LR) of the

application after having been encrypted using k1 giving rise to $(LR)_{k1}$ is stored in the $E^2$PROM of the first computer.

Suppose now that a hacker attempts to run the specified application in a second computer having a second identification code (k2) stored in the ROM portion of the BIOS thereof. All or a portion the database contents (including of course $(LR)_{k1}$ ) that reside in the $E^2$PROM portion in the first computer may be copied in a known *per se* means to the second computer. It is important to note that the hacker is unable to modify the key in the ROM of the second computer to K1, since, as recalled, the contents of the ROM is established during manufacture and is practically invariable.

Now, when the application under question is executed in the second computer, the license verifier retrieves said LR from the application and, as explained above, encrypts it using the key as retrieved from the ROM of the second computer, i.e k2 giving rise to encrypted license record $(LR)_{k2}$. Obviously, the value $(LR)_{k2}$ does not reside in the $E^2$PROM database section of the second computer (since it was not legitimately licensed) and therefore the specified application is invalidated. It goes without saying that the data copied from the first (legitimate) computer is rendered useless, since comparing $(LR)_{k2}$ with the copied value $(LR)_{k1}$ results, of course, in mismatch.

The example above is given for clarity of explanation only and is by no means binding.

In its broadest aspect, the invention provides for a method of restricting software operation within a license limitation including; for a computer having a first non-volatile memory area, a second non-volatile memory area, and a volatile memory area; the steps of: selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification.

An 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. 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's operability) is inadvertently changed by the hacker. This is too high of a risk for the ordinary software hacker to pay. Note that various recognized means for hindering the professional-like hacker may also be utilized (e.g. anti-debuggers, etc.) in conjunction with the present invention.

In the context of the present invention, a "computer" relates to a digital data processor. These processors are found in personal computers, or on one or more processing cards in multi-processor machines. Today, a processor normally include a first non-volatile memory, a second non-volatile memory, and data linkage access to a volatile memory. There are also processors having only one non-volatile memory or having more than two non-volatile memories; all of which should be considered logically as relating to having a first and a second non-volatile memory areas. There are also computational environments where the volatile memory is distributed into numerous physical components, using a bus, LAN, etc.; all of which should logically be considered as being a volatile memory area.

According to the preferred embodiment of the present invention, there is further provided a license authentication bureau which can participate in either or both of:

(i) establishing the license record in the second non-volatile memory; and

(ii) verifying if the key and license record in the non-volatile memory(s) is compatible with the license record information as extracted from the application under question.

The bureau is a telecommunications accessible processor where functions such as formatting, encrypting, and verifying may be performed. Performing these or other functions at the bureau helps to limit the understanding of potential software hackers; since they can not observe how these functions are constructed. Additional security may also be achieved by forcing users of the bureau to register, collecting costs for connection to the bureau, logging transactions at the bureau, etc.

According to one example of using the bureau, setting up a verification structure further includes the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as the encryption key; and transferring, from the bureau to the computer, the encrypted license-record.

According to another example of using the bureau, verifying the program further includes the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license-verification including an identification of the computer, the encrypted license-record for the selected program from the second non-volatile memory, and the licensed-software-program's license-record contents; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

The actual key that serves for identifying the computer may be composed of the pseudo-unique key exclusively, or, if desired, in combination

with information, e.g. information related to the registration of the user such as e.g. place, telephone number, user name, license number, etc. In the context of the present invention, a "pseudo-unique" key may relate to a bit string which uniquely identifies each first non-volatile memory. Alternately the "pseudo-unique" key may relate to a random bit string (or to an assigned bit string) of sufficient length such that: there is an acceptably low probability of a successful unauthorized transfer of licensed software between two computers, where the first volatile memories of these two computers have the same key.

It should be noted that the license bureau might maintain a registry of keys and of licensed programs that have been registered at the bureau in association with these keys. This registry may be used to help facilitate the formalization of procedures for the transfer of ownership of licensed software from use on one computer to use on another computer.

Constructing the key in the manner specified may hinder the hacker in cracking the proposed encryption scheme of the invention, in particular when the establishment of the license record or the verification thereof is performed in the bureau. Those versed in the art will readily appreciate that the invention is by no means bound by the data, the algorithms, or the manner of operation of the bureau. It should be noted that the tasks of establishing and/or verifying a license record may be shared between the bureau and the computer, done exclusively at the computer, or done exclusively at the bureau. The pseudo-unique key length needs to be long enough to hinder encryption attack schemes. The establishing of the key may be done at any time from the non-volatile memory's manufacture until an attempted use of an established license-record in the non-volatile memory. The key is used for encryption or decryption operations associated with license-records. In principle, the manufacturer of the licensed-software-program may specify the

license-record format and therefore different formats may, if desired, be used for respective applications.

According to the preferred embodiment of the present invention, the pseudo-unique key is a unique-identification bit string that is written onto the first non-volatile memory by the manufacturer of the is memory media.

According to one, non-limiting, preferred embodiment of the present invention, the first non-volatile memory area is a ROM section of a BIOS; the second non-volatile memory area is a $E^2$PROM section of a BIOS; and the volatile memory is a RAM e.g. hard disk and/or internal memory of the computer .

The present invention also relates to a non-volatile memory media used as a BIOS of a computer, for restricting software operation within a license limitation, wherein a pseudo-unique key is established.

According to the preferred embodiment of the non-volatile memory media of the present invention, the pseudo-unique key is established in a ROM section of the BIOS.

**BRIEF DESCRIPTION OF THE DRAWINGS:**

In order to understand the invention and to see how it may be carried out in practice, a preferred embodiment will now be described, by way of non-limiting example only, with reference to the accompanying drawings, in which:

Fig. 1 is a schematic diagram of a computer and a license bureau; and

Fig. 2 is a generalized flow chart of the sequence of operations performed according to one embodiment of the invention.

## DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

A schematic diagram of a computer and a license bureau is shown in Figure 1. Thus, a computer processor (1) is associated with input operations (2) and with output operations (3). This computer (processor) internally contains a first non-volatile memory area (4) (e.g. the ROM section of the BIOS), a second non-volatile memory area (5) (e.g. the $E^2$PROM section of the BIOS), and a volatile memory area (6) (e.g. the internal RAM memory of the computer).

The computer processor is in temporary telecommunications linkage with a license bureau (7).

The first non-volatile memory includes a pseudo-random identification key (8), which exclusively or in combination with other information (e.g. user name), is sufficient to uniquely differentiate this first non-volatile memory from all other first non-volatile memories. As specified before, said key constitutes unique identification of the computer.

The second non-volatile memory includes a license-record-area (9) e.g. for the containing of at least one encrypted license-record (e.g. three records 10-12). The volatile memory accommodates a license program (16) having license record fields (13-15) appended thereto. By way of example said fields stand for Application name (e.g. Lotus 123), Vendor name (Lotus inc.), and no of licensed copies (1 for stand alone usage, >1 for number of licensed users for a network application).

Those versed in the art will readily appreciate that the license record is not necessarily bound to continuos fields. In fact, the various license content components of the data record may be embedded in various locations in the application. Any component may, if desired, be encrypted.

Each one of the encrypted license records (10-12) is obtained by encrypting the corresponding license record as extracted from program 16, utilizing for encryption the identification key (8).

In a typical, yet not exclusive, sequence of operation, a transaction/request is sent, by the computer to the bureau. This transaction includes the key (8), the encrypted license-records (10-12), contents from the license program used in forming a license record (e.g. fields 13-15), and other items of information as desired.

The bureau forms the proposed license-record from the contents, encrypts (utilizing predetermined encryption algorithm) the so formed license-record using the key (8), and compares the so formed encrypted license-record with the license-records (10-12). The bureau generates an overlay according to the result of the comparison indication successful comparison, non-critical failure comparison and critical failure comparison.

The bureau returns the overlay which will direct the computer in subsequent operation. Thus, a success overlay will allow the license program to operate. A non-critical failure overlay will ask for additional user interactions. A critical failure overlay will cause permanent disruption to the computer's BIOS operations. Thus, software operation of the program is methodologically according to a license limitation restriction.

Those versed in the art will readily appreciate that the implementation as described with reference to Fig. 1 is by no means binding. Thus, by way of non-limiting example, the bureau, instead of being external entity may form part of the computer.

Attention is now directed to Fig. 2, showing a generalized flow chart of the sequence of operations performed according to one embodiment of the invention.

Thus, selecting (17) a program includes the step of: establishing a licensed-software-program in the volatile memory of the computer wherein the licensed-software-program includes contents used to form a license-record. These contents, be they centralize or decentralized, may include terms, identifications, specifications, or limitations related to the

manufacturer of a software product, the distributor of a software product, the purchaser of a software product, a licensor, a licensee, items of computer hardware or components thereof, or to other terms and conditions related to the aforesaid.

Setting up (18) the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in the first non-volatile memory area; and establishing at least one license-record location in the first or the second nonvolatile memory area.

Establishing a license-record includes the steps of: forming a license-record by encrypting of the contents used to form a license-record with other predetermined data contents, using the key; and establishing the encrypted license-record in one of the at least one established license-record locations (e.g. 10-12 in Figure 1).

Verifying (19) the program includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the first or the second non-volatile memory area, using the key; and comparing the encrypted licensed-software-program's license-record contents with the encrypted license-record in the first or the second non-volatile memory area, or comparing the licensed-software-program's license-record contents with the decrypted license-record in the first or the second non-volatile memory area.

Acting (20) on the program includes the step of: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency. In this context "non-unity" relates to being unequal with respect to a specific equation (e.g. A=B+1); and "insufficiency" relates to being outside of a relational bound (e.g. A>B+1). "Restricting 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).

The present invention has been described with a certain degree of particularity but it should be understood that various modifications and alterations may be made without departing from the scope or spirit of the invention as defined by the following claims:

**CLAIMS:**

1. A method of restricting software operation within a license limitation comprising; for a computer having a first non-volatile memory area, a second non-volatile memory area, and a volatile memory area; the steps of: selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification.

2. A method according to claim 1, further comprising the step of: establishing a license authentication bureau.

3. A method according to claim 2, wherein setting up a verification structure further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as the encryption key; and transferring, from the bureau to the computer, the encrypted license-record.

4. A method according to claim 2, wherein verifying the program further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license-verification including an identification of the computer, the encrypted license-record for the selected program from the second non-volatile memory, and the licensed-software-program's license-record contents; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

5. A method according to any of claims 3 or 4 wherein the identification of the computer includes the pseudo-unique key.

6. A method according to claims 1 or 2 wherein selecting a program includes the step of: establishing a licensed-software-program in the volatile memory of the computer wherein said licensed-software-program includes contents used to form a license-record.

7. A method according to claims 1 or 2 wherein setting up the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in the first non-volatile memory area; and establishing at least one license-record location in the first or the second nonvolatile memory area.

8. A method according to claims 6 and 7 wherein establishing a license-record includes the steps of: forming a license-record by encrypting of the contents used to form a license-record with other predetermined data contents, using the key; and establishing the encrypted license-record in one of the at least one established license-record locations.

9. A method according to claims 1 or 2 wherein verifying the program includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the first or the second non-volatile memory area, using the key; and comparing the encrypted licensed-software-program's license-record contents with the encrypted license-record in the first or the second non-volatile memory area, or comparing the licensed-software-program's license-record contents with the decrypted license-record in the first or the second non-volatile memory area.

10. A method according to any of claims 1 or 9 wherein acting on the program includes the step of: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency.

11. A method according to claim 1 wherein the first non-volatile memory area is a ROM section of a BIOS.

12. A method according to claim 1 wherein the second non-volatile memory area is a $E^2$PROM section of a BIOS.

13. A method according to claim 1 wherein the volatile memory is a RAM.

14. A non-volatile memory media used as a BIOS of a computer, for restricting software operation within a license limitation, wherein a pseudo-unique key is established.

15. A non-volatile memory media according to claim 14 wherein the pseudo-unique key is established in a ROM section of the BIOS.

For the Applicants,
**REINHOLD COHN AND PARTNERS**
By:

**Miki Mullor**
Julian Valiko



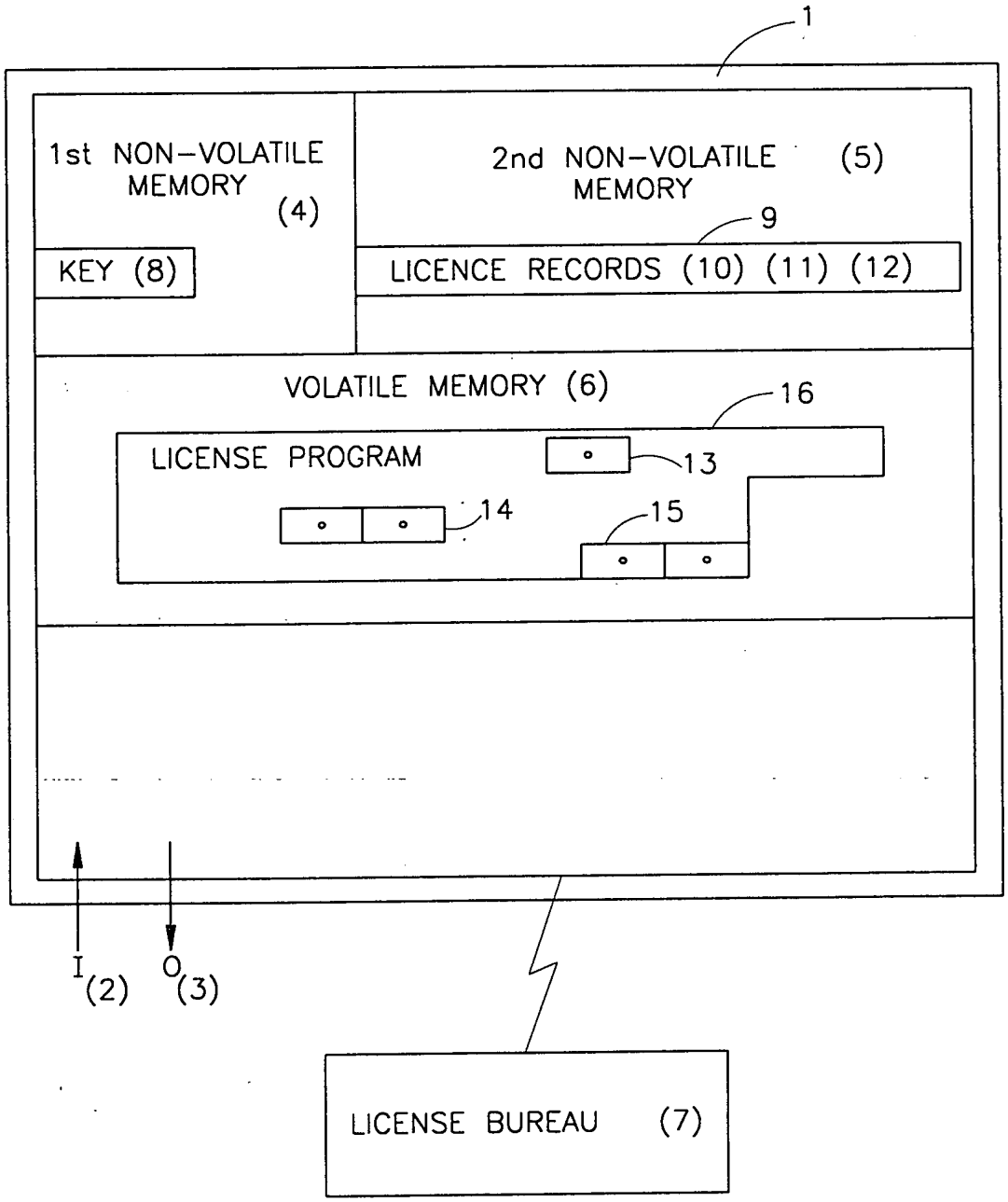


FIG. 1

**Miki Mullor**

Julian Valiko



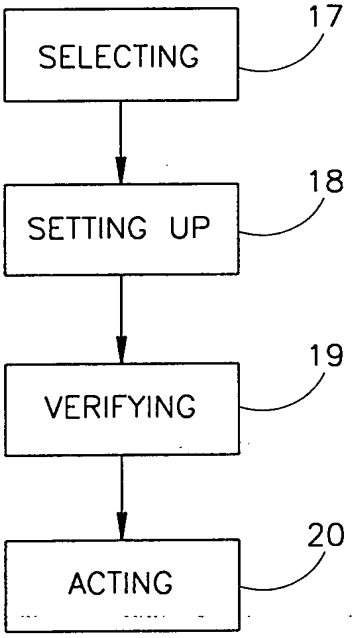


FIG.2

Best Available Copy

Jc135 U.S. PTO
09/164777
10/01/98

| Class | Subclass |
|---|---|
| 705 | 59 |

ISSUE CLASSIFICATION

[redacted]

PATENT NUMBER
6411941
6411941

# U.S. UTILITY PATENT APPLICATION

| O.I.P.E. | PATENT DATE |
|---|---|
| SCANNED ____ Q.A. ____ | JUN 25 2002 |

| SECTOR | CLASS | SUBCLASS | ART UNIT | EXAMINER |
|---|---|---|---|---|
| | | | | |

FILED WITH: ☐ DISK (CRF) ☐ FICHE
(Attached in pocket on right inside flap)

## PREPARED AND APPROVED FOR ISSUE

### ISSUING CLASSIFICATION

| ORIGINAL | | CROSS REFERENCE(S) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CLASS | SUBCLASS | CLASS | SUBCLASS (ONE SUBCLASS PER BLOCK) | | | | | |
| 705 | 59 | 705 | 50 | 51 | 53 | 57 | | |
| INTERNATIONAL CLASSIFICATION | | | | | | | | |
| 5 C 6 F 17 / 60 | | | | | | | | |
| / | | | | | | | | |
| / | | | | | | | | |
| / | | | | | | | | |
| / | | | | | | | | |

☐ Continued on Issue Slip Inside File Jacket

| ☐ TERMINAL DISCLAIMER | DRAWINGS | | | CLAIMS ALLOWED | |
|---|---|---|---|---|---|
| | Sheets Drwg. | Figs. Drwg. | Print Fig. | Total Claims | Print Claim for O.G. |
| | 2 | 2 | 1 | 19 | 18 |

☐ a) The term of this patent subsequent to _____ (date) has been disclaimed.

[signature] 2/25/02
(Assistant Examiner) (Date)

NOTICE OF ALLOWANCE MAILED
3-28-02

☐ b) The term of this patent shall not extend beyond the expiration date of U.S Patent. No. _____

[signature]
Hyung-Sub Sonnet
Primary Examiner
(Primary Examiner) (Date)

ISSUE FEE (W)

| Amount Due | Date Paid |
|---|---|
| $640.00 | 4-22-02 |

☐ c) The terminal ___ months of this patent have been disclaimed.

[signature] 4-2-02
(Legal Instruments Examiner) (Date)

ISSUE BATCH NUMBER

WARNING:
The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122, 181 and 368. Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.

Form PTO-436A
(Rev. 10/97)

(LABEL AREA)

(FACE)

Best Available Copy

[redacted]

## SEARCHED

| Class | Sub. | Date | Exmr. |
|---|---|---|---|
| 705 | 51 | 10/2/00 | CHH |
| | 54 | | |
| | 56 | | |
| | 57 | | |
| | 58 | | |
| | 59 | 10/2/00 | CHH |
| 380 | | | |
| 713 | 187 | 10/2/00 | CHH |
| | 189 | | |
| | 200 | | |
| 705 | 1 | | |
| | 50 | | |
| | 51 | | |
| | 52 | | |
| | 53 | | |
| | 54 | | |
| | 56 | | |
| | 57 | updated search | 2/19/02 CHH |
| | 59 | | |

## SEARCH NOTES
(INCLUDING SEARCH STRATEGY)

| | Date | Exmr. |
|---|---|---|
| Used West in an attempt to identify prior art | 10/2/00 | CHH |
| ~~USDWEST~~ in an attempt to identify relevant and prior art. | 1/3/02 | |
| Searched NPL and Foreign Patent Database | 2/19/02 | CHH |

## INTERFERENCE SEARCHED

| Class | Sub. | Date | Exmr. |
|---|---|---|---|
| | | | |

(RIGHT OUTSIDE)

Best Available Copy

ISSUE SLIP STAPLE AREA (for additional cross references)

| POSITION | INITIALS | ID NO. | DATE |
|---|---|---|---|
| FEE DETERMINATION | | | |
| O.I.P.E. CLASSIFIER | | | |
| FORMALITY REVIEW | | | |

## INDEX OF CLAIMS

✔ ..... Rejected
= ..... Allowed
— (Through numeral) Canceled
÷ ..... Restricted
N ..... Non-elected
I ..... Interference
A ..... Appeal
O ..... Objected

| Claim Final | Claim Original | Date |
|---|---|---|
| | 1 | |
| | 2 | |
| | 3 | |
| | 4 | |
| | 5 | |
| | 6 | |
| | 7 | |
| | 8 | |
| | 9 | |
| | 10 | |
| | 11 | |
| | 12 | |
| | 13 | |
| | 14 | |
| | 15 | |
| | 16 | |
| | 17 | |
| | 18 | |
| | 19 | |
| | 20 | |
| | 21 | |
| | 22 | |
| | 23 | |
| | 24 | |
| | 25 | |
| | 26 | |
| | 27 | |
| | 28 | |
| | 29 | |
| | 30 | |
| | 31 | |
| | 32 | |
| | 33 | |
| | 34 | |
| | 35 | |
| | 36 | |
| | 37 | |
| | 38 | |
| | 39 | |
| | 40 | |
| | 41 | |
| | 42 | |
| | 43 | |
| | 44 | |
| | 45 | |
| | 46 | |
| | 47 | |
| | 48 | |
| | 49 | |
| | 50 | |

| Claim Final | Claim Original | Date |
|---|---|---|
| | 51 | |
| | 52 | |
| | 53 | |
| | 54 | |
| | 55 | |
| | 56 | |
| | 57 | |
| | 58 | |
| | 59 | |
| | 60 | |
| | 61 | |
| | 62 | |
| | 63 | |
| | 64 | |
| | 65 | |
| | 66 | |
| | 67 | |
| | 68 | |
| | 69 | |
| | 70 | |
| | 71 | |
| | 72 | |
| | 73 | |
| | 74 | |
| | 75 | |
| | 76 | |
| | 77 | |
| | 78 | |
| | 79 | |
| | 70 | |
| | 81 | |
| | 82 | |
| | 83 | |
| | 84 | |
| | 85 | |
| | 86 | |
| | 87 | |
| | 88 | |
| | 89 | |
| | 90 | |
| | 91 | |
| | 92 | |
| | 93 | |
| | 94 | |
| | 95 | |
| | 96 | |
| | 97 | |
| | 98 | |
| | 99 | |
| | 100 | |

| Claim Final | Claim Original | Date |
|---|---|---|
| | 110 | |
| | 112 | |
| | 113 | |
| | 114 | |
| | 115 | |
| | 116 | |
| | 117 | |
| | 118 | |
| | 119 | |
| | 110 | |
| | 111 | |
| | 112 | |
| | 113 | |
| | 114 | |
| | 115 | |
| | 116 | |
| | 117 | |
| | 118 | |
| | 119 | |
| | 120 | |
| | 121 | |
| | 122 | |
| | 123 | |
| | 124 | |
| | 125 | |
| | 126 | |
| | 127 | |
| | 128 | |
| | 129 | |
| | 130 | |
| | 131 | |
| | 132 | |
| | 133 | |
| | 134 | |
| | 135 | |
| | 136 | |
| | 137 | |
| | 138 | |
| | 139 | |
| | 140 | |
| | 141 | |
| | 142 | |
| | 143 | |
| | 144 | |
| | 145 | |
| | 146 | |
| | 147 | |
| | 148 | |
| | 149 | |
| | 150 | |

If more than 150 claims or 10 actions staple additional sheet here

(LEFT INSIDE)

# WEST

Help | Logout | Interrupt

Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences

**Search Results -**

| Terms | Documents |
|---|---|
| internet and l1 | 35 |

**Database:**
US Patents Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Refine Search: internet and l1 Clear

## Search History

**Today's Date: 10/4/2000**

| DB Name | Query | Hit Count | Set Name |
|---|---|---|---|
| USPT | internet and l1 | 35 | L6 |
| USPT | bios and encryption | 258 | L5 |
| USPT | bios andencryption | 30492 | L4 |
| USPT | bios adj encryption | 0 | L3 |
| USPT | pseudo adj unique adj keys | 2 | L2 |
| USPT | software adj encryption | 76 | L1 |

19feb02 11:42:36 User264659 Session D29.1
$0.00 0.237 DialUnits FileHomeBase
$0.00 Estimated cost FileHomeBase
$0.03 TYMNET
$0.03 Estimated cost this search
$0.03 Estimated total session cost 0.237 DialUnits

SYSTEM:OS - DIALOG OneSearch
File 15:ABI/Inform(R) 1971-2002/Feb 19
(c) 2002 ProQuest Info&Learning
***File 15: SELECT IMAGE AVAILABILITY FOR PROQUEST FILES**
ENTER 'HELP PROQUEST' FOR MORE
File 16:Gale Group PROMT(R) 1990-2002/Feb 18
(c) 2002 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2002/Feb 18
(c)2002 The Gale Group
File 275:Gale Group Computer DB(TM) 1983-2002/Feb 18
(c) 2002 The Gale Group
File 621:Gale Group New Prod.Annou.(R) 1985-2002/Feb 18
(c) 2002 The Gale Group
File 9:Business & Industry(R) Jul/1994-2002/Feb 15
(c) 2002 Resp. DB Svcs.
File 623:Business Week 1985-2002/Feb 18
(c) 2002 The McGraw-Hill Companies Inc
File 810:Business Wire 1986-1999/Feb 28
(c) 1999 Business Wire
File 624:McGraw-Hill Publications 1985-2002/Feb 19
(c) 2002 McGraw-Hill Co. Inc
File 636:Gale Group Newsletter DB(TM) 1987-2002/Feb 18
(c) 2002 The Gale Group
File 813:PR Newswire 1987-1999/Apr 30
(c) 1999 PR Newswire Association Inc
File 634:San Jose Mercury Jun 1985-2002/Feb 16
(c) 2002 San Jose Mercury News
File 20:Dialog Global Reporter 1997-2002/Feb 19
(c) 2002 The Dialog Corp.
File 77:Conference Papers Index 1973-2002/Jan
(c) 2002 Cambridge Sci Abs
File 35:Dissertation Abs Online 1861-2002/Feb
(c) 2002 ProQuest Info&Learning
File 583:Gale Group Globalbase(TM) 1986-2002/Feb 16
(c) 2002 The Gale Group
File 65:Inside Conferences 1993-2002/Feb W2
(c) 2002 BLDSC all rts. reserv.
File 2:INSPEC 1969-2002/Feb W3
(c) 2002 Institution of Electrical Engineers
File 233:Internet & Personal Comp. Abs. 1981-2002/Feb
(c) 2002 Info. Today Inc.
File 99:Wilson Appl. Sci & Tech Abs 1983-2002/Jan
(c) 2002 The HW Wilson Co.
File 473:FINANCIAL TIMES ABSTRACTS 1998-2001/APR 02
(c) 2001 THE NEW YORK TIMES
***File 473: This file will not update after March 31, 2001.**
It will remain on Dialog as a closed file.
File 474:New York Times Abs 1969-2002/Feb 18
(c) 2002 The New York Times
File 475:Wall Street Journal Abs 1973-2002/Feb 18
(c) 2002 The New York Times
File 610:Business Wire 1999-2002/Feb 19
(c) 2002 Business Wire.
***File 610: File 610 now contains data from 3/99 forward.**
Archive data (1986-2/99) is available in File 810.
File 613:PR Newswire 1999-2002/Feb 19

(c) 2002 PR Newswire Association Inc
***File 613: File 613 now contains data from 5/99 forward.**
Archive data (1987-4/99) is available in File 813.
File 476:Financial Times Fulltext 1982-2002/Feb 19

```
      Set  Items  Description
      ---  -----  -----------
?s bios and verify and license
           45863  BIOS
          202023  VERIFY
          993507  LICENSE
      S1     100  BIOS AND VERIFY AND LICENSE
?s s1 and py<=1998
Processing
Processed  10 of  27 files ...
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
Processing
Processed  20 of  27 files ...
Processing
Completed processing all files
             100  S1
        47213027  PY<=1998
      S2      60  S1 AND PY<=1998
?rd
>>>Duplicate detection is not supported for File 623.

>>>Records from unsupported files will be retained in the RD set.
...examined 50 records  (50)
>>>Record 623:745043 ignored; incomplete bibliographic data, not retained -
in RD set
...completed examining records
      S3      42  RD (unique items)
?s s3 and agent
              42  S3
          936552  AGENT
      S4       8  S3 AND AGENT
?t s4/5/1-8
```

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | | ATTORNEY DOCKET NO. |
|---|---|---|---|---|
| 09/164,777 | 10/01/98 | MULLOR | M | REINC4237.01 |

TM11/1018

SPENCER AND FRANK
SUITE 300 EAST
1100 NEW YORK AVENUE NW
WASHINGTON DC 20005-3955

| EXAMINER |
|---|
| TRAMMELL, J |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2161 | 3 |

DATE MAILED: 10/18/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/164,777 | MULLOR ET AL. | |
| | Examiner | Art Unit | |
| | Calvin L Hewitt II | 2161 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

**Status**

1)☒ Responsive to communication(s) filed on *01 October 1998* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)☐ All b)☐ Some * c)☐ None of the CERTIFIED copies of the priority documents have been:

1.☐ received.

2.☐ received in Application No. (Series Code / Serial Number) _____ .

3.☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: .

## *Status of Claims*

1. Claims 1-15 have been examined.

## *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-4 and 11-13 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ginter et al U.S. Patent No. 5,892,900.

As per claim 1, Ginter et al teach of a system and method for secure transactions management and electronic rights protection that:

- restricts software operation within a license limitation (column 5, lines 29-41 and column 6, lines 29-65)
- utilizes a computer that has a first non-volatile memory area (column 70, lines 40-65)

, a second non-volatile memory area (column 70, lines 40-65) and a volatile memory area (column 71, lines 12-25)

- provides a means of selecting a program residing in the volatile memory (column 71, lines 25-27 and column 82, lines 12-52)
- sets up a verification structure in the non-volatile memories (column 70, lines 23-53 and column/line 63/67-64/15)
- verifies the program using the structure (column 70, lines 23-53 and column/line 63/67-64/15)
- and acts on the program according to the verification (column 70, lines 23-53 and column/line 63/67-64/15).

As per claim 2, the method and system of Ginter et al provide for a license authorization bureau in the form of a VDE (virtual distribution environment) distributor and/or administrator (column/line 278/40 to 281/44).

As per claim 3, the method and system of Ginter et al discloses a verification method with a license authorization bureau that comprises of:

- a two-way data communication link between said bureau and end-user computer (figure 77)

- a method for establishing end-user rights (column/line 278/40 to 281/44)
- data encryption using keys (column 281, lines 10-22)
- creating a license record from the selected program at the bureau (column 71, lines 25-27, column 82, lines 12-52, column/line 278/40 to 281/44 and column 15, lines 10-34).

As per claim 4, the method and system of Ginter et al also provides a means of encrypting the license record for the selected program from the second volatile memory (column/line 65/55 to 66/47).

As per claim 6, the method and system of Ginter et al provides a means for establishing a licensed software program. Where said program contains license record data and is found in the volatile memory (column 71, lines 25-27, column 82, lines 12-52, column/line 278/40 to 281/44, column 15, lines 10-34, figure 8 and column 96, lines 37-41).

As per claim 10, the method and system of Ginter et al provide a means for restricting a program's operation with predetermined limitations if the authorization is invalid (column 279, lines 21-32).

As per claim 11, the method and system of Ginter et al provide for a ROM BIOS (figure 69G and column 70, lines 39-53).

As per claim 12, the method and system of Ginter et al provide for an EEPROM BIOS (figure 69G and column, lines 54-65).

As per claim 13, the method and system of Ginter et al provide for RAM (column 71, lines 16-25).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al U.S. Patent No. 5,892,900 as applied to claim 3 above, and further in view of Goldman et al 5,684,951. As per claim 3, Ginter et al disclose a verification structure. In addition, Ginter et al disclose a system and method for secure transaction management and electronic rights protection utilizing encryption keys (column 206, lines 57-65).

However, Ginter et al do not disclose pseudo unique keys. Goldman et al teach of a method and system for user authorization over a multi-user computer system. In said system, a user has valid id but lacks an authorized means of access. Using pseudo unique keys (abstract, lines 19-21), said user can validate said means of access. Therefore, it would have been obvious to a person of ordinary skill in the art of encryption, to incorporate pseudo unique keys into the system of Ginter et al.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al U.S. Patent. 5,892,900 in view of Goldman et al U.S Patent 5,684,951. Ginter et al teach of a method and system for electronic rights protection comprising of volatile memory, non-volatile memory, license records location and licensed software programs (see section 2 rejections pertaining to claims 1, 3, 4 and 6). Ginter et al also use encryption keys (column 206, lines 57-65).

However, Ginter et al do not make use of pseudo unique keys in their system. Goldman et al teach of a method and system for user authorization over a multi-user computer system through the use of pseudo unique keys (abstract, lines 19-21). Therefore, it would have been obvious to a person of ordinary skill in the art of the time the invention was made to utilize pseudo unique keys in the system of Ginter et al.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al U.S. Patent No. 5,892,900 as applied to claim 6 above, and further in view of Goldman et al U.S Patent 5,684,951. Ginter et al disclose a method for authoring content that includes encryption keys (column/line 282/ 33 to 283/34). As per claim 6, Ginter et al disclose a method for selecting a licensed software program from the volatile memory to form a license record. However, Ginter et al do not use pseudo unique keys for purposes of encryption. Goldman et al teach of a method and system for user authorization over a

multi-user computer system through the use of pseudo unique keys (abstract, lines 19-21). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use pseudo unique keys.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al U.S. Patent No. 5,892,900 in view of Goldman et al U.S Patent 5,684,951 and Richardson, III U.S. Patent No. 5,490,216. Ginter et al teach of a system and method for encrypting and decrypting of licensing related communications between end-user(s) and a license authorization bureau (column/line 282/33 to 283/34 and 168/25 to 169/40). Ginter et al also teach of volatile and non-volatile memory areas used in conjunction with licensed software programs (columns 70-72, column 82, lines 12-52, column/line 278/40 to 281/44, column 15, lines 10-34, figure 8 and column 96, lines 37-41). However, Ginter et al do not disclose pseudo unique keys. Goldman et al provide for the use of pseudo

unique keys (abstract, 21-23). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to incorporate pseudo unique keys into the system of Ginter et al.

## *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Richardson , III teaches a system for software protection

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Calvin Loyd Hewitt II whose telephone number is (703) 305-0625. The examiner can normally be reached on Monday-Friday from 8:30 AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell, can be reached at (703) 305-9768.

Any response to this action should be mailed to"

Commissioner of Patents and Trademarks

C/o Technology Center 2700

Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

or:

(703) 308-5397 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Calvin Loyd Hewitt II

October 3, 2000

James P. Trammell
Supervisory Patent Examiner
Technology Center 2700

| Notice of References Cited | Application/Control<br>09/164,777 | Applicant(s)/Patent Under Reexamination<br>MULLOR ET AL. | |
|---|---|---|---|
| | Examiner<br>Calvin L Hewitt II | Art Unit<br>2161 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | DOCUMENT SOURCE ** APS | OTHER |
|---|---|---|---|---|---|---|---|---|
| ☐ | A | 5,892,900 | Apr. 1999 | Ginter et al | 395 | 186 | ☐ | ☐ |
| ☐ | B | 5,684,951 | Nov. 1997 | Goldman et al | 395 | 188.01 | ☐ | ☐ |
| ☐ | C | | | | | | ☐ | ☐ |
| ☐ | D | | | | | | ☐ | ☐ |
| ☐ | E | | | | | | ☐ | ☐ |
| ☐ | F | | | | | | ☐ | ☐ |
| ☐ | G | | | | | | ☐ | ☐ |
| ☐ | H | | | | | | ☐ | ☐ |
| ☐ | I | | | | | | ☐ | ☐ |
| ☐ | J | | | | | | ☐ | ☐ |
| ☐ | K | | | | | | ☐ | ☐ |
| ☐ | L | | | | | | ☐ | ☐ |
| ☐ | M | | | | | | ☐ | ☐ |

**FOREIGN PATENT DOCUMENTS**

| * | | DOCUMENT NO. | DATE | COUNTRY | NAME | CLASS | SUBCLASS | DOCUMENT SOURCE ** APS | OTHER |
|---|---|---|---|---|---|---|---|---|---|
| ☐ | N | | | | | | | ☐ | ☐ |
| ☐ | O | | | | | | | ☐ | ☐ |
| ☐ | P | | | | | | | ☐ | ☐ |
| ☐ | Q | | | | | | | ☐ | ☐ |
| ☐ | R | | | | | | | ☐ | ☐ |
| ☐ | S | | | | | | | ☐ | ☐ |
| ☐ | T | | | | | | | ☐ | ☐ |

**NON-PATENT DOCUMENTS**

| * | | DOCUMENT (Including Author, Title Date, Source, and Pertinent Pages) | DOCUMENT SOURCE ** APS | OTHER |
|---|---|---|---|---|
| ☐ | U | | ☐ | ☐ |
| ☐ | V | | ☐ | ☐ |
| ☐ | W | | ☐ | ☐ |
| ☐ | X | | ☐ | ☐ |

*A copy of this reference is not being furnished with this Office action. (See Manual of Patent Examining Procedure, Section 707.05(a).)
**APS encompasses any electronic search, i.e. text, image, and Commercial Databases.

#4
12/1/00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

OIPE
NOV 17 2000
JC67
PATENT & TRADEMARK OFFICE

Examiner: J. Trammell
Group Unit: 2161

RECEIVED
NOV 20 2000
Technology Center 2100

In Re PATENT APPLICATION of

| | | | |
|---|---|---|---|
| Applicant | : | Miki MULLOR et al. | ) |
| Application No. | : | 09/164,777 | ) |
| Filed | : | October 1, 1998 | ) |
| For | : | METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION | ) |
| Attorney Docket | : | 32130-142820 | ) |

LETTER REQUESTING NEW ACTION

November 17, 2000

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The Examiner's Action of October 18, 2000 has been received. Because the Action is ambiguous as to the nature of the rejection, omits listing cited references on the form PTO-892 and fails to include copies of the references applied against at least claim 9 with the Action, it is requested that a new Action be issued with a new response date extending three-months from date of the new Action.

Specifically, the summary of the Action indicates claims 1-15 are rejected. However, in the body of the Action, only claims 1-13 are rejected. Claims 13 and 14 do not have any substantive rejections applied against them. It is also noted that in the first rejection on page 2, claims 1-4 and 11-13 are mentioned in the first part of the rejection, however, claims 6 and 10 also appear to be rejected in the narrative of this rejection.

The Richardson U.S. Patent No. 5,490,216 applied against claim 9 is not included on the form PTO-892 and no copy of this reference was supplied with the Action.

Finally, the Action fails to indicate receipt of the certified copy of the Priority Document which was filed with the Application on October 1, 1998. It is requested that in the new Action the Examiner acknowledge receipt of the Priority Document.

This letter is NOT a response to the pending Action but rather a request for issuance of a substitute Action with a new response date.

Respectfully submitted,

Robert Kinberg
Registration No. 26,924
VENABLE
Post Office Box 34385
Washington, DC 20005-3917
Telephone: (202) 962-4800
Direct dial: (202) 962-4014
Telefax: (202) 962-8300

RK/tah/trt

**DC2DOCS1\251666**

UNITED S[redacted]ES DEPARTMENT OF COMMERCE
**Patent and Trademark Office**
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|---|---|---|---|
| 09/164,777 | 10/01/98 | MULLOR M | REINC4237.01 |

| EXAMINER |
|---|
| HEWITT, C |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2161 | 5 |

DATE MAILED: 12/20/00

TM02/1220

SPENCER AND FRANK
SUITE 300 EAST
1100 NEW YORK AVENUE NW
WASHINGTON DC 20005-3955

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

PTO-90C (Rev. 2/95)
*U.S. GPO: 2000-473-000/44602

1- File Copy

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/164,777 | MULLOR ET AL. | |
| | Examiner | Art Unit | |
| | Calvin L Hewitt II | 2161 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *01 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 2.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

18) ☐ Interview Summary (PTO-413) Paper No(s). _____.

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

### *Status of Claims*

1. Claims 1-15 have been examined.

### *Response to Applicants' Request*

2. Applicant's desire for clarity regarding the Examiner's Office Action dated October 18, 2000 has been noted. In response, the Examiner has written another Office Action that the Examiner believes speaks directly to the issues raised by the Applicants.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-4, 6 and 10-13 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ginter et al U.S. Patent No. 5,892,900.

As per claim 1, Ginter et al teach of a system and method for secure transactions management and electronic rights protection that:

- restricts software operation within a license limitation (column 5, lines 29-41; column 6, lines 29-65; column 7, lines 45-57)
- utilizes a computer that has a first non-volatile memory area (column 70, lines 40-65) , a second non-volatile memory area (column 70, lines 40-65) and a volatile memory area (column 71, lines 12-25)
- provides a means of selecting a program residing in the volatile memory (column 71, lines 25-27 and column 82, lines 12-52)
- sets up a verification structure in the non-volatile memories (column 70, lines 23-53 and column/line 63/67-64/15)
- verifies the program using the structure (column 70, lines 23-53 and column/line 63/67-64/15)
- and acts on the program according to the verification (column 70, lines 23-53 and column/line 63/67-64/15).

As per claim 2, the method and system of Ginter et al provide for a license authorization bureau in the form of a VDE (virtual distribution environment) distributor and/or administrator (column/line 278/40 to 281/44).

As per claim 3, the method and system of Ginter et al discloses a verification method with a license authorization bureau that comprises of:

- a two-way data communication link between said bureau and end-user computer (figure 77)
- a method for establishing end-user rights (column/line 278/40 to 281/44)
- data encryption using keys (column 281, lines 10-22)
- creating a license record from the selected program at the bureau (column 71, lines 25-27, column 82, lines 12-52, column/line 278/40 to 281/44 and column 15, lines 10-34).

As per claim 4, the method and system of Ginter et al also provides a means of encrypting the license record for the selected program from the second volatile memory (column/line 65/55 to 66/47).

As per claim 6, the method and system of Ginter et al provides a means for establishing a licensed software program. Where said program contains license record data and is found in the volatile memory (column 71, lines 25-27, column 82, lines 12-52, column/line 278/40 to 281/44, column 15, lines 10-34, figure 8 and column 96, lines 37-41).

As per claim 10, the method and system of Ginter et al provide a means for restricting a program's operation with predetermined limitations if the authorization is invalid (column 279, lines 21-32).

As per claim 11, the method and system of Ginter et al provide for a ROM BIOS (figure 69G and column 70, lines 39-53).

As per claim 12, the method and system of Ginter et al provide for an EEPROM BIOS (figure 69G and column 70, lines 54-65).

As per claim 13, the method and system of Ginter et al provide for volatile RAM (column 71, lines 22-25).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al U.S. Patent No. 5,892,900 as applied to claims 1, 3, 4 and 6 above, and further in view of Goldman et al 5,684,951.

As per claim 5, Ginter et al disclose a verification structure. In addition, Ginter et al disclose a system and method for secure transaction management and electronic rights protection utilizing encryption keys (column 206, lines 57-65).

However, Ginter et al do not disclose pseudo unique keys. Goldman et al teach of a method and system for user authorization over a multi-user computer system. In said system, a user has valid id but lacks an authorized means of access. In order to access the desired data, a user is sent a pseudo unique key (abstract, lines 19-21) that is derived from

a user id and the current IP address. By utilizing such a method a valid user can be provided access to secured data without comprising the security of the larger system. Therefore, it would have been obvious to a person of ordinary skill in the art of encryption, to incorporate pseudo unique keys into the system of Ginter et al.

As per claim 7, Ginter et al teach of a method and system for electronic rights protection comprising of volatile memory, non-volatile memory, license records location and licensed software programs (column 5, lines 29-41; column 6, lines 29-65; column 15, lines 10-34; column/line 63/67-64/15; column/line 65/55-66-47; column 70, lines 23-65; column 71, lines 12-27; column 96, lines 37-41; column/line 278/40-281/44). Ginter et al also use encryption keys (column 206, lines 57-65). However, Ginter et al do not make use of pseudo unique keys in their system. Goldman et al teach of a method and system for user authorization over a multi-user computer system through the use of pseudo unique keys (abstract, lines 19-23). In said system, a user has valid id but lacks an authorized means of access. In order to access the desired data, a user is sent a pseudo unique key that is derived from a user id and the current IP address. By utilizing such a method a valid user can be provided access to secured data without comprising the security of the larger system. Therefore, it would have been obvious to a person of ordinary skill in the art of the time the invention was made to utilize pseudo unique keys in the system of Ginter et al.

As per claim 8, Ginter et al disclose a method for authoring content that includes encryption keys (column/line 282/ 33 to 283/34). Ginter et al disclose a method for selecting a licensed software program from the volatile memory to form a license record. However, Ginter et al do not use pseudo unique keys for purposes of encryption. Goldman et al teach of a method and system for user authorization over a multi-user computer system through the use of pseudo unique keys (abstract, lines 19-23). In said system, a user has valid id but lacks an authorized means of access. In order to access the desired data, a user is sent a pseudo unique key that is derived from a user id and the current IP address. By utilizing such a method a valid user can be provided access to secured data without comprising the security of the larger system. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use pseudo unique keys.

As per claim 9, Ginter et al teach of a system and method for encrypting and decrypting of licensing related communications between end-user(s) and a license authorization bureau (column/line 282/33 to 283/34 and 168/25 to 169/40). Ginter et al also teach of volatile and non-volatile memory areas used in conjunction with licensed software programs (columns 70-72, column 82, lines 12-52, column/line 278/40 to 281/44, column 15, lines 10-34, figure 8 and column 96, lines 37-41). However, Ginter et al do not disclose pseudo unique keys. Goldman et al provide for the use of pseudo unique keys (abstract, 19-23). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to incorporate pseudo unique keys into the system of Ginter et al.

6. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al, U.S. Patent No. 5,892,900 in view of Goldman et al U.S. Patent No. 5,684,951.

As per claims 14 and 15, Ginter et al. disclose a rights management system for restricting software operation (column 5, lines 29-41; column 6, lines 29-65; column 7, lines 45-57). Further, in order to execute said rights management system, Ginter et al. disclose read only memory (ROM) that may be used store encryption key information. Ginter et al. also disclose ROM components, such as masked ROM and EEPROM, that store permanent portions of code that interface with the encryption and decryption engine (column/line 70/54-71/11). Recall, Ginter et al utilize encryption keys as a method of encryption (column/line 67/48-68/16). However, Ginter et al. do not disclose pseudo unique keys. Goodman et al disclose pseudo unique keys (abstract, lines 19-23) and provides for the storage in a memory unit (column 8, lines 11-12). In said system, a user has valid id but lacks an authorized means of access. In order to access the desired data, a user is sent a pseudo unique key that is derived from a user id and the current IP address. By utilizing such a method a valid user can be provided access to secured data without comprising the security of the larger system. Therefore, it would have been obvious

## *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Richardson , III teaches a system for software protection

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Calvin Loyd Hewitt II whose telephone number is (703) 305-0625. The examiner can normally be reached on Monday-Friday from 8:30 AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell, can be reached at (703) 305-9768.

Any response to this action should be mailed to"

Commissioner of Patents and Trademarks

C/o Technology Center 2700

Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

or:

(703) 308-5397 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Calvin Loyd Hewitt II

December 4, 2000

JAMES P. TRAMMELL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

| Notice of References Cited | Application/Control No. 09/164,777 | Applicant(s)/Patent Under Reexamination MULLOR ET AL. | |
|---|---|---|---|
| | Examiner Calvin L Hewitt II | Art Unit 2161 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | DOCUMENT SOURCE ** APS | OTHER |
|---|---|---|---|---|---|---|---|---|
| ☐ | A | 5,892,900 | Apr. 1999 | Ginter et al. | 395 | 186 | ☐ | ☐ |
| ☐ | B | 5,684,951 | Nov. 1997 | Goodman et al. | 395 | 188.01 | ☐ | ☐ |
| ☐ | C | 5,490,216 | Feb. 1996 | Richardson III | 380 | 4 | ☐ | ☐ |
| ☐ | D | | | | | | ☐ | ☐ |
| ☐ | E | | | | | | ☐ | ☐ |
| ☐ | F | | | | | | ☐ | ☐ |
| ☐ | G | | | | | | ☐ | ☐ |
| ☐ | H | | | | | | ☐ | ☐ |
| ☐ | I | | | | | | ☐ | ☐ |
| ☐ | J | | | | | | ☐ | ☐ |
| ☐ | K | | | | | | ☐ | ☐ |
| ☐ | L | | | | | | ☐ | ☐ |
| ☐ | M | | | | | | ☐ | ☐ |

**FOREIGN PATENT DOCUMENTS**

| * | | DOCUMENT NO. | DATE | COUNTRY | NAME | CLASS | SUBCLASS | DOCUMENT SOURCE ** APS | OTHER |
|---|---|---|---|---|---|---|---|---|---|
| ☐ | N | | | | | | | ☐ | ☐ |
| ☐ | O | | | | | | | ☐ | ☐ |
| ☐ | P | | | | | | | ☐ | ☐ |
| ☐ | Q | | | | | | | ☐ | ☐ |
| ☐ | R | | | | | | | ☐ | ☐ |
| ☐ | S | | | | | | | ☐ | ☐ |
| ☐ | T | | | | | | | ☐ | ☐ |

**NON-PATENT DOCUMENTS**

| * | | DOCUMENT (Including Author, Title Date, Source, and Pertinent Pages) | DOCUMENT SOURCE ** APS | OTHER |
|---|---|---|---|---|
| ☐ | U | | ☐ | ☐ |
| ☐ | V | | ☐ | ☐ |
| ☐ | W | | ☐ | ☐ |
| ☐ | X | | ☐ | ☐ |

*A copy of this reference is not being furnished with this Office action. (See Manual of Patent Examining Procedure, Section 707.05(a).)
**APS encompasses any electronic search i.e. text, image, and Commercial Databases.

GAU 2161
#6/Ext. ②
Amdt A
ME
5-29-01

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of

| | | | |
|---|---|---|---|
| Applicants | : | Miki MULLOR et al. | Customer No. 26694 |
| Appln. No. | : | 09/164,777 | |
| Filed | | October 1, 1998 | |
| For | | METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION | |
| Group Art Unit | : | 2161 | |
| Examiner | : | J. Trammell | |
| Atty. Dkt. | : | 32130-142820 | |

PATENT TRADEMARK OFFICE

OIPE JC177 MAY 2 1 2001 PATENT & TRADEMARK OFFICE

RECEIVED MAY 2 3 2001 Technology Center 2100

Assistant Commissioner for Patents
Washington, D.C. 22031

## AMENDMENT

Sir:

## REQUEST FOR EXTENSION OF TIME

Please extend the period for responding to the Office Action dated December 20, 2000 by two months so that the due date expires May 21, 2001. The requisite extension fee of $195.00 under 37 C.F.R. 1.17 (a) (1) is attached. Should no check be attached, please charge our Deposit Account 22-0261. Please also deduct any additional fees due or credit any overage to the same account.

Responsive to the Office Action dated December 20, 2000, please amend the application as follows:

05/22/2001 SMINASS1 00000081 09164777 195.00 OP
01 FC:217

## IN THE SPECIFICATION

Page 1, please rewrite paragraph 2 as follows:

Numerous methods have been devised for the identifying and restricting of an unauthorized software program's operation. These methods have been primarily motivated by the grand proliferation of illegally copied software, which is engulfing the marketplace. This illegal copying represents billions of dollars in lost profits to commercial software developers.

Page1, please rewrite paragraph ~~3~~ 4 as follows:

Hardware based products have also been developed to validate authorized software usage by accessing a dongle that is coupled e.g. to the parallel port of the P.C. These units are expensive, inconvenient, and not particularly suitable for software that may be sold by downloading (e.g. over the internet).

Page 9, please rewrite paragraph 3 as follows:

The second non-volatile memory includes a license-record-area (9) e.g. which contains at least one encrypted license-record (e.g. three records 10-12). The volatile memory accommodates a license program (16) having license record fields (13-15) appended thereto. By way of example said fields stand for Application names (e.g. Lotus 123), Vendor name (Lotus inc.), and number of licensed copies (1 for stand alone usage, >1 for number of licensed users for a network application).

Page 9, please rewrite paragraph 4 as follows:

Those versed in the art will readily appreciate that the license record is not necessarily bound to continuous fields. In fact, the various license content components of the data record may be embedded in various locations in the application. Any component may, if desired, be encrypted.

Page 9 and continuing on page 10, please rewrite paragraph 7 as follows:

The bureau forms the proposed license-record from the contents, encrypts (utilizing predetermined encryption algorithm) the so formed license-record using the key (8), and compares the so formed encrypted license-record with the license-record (10-12). The bureau generates an overlay according to the result of the comparison indicating successful comparison, non-critical failure comparison and the critical failure comparison.

**IN THE CLAIMS:**

Please amended the claims as follows:

1. (Amended) A method of restricting software operation within a licensefor use with a computer including a first, non erasable, non-volatile memory area, a second, non-erasable non-volatile memory area, and a volatile memory area; the first non volatile memory accomodates data that includes unique key; the method comprising the steps of:

selecting a program residing in the volatile memory,

setting up a verification structure in the second non-volatile memory , the verfication structure accommodates data that includes at least one license record,

verifying the program using at least said verification structure, and

acting on the program according to the verification.

Please add the following new claims:

16. (New) The method according to Claim 1, wherein the unique key includes a pseudo-unique key.

17. (New) The method according to Claim 1, wherein said step of setting up a verification record, including the license record, includes encrypting a license record data in said program using at least said key.

18. (New) The method according to Claim 1, wherein said step of verifying the program includes decrypting the license record data accommodated in said second non volatile memory using at least said unique key.

19. (New) The method according to Claim 1, wherein said step of verifying the program includes encrypting the license record that is accommodated in said program using at least said unique key.

20. (New) A method for restricting access to a software program, comprising:

storing a pseudo-unique key in a first non-volatile memory area of a computer;

selecting a software program residing in a volatile memory area of the computer;

extracting license information from the software program;

encrypting the license information using the pseudo-unique key;

storing the encrypted pseudo-unique key in a second non-volatile memory area of the computer;

verifying the software program using based on the encrypted pseudo-unique key; and

acting on the software program based on the verification.

## REMARKS

Claims 1-15 stand rejected. By this Amendment, claim 1 has been amended, claims 14 and 15 have been canceled and new claims 16-20 have been added to the application. Claims 1-13 and 16-20 are therefore pending. It is believed that each of the pending claims define an invention which is novel and unobvious over the cited art. Favorable reconsideration of this case is respectfully requested.

The specification has been reviewed and edited to eliminate minor inaccuracies and typographical errors.

The present invention provides a method and system for identifying and restricting operation of an unauthorized software program. In a preferred embodiemt, a key resides in a first non-volatile part of a computer's memory. The non-volatile memory being typically, but not necessarily, a stand alone module which is not erasable and therefore cannot be modified (see the present specification, page 9, lines 3 to 7). A verification structure is formed to include one or more license records, described below, and resides in a second non-volatile part of the memory, (see the present specification, page 9, lines 8 to 10). The second non-volatile part is erasable and therefore license data in the verification structure can be modified. For example, license data may be added or modified as required, for example, when new licenses are added or expire. The license records are obtained by encrypting license records extracted from the software program with the key stored in the first non-volatile part of the computer's memory, page 9 lines 19 to 21. The key may be of many possible variants (see, for example, the options elaborated in the bridging paragraph between pages 6 and 7 of the specification). The key may also be used for encryption of license record or decryption of encrypted license record all as required and appropriate (see, e.g. page 7 lines 20, 21). Moreover, the contents of the license record is very flexible (see e.g. page 10 lines 17 to 25). The specification explains other advantages of the

invention in more detail.

Claims 1-4, 6 and 10-13 have been rejected under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent No. 5,892,900 to Ginter et al.

Ginter et al. do not anticipate the present invention as they do not disclose, among other things, setting up a verification structure and verifying the program using the verification structure as recited in the rejected claims.

Ginter et al. provide a system and method for secure electronic transaction management and electronic rights protection. Ginter's method provides "machine bound" delivery of content or software through what they call "Stationary Object" (col. 136, lines 64-66 and Fig 18). A stationary object is an object bound to a specific machine. The main security measure used to protect the content of a "Stationary Object" from illegal use is to encrypt it according to the target's unique key (col. 137, lines 45-50).

"For example, a container that is bound by its control to a specific VDE node is called a "stationary Object (see Fig 18)" (col. 136, lines 64-66). "Fig 18 shows an example of a "stationary object" structure 850 provided by the preferred embodiment. 'Stationary Object" structure is intended to be used only at specific VDE electronic appliance/installations that have received explicit permissions to use one or more portions of the stationary object..." (col. 137, lines 23-28)

"This private body (method) section 806 is preferably encrypted using one or more private body keys contained in the separate permissions record 808. The data blocks 812 contain content (information or administrative) that may be encrypted using one or more content keys also provided in permissions record 808."

Accordingly, in Ginter et al., software distributed through a stationary object is <u>encrypted for the specific machine therefor "bound" to it</u>. " Objects may be classified in one sense based on

whether the protection information is bound together with the protected information" (Ginter, col. 136, line 62).

Consequently, this method suffers from the deficiency that it is incompatible with free "out of channel" or "retail channel" distribution. In the latter mode of operation, it is often desired to broadcast a single version of the software to all the subscribers, rather than a machine bound (and obviously different) version for each subscriber that is required by Ginter et al. In other words, the "Stationary Object" aspect of Ginter has the shortcoming, among others, that it cannot support a business model where the distributor doesn't know the final target machine. Therefore, the system and method will not be able to freely distribute the software, such as happens in retail and software companies that ships millions of copies.

Ginter itself acknowledges that the problem with "Stationary Objects" therefore suggests a second method named "Traveling Objects" (col. 136, line 66 - col.137, line 3, and fig. 19). A "Traveling Object" is an object that contains the information needed to use its content: "a container that is not bound by its control information to a specific VDE node but rather carries sufficient control and permissions to permit its use, in a whole or in part, at any of several sites is called a "Traveling Object" (Ginter, col. 136, line 66 - col. 137, line 3). A traveling object allows shipping the content to unknown destinations by encrypting the content with the same key again and again. However, Ginter uses an encryption technique in the "Traveling Object" feature in which <u>the key is incorporated in the distributed objects</u>. Ginter acknowledge the shortcomings of this solution to wit:

> "In the case of a "traveling object", content owners may distribute information with some or all of the key blocks **810** included in the object **300** in which the content is encapsulated. Putting keys in distributed objects **300** increases the exposure to attempts to defeat security mechanisms by breaking or cryptoanalyzing the encryption algorithm with which the private header is protected (e.g., by determining the key for the header's encryption). This breaking of security would normally require considerable skill and time, but if broken, the

> algorithm and key could be published so as to allow large numbers of individuals who possess objects that are protected with the same key(s) and algorithm(s) to illegally use protected information. (Col. 139, lines 38 to 50)."

Ginter admits that this solution can thus be used only with limited type of software which is not commercially valuable, to wit:

> "As a result, placing keys in distributed objects **300** may be limited to content that is either "time sensitive" (has reduced value after the passage of a certain period of time), or which is somewhat limited in value, or where the commercial value of placing keys in objects (for example convenience to end-users, lower cost of eliminating the communication or other means for delivering keys and/or permissions information and/or the ability to supporting objects going "out-of channel") exceeds the cost of vulnerability to sophisticated hackers. (Col. 139, lines 50 to 59)."

The present invention differs from and overcomes the deficiencies associated with the stationary object and traveling object methods described in Ginter et al. In the present invention, a unique key is stored in the first non-volatile memory of the computer. A software program in the volatile memory of the computer is selected. A license record is extracted from the software program and encrypted using the unique key stored in the computer (see new independent claim 20). Thus, the software program is not machine bound as is required by the stationery object method, nor is the same key used over and over to encrypt the software as is the case with the traveling object. In the present method, the verification structure is formed by using a unique key for each computer and license record information in the software.

Moreover, in col. 70, line 23 – col. 71, line 25 Ginter et al. describe the architecture as add-on hardware which is named "SPU"(col. 63, line 66 – col. 64, line 15). Col. 64, lines 16-21 explicitly detail the fact that the SPU is a hardware add-on, not part of the PC. In col. 70 Ginter et al. describes the memory architecture for the SPU and uses terms taken from the PC engineering world. However, this is not referring to those actual PC components which name is used in their design.

In view of the above, it is clear that Ginter et al do not describe the step of setting up a verification structure. The portions of Ginter et al. referred to by the Examiner all describe the elements of the proprietary hardware of Ginter et al. These portions of Ginter et al. do not describe setting the verification structure in memory, they describe basic functionality of a common CPU that loads code to memory and executes it.

Furthermore, it is clear that Ginter et al. do not describe the step of verifying the program using the verification structure. There is no mention whatsoever in Ginter et al. in col. 70, lines 23-53 and col. 63, line 67 - col. 64, line 15 referred to by the Examiner of a process where a software program verifies its authenticity using a license (verification structure) stored in the second volatile non-volatile memory. The functionality described in these portions of Ginter et al. is the different functionality that add-on hardware, referred to as SPU, can perform. There no specific discussion as to how the functionality is performed and whether it is actually has something to do with protecting software.

In contrast to Ginter et al., the present invention provides a system and method which not only enables free distribution of the software (such as happens in retail stores, and software companies that ship millions of copies), that overcomes the problems with the stationary object in Ginter et al., but also does not suffer from the limitations of incorporating the key in the distributed data as is the case with the traveling object of Ginter et al. Moreover, the steps of setting up a verification structure and using that structure for verification are clearly recited in the rejected claims

For example, independent claim 1 recites a method of restricting software operation within a license limitation. The method is useful for a computer including a first, non-erasable, non-volatile memory area, a second, erasable, non-volatile memory area, and a volatile memory area. The first non-volatile memory accommodates data that includes unique key. According to

the method of the invention, a program residing in the volatile memory is selected. A verification structure is set up in the second non-volatile memory. The verification structure accommodates data that include at least one license record. The program is verified using at least the verification structure. Based on the verification, the program is acted on accordingly.

Additionally, new independent claim 20 recites additional features not disclosed in Ginter et al. In claim 20, a method for restricting access to a software program is defined. The method includes storing a pseudo-unique key in a first non-volatile memory area of a computer. A software program residing in a volatile memory area of the computer is selected. License information is extracted from the software program. The license information is encrypted using the pseudo-unique key. The encrypted pseudo-unique key is stored in a second non-volatile memory area of the computer. The software program is verified using based on the encrypted pseudo-unique key and the software program is acted on based on the verification.

Thus, in the method recited in claim 20, license information is extracted from the software program and encrypted using a key stored on the computer. Applicants review of the cited references did not reveal any description of extracting information from a program, encrypting the information using a key stored on the computer, and storing the encrypted information on the computer. There is no description in the cited references of the steps of "extracting license information from the software program" and "encrypting the license information using the pseudo-unique key" as is recited in new claim 22.

No claim recitation can be ignored in determining anticipation. See Pac-Tex, Inc. v. Amerace Corp., 14 U.S.P.Q.2d 187, (Fed. Cir. 1990). Anticipation requires the disclosure, in a prior art reference, of each and every recitation as set forth in the claims. See Titanium Metals Corp. v. Banner, 227 U.S.P.Q. 773 (Fed. Cir. 1985), Orthokinetics, Inc. v. Safety Travel Chairs,

Inc. 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986), and Akzo N.V. v. U.S. International Trade Commissioner, 1 U.S.P.Q.2d 1241 (Fed. Cir. 1986).

There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. 102. See Scripps Clinic and Research Foundation v. Genentech, Inc., 18 U.S.P.Q.2d 1001 (CAFC, 1991) and Studiengesellschaft Kohle GmbH v. Dart Industries, 220 U.S.P.Q. 841 (CAFC, 1984).

In view of the above discussion, it is clear that the cited reference does not teach each and every element recited in the claims as required by 35 U.S.C. 102(e). Therefore, the withdrawal of the rejection of claims 1-4, 6 and 10-14 under 35 U.S.C. 102(e) is respectfully requested.

Claims 5 and 7-9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al. in view of Goldman et al.

Claims 5 and 7-9 depend from independent claim 1 and would patentable for at least the reasons discussed above regarding independent claim 1.

Goldman et al. do not supplement Ginter et al. to teach or suggest the features as recited in the rejected claims.

Claims 14 and 15 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al in view of Goldman et al.

Claims 14 and 15 have been canceled, rendering this rejection moot.

In view of the above discussion, it is clear that the cited references, taken alone of in combination, do not render the present invention obvious. Therefore the withdraw of this rejection is respectfully requested.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In view of the foregoing, reconsideration and allowance of this application are believed in order, and such action is earnestly solicited.

The Commissioner is authorized to charge any fee necessitated by this Amendment to our Deposit Account No. 22-0261.

Respectfully submitted,

VENABLE, Attorneys at Law

Robert Kinberg
Registration No. 26,924
P.O. Box 34385
Washington, D.C. 20043-9998
Telephone 202-962-4800
Telefax 202-962-8300

RK/JAK/lrh
#289169

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

## IN THE SPECIFICATION

Page 1, please rewrite paragraph 2 as follows:

Numerous methods have been devised for the identifying and restricting of an unauthorized software program's operation. These methods have been primarily motivated by the grand proliferation of illegally copied software, which is engulfing the marketplace. This illegal copying represents billions of dollars in lost profits to commercial software developers.

Page1, please rewrite paragraph 3 as follows:

Hardware based products have also been developed to validate authorized software usage by accessing a dongle that is coupled e.g. to the parallel port of the P.C. These units are expensive, inconvenient, and not particularly suitable for software that may be sold by downloading (e.g. over the internet).

Page 9, please rewrite paragraph 3 as follows:

The second non-volatile memory includes a license-record-area (9) e.g. ~~for the containing of~~ which contains at least one encrypted license-record (e.g. three records 10-12). The volatile memory accommodates a license program (16) having license record fields (13-15) appended thereto. By way of example said fields stand for Application names (e.g. Lotus 123), Vendor name (Lotus inc.), and ~~no~~ number of licensed copies (1 for stand alone usage, >1 for number of licensed users for a network application).

Page 9, please rewrite paragraph 4 as follows:

Those versed in the art will readily appreciate that the license record is not necessarily bound to ~~continuos~~ continuous fields. In fact, the various license content components of the data

record may be embedded in various locations in the application. Any component may, if desired, be encrypted.

Page 9 and continuing on page 10, please rewrite paragraph 7 as follows:

The bureau forms the proposed license-record from the contents, encrypts (utilizing predetermined encryption algorithm) the so formed license-record using the key (8), and compares the so formed encrypted license-record with the license-record (10-12). The bureau generates an overlay according to the result of the comparison ~~indication~~ indicating successful comparison, non-critical failure comparison and the critical failure comparison.

**IN THE CLAIMS:**

Please amended the claims as follows:

1. (Amended) A method of restricting software operation within a license ~~limitation comprising;~~ for use with a computer including ~~having~~ a first, non erasable, non-volatile memory area, a second, non-erasable non-volatile memory area, and a volatile memory area; the first non volatile memory accomodates data that includes unique key; the method comprising the steps of:

selecting a program residing in the volatile memory,

setting up a verification structure in the second non-volatile memory ~~memories~~, the verfication structure accommodates data that includes at least one license record,

verifying the program using at least said verification structure~~the structure~~, and

acting on the program according to the verification.

Please add the following new claims:

16. (New) The method according to Claim 1, wherein the unique key includes a pseudo-unique key.

17. (New) The method according to Claim 1, wherein said step of setting up a verification record, including the license record, includes encrypting a license record data in said program using at least said key.

18. (New) The method according to Claim 1, wherein said step of verifying the program includes decrypting the license record data accommodated in said second non volatile memory using at least said unique key.

19. (New) The method according to Claim 1, wherein said step of verifying the program includes encrypting the license record that is accommodated in said program using at least said unique key.

20. (New) A method for restricting access to a software program, comprising:

storing a pseudo-unique key in a first non-volatile memory area of a computer;

selecting a software program residing in a volatile memory area of the computer;

extracting license information from the software program;

encrypting the license information using the pseudo-unique key;

storing the encrypted pseudo-unique key in a second non-volatile memory area of the computer;

verifying the software program using based on the encrypted pseudo-unique key; and

acting on the software program based on the verification.

FORM CD-76
(REV. 4-89)
(PRESCRIBED BY
DAO-207-2)

U.S. DEPARTMENT OF COMMERCE

# CLASSIFIED MATERIAL RECEIPT

Receipt Number: RR131 533 435 US

Classification of Document: SECRET

Sent By: *(Name, Unit, Address)*
COMMISSIONER OF PATENTS
US PTO
WASHINGTON, D.C. 20231 RETURN TO LIC. & REV. GROUP 3662

Date of Document: 05-18-01

Description of Document:

QUAYLE

(S.N. 09/552,520-1 of 2 copies 2 pages)

OIPE JC177
MAY 21 2001
PATENT & TRADEMARK OFFICE

RECEIVED
MAY 21 2001
VENABLE
WASHINGTON, DC

| Date Transmitted | To: *(Name and address)* | Received by: *(Signature)* | Date Received |
|---|---|---|---|
| 05-18-01 | VENABLE BAETJER HOWARD & CIVILETTI LLP | M. Sergent | 5-21-01 |
| | 1201 NEW YORK AVENUE NW SUITE 1000 WASHINGTON DC 20005-3917 | | |
| | | | |

USCOMM-DC 89-1967

UNITED STA[redacted] DEPARTMENT OF COMMERCE
**Patent and Trademark Office**
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|---|---|---|---|
| 09/164,777 | 10/01/98 | MULLOR M | REINC4237.01 |

| EXAMINER |
|---|
| HEWITT II,C |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2161 | 7 |

TM01/0622

SPENCER AND FRANK
SUITE 300 EAST
1100 NEW YORK AVENUE NW
WASHINGTON DC 20005-3955

**DATE MAILED:** 06/22/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/164,777 | MULLOR ET AL. | |
| | Examiner | Art Unit | |
| | Calvin L Hewitt II | 2161 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *21 May 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13 and 16-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

15) ☐ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: .

## *Status of Claims*

1. Claims 1-13 and 16-20 have been examined.

## *Response to Arguments and Amendment*

2. The Applicants are of the opinion that the Ginter et al. reference is insufficient as it is believed that it does not teach, "... setting up a verification structure and verifying the program using the verification structure". The Examiner will focus his comments to this matter as other comments regarding the intended use of the claimed invention (e.g. "stationary object" vs. "travelling object") do not result in a structural difference between the claimed invention and the prior art. And, if the prior art structure is capable of performing the intended use, then it meets the claim- See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). To this end, the Examiner would like to reiterate that Ginter et al. the system of Ginter et al. supports, "launchable content" (column/line 24/54-25/27) and maintains, and allows for evolving, content and content control as it passes through a "chain of handling" (column/line 28/42-32/60).

Regarding verification structure, Ginter et al. create for each VDE object a permission record (PERC) (column/line 93/5-94/4; column/line 155/38-159/12) that "...

controls how access and/or manipulation permissions are distributed and/or how content and/or other information may otherwise be used (column 155, lines 46-51). Ginter et al teach that electronic appliances may include one or more SPUs (column 64, lines 1-4) and may be a standardized feature on microprocessors (column 65, lines 17-55). As previously stated, the SPU contains, volatile and non-volatile memories (column/line 70/11-71/15; column/line 71/51-72/67). The SPU Internal ROM contains, "...kernel programs, load modules and encryption key information [that] enable the control of certain basic functions of the SPU" and "... components that are at least in part dependent on [device configuration] may be loaded in [ROM] along with additional load modules that have been determined to be required for specific installations or applications (column 70, lines 48-53). Further, Ginter et al. teach that SPU hardware, provides at least enough processing capabilities to support the secure parts of processing such as events that generate a usage permission (figure 3; column 58, lines 22-49; column 60, lines 45-55). Therefore, the Examiner regards the generation of usage permissions as basic to a SPU, hence, the appropriate load modules would be present in the ROM or EEPROM (column 70, lines 54-65) to allow for such minimum processing. Also, Ginter et al. teach that content control information follows the content (e.g. PERC) therefore, it is inherent that PERC-relevant data would be stored in non-volatile memory (relying on the standard definition of "non-volatile" memory as memory that is maintained even when the power is removed from the storage system). Finally, the Examiner takes issue with the Applicant using EEPROM to store a license record including author name, program name

and number of licensed users. The Applicant has not disclosed the necessary hardware to allow a user to add, remove and modify a license record stored in an EEPROM. EEPROM is read-only memory. Therefore the ability to update existing and add new records to data stored in the EEPROM is contradictory.

*Claim Rejections - 35 USC § 112*

3. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not support the Applicants' claim of using non-erasable, non-volatile memory being used to store license records.

Claims 2-19 are also rejected as they depend from claim 1.

4. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicant refers to secondary non-volatile storage as EEPROM (Specification, page 8, lines 1 and 25-27). However, EEPROMs require a special or programmer voltage to program it, store 0's and 1's, are programmed at the factory and

when erased **all** data is removed. The Applicants do not teach the device necessary to edit an EEPROM nor have they made it clear to the Examiner how their system would be implemented in light of the non-trivial processing required to write and erase its data.

Claims 2-19 are also rejected as they depend from claim 1.

5. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A device to write to an EEPROM and a method taking into account said device are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The Applicants do not teach the device necessary to edit an EEPROM nor have they made it clear to the Examiner how their system would be implemented in light of the non-trivial processing required to write and erase its data.

Claims 2-19 are also rejected as they depend from claim 1.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term "non-volatile" in claim 1 is used by

the claim to exclude "hard disk," while it is accepted that a "hard disk" is "non-volatile" as it does not lose data when the power is removed from it.

Claims 2-19 are also rejected as they depend from claim 1.

8. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the encrypting of the pseudo unique key.

### *Claim Rejections - 35 USC § 102*

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-4, 6 and 10-13 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ginter et al. U.S. Patent No. 5,892,900.

As per claim 1, Ginter et al. teach of a system and method for secure transactions management and electronic rights protection that:

- restricts software operation within a license limitation (column 5, lines 29-41; column 6, lines 29-65; column 7, lines 45-57)

- utilizes a computer that has a first non-volatile memory column/line 70/45-71-16; column/line 71/52-72/67; column 231, lines 13-32; column 236, lines 43-53; column 240, lines 7-42; column 241, lines 19-30; column/line 245/55-246/24), a second non-volatile memory area (column/line 70/45-71-16; column/line 71/52-72/67; column 231, lines 13-32; column 236, lines 43-53; column 240, lines 7-42; column 241, lines 19-30; column/line 245/55-246/24) and a volatile memory area (column 71, lines 12-25)
- provides a means of selecting a program residing in the volatile memory (column 71, lines 25-27 and column 82, lines 12-52)
- sets up a verification structure in the non-volatile memories (column 70, lines 23-53 and column/line 63/67-64/15)
- verifies the program using the structure (column 70, lines 23-53 and column/line 63/67-64/15)
- acts on the program according to the verification (column 70, lines 23-53 and column/line 63/67-64/15).

As per claim 2, the method and system of Ginter et al. provide for a license authorization bureau in the form of a VDE (virtual distribution environment) distributor and/or administrator (column/line 278/40 to 281/44).

As per claim 3, the method and system of Ginter et al. discloses a verification method with a license authorization bureau that comprises of:

- a two-way data communication link between said bureau and end-user computer (figure 77)
- a method for establishing end-user rights (column/line 278/40 to 281/44)
- data encryption using keys (column 281, lines 10-22)
- creating a license record from the selected program at the bureau (column 15, lines 10-34; column 71, lines 25-27, column 82, lines 12-52, column/line 278/40 to 281/44 ).

As per claim 4, the method and system of Ginter et al. also provides a means of encrypting the license record for the selected program from the second volatile memory (column/line 65/55 to 66/47).

As per claim 6, the method and system of Ginter et al. provides a means for establishing a licensed software program. Where said program contains license record data and is found in the volatile memory (column 71, lines 25-27, column 82, lines 12-52, column/line 278/40 to 281/44, column 15, lines 10-34, figure 8 and column 96, lines 37-41).

As per claim 10, the method and system of Ginter et al. provide a means for restricting a program's operation with predetermined limitations if the authorization is invalid (column 279, lines 21-32).

As per claim 11, the method and system of Ginter et al. provide for a ROM BIOS (figure 69G and column 70, lines 39-53).

As per claim 12, the method and system of Ginter et al. provide for an EEPROM BIOS (figure 69G and column 70, lines 54-65).

As per claim 13, the method and system of Ginter et al. provide for volatile RAM (column 71, lines 22-25).

### *Claim Rejections - 35 USC § 103*

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 5 and 7-9 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al. U.S. Patent No. 5,892,900 as applied to claims 1, 3, 4 and 6 above, and further in view of Goldman et al. 5,684,951.

As per claim 5 and 16-20, Ginter et al. disclose a verification structure. In addition, Ginter et al. disclose a system and method for secure transaction management and electronic rights protection utilizing encryption keys (column 15, lines 35-60; column/line 45/3-46/26; column 49, lines 47-52; column 206, lines 57-65). Ginter et al. also teach unique keys and storing keys in non-volatile memory (column/line 21/60-22/25; column/line 70/45-71-16; column/line 71/52-72/67). However, Ginter et al. do not disclose pseudo unique keys. Goldman et al. teach of a method and system for user

authorization over a multi-user computer system. In said system, a user has valid id but lacks an authorized means of access. In order to access the desired data, a user is sent a pseudo unique key (abstract, lines 19-21) that is derived from a user id and the current IP address. Therefore, it would have been obvious to a person of ordinary skill in the art of encryption, to incorporate pseudo unique keys into the system of Ginter et al. By utilizing such a method a valid user can be provided access to secured data without comprising the security of the larger system. It would have also been obvious to encrypt communications using pseudo unique keys if less secure means of data exchange was deemed appropriate.

As per claim 7, Ginter et al. teach of a method and system for electronic rights protection comprising of volatile memory, non-volatile memory, license records location and licensed software programs (column 5, lines 29-41; column 6, lines 29-65; column 15, lines 10-34; column/line 63/67-64/15; column/line 65/55-66-47; column 70, lines 23-65; column 71, lines 12-27; column 96, lines 37-41; column/line 278/40-281/44). Ginter et al. also use encryption keys (column 206, lines 57-65). However, Ginter et al. do not make use of pseudo unique keys in their system. Goldman et al. teach of a method and system for user authorization over a multi-user computer system through the use of pseudo unique keys (abstract, lines 19-23). In said system, a user has valid id but lacks an authorized means of access. In order to access the desired data, a user is sent a pseudo unique key that is derived from a user id and the current IP address. Therefore, it would have been obvious to a person of ordinary skill in the art of the time the invention was made to utilize pseudo unique keys in the system of Ginter et al.. By utilizing such a

method a valid user can be provided access to secured data without comprising the security of the larger system.

As per claim 8, Ginter et al. disclose a method for authoring content that includes encryption keys (column/line 282/ 33 to 283/34). Ginter et al. disclose a method for selecting a licensed software program from the volatile memory to form a license record. However, Ginter et al. do not use pseudo unique keys for purposes of encryption. Goldman et al. teach of a method and system for user authorization over a multi-user computer system through the use of pseudo unique keys (abstract, lines 19-23). In said system, a user has valid id but lacks an authorized means of access. In order to access the desired data, a user is sent a pseudo unique key that is derived from a user id and the current IP address. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use pseudo unique keys. By utilizing such a method a valid user can be provided access to secured data without comprising the security of the larger system. In addition, it would have also been obvious to encrypt communications using pseudo unique keys if less secure means of data exchange was deemed appropriate.

As per claim 9, Ginter et al. teach of a system and method for encrypting and decrypting of licensing related communications between end-user(s) and a license authorization bureau (column/line 282/33 to 283/34 and 168/25 to 169/40). Ginter et al. also teach of volatile and non-volatile memory areas used in conjunction with licensed software programs (figure 8; column 15, lines 10-34; columns 70-72, column 82, lines

12-52, , column/line 70/45-71-16; column/line 71/52-72/67; column 96, lines 37-41; column 231, lines 13-32; column 236, lines 43-53; column 240, lines 7-42; column 241, lines 19-30; column/line 245/55-246/24; column/line 278/40-281/44). However, Ginter et al. do not disclose pseudo unique keys. Goldman et al. provide for the use of pseudo unique keys (abstract, 19-23). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to incorporate pseudo unique keys into the system of Ginter et al.. By utilizing such a method a valid user can be provided access to secured data without comprising the security of the larger system.

## *Conclusion*

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Richardson , III teaches a system for software protection

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Calvin Loyd Hewitt II whose telephone number is (703) 305-0625. The examiner can normally be reached on Monday-Friday from 8:30 AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell, can be reached at (703) 305-9768.

Any response to this action should be mailed to"

Commissioner of Patents and Trademarks

C/o Technology Center 2700

Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

or:

(703) 308-5397 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Calvin Loyd Hewitt II

June 21, 2001

JAMES P. TRAMMELL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARK
Washington, D.C. 20231

| APPLICATION NUMBER | FILING DATE | FIRST NAMED APPLICANT | ATTORNEY DOCKET NO. |
|---|---|---|---|
| | 11/09/01 | | |

| EXAMINER |
|---|
| Calvin Hewitt |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2161 | 8 |

**DATE MAILED:**

## INTERVIEW SUMMARY

All participants (applicant, applicant's representative, PTO personnel):

(1) Calvin Hewitt (3) Robert Kinberg

(2) Jeffrey Kurinski (4) Mickey Mullor

Date of Interview 11-9-01

Type: ☐ Telephonic ☐ Televideo Conference ☐ Personal (copy is given to ☐ applicant ☐ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☒ No If yes, brief description:

Agreement ☑ was reached. ☐ was not reached.

Claim(s) discussed: Claim 1 ; independent claims

Identification of prior art discussed: Ginter 5892900

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Storage of license data using BIOS. 112 corrections
Editing independent claim language

( A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

☐ It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary. A FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has are ready been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

Examiner Note: You must sign this form unless it is an attachment to another form.

Calvin Hewitt

FORM PTOL-413 (REV. 2-98)

5A

RCE/2161/A

#9/RCE
Ext. 2
ME
12-13-01

Revised PTO/SB/30 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
Attorney Docket No. 39636-176166

OIPE JC54
NOV 14 2001
PATENT & TRADEMARK OFFICE

# REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

**Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000, provides for continued examination of an utility or plant application filed on or after June 8, 1995. See The American Inventors Protection Act of 1999 (AIPA).**

| | |
|---|---|
| *Application Number* | 09/164,777 |
| *Filing Date* | October 1, 1998 |
| *Examiner Name* | C. Hewitt, II |
| *First Named Inventor* | M. Mullor |
| *Group Art Unit* | 2161 |
| *Attorney Docket Number* | 39636-176166 |

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

***NOTE:*** *37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53 (d) (PTO/SB/29) instead of a RCE to be eligible for* the patent term adjustment provisions of the AIPA. See Changes to Application Examination and Provisional Application Practice, Interim Rule, 65 *Fed. Reg.* 14865 (Mar. 20, 2000), 1233 *Off. Gaz. Pat. Office* 47 (Apr. 11, 2000), which established RCE practice.

RECEIVED
NOV 16 2001
Technology Center 2100

1. Submission required under 37 C.F.R. § 1.114
   - a. ☐ Previously submitted
     - i. ☐ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on (Any unentered amendment(s) referred to above will be entered).
     - ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on
     - iii. ☐ Other
   - b. Enclosed
     - i. ☒ Amendment/Reply
     - ii ☐ Affidavit(s)/Declaration(s)
     - iii. ☒ Information Disclosure Statement (IDS)
     - iv. ☐ Other
2. Miscellaneous
   - a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of _____months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) **required**)
   - b. ☐ Other
3. Fees The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.
   - a. ☒ The Director is hereby authorized to charge the following fees, or credit any overpayments, to Deposit Account No. 22-0261
     - i. ☒ RCE fee required under 37 C.F.R. § 1.17(e)
     - ii. ☒ Extension of time fee (37 C.F.R. §§ 1.136 and 1.17)
     - iii. ☐ Other
   - b. ☒ Check in the amount of $ 570.00 enclosed
   - c. ☐ Payment by credit card (Form PTO-2038 enclosed)

***SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED***

| | | | |
|---|---|---|---|
| *Name (Print /Type)* | Jeffri A. Kaminski | *Registration No. (Attorney/Agent)* | 42,709 |
| *Signature* | [signature] | *Date* | November 14, 2001 |

VENABLE
P.O. Box 34385
Washington, DC 20043-9998

SEND Fees and Completed Forms to the following address: Commissioner for Patents, Box RCE, Washington, DC 20231.
PC Docs No. 331636

11/15/2001 EABUBAK1 00000001 09164777
01 FC:279 370.00 OP

VENABLE
ATTORNEYS AT LAW

#10/Arnold B
ME
12-13-01

OIPE JC54
NOV 14 2001
PATENT & TRADEMARK OFFICE

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of

| | | | |
|---|---|---|---|
| Applicants | : | Miki MULLOR et al. | Customer No. 26694 PATENT TRADEMARK OFFICE |
| Appln. No. | : | 09/164,777 | |
| Filed | : | October 1, 1998 | |
| For | : | METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION | |
| Group Art Unit | : | 2161 | |
| Examiner | : | J. Trammell | |
| Atty. Dkt. | : | 39636-176166 | |

RECEIVED
NOV 16 2001
Technology Center 2100

Assistant Commissioner for Patents
Washington, D.C. 22031

## AMENDMENT

Sir:

## REQUEST FOR EXTENSION OF TIME

Please extend the period for responding to the Office Action dated June 22, 2001 by two months so that the due date expires November 22, 2001. The requisite extension fee of $200.00 under 37 C.F.R. 1.17 (a) (1) is attached. Should no check be attached, please charge our Deposit Account 22-0261. Please also deduct any additional fees due or credit any overage to the same account.

Responsive to the Office Action dated June 22, 2001, please amend the application as follows:

12/14/2001 HEADON 00000006 220261 09164777
01 FC:203 27.00 CH

11/15/2001 EABUBAK1 00000001 09164777
02 FC:216 200.00 OP

B

**IN THE CLAIMS:**

Please amended the claims as follows:

1. (Twice Amended) 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.

3. (Amended) A method according to claim 2, wherein setting up a verification structure further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as an encryption key; transferring, from the bureau to the computer, the encrypted license-record; and storing the encrypted license record in the erasable non-volatile memory area of the BIOS.

4. (Amended) A method according to claim 2, wherein verifying the program further comprises the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-

license verification including an identification of the computer, an encrypted license-record for the selected program from the erasable, non-volatile memory area of the BIOS, and the program's license-record; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

B2 cont

5. (Amended) A method according to claim 3 wherein the identification of the computer includes the unique key.

6. (Amended) A method according to claim 1 wherein selecting a program includes the steps of: establishing a licensed-software-program in the volatile memory of the computer wherein said licensed-software-program includes contents used to form the license-record.

7. (Amended) A method according to claim 6 wherein using an agent to set up the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in a first non-volatile memory area of the computer; and establishing at least one license-record location in the first nonvolatile memory area or in the erasable, non-volatile memory area of the BIOS.

B3

9. (Amended) A method according to claim 7 wherein verifying the program includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the erasable, non-volatile memory area of the BIOS, using the pseudo-unique key; and comparing the encrypted licenses-software-program's license-record contents with the encrypted license-record in the erasable, non-volatile



B

memory area of the BIOS, or comparing the license-software-program's license-record contents with the decrypted license-record in erasable non-volatile memory area of the BIOS.

B3

10. (Amended) A method according to claim 9 wherein acting on the program includes the step: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency.

11. (Amended) A method according to claim 22 wherein the first non-volatile memory area is a ROM section of a BIOS.

12. (Amended) A method according to claim 1 wherein the erasable, non-volatile memory area is a $E^2$PROM section of the BIOS.

Sub C1

16. (Amended) The method of Claim 22, wherein the unique key includes a pseudo-unique key.

B4

~~17~~ 14. (Amended) The method according Claim ~~22~~ 13, wherein the step of using the agent to set up the verification record, including the license record, includes encrypting a license record data in the program using at least the unique key.

~~18~~ 15. (Amended) The method according to Claim ~~22~~ 13, wherein the step of verifying the program includes a decrypting the license record data accommodated in the erasable second non-volatile memory area of the BIOS using at least the unique key.



B

17 ~~19~~. (Amended) The method according to Claim 13 ~~22~~, wherein the step of verifying the program includes encrypting the license record that is accommodated in the program using at least the unique key.

Sub C2

20. (Amended) A method for accessing a software program using a pseudo-unique key stored in a first non-erasable non-volatile memory area of a computer, the first non-volatile memory area being unable to be programmatically changed, the method, comprising:

loading a software program residing in a volatile memory area of the computer;

extracting license information from the software program;

encrypting license information using the pseudo-unique key stored in the first non-volatile memory area;

storing the encrypting license information in a second erasable, writable, non volatile memory area of the BIOS of the computer;

subsequently verifying the software program based on the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS; and

acting on the software program based on the verification.

Please add the following new claims:

B4

19 ~~21~~. (New) The method of claim 18 ~~20~~, wherein the verification comprises:

B5

extracting the license information from the software program;

encrypting the license information using the pseudo-unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and



B

comparing the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.

B5 Bd"

13 ~~22~~. (New) The method of claim 1, wherein a unique key is stored in a first non-volatile memory area of the computer.

15 ~~23~~. (New) The method according to claim 14 ~~17~~, wherein the verification comprises:

extracting the license record from the software program;

encrypting the license record using the unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and

comparing the encrypted license information stored in the erasable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.



B

## REMARKS

Claims 1-13 and 16-23 are now pending in this application. New claims 21-23 have been added by this amendment. Each of the pending claims is believed to define an invention which is novel and unobvious over the cited references. Favorable reconsideration of this case is respectfully requested.

Applicant's representative appreciates the Examiner's courtesy in conducting a personnel interview in this case. The claims have been amended as agreed upon during the interview and it is respectfully submitted that this application is now in condition for allowance.

Specifically, claim 1 has been amended to recite that the verification structure is stored in an erasable, non-volatile memory area of the BIOS. This claim amendment overcomes the rejections under 35 U.S.C. 112, first paragraph in sections 3, 4 and 5 of the Final Office Action, as well as the rejection under 35 U.S.C. 112, second paragraph in section 7 of the Final Office Action.

Claim 20 has been amended to correct the informality noted by the Examiner. In view of these amendments, it is respectfully submitted that all pending claims are now in all aspects in compliance with 35 U.S.C. 112, first paragraph and 35 U.S.C. 112, second paragraph. Therefore, the withdrawal of these rejections is respectfully requested.

Claims 1-4, 6 and 10-13 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,892,900 to Ginter et al.

Claims 5 and 7-9, and 16-20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al. in view of U.S. Patent No. 5,684,951 to Goldman et al.



B

Consequently, it is clear that the cited references do not anticipate or render the present claims obvious. Therefore, the withdrawal of this rejection is respectfully requested.

As requested by the Examiner during the interview, a description of a specific embodiment of the invention is attached hereto.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In view of the foregoing, reconsideration and allowance of this application are believed in order, and such action is earnestly solicited.

The Commissioner is authorized to charge any fee necessitated by this Amendment to our Deposit Account No. 22-0261.

Respectfully submitted,

VENABLE, Attorneys at Law

Jeffrey A. Kaminski
Registration No. 42,709
P.O. Box 34385
Washington, D.C. 20043-9998
Telephone 202-962-4800
Telefax 202-962-8300

RK/JAK/lrh
#331676

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

RECEIVED
NOV 16 2001
Technology Center 2100

OIPE JC54
NOV 14 2001
PATENT & TRADEMARK OFFICE

## IN THE CLAIMS:

Please amended the claims as follows:

1. (Twice Amended) A method of restricting software operation within a license for use with a computer including an ~~first, non-erasable, non-volatile memory area, a second, non-~~erasable, non-volatile memory area of a (BIOS) of the computer, and a volatile memory area; ~~the first non-volatile memory accomodates data that includes unique key;~~ the method comprising the steps of:

selecting a program residing in the volatile memory,

using an agent to set~~ting~~ up verification structure in the ~~second~~ erasable, non-volatile memory of the BIOS, the ~~verfication~~ verification structure accommodatinge~~s~~ data that includes at least one license record,

verifying the program using at least ~~said~~ the verification structure from the erasable non-volatile memory of the BIOS, and

acting on the program according to the verification.

3. (Amended) A method according to claim 2, wherein setting up a verification structure further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as ~~the~~ an encryption key; ~~and~~ transferring, from the bureau to the computer, the encrypted license-record; and storing the encrypted license record in the erasable non-volatile memory area of the BIOS.

B

4. (Amended) A method according to claim 2, wherein verifying the program further comprises~~ing~~ the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license verification including an identification of the computer, ~~the~~ an encrypted license-record for the selected program from the ~~second~~ erasable, non-volatile memory area of the BIOS, and the ~~license-software~~ program's license-record ~~contents~~; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

5. (Amended) A method according to claim 3 wherein the identification of the computer includes the ~~pseudo~~ unique key.

6. (Amended) A method according to claim 1 wherein selecting a program includes the steps of: establishing a licensed-software-program in the volatile memory of the computer wherein said licensed-software-program includes contents used to form ~~a~~ the license-record.

7. (Amended) A method according to claim ~~1~~ 6 wherein using an agent to set~~ting~~ up the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in ~~the~~ a first non-volatile memory area of the computer; and establishing at least one license-record location in the first ~~or the second~~ nonvolatile memory area or in the erasable, non-volatile memory area of the BIOS.

9. (Amended) A method according to claim 7~~1~~ wherein verifying the program

includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the ~~first or the second~~ erasable, non-volatile memory area of the BIOS, using the pseudo-unique key; and comparing the encrypted licenses-software-program's license-record contents with the encrypted license-record in the ~~first or the second~~ erasable, non-volatile memory area of the BIOS, or comparing the license-software-program's license-record contents with the decrypted license-record in ~~the first or the second~~ erasable non-volatile memory area of the BIOS.

10. (Amended) A method according to claim 9~~1~~ wherein acting on the program includes the step: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency.

11. (Amended) A method according to claim 22~~1~~ wherein the first non-volatile memory area is a ROM section of a BIOS.

12. (Amended) A method according to claim 1 wherein the ~~second~~ erasable, non-volatile memory area is a $E^2$PROM section of ~~a~~ the BIOS.

16. (Amended) The method of Claim 22~~1~~, wherein the unique key includes a pseudo-unique key.

17. (Amended) The method according Claim 22~~1~~, wherein ~~said~~ the step of using the agent to set~~ting~~ up ~~a~~ the verification record, including the license record, includes encrypting a license record data in ~~said~~ the program using at least ~~said~~ the unique key.

18. (Amended) The method according to Claim 22~~1~~, wherein ~~said~~ the step of verifying the program includes a decrypting the license record data accommodated in ~~said~~ the erasable second non-volatile memory area of the BIOS using at least ~~said~~ the unique key.

19. (Amended) The method according to Claim 22~~1~~, wherein ~~said~~ the step of verifying the program includes encrypting the license record that is accommodated in ~~said~~ the program using at least ~~said~~ the unique key.

20. (Amended) A method for ~~restricting~~ accessing ~~to~~ a software program using a pseudo-unique key stored in a first non-erasable non-volatile memory area of a computer, the first non-volatile memory area being unable to be programmatically changed, the method, comprising:

~~storing a pseudo-unique key in a first non-volatile memory area of a computer;~~

~~selecting~~ loading a software program residing in a volatile memory area of the computer;

extracting license information from the software program;

encrypting license information using the pseudo-unique key stored in the first non-volatile memory area;

storing the encrypting ~~pseudo-unique key~~ license information in a second erasable, writable, non volatile memory area of the BIOS of the computer;

subsequently verifying the software program ~~using~~ based on the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS ~~pseudo-unique key~~; and

acting on the software program based on the verification.

Please add the following new claims:

21. (New) The method of claim 20, wherein the verification comprises:

extracting the license information from the software program;

encrypting the license information using the pseudo-unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and

comparing the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.

22. (New) The method of claim 1, wherein a unique key is stored in a first non-volatile memory area of the computer.

23. (New) The method according to claim 17, wherein the verification comprises:

extracting the license record from the software program;

encrypting the license record using the unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and

comparing the encrypted license information stored in the erasable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.

#11

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

OIPE JC54
NOV 14 2001
PATENT & TRADEMARK OFFICE

In re application of:

Miki MULLOR et al.

Appl. No: 09/164,777

Filed: October 1, 1998

For: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION

Art Unit: 2161

Examiner: J. Trammell

Atty. Docket No: 39636-176166

Customer No:

26694

PATENT TRADEMARK OFFICE

RECEIVED
NOV 16 2001
Technology Center 2100

**Information Disclosure Statement Under 37 C.F.R. § 1.97(c)**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This is an Information Disclosure Statement submitted under 37 C.F.R. § 1.97 within the time specified under 37 C.F.R. § 1.97(c)(2).

In order to comply with applicant's duty of disclosure under 37 C.F.R. § 1.56, the U.S. Patent and Trademark Office is notified of the documents which are listed on the attached Form PTO-1449 and which the Examiner may deem relevant to patentability of the claims of the above-identified application. One copy of each of the listed documents is submitted herewith.

The instant Information Disclosure Statement is being a first Office action on the merits, after filing a request for continued examination. Accordingly, pursuant to 37 C.F.R. §1.97(b)(2), no fee is due.

In view of the above, no further translation or statement of relevance is required, and as all requirements of 37 C.F.R. § 1.97 and all official guide lines pertaining to Information

Disclosure Statements have been complied with, and it is therefore respectfully requested that the Examiner consider the documents and make them of record.

If no check is attached, please charge any necessary fee or credit any overpayment in connection with this Information Disclosure Statement to Deposit Account No. 22-0261.

Respectfully submitted,

Date: 11/19/01

Jeffri A. Kaminski
Registration No. 42,709
VENABLE
P.O. Box 34385
Washington, D.C. 20043-9998

Telephone: (202) 962-4800
Telefax: (202) 962-8300

#331700

Please type a plus sign (+) inside this box

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet 1 of 2

| Complete if Known | |
|---|---|
| Application Number | 09/164,777 |
| Filing Date | October 1, 1998 |
| First Named Inventor | Miki MULLOR et al. |
| Group Art Unit | 2161 |
| Examiner Name | J. Trammell |
| Attorney Docket Number | 39636-176166 |

## U.S. PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | U.S. Patent Document Number | Kind Code[2] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | | 5,754,763 | | Bereiter | 5/19/1998 | |
| | | 5,758,068 | | Brandt et al. | 5/26/1998 | |
| | | 5,790,664 | | Coley et al. | 8/4/1998 | |
| | | 5,758,069 | | Olsen | 5/26/1998 | |
| | | 5,905,860 | | Olsen et al. | 5/18/1999 | |
| | | 5,390,297 | | Barber et al. | 2/14/1995 | |
| | | 6,173,446 | | Khan et al. | 1/9/2001 | |
| | | 4,903,296 | | Chandra et al. | 2/20/1990 | |
| | | 6,298,138 | | Gotoh et al. | 10/2/2001 | |
| | | 6,192,475 | | Wallance | 2/20/2001 | |
| | | 6,272,636 | | Neville et al. | 8/77/2001 | |
| | | 6,055,503 | | Horstmann | 4/25/2000 | |
| | | 6,073,256 | | Sesma | 6/6/2000 | |
| | | 6,006,190 | | Baena-Arnaiz et al. | 12/21/1999 | |
| | | 6,078,909 | | Knurson | 6/20/2000 | |
| | | 6,243,468 | | Pearce et al. | 6/5/2001 | |
| | | 6,189,146 | | Misra et al. | 2/13/2001 | |
| | | 5,671,412 | | Christiano | 9/23/1997 | |
| | | 5,826,011 | | Chou et al. | 10/20/1998 | |
| | | 6,023,763 | | Grumpstrup et al. | 2/8/2000 | |

RECEIVED DEC 03 2001 Group 2100

## FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | Foreign Patent Document Office[3] | Number[4] | Kind Code[5] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T[6] |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Examiner Signature | | Date Considered | |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

VENABLE

Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

Please type a plus sign (+) inside this box +

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet 2 of 2

| Complete if Known | |
|---|---|
| Application Number | 09/164,777 |
| Filing Date | October 1, 1998 |
| First Named Inventor | Miki MULLOR et al. |
| Group Art Unit | 2161 |
| Examiner Name | J. Trammell |
| Attorney Docket Number | 39636-176166 |

## U.S. PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | U.S. Patent Document Number | Kind Code[2] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | | 6,216,747 | | Larsson et al. | 5/1/2001 | |
| | | 6,128,741 | | Goetz et al. | 10/3/2000 | |
| | | 4,924,378 | | Hershey et al. | 5/8/1990 | |
| | | 5,386,369 | | Christiano | 1/31/1995 | |
| | | 6,233,567 | | Cohen | 5/15/2001 | |
| | | 4,866,769 | | Karp | 9/12/1989 | |
| | | 6,021,438 | | Duvvoori et al. | 2/1/2000 | |

RECEIVED
DEC 03 2001
Group 2100

## FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | Foreign Patent Document Office[3] | Number[4] | Kind Code[5] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T[6] |
|---|---|---|---|---|---|---|---|---|

| Examiner Signature | | Date Considered | |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

VENABLE
ATTORNEYS AT LAW

Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

RECEIVED 11/28/01 PL

Official

VENABLE, BAETJER, HOWARD & CIVILETTI, LLP
*including professional corporations*

1201 New York Avenue, N.W., Suite 1000
Washington, D.C. 20005
(202) 962-4800, Fax (202) 962-8300

MARYLAND • WASHINGTON, D.C. • VIRGINIA

VENABLE®
ATTORNEYS AT LAW

| TO: | FAX NUMBER: | PHONE NUMBER: |
|---|---|---|
| **Examiner C. Hewitt** | **703-308-5397** | **703-308-8057** |
| SENDER: J. Kaminski | SENDER'S FAX NUMBER: | SENDER'S PHONE NUMBER: 202-962-4048 |
| | SENDER'S ASSISTANT: | ASSISTANT'S PHONE NUMBER: |
| DATE: 11/28/2001 | CLIENT/MATTER NUMBER: 176166 | PAGES, EXCLUDING COVER: |

MESSAGE:

**Informational communication**. Please deliver to Examiner Calvin Hewitt.
Attached is an informational copy of the amendment filed on November 14, which you have yet to receive from the PTO mailroom.

RECEIVED
DEC 03 2001
Group 2100

If you require assistance with this transmission, please contact the sender.

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the above address via the U.S. postal service. Thank you.

Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

101203
Venable Filing Number

11/14/01
Filing Date

Atty. Docket No. 39636-176166
Re: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION
Application No.: 09/164,777 Filing Date: October 1, 1998
Patent No.: Issue Date
Trademark: Trademark Reg. No:
Opposition/Cancellation No:

The following items were received from Venable, Washington, D.C., by the U.S. Patent & Trademark Office:

**U.S. PTO FEES ENCLOSED**

| | | | |
|---|---|---|---|
| XX | **RCE Transmittal Sheet** | $370.00 | **Filing Fee** |
| | Issue Fee Part | | Surcharge Fee |
| | Invention Declaration | | |
| | National Stage Application | | Additional Claim Fee |
| | Translation of International Application | | |
| | New U.S. TM Application (___ specimens) | | Recordation of Assignment Fee |
| | Rule 53(d) Continuation or Division Application | | |
| | Rule 53(b) Continuation or Division | | IDS Fee |
| | Application (in Duplicate) (attach copy of specifications, claims, drawings & declaration) | | |
| | Priority Document-Cert.Copy of _____Appln. # _____ Date _____ | $200.00 | **Extension Fee** |
| | Assignment w/Cover Sheet | | |
| XX | **IDS w/ PTO-1449 (with references)** | | Notice of Appeal Fee |
| XX | **Amendment (with marked up version)** | | |
| | Submission of Substitute Specification | | Brief on Appeal Fee |
| XX | **Petition/Request for Extension of Time** | | |
| | Notice of Appeal | | Oral Hearing Request Fee |
| | Appeal Brief (in triplicate) | | |
| | Request for Oral Hearing | | Petition Fee |
| | Confirmation of Hearing Petition | | |
| | Letter Under 37 CFR 1.28 (c) | | Issue Fee (Additional) |
| | Certificate of Correction | | |
| | Maintenance Fee Transmittal | | Maintenance Fee |
| | TM Statement of Use | | |
| | Declaration Under 8 | | TM Statement of Use |

RECEIVED
DEC 03 2001
Group 2100

P 407829

15743/PTO 11/14/01 CHECK NO 407829

| DATE | INVOICE NO | AMOUNT | DISCOUNT | NET AMOUNT |
|---|---|---|---|---|
| 11/14/01 | 04-111401 | 570.00 | .00 | 570.00 |
| | L.HAYES-39636.176166-FILING RCE W/ EXT. OF TIME | | | |

Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of

| | | | |
|---|---|---|---|
| Applicants | : | Miki MULLOR et al. | Customer No. 26694 PATENT TRADEMARK OFFICE |
| Appln. No. | : | 09/164,777 | |
| Filed | : | October 1, 1998 | |
| For | : | METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION | |
| Group Art Unit | : | 2161 | |
| Examiner | : | J. Trammell | |
| Atty. Dkt. | : | 39636-176166 | |

Assistant Commissioner for Patents
Washington, D.C. 22031

RECEIVED
DEC 03 2001
Group 2100

## AMENDMENT

Sir:

## REQUEST FOR EXTENSION OF TIME

Please extend the period for responding to the Office Action dated June 22, 2001 by two months so that the due date expires November 22, 2001. The requisite extension fee of $200.00 under 37 C.F.R. 1.17 (a) (1) is attached. Should no check be attached, please charge our Deposit Account 22-0261. Please also deduct any additional fees due or credit any overage to the same account.

Responsive to the Office Action dated June 22, 2001, please amend the application as follows:

Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

Amendment
U.S. Application No.: 09/164,777

**IN THE CLAIMS:**

Please amended the claims as follows:

1. (Twice Amended) 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 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.

3. (Amended) A method according to claim 2, wherein setting up a verification structure further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as an encryption key; transferring, from the bureau to the computer, the encrypted license-record; and storing the encrypted license record in the erasable non-volatile memory area of the BIOS.

4. (Amended) A method according to claim 2, wherein verifying the program further comprises the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

B

license verification including an identification of the computer, an encrypted license-record for the selected program from the erasable, non-volatile memory area of the BIOS, and the program's license-record; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

5. (Amended) A method according to claim 3 wherein the identification of the computer includes the unique key.

6. (Amended) A method according to claim 1 wherein selecting a program includes the steps of: establishing a licensed-software-program in the volatile memory of the computer wherein said licensed-software-program includes contents used to form the license-record.

7. (Amended) A method according to claim 6 wherein using an agent to set up the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in a first non-volatile memory area of the computer; and establishing at least one license-record location in the first nonvolatile memory area or in the erasable, non-volatile memory area of the BIOS.

9. (Amended) A method according to claim 7 wherein verifying the program includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the erasable, non-volatile memory area of the BIOS, using the pseudo-unique key; and comparing the encrypted licenses-software-program's license-record contents with the encrypted license-record in the erasable, non-volatile



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

memory area of the BIOS, or comparing the license-software-program's license-record contents with the decrypted license-record in erasable non-volatile memory area of the BIOS.

10. (Amended) A method according to claim 9 wherein acting on the program includes the step: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency.

11. (Amended) A method according to claim 22 wherein the first non-volatile memory area is a ROM section of a BIOS.

12. (Amended) A method according to claim 1 wherein the erasable, non-volatile memory area is a $E^2$PROM section of the BIOS.

16. (Amended) The method of Claim 22, wherein the unique key includes a pseudo-unique key.

17. (Amended) The method according Claim 22, wherein the step of using the agent to set up the verification record, including the license record, includes encrypting a license record data in the program using at least the unique key.

18. (Amended) The method according to Claim 22, wherein the step of verifying the program includes a decrypting the license record data accommodated in the erasable second non-volatile memory area of the BIOS using at least the unique key.



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

19. (Amended) The method according to Claim 22, wherein the step of verifying the program includes encrypting the license record that is accommodated in the program using at least the unique key.

20. (Amended) A method for accessing a software program using a pseudo-unique key stored in a first non-erasable non-volatile memory area of a computer, the first non-volatile memory area being unable to be programmatically changed, the method, comprising:

loading a software program residing in a volatile memory area of the computer;

extracting license information from the software program;

encrypting license information using the pseudo-unique key stored in the first non-volatile memory area;

storing the encrypting license information in a second erasable, writable, non volatile memory area of the BIOS of the computer;

subsequently verifying the software program based on the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS; and

acting on the software program based on the verification.

Please add the following new claims:

21. (New) The method of claim 20, wherein the verification comprises:

extracting the license information from the software program;

encrypting the license information using the pseudo-unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

B

comparing the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.

22. (New) The method of claim 1, wherein a unique key is stored in a first non-volatile memory area of the computer.

23. (New) The method according to claim 17, wherein the verification comprises:

extracting the license record from the software program;

encrypting the license record using the unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and

comparing the encrypted license information stored in the erasable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

## REMARKS

Claims 1-13 and 16-23 are now pending in this application. New claims 21-23 have been added by this amendment. Each of the pending claims is believed to define an invention which is novel and unobvious over the cited references. Favorable reconsideration of this case is respectfully requested.

Applicant's representative appreciates the Examiner's courtesy in conducting a personnel interview in this case. The claims have been amended as agreed upon during the interview and it is respectfully submitted that this application is now in condition for allowance.

Specifically, claim 1 has been amended to recite that the verification structure is stored in an erasable, non-volatile memory area of the BIOS. This claim amendment overcomes the rejections under 35 U.S.C. 112, first paragraph in sections 3, 4 and 5 of the Final Office Action, as well as the rejection under 35 U.S.C. 112, second paragraph in section 7 of the Final Office Action.

Claim 20 has been amended to correct the informality noted by the Examiner. In view of these amendments, it is respectfully submitted that all pending claims are now in all aspects in compliance with 35 U.S.C. 112, first paragraph and 35 U.S.C. 112, second paragraph. Therefore, the withdrawal of these rejections is respectfully requested.

Claims 1-4, 6 and 10-13 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,892,900 to Ginter et al.

Claims 5 and 7-9, and 16-20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al. in view of U.S. Patent No. 5,684,951 to Goldman et al.



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

Amendment
U.S. Application No.: 09/164,777

Consequently, it is clear that the cited references do not anticipate or render the present claims obvious. Therefore, the withdrawal of this rejection is respectfully requested.

As requested by the Examiner during the interview, a description of a specific embodiment of the invention is attached hereto.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In view of the foregoing, reconsideration and allowance of this application are believed in order, and such action is earnestly solicited.

The Commissioner is authorized to charge any fee necessitated by this Amendment to our Deposit Account No. 22-0261.

Respectfully submitted,

VENABLE, Attorneys at Law

Jeffri A. Kaminski
Registration No. 42,709
P.O. Box 34385
Washington, D.C. 20043-9998
Telephone 202-962-4800
Telefax 202-962-8300

RK/JAK/lrh
#331676



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

Appln. No.: 09/164,777

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

**IN THE CLAIMS:**

Please amended the claims as follows:

1. (Twice Amended) A method of restricting software operation within a license for use with a computer including an ~~first, non erasable, non volatile memory area, a second, non-~~erasable, non-volatile memory area of a (BIOS) of the computer. and a volatile memory area; ~~the first non volatile memory accomodates data that includes unique key;~~ the method comprising the steps of:

selecting a program residing in the volatile memory,

using an agent to set~~ting~~ up verification structure in the ~~second~~ erasable, non-volatile memory of the BIOS. the ~~verfication~~ verification structure accommodatinge~~s~~ data that includes at least one license record,

verifying the program using at least ~~said~~ the verification structure from the erasable non-volatile memory of the BIOS, and

acting on the program according to the verification.

3. (Amended) A method according to claim 2, wherein setting up a verification structure further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as ~~the~~ an encryption key; ~~and~~ transferring, from the bureau to the computer, the encrypted license-record; and storing the encrypted license record in the erasable non-volatile memory area of the BIOS.

Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

Appln. No.: 09/164,777

4. (Amended) A method according to claim 2, wherein verifying the program further comprises~~ing~~ the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license verification including an identification of the computer, ~~the~~ an encrypted license-record for the selected program from the ~~second~~ erasable, non-volatile memory area of the BIOS, and the ~~license software~~ program's license-record ~~contents~~; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

5. (Amended) A method according to claim 3 wherein the identification of the computer includes the ~~pseudo-~~unique key.

6. (Amended) A method according to claim 1 wherein selecting a program includes the steps of: establishing a licensed-software-program in the volatile memory of the computer wherein said licensed-software-program includes contents used to form ~~a~~ the license-record.

7. (Amended) A method according to claim ~~1~~ 6 wherein using an agent to ~~setting~~ up the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in ~~the~~ a first non-volatile memory area of the computer; and establishing at least one license-record location in the first ~~or the second~~ nonvolatile memory area or in the erasable, non-volatile memory area of the BIOS.

9. (Amended) A method according to claim 7~~1~~ wherein verifying the program



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the ~~first or the second~~ erasable, non-volatile memory area of the BIOS, using the pseudo-unique key; and comparing the encrypted licenses-software-program's license-record contents with the encrypted license-record in the ~~first or the second~~ erasable, non-volatile memory area of the BIOS, or comparing the license-software-program's license-record contents with the decrypted license-record in ~~the first or the second~~ erasable non-volatile memory area of the BIOS.

10. (Amended) A method according to claim 9~~1~~ wherein acting on the program includes the step: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency.

11. (Amended) A method according to claim 22~~1~~ wherein the first non-volatile memory area is a ROM section of a BIOS.

12. (Amended) A method according to claim 1 wherein the ~~second~~ erasable, non-volatile memory area is a $E^2$PROM section of ~~a~~ the BIOS.

16. (Amended) The method of Claim 22~~1~~, wherein the unique key includes a pseudo-unique key.

17. (Amended) The method according Claim 22~~1~~, wherein ~~said~~ the step of using the agent to set~~ting~~ up ~~a~~ the verification record, including the license record, includes encrypting a license record data in ~~said~~ the program using at least ~~said~~ the unique key.



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

18. (Amended) The method according to Claim 22~~1~~, wherein ~~said~~ the step of verifying the program includes a decrypting the license record data accommodated in ~~said~~ the erasable second non-volatile memory area of the BIOS using at least ~~said~~ the unique key.

19. (Amended) The method according to Claim 22~~1~~, wherein ~~said~~ the step of verifying the program includes encrypting the license record that is accommodated in ~~said~~ the program using at least ~~said~~ the unique key.

20. (Amended) A method for ~~restricting~~ accessing ~~to~~ a software program using a pseudo-unique key stored in a first non-erasable non-volatile memory area of a computer, the first non-volatile memory area being unable to be programmatically changed, the method, comprising:

~~storing a pseudo-unique key in a first non-volatile memory area of a computer;~~

~~selecting~~ loading a software program residing in a volatile memory area of the computer;

extracting license information from the software program;

encrypting license information using the pseudo-unique key stored in the first non-volatile memory area;

storing the encrypting ~~pseudo-unique key~~ license information in a second erasable, writable, non volatile memory area of the BIOS of the computer;

subsequently verifying the software program ~~using~~ based on the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS ~~pseudo-unique key~~; and

acting on the software program based on the verification.



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

Please add the following new claims:

21. (New) The method of claim 20, wherein the verification comprises:

extracting the license information from the software program;

encrypting the license information using the pseudo-unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and

comparing the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.

22. (New) The method of claim 1, wherein a unique key is stored in a first non-volatile memory area of the computer.

23. (New) The method according to claim 17, wherein the verification comprises:

extracting the license record from the software program;

encrypting the license record using the unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and

comparing the encrypted license information stored in the erasable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | |
|---|---|
| In re application of: | |
| Miki MULLOR et al. | Art Unit: 2161 |
| Appl. No: 09/164,777 | Examiner: J. Trammell |
| Filed: October 1, 1998 | Atty. Docket No: 39636-176166 |
| For: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION | Customer No: 26694 PATENT TRADEMARK OFFICE |

RECEIVED
DEC 03 2001
Group 2100

**Information Disclosure Statement Under 37 C.F.R. § 1.97(c)**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This is an Information Disclosure Statement submitted under 37 C.F.R. § 1.97 within the time specified under 37 C.F.R. § 1.97(c)(2).

In order to comply with applicant's duty of disclosure under 37 C.F.R. § 1.56, the U.S. Patent and Trademark Office is notified of the documents which are listed on the attached Form PTO-1449 and which the Examiner may deem relevant to patentability of the claims of the above-identified application. One copy of each of the listed documents is submitted herewith.

The instant Information Disclosure Statement is being a first Office action on the merits, after filing a request for continued examination. Accordingly, pursuant to 37 C.F.R. §1.97(b)(2), no fee is due.

In view of the above, no further translation or statement of relevance is required, and as all requirements of 37 C.F.R. § 1.97 and all official guide lines pertaining to Information

Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

Information Disclosure Statement
U.S. Appln. No.: 09/164,777

Disclosure Statements have been complied with, and it is therefore respectfully requested that the Examiner consider the documents and make them of record.

If no check is attached, please charge any necessary fee or credit any overpayment in connection with this Information Disclosure Statement to Deposit Account No. 22-0261.

Respectfully submitted,

Date: 11/19/01

Jeffri A. Kaminski
Registration No. 42,709
VENABLE
P.O. Box 34385
Washington, D.C. 20043-9998

Telephone: (202) 962-4800
Telefax: (202) 962-8300

#331700



Received from < 202 962 8300 > at 11/28/01 4:58:33 PM [Eastern Standard Time]

B

Revised PTO/SB/30 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
Attorney Docket No. 39636-176166

# REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

**Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000, provides for continued examination of an utility or plant application filed on or after June 8, 1995. See The American Inventors Protection Act of 1999 (AIPA).**

| | |
|---|---|
| *Application Number* | 09/164,777 |
| *Filing Date* | October 1, 1998 |
| *Examiner Name* | C. Hewitt, II |
| *First Named Inventor* | M. Muller |
| *Group Art Unit* | 2161 |
| *Attorney Docket Number* | 39636-176166 |

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.
***NOTE:*** *37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53 (d) (PTO/SB/29) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA.* See Changes to Application Examination and Provisional Application Practice, Interim Rule, 65 *Fed. Reg.* 14865 (Mar. 20, 2000), 1233 *Off. Gaz. Pat. Office* 47 (Apr. 11, 2000), which established RCE practice.

1. **Submission required under 37 C.F.R. § 1.114**
   - a. ☐ Previously submitted
     - i. ☐ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on (Any unentered amendment(s) referred to above will be entered).
     - ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on
     - iii. ☐ Other
   - b. Enclosed
     - i. ☒ Amendment/Reply
     - ii ☐ Affidavit(s)/Declaration(s)
     - iii. ☒ Information Disclosure Statement (IDS)
     - iv. ☐ Other
2. **Miscellaneous**
   - a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of _____months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) required)
   - b. ☐ Other
3. **Fees** The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.
   - a. ☒ The Director is hereby authorized to charge the following fees, or credit any overpayments, to Deposit Account No. 22-0261
     - i. ☒ RCE fee required under 37 C.F.R. § 1.17(e)
     - ii. ☒ Extension of time fee (37 C.F.R. §§ 1.136 and 1.17)
     - iii. ☐ Other
   - b. ☒ Check in the amount of $ 570.00 enclosed
   - c. ☐ Payment by credit card (Form PTO-2038 enclosed)

***SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED***

| | | | |
|---|---|---|---|
| *Name (Print/Type)* | Jeffri A. Kaminski | *Registration No. (Attorney/Agent)* | 42,709 |
| *Signature* | | *Date* | November 14, 2001 |

VENABLE
P.O. Box 34385
Washington, DC 20043-9998

SEND Fees and Completed Forms to the following address: Commissioner for Patents, Box RCE, Washington, DC 20231.
PC Docs No. 331636

VENABLE
ATTORNEYS AT LAW

Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

101203
Venable Filing Number

11/14/01
Filing Date

Atty. Docket No. 39636-176163
Re: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION
Application No.: 09/164,777 Filing Date: October 1, 1998
Patent No.: Issue Date
Trademark: Trademark Reg. No:
Opposition/Cancellation No:

The following items were received from Venable, Washington, D.C., by the U.S. Patent & Trademark Office:

**U.S. PTO FEES ENCLOSED**

| | | | |
|---|---|---|---|
| XX | RCE Transmittal Sheet | $370.00 | Filing Fee |
| | Issue Fee Part | | Surcharge Fee |
| | Invention Declaration | | |
| | National Stage Application | | Additional Claim Fee |
| | Translation of International Application | | |
| | New U.S. TM Application (___ specimens) | | Recordation of Assignment Fee |
| | Rule 53(d) Continuation or Division Application | | |
| | Rule 53(b) Continuation or Division Application (in Duplicate) (attach copy of specifications, claims, drawings & declaration) | | IDS Fee |
| | Priority Document-Cert.Copy of _____Appln. # _____ Date _____ | $200.00 | Extension Fee |
| | Assignment w/Cover Sheet | | |
| XX | IDS w/ PTO-1449 (with references) | | Notice of Appeal Fee |
| XX | Amendment (with marked up version) | | |
| | Submission of Substitute Specification | | Brief on Appeal Fee |
| XX | Petition/Request for Extension of Time | | |
| | Notice of Appeal | | Oral Hearing Request Fee |
| | Appeal Brief (in triplicate) | | |
| | Request for Oral Hearing | | Petition Fee |
| | Confirmation of Hearing Petition | | |
| | Letter Under 37 CFR 1.28 (c) | | Issue Fee (Additional) |
| | Certificate of Correction | | |
| | Maintenance Fee Transmittal | | Maintenance Fee |
| | TM Statement of Use | | |
| | Declaration Under 8 | | TM Statement of Use |
| | Declaration Under 8 and 15 | | |
| | TM renewal Application | | 8 Affidavit Fee |
| | Notice of Opposition | | |
| | Supplemental Search Report and Annex | | TM Renewal Application Fee |
| | Postcard | | |
| | Change of Address | | Notice of Opposition Fee |
| | | | Terminal Disclaimer |
| | | Fee: | $570.00 |
| | | Check Number | |

Official

OIPE JC177 NOV 14 2001 PATENT & TRADEMARK OFFICE

12/06/01

#331763

Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

101203
Venable Filing Number

11/14/01
Filing Date

Atty. Docket No. 39636-176166
Re: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION
Application No.: 09/164,777 Filing Date: October 1, 1998
Patent No.: Issue Date
Trademark: Trademark Reg. No:
Opposition/Cancellation No:

The following items were received from Venable, Washington, D.C., by the U.S. Patent & Trademark Office:

**U.S. PTO FEES ENCLOSED**

| | | | |
|---|---|---|---|
| XX | **RCE Transmittal Sheet** | $370.00 | **Filing Fee** |
| | Issue Fee Part | | Surcharge Fee |
| | Invention Declaration | | |
| | National Stage Application | | Additional Claim Fee |
| | Translation of International Application | | |
| | New U.S. TM Application (___ specimens) | | Recordation of Assignment Fee |
| | Rule 53(d) Continuation or Division Application | | |
| | Rule 53(b) Continuation or Division | | IDS Fee |
| | Application (in Duplicate) (attach copy of specifications, claims, drawings & declaration) | | |
| | Priority Document-Cert.Copy of _____Appln. # _____ Date _____ | $200.00 | **Extension Fee** |
| | Assignment w/Cover Sheet | | |
| XX | **IDS w/ PTO-1449 (with references)** | | Notice of Appeal Fee |
| XX | **Amendment (with marked up version)** | | |
| | Submission of Substitute Specification | | Brief on Appeal Fee |
| XX | **Petition/Request for Extension of Time** | | |
| | Notice of Appeal | | Oral Hearing Request Fee |
| | Appeal Brief (in triplicate) | | |
| | Request for Oral Hearing | | Petition Fee |
| | Confirmation of Hearing Petition | | |
| | Letter Under 37 CFR 1.28 (c) | | Issue Fee (Additional) |
| | Certificate of Correction | | |
| | Maintenance Fee Transmittal | | Maintenance Fee |
| | TM Statement of Use | | |
| | Declaration Under 8 | | TM Statement of Use |
| | Declaration Under 8 and 15 | | |
| | TM renewal Application | | 8 Affidavit Fee |
| | Notice of Opposition | | |
| | Supplemental Search Report and Annex | | TM Renewal Application Fee |
| | Postcard | | |
| | Change of Address | | Notice of Opposition Fee |
| | | | Terminal Disclaimer |
| | | **Fee:** | **$570.00** |
| | | Check Number | |

Official!

RECEIVED 12/06/01

OIPE JC177 NOV 1 6 2001 PATENT & TRADEMARK OFFICE

#331763

Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of

| | | | |
|---|---|---|---|
| Applicants | : | Miki MULLOR et al. | Customer No. 26694 PATENT TRADEMARK OFFICE |
| Appln. No. | : | 09/164,777 | |
| Filed | : | October 1, 1998 | |
| For | : | METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION | |
| Group Art Unit | : | 2161 | |
| Examiner | : | J. Trammell | |
| Atty. Dkt. | : | 39636-176166 | |

Assistant Commissioner for Patents
Washington, D.C. 22031

## AMENDMENT

Sir:

## REQUEST FOR EXTENSION OF TIME

Please extend the period for responding to the Office Action dated June 22, 2001 by two months so that the due date expires November 22, 2001. The requisite extension fee of $200.00 under 37 C.F.R. 1.17 (a) (1) is attached. Should no check be attached, please charge our Deposit Account 22-0261. Please also deduct any additional fees due or credit any overage to the same account.

Responsive to the Office Action dated June 22, 2001, please amend the application as follows:

Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

**IN THE CLAIMS:**

Please amended the claims as follows:

1. (Twice Amended) 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 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.

3. (Amended) A method according to claim 2, wherein setting up a verification structure further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as an encryption key; transferring, from the bureau to the computer, the encrypted license-record; and storing the encrypted license record in the erasable non-volatile memory area of the BIOS.

4. (Amended) A method according to claim 2, wherein verifying the program further comprises the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

license verification including an identification of the computer, an encrypted license-record for the selected program from the erasable, non-volatile memory area of the BIOS, and the program's license-record; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

5. (Amended) A method according to claim 3 wherein the identification of the computer includes the unique key.

6. (Amended) A method according to claim 1 wherein selecting a program includes the steps of: establishing a licensed-software-program in the volatile memory of the computer wherein said licensed-software-program includes contents used to form the license-record.

7. (Amended) A method according to claim 6 wherein using an agent to set up the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in a first non-volatile memory area of the computer; and establishing at least one license-record location in the first nonvolatile memory area or in the erasable, non-volatile memory area of the BIOS.

9. (Amended) A method according to claim 7 wherein verifying the program includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the erasable, non-volatile memory area of the BIOS, using the pseudo-unique key; and comparing the encrypted licenses-software-program's license-record contents with the encrypted license-record in the erasable, non-volatile



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

memory area of the BIOS, or comparing the license-software-program's license-record contents with the decrypted license-record in erasable non-volatile memory area of the BIOS.

10. (Amended) A method according to claim 9 wherein acting on the program includes the step: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency.

11. (Amended) A method according to claim 22 wherein the first non-volatile memory area is a ROM section of a BIOS.

12. (Amended) A method according to claim 1 wherein the erasable, non-volatile memory area is a $E^2$PROM section of the BIOS.

16. (Amended) The method of Claim 22, wherein the unique key includes a pseudo-unique key.

17. (Amended) The method according Claim 22, wherein the step of using the agent to set up the verification record, including the license record, includes encrypting a license record data in the program using at least the unique key.

18. (Amended) The method according to Claim 22, wherein the step of verifying the program includes a decrypting the license record data accommodated in the erasable second non-volatile memory area of the BIOS using at least the unique key.



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

19. (Amended) The method according to Claim 22, wherein the step of verifying the program includes encrypting the license record that is accommodated in the program using at least the unique key.

20. (Amended) A method for accessing a software program using a pseudo-unique key stored in a first non-erasable non-volatile memory area of a computer, the first non-volatile memory area being unable to be programmatically changed, the method, comprising:

loading a software program residing in a volatile memory area of the computer;

extracting license information from the software program;

encrypting license information using the pseudo-unique key stored in the first non-volatile memory area;

storing the encrypting license information in a second erasable, writable, non volatile memory area of the BIOS of the computer;

subsequently verifying the software program based on the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS; and

acting on the software program based on the verification.

Please add the following new claims:

21. (New) The method of claim 20, wherein the verification comprises:

extracting the license information from the software program;

encrypting the license information using the pseudo-unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

comparing the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.

22. (New) The method of claim 1, wherein a unique key is stored in a first non-volatile memory area of the computer.

23. (New) The method according to claim 17, wherein the verification comprises:

extracting the license record from the software program;

encrypting the license record using the unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and

comparing the encrypted license information stored in the erasable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

## REMARKS

Claims 1-13 and 16-23 are now pending in this application. New claims 21-23 have been added by this amendment. Each of the pending claims is believed to define an invention which is novel and unobvious over the cited references. Favorable reconsideration of this case is respectfully requested.

Applicant's representative appreciates the Examiner's courtesy in conducting a personnel interview in this case. The claims have been amended as agreed upon during the interview and it is respectfully submitted that this application is now in condition for allowance.

Specifically, claim 1 has been amended to recite that the verification structure is stored in an erasable, non-volatile memory area of the BIOS. This claim amendment overcomes the rejections under 35 U.S.C. 112, first paragraph in sections 3, 4 and 5 of the Final Office Action, as well as the rejection under 35 U.S.C. 112, second paragraph in section 7 of the Final Office Action.

Claim 20 has been amended to correct the informality noted by the Examiner. In view of these amendments, it is respectfully submitted that all pending claims are now in all aspects in compliance with 35 U.S.C. 112, first paragraph and 35 U.S.C. 112, second paragraph. Therefore, the withdrawal of these rejections is respectfully requested.

Claims 1-4, 6 and 10-13 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,892,900 to Ginter et al.

Claims 5 and 7-9, and 16-20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ginter et al. in view of U.S. Patent No. 5,684,951 to Goldman et al.



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

Consequently, it is clear that the cited references do not anticipate or render the present claims obvious. Therefore, the withdrawal of this rejection is respectfully requested.

As requested by the Examiner during the interview, a description of a specific embodiment of the invention is attached hereto.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In view of the foregoing, reconsideration and allowance of this application are believed in order, and such action is earnestly solicited.

The Commissioner is authorized to charge any fee necessitated by this Amendment to our Deposit Account No. 22-0261.

Respectfully submitted,

VENABLE, Attorneys at Law

Jeffri A. Kaminski
Registration No. 42,709
P.O. Box 34385
Washington, D.C. 20043-9998
Telephone 202-962-4800
Telefax 202-962-8300

RK/JAK/lrh
#331676



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

Appln. No.: 09/164,777

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

**IN THE CLAIMS:**

Please amended the claims as follows:

1. (Twice Amended) A method of restricting software operation within a license for use with a computer including an ~~first, non-erasable, non-volatile memory area, a second, non-~~erasable, non-volatile memory area of a (BIOS) of the computer. and a volatile memory area; ~~the first non-volatile memory accomodates data that includes unique key;~~ the method comprising the steps of:

selecting a program residing in the volatile memory,

using an agent to set~~ting~~ up verification structure in the ~~second~~ erasable, non-volatile memory of the BIOS, the ~~verfication~~ verification structure accommodatin~~ges~~ data that includes at least one license record,

verifying the program using at least ~~said~~ the verification structure from the erasable non-volatile memory of the BIOS, and

acting on the program according to the verification.

3. (Amended) A method according to claim 2, wherein setting up a verification structure further comprising the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license including an identification of the computer and the license-record's contents from the selected program; forming an encrypted license-record at the bureau by encrypting parts of the request-for-license using part of the identification as ~~the~~ an encryption key; ~~and~~ transferring, from the bureau to the computer, the encrypted license-record; and storing the encrypted license record in the erasable non-volatile memory area of the BIOS.

Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

Appln. No.: 09/164,777

4. (Amended) A method according to claim 2, wherein verifying the program further comprises~~ing~~ the steps of: establishing, between the computer and the bureau, a two-way data-communications linkage; transferring, from the computer to the bureau, a request-for-license verification including an identification of the computer, ~~the~~ an encrypted license-record for the selected program from the ~~second~~ erasable, non-volatile memory area of the BIOS, and the ~~license-software~~ program's license-record ~~contents~~; enabling the comparing at the bureau; and transferring, from the bureau to the computer, the result of the comparing.

5. (Amended) A method according to claim 3 wherein the identification of the computer includes the ~~pseudo~~ unique key.

6. (Amended) A method according to claim 1 wherein selecting a program includes the steps of: establishing a licensed-software-program in the volatile memory of the computer wherein said licensed-software-program includes contents used to form ~~a~~ the license-record.

7. (Amended) A method according to claim ~~1~~ 6 wherein using an agent to set~~ting~~ up the verification structure includes the steps of: establishing or certifying the existence of a pseudo-unique key in ~~the~~ a first non-volatile memory area of the computer; and establishing at least one license-record location in the first ~~or the second~~ nonvolatile memory area or in the erasable, non-volatile memory area of the BIOS.

9. (Amended) A method according to claim 7~~1~~ wherein verifying the program



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

includes the steps of: encrypting the licensed-software-program's license-record contents from the volatile memory area or decrypting the license-record in the ~~first or the second~~ erasable, non-volatile memory area of the BIOS, using the pseudo-unique key; and comparing the encrypted licenses-software-program's license-record contents with the encrypted license-record in the ~~first or the second~~ erasable. non-volatile memory area of the BIOS, or comparing the license-software-program's license-record contents with the decrypted license-record in ~~the first or the second~~ erasable non-volatile memory area of the BIOS.

10. (Amended) A method according to claim 9~~1~~ wherein acting on the program includes the step: restricting the program's operation with predetermined limitations if the comparing yields non-unity or insufficiency.

11. (Amended) A method according to claim 22~~1~~ wherein the first non-volatile memory area is a ROM section of a BIOS.

12. (Amended) A method according to claim 1 wherein the ~~second~~ erasable, non-volatile memory area is a $E^2$PROM section of ~~a~~ the BIOS.

16. (Amended) The method of Claim 22~~1~~, wherein the unique key includes a pseudo-unique key.

17. (Amended) The method according Claim 22~~1~~, wherein ~~said~~ the step of using the agent to ~~setting~~ up ~~a~~ the verification record, including the license record, includes encrypting a license record data in ~~said~~ the program using at least ~~said~~ the unique key.



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

Appln. No.: 09/164,777

18. (Amended) The method according to Claim 22~~1~~, wherein ~~said~~ the step of verifying the program includes a decrypting the license record data accommodated in ~~said~~ the erasable second non-volatile memory area of the BIOS using at least ~~said~~ the unique key.

19. (Amended) The method according to Claim 22~~1~~, wherein ~~said~~ the step of verifying the program includes encrypting the license record that is accommodated in ~~said~~ the program using at least ~~said~~ the unique key.

20. (Amended) A method for ~~restricting~~ accessing ~~to~~ a software program using a pseudo-unique key stored in a first non-erasable non-volatile memory area of a computer, the first non-volatile memory area being unable to be programmatically changed, the method, comprising:

~~storing a pseudo-unique key in a first non-volatile memory area of a computer;~~

~~selecting~~ loading a software program residing in a volatile memory area of the computer;

extracting license information from the software program;

encrypting license information using the pseudo-unique key stored in the first non-volatile memory area;

storing the encrypting ~~pseudo-unique key~~ license information in a second erasable, writable, non volatile memory area of the BIOS of the computer;

subsequently verifying the software program ~~using~~ based on the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS ~~pseudo-unique key~~; and

acting on the software program based on the verification.



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

Please add the following new claims:

21. (New) The method of claim 20, wherein the verification comprises:

extracting the license information from the software program;

encrypting the license information using the pseudo-unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and

comparing the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.

22. (New) The method of claim 1, wherein a unique key is stored in a first non-volatile memory area of the computer.

23. (New) The method according to claim 17, wherein the verification comprises:

extracting the license record from the software program;

encrypting the license record using the unique key stored in the first non-volatile memory area of the computer to form second encrypted license information; and

comparing the encrypted license information stored in the erasable, non-volatile memory area of the BIOS of the computer with the second encrypted license information.



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

Duplicate #1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Miki MULLOR et al.

Appl. No: 09/164,777

Filed: October 1, 1998

For: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION

Art Unit: 2161

Examiner: J. Trammell

Atty. Docket No: 39636-176166

Customer No:
26694
PATENT TRADEMARK OFFICE

Official

RECEIVED 12/06/01 PM

**Information Disclosure Statement Under 37 C.F.R. § 1.97(c)**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This is an Information Disclosure Statement submitted under 37 C.F.R. § 1.97 within the time specified under 37 C.F.R. § 1.97(c)(2).

In order to comply with applicant's duty of disclosure under 37 C.F.R. § 1.56, the U.S. Patent and Trademark Office is notified of the documents which are listed on the attached Form PTO-1449 and which the Examiner may deem relevant to patentability of the claims of the above-identified application. One copy of each of the listed documents is submitted herewith.

The instant Information Disclosure Statement is being a first Office action on the merits, after filing a request for continued examination. Accordingly, pursuant to 37 C.F.R. §1.97(b)(2), no fee is due.

In view of the above, no further translation or statement of relevance is required, and as all requirements of 37 C.F.R. § 1.97 and all official guide lines pertaining to Information

Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

Information Disclosure Statement
U.S. Appln. No.: 09/164,777

Disclosure Statements have been complied with, and it is therefore respectfully requested that the Examiner consider the documents and make them of record.

If no check is attached, please charge any necessary fee or credit any overpayment in connection with this Information Disclosure Statement to Deposit Account No. 22-0261.

Respectfully submitted,

Date: 11/19/01

Jeffri A. Kaminski
Registration No. 42,709
VENABLE
P.O. Box 34385
Washington, D.C. 20043-9998

Telephone: (202) 962-4800
Telefax: (202) 962-8300

#331700



Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

# WEST

Help | Logout | Interrupt

Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences

**Search Results -**

| Terms | Documents |
|---|---|
| l1 and encryption | 8 |

**Database:**
US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Refine Search: l1 and encryption Clear

**Search History**

**Today's Date: 1/3/2002**

| DB Name | Query | Hit Count | Set Name |
|---|---|---|---|
| USPT | l1 and encryption | 8 | L3 |
| USPT | l1 and license | 1 | L2 |
| USPT | updat$ adj bios | 72 | L1 |

Scanned

# WEST

Help | Logout | Interrupt

Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences

**Search Results -**

| Terms | Documents |
|---|---|
| l7 and (volatile adj memory) | 9 |

**Database:**
US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Refine Search: l7 and (volatile adj memory) Clear

**Search History**

**Today's Date: 1/3/2002**

| DB Name | Query | Hit Count | Set Name |
|---|---|---|---|
| USPT | l7 and (volatile adj memory) | 9 | L8 |
| USPT | l6 not l5 | 27 | L7 |
| USPT | l4 and bios | 31 | L6 |
| USPT | l2 and remote and (agent adj5 (configur$ or set$)) | 36 | L5 |
| USPT | l2 and remote | 280 | L4 |
| USPT | steinberg.in. and (file adj server) | 1 | L3 |
| USPT | agent and configuration and license | 978 | L2 |
| USPT | (remote adj configuration) and license | 3 | L1 |

MG

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/164,777 | 10/01/1998 | MIKI MULLOR | REINC4237.01 | 7068 |

7590 01/15/2002

SPENCER AND FRANK
SUITE 300 EAST
1100 NEW YORK AVENUE NW
WASHINGTON, DC 200053955

| EXAMINER |
|---|
| HEWITT II, CALVIN L |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2161 | 12 |

DATE MAILED: 01/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

H.G

| Office Action Summary | Application No. | Applicant(s) |
|---|---|---|
| | 09/164,777 | MULLOR ET AL. |
| | Examiner | Art Unit |
| | Calvin L Hewitt II | 2161 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *14 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *11*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## *Status of Claims*

1. Claims 1-23 have been examined.

## *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 11, 12, 15 and 16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 11, 12 and 15 are rejected as flash memory is a type of EEPROM. Flash memory can be used as a computer BIOS. Therefore, a computer BIOS would not contain an EEPROM and/or ROM section.

Claim 16 is rejected because a key cannot be simultaneously "unique" and "pseudo-unique".

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites, "loading a software program residing in volatile memory area of the computer". This limitation would not be clear to one of ordinary skill as the software would have to be loaded a priori in order to reside in volatile memory.

Claim 21 is rejected because it depends from claim 20.

## *Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-23 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Misra et al., U.S. Patent No. 6,189,146, Goldman et al., U.S. Patent No. 5,684,951. and Ewertz et al., U.S. Patent No. 5,479,639.

Misra et al. teach a system and method for software licensing that comprises:

- selecting a program from volatile memory (figure 2)
- using data stored in various memory locations to implement the system (figure 2; column 5, lines 2-67)
- using an agent to set up a verification structure in computer memory where structure data includes a license record (column 4, lines 14-20 and 49-67; column 11, lines 45-59; column 12, lines 8-31)
- verifying and acting on the program according to the verification structure (e.g. software license) (column/line 13/65-14/53; column/line 14/54-17/40)
- a licensing authentication bureau in a two-way connection with a computer that handles requests for licenses (where license data includes computer identification and license record contents), encrypts a request for license (e.g. license) using computer identification, performs license validation and transfers a license to a computer (figures 1 and 3-8; column 6, lines 50-64; column 9,

- lines 40-50; column/line 11/60-12/27; column/line 13/65-14/52; column 15, lines 37-49)
- a license that contains predetermined information (column 10, lines 60-67; column 11, lines 1-24)
- storing a license record in non-volatile memory (column 12, lines 8-27)
- comparing licenses to determine validity and restricting the program's operations if a license is determined to be invalid (column 14, lines 30-51)
- encryption using an identification of a computer that is a unique key (column 15, lines 37-49)

Regarding the storage of encrypted licenses, Misra et al. teach licenses that are encrypted using a unique key as they are placed in storage (column 8, lines 35-52). Therefore, it would have been obvious to one of ordinary skill of the art to allow user nodes to store licenses in encrypted form for additional security. In addition, as Misra et al. implement their system using various computer system memory such as RAM (e.g. volatile), ROM (which houses a BIOS), portable and hard disk memory (column 5, lines 37-67) it would have been obvious to perform encryption processes using the appropriate memory given the characteristics of the target system (figures 1 and 2). Misra et al. also teach

encryption keys and programs ("agent") used in the license collation process that belong to various parties (column 8, lines 35-52; column 15, lines 37-54). Therefore, it would have been obvious to one of ordinary skill of the art to store these keys in non-volatile memory as these keys are used to securely communicate between and identify parties, as well as access encrypted data.

Misra et al., however, do not teach pseudo-unique keys nor constructing license records within a computer BIOS. Goldman et al. teach pseudo-unique keys (abstract) while, Ewertz et al. teach of expanding BIOS memory to store identification and/or configuration data such as software licenses (column 3, lines 15-40; column/line 11/3-12/14). Therefore, it would have been obvious for one of ordinary skill of the art to combine the teachings of Misra et al., Goldman et al. and Ewertz et al.. Recall, Ewertz et al. teach of expanding non-volatile memory (e.g. BIOS) ('639, column 3, lines 15-40) for maintaining data such as software licenses. Hence, it would have been obvious to one of ordinary skill to use the BIOS to store licenses in the Misra et al. system as they teach of users storing license data in persistent- non-volatile storage ('146, column 12, lines 8-27). Also pseudo unique keys can be issued, on a temporary basis (say), ('951, abstract), to encrypt licenses ('146, column 13, lines 42-48). This allows a client to access secured data without comprising the security of the larger system.

## *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Edenson et al. teach a system for protecting copyrighted program material using a BIOS
- Fette et al. teach a programmable radio and operating software in accordance with a license
- Steinberg et al. teach software branding
- Smith et al. teach a system for distributing, registering and purchasing software over a network using an agent program embedded in each software application

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Calvin Loyd Hewitt II whose telephone number is (703) 308-8057. The Examiner can normally be reached on Monday-Friday from 8:30 AM-5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, James P. Trammell, can be reached at (703) 305-9768.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

c/o Technology Center 2100

Washington, D.C. 20231

or faxed to :

(703) 746-7239 (for formal communications intended for entry),

(703) 746-7238 (for after-final communications),

or:

(703) 746-7240 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Hyung Sub Sough
Primary Examiner

Calvin Loyd Hewitt II

January 7, 2002

| Notice of References Cited | Application/Control No. 09/164,777 | Applicant(s)/Patent Under Reexamination MULLOR ET AL. | |
|---|---|---|---|
| | Examiner Calvin L Hewitt II | Art Unit 2161 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification | |
|---|---|---|---|---|---|---|
| | A | US-5,479,639-A | 12-1995 | Ewertz et al. | 395 | 430 |
| | B | US-6,189,146-A | 02-2001 | Misra et al. | 717 | 11 |
| | C | US-6,067,582-A | 05-2000 | Smith et al. | 710 | 5 |
| | D | US-6,000,030 | 12-1999 | Steinberg et al. | 713 | 200 |
| | E | US-6,052,600-A | 04-2000 | Fette et al. | 455 | 509 |
| | F | US-6,198,875-A | 03-2001 | Edenson et al. | 386 | 94 |
| | G | US- | | | | |
| | H | US- | | | | |
| | I | US- | | | | |
| | J | US- | | | | |
| | K | US- | | | | |
| | L | US- | | | | |
| | M | US- | | | | |

**FOREIGN PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | Classification | |
|---|---|---|---|---|---|---|---|
| | N | | | | | | |
| | O | | | | | | |
| | P | | | | | | |
| | Q | | | | | | |
| | R | | | | | | |
| | S | | | | | | |
| | T | | | | | | |

**NON-PATENT DOCUMENTS**

| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
| | U | |
| | V | |
| | W | |
| | X | |

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Please type a plus sign (+) inside this box [+]

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet 1 of 2

| Complete if Known | |
|---|---|
| Application Number | 09/164,777 |
| Filing Date | October 1, 1998 |
| First Named Inventor | Miki MULLOR et al. |
| Group Art Unit | 2161 |
| Examiner Name | J. Trammell |
| Attorney Docket Number | 39636-176166 |

OIPE
NOV 14 2001
PATENT & TRADEMARK OFFICE

## U.S. PATENT DOCUMENTS

| Examiner Initials * | Cite No.[1] | U.S. Patent Document Number | Kind Code[2] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | | 5,754,763 | | Bereiter | 5/19/1998 | |
| | | 5,758,068 | | Brandt et al. | 5/26/1998 | |
| | | 5,790,664 | | Coley et al. | 8/4/1998 | |
| | | 5,758,069 | | Olsen | 5/26/1998 | |
| | | 5,905,860 | | Olsen et al. | 5/18/1999 | |
| | | 5,390,297 | | Barber et al. | 2/14/1995 | |
| | | 6,173,446 | | Khan et al. | 1/9/2001 | |
| | | 4,903,296 | | Chandra et al. | 2/20/1990 | |
| | | 6,298,138 | | Gotoh et al. | 10/2/2001 | |
| | | 6,192,475 | | Wallance | 2/20/2001 | |
| | | 6,272,636 | | Neville et al. | 8/77/2001 | |
| | | 6,055,503 | | Horstmann | 4/25/2000 | |
| | | 6,073,256 | | Sesma | 6/6/2000 | |
| | | 6,006,190 | | Baena-Arnaiz et al. | 12/21/1999 | |
| | | 6,078,909 | | Knutson | 6/20/2000 | |
| | | 6,243,468 | | Pearce et al. | 6/5/2001 | |
| | | 6,189,146 | | Misra et al. | 2/13/2001 | |
| | | 5,671,412 | | Christiano | 9/23/1997 | |
| | | 5,826,011 | | Chou et al. | 10/20/1998 | |
| | | 6,023,763 | | Grumpstrup et al. | 2/8/2000 | |

RECEIVED
NOV 16 2001
Technology Center 2100

## FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | Foreign Patent Document Office[3] | Number[4] | Kind Code[5] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T[6] |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Examiner Signature | | Date Considered | 1/23/03 |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

VENABLE
ATTORNEYS AT LAW

Please type a plus sign (+) inside this box [+]

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet 2 of 2

| Complete if Known | |
|---|---|
| Application Number | 09/164,777 |
| Filing Date | October 1, 1998 |
| First Named Inventor | Miki MULLOR et al. |
| Group Art Unit | 2161 |
| Examiner Name | J. Trammell |
| Attorney Docket Number | 39636-176166 |

OIPE JC54
NOV 14 2001
PATENT & TRADEMARK OFFICE

## U.S. PATENT DOCUMENTS

| Examiner Initials * | Cite No.[1] | U.S. Patent Document Number | Kind Code[2] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | | 6,226,747 | | Larsson et al. | 5/1/2001 | |
| | | 6,128,741 | | Goetz et al. | 10/3/2000 | |
| | | 4,924,378 | | Hershey et al. | 5/8/1990 | |
| | | 5,386,369 | | Christiano | 1/31/1995 | |
| | | 6,233,567 | | Cohen | 5/15/2001 | |
| | | 4,866,769 | | Karp | 9/12/1989 | |
| | | 6,021,438 | | Duvvoori et al. | 2/1/2000 | |

RECEIVED
NOV 16 2001
Technology Center 2100

## FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | Foreign Patent Document Office[3] | Number[4] | Kind Code[5] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T[6] |
|---|---|---|---|---|---|---|---|---|

| Examiner Signature | | Date Considered | |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

VENABLE
ATTORNEYS AT LAW

#13/C
2-6-02
DW

MAILED
FEB 05 2002
Technology Center 2100

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of

| | | | |
|---|---|---|---|
| Applicants | : | Miki MULLOR et al. | ) Customer No. *26694* 26694 PATENT TRADEMARK OFFICE |
| Appln. No. | : | 09/164,777 | ) |
| Filed | : | October 1, 1998 | ) |
| For | : | METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSED LIMITATION | ) |
| Group Art Unit | : | 2161 | |
| Examiner | : | C. Hewitt | |
| Atty. Dkt. | : | 39636-176166 | |

Assistant Commissioner for Patents
Washington, D.C. 22031

**AMENDMENT**

Sir:

Responsive to the Office Action dated January 15, 2002, please amend the application as follows:

**IN THE CLAIMS:**

Please cancel claims 11, 12, 14 and 15 without prejudice to their re-entry at a later date.

Please amended the claims as follows:

C1

12 ~~16~~. (Amended) The method of Claim 1, wherein a pseudo-unique key is stored in the non-volatile memory of the BIOS.

C2

18 ~~10~~. (Amended) A method for accessing an application software program using a

Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]



23

pseudo-unique key stored in a first non-erasable non-volatile memory area of a computer, the first non-volatile memory area being unable to be programmatically changed, the method, comprising:

loading the application software program residing in a non-volatile memory area of the computer;

extracting license information from the software program;

encrypting license information using the pseudo-unique key stored in the first non-volatile memory area;

storing the encrypting license information in a second erasable, writable, non-volatile memory area of the BIOS of the computer;

subsequently verifying the application software program based on the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS; and

acting on the application software program based on the verification.

## REMARKS

Claims 1-10, 13 and 16-23 are now pending in this application. Each of the pending claims is believed to define an invention which is novel and unobvious over the cited references. Favorable reconsideration of this case is respectfully requested.

Claims 16 and 20 have been amended to correct the informalities noted by the Examiner. Claims 11, 12, 14 and 15 have been canceled. In view of these amendments, it is respectfully submitted that all pending claims are now in all aspects in compliance with 35 U.S.C. 112, second paragraph. Therefore, the withdrawal of this rejection is respectfully requested.



Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]

Amendment
U.S. Application No.: 09/164,777

Claims 1-23 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Misra et al. in view of U.S. Patent No. 5,684,951 to Goldman et al. and U.S. Patent No. 5,479,639 Ewertz et al.

The cited references do not render the present invention obvious as they do not teach or suggest, among other things, storing a verification structure, such as a software license information, in the BIOS of a computer as is recited in the present claims.

Misra et al. is cited as the primary reference against the present claims. Misra relates to a system and method for enforcing software licenses. The system of Misra generates unique identifiers for servers and clients, col 12, lines 41-42. The client system ID 142 is a unique identifier for the client computer, col 12, lines 50-51. The client system IDs can be based on information collected from a computer's hardware and installed software. For example, hard disk volume numbers, registered software, video cards, and some microprocessors contain unique identifiers. This information can be combined to uniquely identify a particular PC. Thus, the client system ID of Misra, is similar to the pseudo-unique key recited in claims 1 and 20.

Misra also describes a license ID, which is a unique identifier assigned to a software license when the software license is issued to a client device, col. 11, lines 9-12. The license ID may be a digital certificate indicating the right to use the particular software at issue, col. 10, lines 60-67. The license ID of Misra is similar to the verification structure and license information recited in claims 1 and 20, respectively.

Misra fails to teach using the BIOS of a computer to store the license ID, as noted in Section 7, Page 6 of the Office Action. Ewertz is cited as supplementing Misra to teach this feature. However, the license information described in Ewertz has a different meaning and a different function from the license information described in Misra. Therefore, a combination of these references would not result in the claimed invention, as is discussed in detail below.



Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]

In Ewertz, a "software license number" is described as one type of identification information, col. 3, lines 20-22. This identification information may also include an Ethernet address or system serial numbers, col 3, lines 20-22. The identification information is a unique identification value stored in a non-writable, non-erasable area of the BIOS during manufacture. The identification information uniquely identifies a particular computer. Therefore, according to Ewertz a "software license number" is one of a type of static data structures identifying a specific computer and the static data structure is stored such that it cannot be modified. Accordingly, the software license number of Ewertz is simply identification for the operating system of a particular computer.

For example, col. 2, lines 47-49 of Ewertz disclose that the memory storing the identification information may be electronically locked to prevent erasure or modification of its contents once installed. Moreover, in teaching a preferred embodiment, col. 11, line 23 - col. 12, line 14 of Ewertz describe that several types of identification information must be retained for individual computer systems. One type of identification number, as mentioned above, is an Ethernet address. The Ethernet address is stored in a protected area 306 in static page 2 of the flash memory of Ewertz and cannot be erased or altered once the device is installed. Thus the identification number cannot be destroyed. Ewertz also teaches other computer system identification numbers, such as unique serial number, printed board assembly (PBA) numbers or <u>operating system license numbers</u> may be stored in the locked memory.

Consequently, Ewertz teaches storing identification information for the computer in a non-writable, non-erasable non-volatile memory. This <u>identification information</u> of Ewertz corresponds to the <u>pseudo-unique key</u> stored in the first non-erasable, non-volatile memory as recited in claims 1 and 20 and does not correspond to the license information recited in these claims. The identification information of Ewertz is a static data structure, like the system ID of



Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]

Misra, that uniquely identifies a computer and simply does not correspond the license ID of Misra or the license information of the present invention as defined by claims 1 and 20.

From the above discussion, it is clear that the "software license number" according to Ewertz is equivalent in definition and function to Misra's system ID. Therefore, even if Misra is combined with Ewertz, this combination does not result in the present invention. The proposed combination results in the system ID of Misra being stored in the BIOS, not the verification structure or license information being stored in the BIOS as is required by the present claims.

Furthermore, there is no suggestion or motivation to combine Misra and Ewertz in the manner suggested in the Office Action. BIOS is a configuration utility. Software license management applications, such as the one of the present invention, are operating system (OS) level programs. Therefore, BIOS programs and software licensing management applications do not ordinarily interact or communicate because when BIOS is running, the computer is in a configuration mode, hence OS is not running. Thus, BIOS and OS level programs are normally mutually exclusive.

Ewertz teaches that writing to the BIOS area is performed by the BIOS routines:

> "Referring to Fig. 8, processing logic for updating the flash memory device with configuration data, such as EISA information, is illustrated... The processing logic shown in Fig. 8 resides in the system BIOS of the preferred embodiment" Col 10, lines 20-28

Misra teaches a licensing system that is OS level based:

> "The license generator 26, license server 28 and intermediate server 32 are preferably implemented as computer servers, such as Windows NT servers that run Windows NT server operating systems from Microsoft corporation or UNIX-based servers" Col 5, lines 3-7

Thus, the systems described in Misra and Ewertz are an OS program and a BIOS program, respectively, that cannot run at the same time. Therefore, there is no teaching or suggestion to combine these programs. In fact such a combination would change the operation



Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]

of the programs, which is an indicia of non-obviousness, see MPEP Sec. 2141.03 and related case law.

Moreover, the present invention proceeds against conventional wisdom in the art. Using BIOS to store application data such as that stored in Misra's local cache for licenses is not obvious. The BIOS area is not considered a storage area for computer applications. An ordinary skilled artisan would not consider the BIOS as a storage medium to preserve application data for at least two reasons.

First, OS does not support this functionality and is not recognized as a hardware device like other peripherals. Every OS provides a set of application program interfaces (APIs) for applications to access storage devices such as hard drives, removable devices, etc. An ordinary person skilled in the art makes use of OS features to write date to storage mediums. There is no OS support whatsoever to write data to the system BIOS. Therefore, an ordinary person skilled in the art would not consider the BIOS as a possible storage medium. Furthermore, it is common that all peripheral devices in the PC are listed and recognized by the OS except for the BIOS. This supports the fact that the BIOS is not considered a peripheral device. Accordingly, an ordinary person skilled in the art would not consider the BIOS for any operation, including writing to the BIOS.

Second, no file system is associated with the BIOS. Every writable device connected to the PC is associated with an OS file system to arrange and manage data structures. An example for such a file system would be FAT, FAT32, NTFS, HPFS, etc. that suggests writing data to the writable device. No such file system is associated with the BIOS. This is further evidence that OS level application programmers would not consider the BIOS as a storage medium for license data.



Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]

Additionally, Misra teaches away from using the BIOS as a storage area by making a statement about client computers that do not have a persistent non-volatile area.

> "The license cache 136 is kept in persisted (non-volatile) storage. Clients that do not have persistent storage can be issued licenses as long as they can generate a unique client ID and can respond to the client platform challenge protocol" (Misra, Col. 12, lines 15-18)

Since all computers must have a BIOS, it is clear Misra teaches away from using the BIOS as a local storage area for licenses.

Goldman et al. do not supplement Misra and Ewertz to teach or suggest the present invention.

Thus, in view of the above discussion, it is clear that the cited references, taken alone or in any combination, do not fairly teach or suggest the present invention. Therefore the withdrawal of this rejection is respectfully requested. Favorable reconsideration of this case and early issuance of a Notice of Allowance is respectfully requested

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In view of the foregoing, reconsideration and allowance of this application are believed in order, and such action is earnestly solicited.



Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]

Amendment
U.S. Application No.: 09/164,777

The Commissioner is authorized to charge any fee necessitated by this Amendment to our Deposit Account No. 22-0261.

Respectfully submitted,

Robert Kinberg
Registration No. 26,924
Jeffri A. Kaminski
Registration No. 42, 709
P.O. Box 34385
Washington, D.C. 20043-9998
Telephone 202-962-4800
Telefax 202-962-8300

RK/JAK/lrh
#347353



Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]

Amendment
U.S. Appln. No.: 09/164,777

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

Please cancel claims 11, 12, 14 and 15 without prejudice to their re-entry at a later date.

Please amended the claims as follows:

16. (Amended) The method of Claim ~~22~~1, wherein ~~the~~ a pseudo-unique key ~~includes a pseudo unique key~~ is stored in the non-volatile memory of the BIOS.

20. (Amended) A method for accessing an application software program using a pseudo-unique key stored in a first non-erasable non-volatile memory area of a computer, the first non-volatile memory area being unable to be programmatically changed, the method, comprising:

loading the~~a~~ application software program residing in a non-volatile memory area of the computer;

extracting license information from the software program;

encrypting license information using the pseudo-unique key stored in the first non-volatile memory area;

storing the encrypting —license information in a second erasable, writable, ~~non volatile~~non-volatile memory area of the BIOS of the computer;

subsequently verifying the application software program based on the encrypted license information stored in the second erasable, writable, non-volatile memory area of the BIOS; and

acting on the application software program based on the verification.

Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]

Revised PTO/SB/97 (08-00)
Attorney Docket No.
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

OIPE
RECEIVED 2/5/02

## Certificate of Transmission under 37 CFR 1.8

The undersigned certifies that the attached Amendment is being facsimile filed to the Examiner C. Hewitt (703) 746-7239) on February 5, 2002.

Signature

Jeffri Kaminski

Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of transmission, or this certificate must identify each submitted paper.

Burden Hour Statement: This form is estimated to take 0.03 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PC/DOCS2/349898

VENABLE
Received from < 202 962 8300 > at 2/5/02 3:38:28 PM [Eastern Standard Time]

# WEST

Help | Logout | Interrupt

Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases

## Search Results -

| Terms | Documents |
|---|---|
| license and (non adj volatile adj memory) | 7 |

**Database:**
US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

**Search:** 813722.pn.

Refine Search

Recall Text | Clear

## Search History

**DATE: Tuesday, February 19, 2002** Printable Copy Create Case

| Set Name side by side | Query | Hit Count | Set Name result set |
|---|---|---|---|
| *DB=JPAB,EPAB,DWPI; PLUR=YES; OP=OR* | | | |
| L19 | license and (non adj volatile adj memory) | 7 | L19 |
| L18 | (software adj meter$) and (non adj volatile adj memory) | 3 | L18 |
| L17 | (software adj meter$) and (non adj volatile adj storage) | 0 | L17 |
| L16 | l14 and remote | 4 | L16 |
| L15 | L14 and updat$ and remote | 0 | L15 |
| L14 | bios and agent | 2956 | L14 |
| L13 | L12 and agent | 8 | L13 |
| L12 | bios and meter$ | 232 | L12 |
| L11 | bios and license | 1 | L11 |
| L10 | l7 and agent | 0 | L10 |
| *DB=USPT,JPAB,EPAB,DWPI; PLUR=YES; OP=OR* | | | |
| L9 | l8 and (write adj10 bios) | 3 | L9 |
| L8 | L7 and agent | 655 | L8 |
| L7 | bios and license | 829 | L7 |
| L6 | license and (remote adj configuration) | 5 | L6 |
| L5 | l4 not bios | 0 | L5 |
| L4 | bios and license and (remote adj configuration) | 0 | L4 |
| L3 | L2 and license | 1 | L3 |
| L2 | updat$ adj bios | 86 | L2 |
| L1 | (bios adj version) and license and agent | 2 | L1 |

Scanned

END OF SEARCH HISTORY

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

# NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 03/28/2002

SPENCER AND FRANK
SUITE 300 EAST
1100 NEW YORK AVENUE NW
WASHINGTON, DC 200053955

| EXAMINER |
|---|
| HEWITT II, CALVIN L |

| ART UNIT | CLASS-SUBCLASS |
|---|---|
| 2161 | 705-059000 |

DATE MAILED: 03/28/2002

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/164,777 | 10/01/1998 | MIKI MULLOR | REINC4237.01 | 7068 |

TITLE OF INVENTION: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSE LIMITATION

| TOTAL CLAIMS | APPLN. TYPE | SMALL ENTITY | ISSUE FEE | PUBLICATION FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| 19 | nonprovisional | YES | $640 | $0 | $640 | 06/28/2002 |

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.**

**HOW TO REPLY TO THIS NOTICE:**

I. Review the SMALL ENTITY status shown above. If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

B. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

☐ Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**



PTOL-85 (REV. 07-01) Approved for use through 01/31/2004.

# PART B - FEE(S) TRANSMITTAL

**Complete and mail this form, together with applicable fee(s), to:**

**Box ISSUE FEE**
**Assistant Commissioner for Patents**
**Washington, D.C. 20231**

MAILING INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

7590 03/28/2002

SPENCER AND FRANK
SUITE 300 EAST
1100 NEW YORK AVENUE NW
WASHINGTON, DC 200053955

Note: The certificate of mailing below can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing.

**Certificate of Mailing**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above on the date indicated below.

| |
|---|
| (Depositor's name) |
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/164,777 | 10/01/1998 | MIKI MULLOR | REINC4237.01 | 7068 |

TITLE OF INVENTION: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSE LIMITATION

| TOTAL CLAIMS | APPLN. TYPE | SMALL ENTITY | ISSUE FEE | PUBLICATION FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| 19 | nonprovisional | YES | $640 | $0 | $640 | 06/28/2002 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| HEWITT II, CALVIN L | 2161 | 705-059000 |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Use of PTO form(s) and Customer Number are recommended, but not required.

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47) attached.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1_____
2_____
3_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) ❑ individual ❑ corporation or other private group entity ❑ government

4a. The following fee(s) are enclosed:

❑ Issue Fee

❑ Publication Fee

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s):

❑ A check in the amount of the fee(s) is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____(enclose an extra copy of this form).

The COMMISSIONER OF PATENTS AND TRADEMARKS is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature) (Date)

NOTE; The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending on the needs of the individual case. Any comments on the amount of time required to complete this form should be sent to the Chief Information Officer, United States Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND FEES AND THIS FORM TO: Box Issue Fee, Assistant Commissioner for Patents, Washington, D.C. 20231

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMIT THIS FORM WITH FEE(S)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/164,777 | 10/01/1998 | MIKI MULLOR | REINC4237.01 | 7068 |

7590 03/28/2002

SPENCER AND FRANK
SUITE 300 EAST
1100 NEW YORK AVENUE NW
WASHINGTON, DC 200053955

| EXAMINER |
|---|
| HEWITT II, CALVIN L |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2161 | |

DATE MAILED: 03/28/2002

## Determination of Patent Term Extension under 35 U.S.C. 154 (b)

**(application filed after June 7, 1995 but prior to May 29, 2000)**

The patent term extension is 0 days. Any patent to issue from the above identified application will include an indication of the 0 day extension on the front page.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term extension is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system. (http://pair.uspto.gov)



PTOL-85 (REV. 07-01) Approved for use through 01/31/2004.

| Notice of Allowability | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/164,777 | MULLOR ET AL. | |
| | Examiner | Art Unit | |
| | Calvin L Hewitt II | 2161 | |

***-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--***

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *2-5-02*.
2. ☒ The allowed claim(s) is/are *1-10,13 and 16-23*.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
   (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

8. ☐ CORRECTED DRAWINGS must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No. ____.
   (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
   (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.**

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1☒ Notice of References Cited (PTO-892)
3☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
5☒ Information Disclosure Statements (PTO-1449), Paper No. *11*.
7☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

2☐ Notice of Informal Patent Application (PTO-152)
4☒ Interview Summary (PTO-413), Paper No. *14* .
6☒ Examiner's Amendment/Comment
8☒ Examiner's Statement of Reasons for Allowance
9☐ Other

Hyung-Sub Sough
Primary Examiner

#14/D
2-22-07

## *Status of Claims*

1. Claims 1-10, 13, and 16-23 have been examined.

## *Examiner's Amendment*

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffri Kaminski on 19 February 2002.

3. The application has been amended as follows:

In claim 1, line 2, replace "(BIOS)" with BIOS.

In claim 1, line 3, replace "... computer, _ and" with "... computer, and"

In claim 20, "using an agent to perform the following steps" [has been] inserted in line 6, as the second limitation after "loading the application..." and before "extracting license information...", detailing that the steps of

"encrypting...", "storing...", and "subsequently verifying..." are performed by the agent. This **does not** apply, however, to the "acting..." limitation.

***Reasons for Allowance***

4. Claims 1-10, 13, and 16-19 have been allowed. The instant application teaches a method for restricting software use by storing a verification structure in a computer BIOS.

It is well known to those of ordinary skill in the art of software licensing to monitor the use of software using special code that enforces the preferences of the software provider (e.g. creator, distributor, or service provider), or provider and end-user, by restricting the manner in which an end-user can manipulate (e.g. print, save, redistribute, customize) the software. For example, Ginter et al. (US 5,892,900) implement their software distribution system by dynamically linking a verification structure, such as a PERC or permission record, to software content that dynamically control how the software, and its associated administrative data, may be distributed and used (column 155, lines 46-51). Misra et al. (US 6,189,146) disclose a method for licensing software that uses agents to manage software licenses, and stores the licenses in persistent non-volatile storage (column 12, lines 8-31). Neither reference teaches utilizing BIOS

D

as the non-volatile means for storing a licensed software verification structure. Ewertz et al. (US 5,479,639) teach the use of BIOS memory for storing licensing numbers. Hence, it appears initially, that to one of ordinary skill of the art, the combination of Ewertz et al. with either Ginter et al. and/or Misra et al., would render the present invention obvious. However, the key distinction between the present invention and the closest prior art, is that the Misra et al., and Ginter et al. systems and the Ewertz et al. system run at the operating system level and BIOS level, respectively. More specifically, the closest prior art systems, singly or collectively, do not teach licensed programs running at the OS level interacting with a program verification structure stored in the BIOS to verify the program using the verification structure and having a user act on the program according to the verification. Further, it is well known to those of ordinary skill of the art that a computer BIOS is not setup to manage a software license verification structure. The present invention overcomes this difficulty by using an agent to set up a verification structure in the erasable, non-volatile memory of the BIOS.

5. Claims 20-23 have been allowed. The instant application teaches a method for restricting software use by storing license information in a computer BIOS.

D

Ginter et al. (US 5,892,900) implement their software distribution system by encrypting (column/line 65/55-66/47) software control information (e.g. PERC) and linking control information, to software content that dynamically manages how the software, and its associated administrative data, may be distributed and used (column 155, lines 46-51). Misra et al. (US 6,189,146) disclose a method for licensing software that stores licenses in persistent non-volatile storage (column 12, lines 8-31). Neither reference teaches utilizing BIOS as the non-volatile means for storing licensing data. Ewertz et al. (US 5,479,639) teach the use of BIOS memory for storing licensing numbers. Hence, it appears initially, that to one of ordinary skill of the art, the combination of Ewertz et al. with either Ginter et al. and/or Misra et al., would render the present invention obvious. However, a key distinction between the present invention and the closest prior art, is that the Misra et al., and Ginter et al. systems and the Ewertz et al. system run at the operating system level and BIOS level, respectively. More specifically, the closest prior art systems, singly or collectively, do not teach extracting licensing information from a software program, encrypting the information and storing it in the BIOS. Further, it is well known to those of ordinary skill of the art that a computer BIOS is not setup to store license information. The present invention overcomes this difficulty by utilizing an agent to verify the application software program using the license information stored in the erasable, writable, non-volatile memory of the BIOS.

D

6. Any comments considered necessary by Applicant must be submitted no later that the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Infoworld magazine evaluates desktop management software
- Saito et al. disclose a method for automatic license monitoring

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Calvin Loyd Hewitt II whose telephone number is (703) 308-8057. The Examiner can normally be reached on Monday-Friday from 8:30 AM-5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, James P. Trammell, can be reached at (703) 305-9768.

Any response to this action should be mailed to:

D

Commissioner of Patents and Trademarks

c/o Technology Center 2100

Washington, D.C. 20231

or faxed to:

(703) 746-7239 (for formal communications intended for entry),

(703) 746-7238 (for after-final communications),

or:

(703) 746-7240 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Calvin Loyd Hewitt II

February 20, 2002

Hyung-Sub Sough
Primary Examiner

| Notice of References Cited | Application/Control No. 09/164,777 | Applicant(s)/Patent Under Reexamination MULLOR ET AL. | |
|---|---|---|---|
| | Examiner Calvin L Hewitt II | Art Unit 2161 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification | |
|---|---|---|---|---|---|---|
| | A | US- | | | | |
| | B | US- | | | | |
| | C | US- | | | | |
| | D | US- | | | | |
| | E | US- | | | | |
| | F | US- | | | | |
| | G | US- | | | | |
| | H | US- | | | | |
| | I | US- | | | | |
| | J | US- | | | | |
| | K | US- | | | | |
| | L | US- | | | | |
| | M | US- | | | | |

**FOREIGN PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | Classification | |
|---|---|---|---|---|---|---|---|
| | N | JP-408286906-A | 11-1996 | Japan | Saito et al. | G06F | 9/06 |
| | O | | | | | | |
| | P | | | | | | |
| | Q | | | | | | |
| | R | | | | | | |
| | S | | | | | | |
| | T | | | | | | |

**NON-PATENT DOCUMENTS**

| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
| | U | Dornbusch et al., Destop management software: no need to adjust your set., Infoworld, v17, n37, p60 |
| | V | |
| | W | |
| | X | |

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Please type a plus sign (+) inside this box [+]

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet 1 of 2

| Complete if Known | |
|---|---|
| Application Number | 09/164,777 |
| Filing Date | October 1, 1998 |
| First Named Inventor | Miki MULLOR et al. |
| Group Art Unit | 2161 |
| Examiner Name | J. Trammell |
| Attorney Docket Number | 39636-176166 |

## U.S. PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | U.S. Patent Document Number | Kind Code[2] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | | 5,754,763 | | Bereiter | 5/19/1998 | |
| | | 5,758,068 | | Brandt et al. | 5/26/1998 | |
| | | 5,790,664 | | Coley et al. | 8/4/1998 | |
| | | 5,758,069 | | Olsen | 5/26/1998 | |
| | | 5,905,860 | | Olsen et al. | 5/18/1999 | |
| | | 5,390,297 | | Barber et al. | 2/14/1995 | |
| | | 6,173,446 | | Khan et al. | 1/9/2001 | |
| | | 4,903,296 | | Chandra et al. | 2/20/1990 | |
| | | 6,298,138 | | Gotoh et al. | 10/2/2001 | |
| | | 6,192,475 | | Wallance | 2/20/2001 | |
| | | 6,272,636 | | Neville et al. | 8/7/2001 | |
| | | 6,055,503 | | Horstmann | 4/25/2000 | |
| | | 6,073,256 | | Sesma | 6/6/2000 | |
| | | 6,006,190 | | Baena-Arnaiz et al. | 12/21/1999 | |
| | | 6,078,909 | | Knutson | 6/20/2000 | |
| | | 6,243,468 | | Pearce et al. | 6/5/2001 | |
| | | 6,189,146 | | Misra et al. | 2/13/2001 | |
| | | 5,671,412 | | Christiano | 9/23/1997 | |
| | | 5,826,011 | | Chou et al. | 10/20/1998 | |
| | | 6,023,763 | | Grumpstrup et al. | 2/8/2000 | |

## FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | Foreign Patent Document Office[3] | Number[4] | Kind Code[5] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T[6] |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

| Examiner Signature | | Date Considered | 2/19/02 |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

VENABLE ATTORNEYS AT LAW

Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

Please type a plus sign (+) inside this box

PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet 2 of 2

| Complete if Known | |
|---|---|
| Application Number | 09/164,777 |
| Filing Date | October 1, 1998 |
| First Named Inventor | Miki MULLOR et al. |
| Group Art Unit | 2161 |
| Examiner Name | J. Trammell |
| Attorney Docket Number | 39636-176166 |

## U.S. PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | U.S. Patent Document Number | Kind Code[2] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | | 6,226,747 | | Larsson et al. | 5/1/2001 | |
| | | 6,128,741 | | Goetz et al. | 10/3/2000 | |
| | | 4,924,378 | | Hershey et al. | 5/8/1990 | |
| | | 5,386,369 | | Christiano | 1/31/1995 | |
| | | 6,233,567 | | Cohen | 5/15/2001 | |
| | | 4,866,769 | | Karp | 9/12/1989 | |
| | | 6,021,438 | | Duvvoori et al. | 2/1/2000 | |

## FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No.[1] | Foreign Patent Document Office[3] | Number[4] | Kind Code[5] (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T[6] |
|---|---|---|---|---|---|---|---|---|

| Examiner Signature | [signature] | Date Considered | 2/19/02 |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

VENABLE ATTORNEYS AT LAW

Received from < 202 962 8300 > at 12/6/01 3:18:02 PM [Eastern Standard Time]

| Interview Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/164,777 | MULLOR ET AL. | |
| | Examiner | Art Unit | |
| | Calvin L Hewitt II | 2161 | |

All participants (applicant, applicant's representative, PTO personnel):

(1) *Calvin L Hewitt II*. (3)_____.

(2) *Jeffri A. Kaminski*. (4)_____.

Date of Interview: *19 February 2002* .

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☐ No.
If Yes, brief description: _____ .

Claim(s) discussed: *1 and 20* .

Identification of prior art discussed: _____ .

Agreement with respect to the claims f)☒ was reached. g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *Claim 20 was amended to add the limitation of "an agent to perform the following steps"* .

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

i)☒ It is not necessary for applicant to provide a separate record of the substance of the interview(if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

_____
Examiner's signature, if required

# Summary of Record of Interview Requirements

**Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record**
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

**Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews**
Paragraph (b)
In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

---

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check the appropriate box at the bottom of the Form which informs the applicant that the submission of a separate record of the substance of the interview as a supplement to the Form is not required.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

**Examiner to Check for Accuracy**

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

OIPE JC78
APR 2 2 2002
PATENT & TRADEMARK OFFICE

# PART B - FEE(S) TRANSMITTAL

**Complete and mail this form, together with applicable fee(s), to:**

**Box ISSUE FEE**
**Assistant Commissioner for Patents**
**Washington, D.C. 20231**

MAILING INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

7590 03/28/2002

SPENCER AND FRANK
SUITE 300 EAST
1100 NEW YORK AVENUE NW
WASHINGTON, DC 200053955

Note: The certificate of mailing below can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing.

**Certificate of Mailing**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above on the date indicated below.

(Depositor's name)
(Signature)
(Date)

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/164,777 | 10/01/1998 | MIKI MULLOR | ~~BEDIC4237.01~~ | 7068 |

TITLE OF INVENTION: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSE LIMITATION

| TOTAL CLAIMS | APPLN. TYPE | SMALL ENTITY | ISSUE FEE | PUBLICATION FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| 19 | nonprovisional | YES | $640 | $0 | $640 | 06/28/2002 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| HEWITT II, CALVIN L | 2161 | 705-059000 |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Use of PTO form(s) and Customer Number are recommended, but not required.

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

XX "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47) attached.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 VENABLE
2 Robert Kinberg
3 Jeffri A. Kaminski

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Beeple, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Newport Beach, CA

Please check the appropriate assignee category or categories (will not be printed on the patent) ☐ individual XX ☐ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed:

☒ Issue Fee
☐ Publication Fee
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s):

XX A check in the amount of the fee(s) is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
XX The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 22-0261 (enclose an extra copy of this form).

The COMMISSIONER OF PATENTS AND TRADEMARKS is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature) Jeffri A. Kaminski 42709 (Date) 4/22/02

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

04/24/2002 CVO222 00000132 09164777
01 FC:242 640.00 OP

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending on the needs of the individual case. Any comments on the amount of time required to complete this form should be sent to the Chief Information Officer, United States Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND FEES AND THIS FORM TO: Box Issue Fee, Assistant Commissioner for Patents, Washington, D.C. 20231

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMIT THIS FORM WITH FEE(S)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Miki Mullor

Appl. No. 09/164,777

Confirmation No. 7068

Filed: October 1, 1998

For: METHOD OF RESTRICTING SOFTWARE OPERATION WITHIN A LICENSE LIMITATION

Allowed: March 28, 2002

Art Unit: 2161

Examiner: C. Hewitt II

Atty. Docket No. 39636-176166 (formerly REINC4237.01)

Customer No.

26694

PATENT TRADEMARK OFFICE

**Submission Of Formal Drawings**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Submitted herewith are two (2) sheets of formal drawing containing Figures 1-2.

Respectfully submitted,

Date: 4/22/02

Jeffri A. Kaminski
Registration No. 42,709
VENABLE
P.O. Box 34385
Washington, D.C. 20043-9998

Telephone: (202) 962-4800
Telefax: (202) 962-8300

#357455v3

641.1941

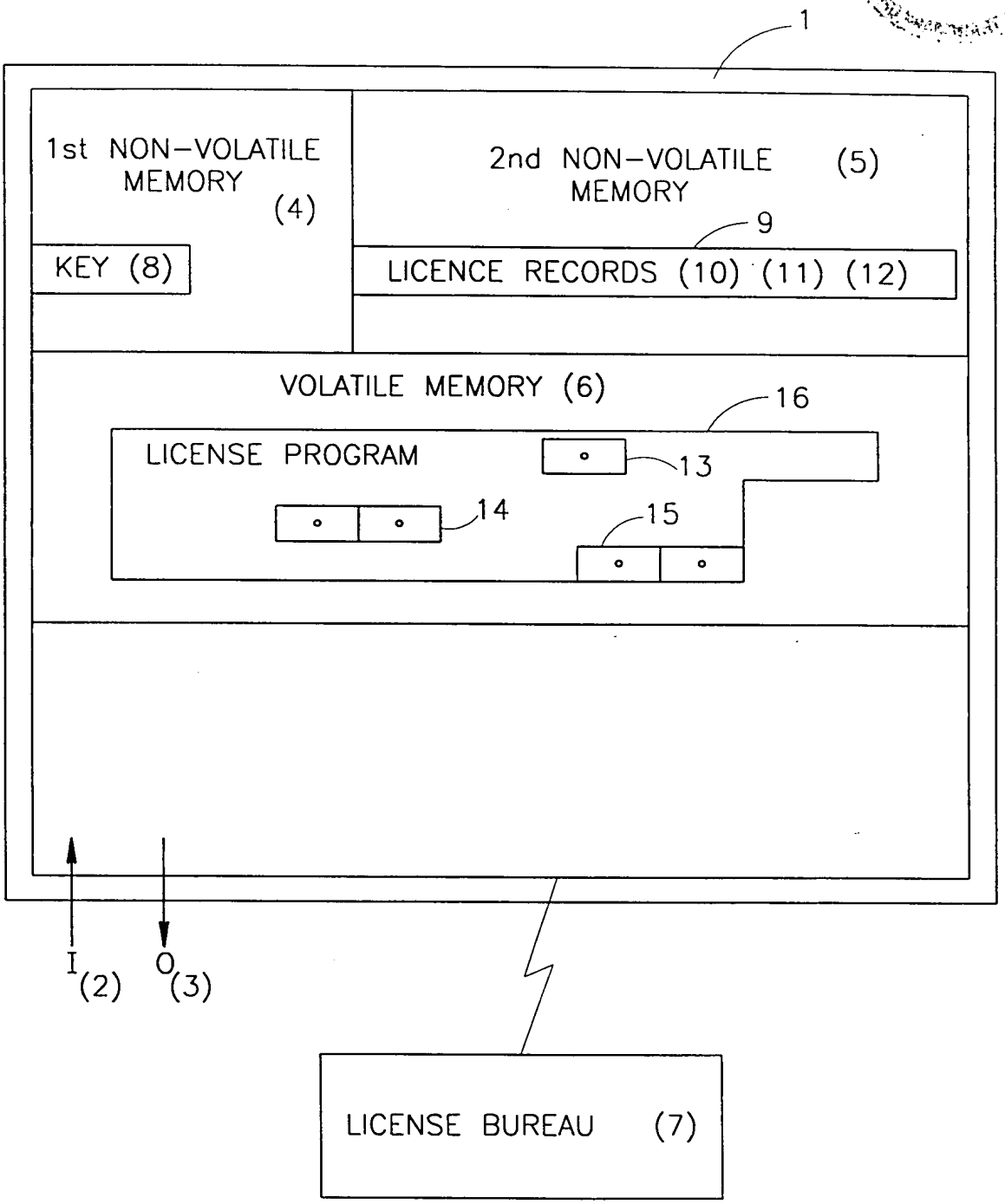


FIG.1

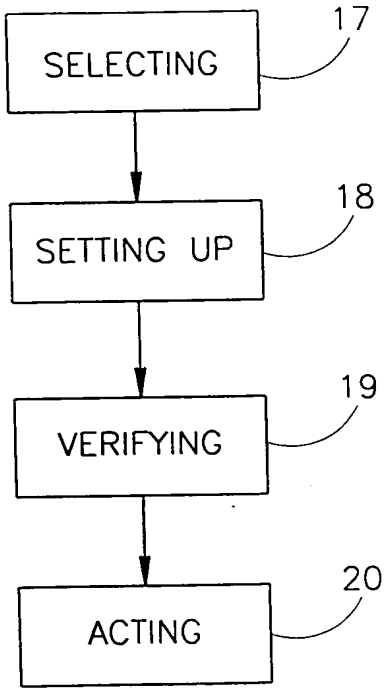


FIG.2

#15
5-20-02
BC

OIPE JC16
APR 22 2002
PATENT & TRADEMARK OFFICE

Please type a plus sign (+) [illegible] this box → [+]

Revised PTO/SB/122 (10-00)
Attorney Docket No. 32014-141666
Approved for use through 10/31/2002. OMB 0651-0035
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# CHANGE OF CORRESPONDENCE ADDRESS
## *Application*

Address to:
Assistant Commissioner for Patents
Washington, D.C. 20231

| | |
|---|---|
| **Application Number** | 09/164,777 |
| **Filling Date** | October 1, 1998 |
| **First Named Inventor** | Miki MULLOR |
| Group Art Unit | 2161 |
| Examiner Name | Calvin L. Hewitt II |
| Attorney Docket Number | **39636-176166 (REINC4237.01)** |

Please change the Correspondence Address for the above-identified application to:

☒ Customer Number 26694 → ***Place Customer Number Bar Code Label here***

*Type Customer Number here*

***OR***

| | | | | | |
|---|---|---|---|---|---|
| ☐ **Firm or Individual Name** | Venable, Baetjer, Howard & Civiletti, L.L.P. | | | | |
| **Address** | P.O. Box 34385 | | | | |
| **Address** | | | | | |
| **City** | Washington | **State** | **DC** | **ZIP** | **20043.9998** |
| **Country** | **USA** | | | | |
| **Telephone** | **202.962.4800** | **Fax** | **202.962.8300** | | |

This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

The New Attorney Docket Number is **39636-176166.**

I am the :

☐ Applicant.

☐ Assignee of record of the entire interest.
Certificate under 37 CFR 3.73(b) is enclosed.

☒ Attorney or agent of record.

☐ Registered practioner named in the application transmittal letter in an application without an executed oath or declaration. See 37 CFR 1.33(a)(1). Registration Number

| | |
|---|---|
| Typed or Printed Name | Robert Kinberg |
| Signature | for [signature] 42,709 |
| Date | April 22, 2002 |

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

VENABLE

AO 120 (Rev. 3/04)

| TO: | Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Central District of California on the following ☑ Patents or ☐ Trademarks:

| DOCKET NO. CV10-10045 | DATE FILED | U.S. DISTRICT COURT Central District of California |
|---|---|---|
| PLAINTIFF<br>ANCORA TECHNOLOGIES, INC., a Delaware Corporation | | DEFENDANT<br>APPLE, INC., a California Corporation |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6411941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

FILED
10 DEC 29 PM 2:58
CLERK U.S. DISTRICT COURT
CENTRAL DIST. OF CALIF.
LOS ANGELES
BY: JR

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| | | |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

AO 120 (Rev. 3/04)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | **REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK** |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Central District of California on the following ☑ Patents or ☐ Trademarks:

| DOCKET NO. CV10-10045 | DATE FILED | U.S. DISTRICT COURT Central District of California |
|---|---|---|
| PLAINTIFF<br>ANCORA TECHNOLOGIES, INC., a Delaware Corporation | | DEFENDANT<br>APPLE, INC., a California Corporation |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6411941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

FILED
10 DEC 29 PM 2:58
CLERK U.S. DISTRICT COURT
CENTRAL DIST. OF CALIF.
LOS ANGELES
BY: JP

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| TRANSFERRED TO NORTHERN DISTRICT OF CALIFORNIA PURSUANT TO ORDER[64] |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| TERRY NAFISI | R LA CHAPELLE | 12/13/11 |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

COPY

AO 120 (Rev. 3/04)

| TO: | Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Central District of California on the following ☑ Patents or ☐ Trademarks:

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| SACV08-626 AG (ANx) | 6/6/2008 | Central District of California |

| PLAINTIFF | DEFENDANT |
|---|---|
| ANCORA TECHNOLOGIES, INC. | TOSHIBA AMERICA INFORMATION, SYSTEMS, INC., DELL, INC., HEWLETT-PACKARD COMPANY |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

FILED 2008 JUN -6 AM 11:28 CLERK U.S. DISTRICT COURT CENTRAL DIST. OF CALIF. SANTA ANA

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

ORDER TRANFERRING CASE TO WESTERN DISTRICT OF WASHINGTON [161]

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| TERRY NAFISI | Ramona La Chapelle | 4/25/2012 |

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 2/99)

| TO: Mail Stop 8<br>Director of the U.S. Patent & Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | **REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK** |
|---|---|

In Compliance with 35 § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court _____ on the following ☑ Patents or ☐ Trademarks:

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| CV 11-06357 YGR | 12/15/2011 | U.S. District Court, Northern District of California |

| PLAINTIFF | DEFENDANT |
|---|---|
| ANCORA TECHNOLOGIES | APPLE INC |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | | ***SEE COMPLAINT*** |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Richard W. Wieking | Jessie Mosley | January 26, 2012 |

**Copy 1—Upon initiation of action, mail this copy to Commissioner Copy 3—Upon termination of action, mail this copy to Commissioner**
**Copy 2—Upon filing document adding patent(s), mail this copy to Commissioner Copy 4—Case file copy**

AO 120 (Rev. 2/99)

| TO: Mail Stop 8<br>Director of the U.S. Patent & Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | **REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK** |
|---|---|

In Compliance with 35 § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Northern District of CA (Oakland) on the following X Patents or ☐ Trademarks:

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| CV 11-06357 YGR | 12/15/2011 | No. Dist., CA, 1301 Clay St., Ste. 400 South, Oakland, CA 94612 |

| PLAINTIFF | DEFENDANT |
|---|---|
| ANCORA TECHNOLOGIES | APPLE INC |

| | PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|---|
| 1 | 6411941 | 06/25/2002 | Ancora Technologies, Inc. |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

In the above—entitled case, the following patent(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

***ORDER GRANTING SUMMARY JUDGMENT and FINAL JUDGMENT, ENTERED ON 04/29/2013***

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Richard W. Wieking | Jessie Mosley | May 1, 2013 |

**Copy 1—Upon initiation of action, mail this copy to Commissioner Copy 3—Upon termination of action, mail this copy to Commissioner**
**Copy 2—Upon filing document adding patent(s), mail this copy to Commissioner Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | **REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK** |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Northern District of California on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 4:15-cv-03659 | 8/11/2015 | Northern District of California |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | Apple, Inc. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6411941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| RICHARD W. WIEKING | | 8/12/2015 |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

Trials@uspto.gov
571-272-7822

Paper 7
Entered: April 26, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

APPLE INC.
Petitioner

v.

ANCORA TECHNOLOGIES INC.
Patent Owner

---

Case CBM2016-00023
Patent 6,411,941 B1

Before JONI Y. CHANG, MICHAEL W. KIM, and KEVIN W. CHERRY, *Administrative Patent Judges.*

CHANG, *Administrative Patent Judge.*

JUDGMENT
Termination of Proceeding
*37 C.F.R. § 42.73*

/

On April 25, 2016, Apple Inc. ("Apple") and Ancora Technologies Inc. ("Ancora") filed a joint motion to terminate the instant proceeding in view of the parties' agreement to settle their disputes. Paper 6. The parties also filed a true copy of their written settlement agreement made in connection with the termination of the instant proceeding (Ex. 1030), and a joint request to have their settlement agreement treated as confidential business information under 37 C.F.R. § 42.74(c). Paper 6, 3.

Generally, the Board expects that a covered business method patent review will terminate after the filing of a settlement agreement. *See, e.g., Office Patent Trial Practice Guide*, 77 Fed. Reg. 48,756, 48,768 (Aug. 14, 2012). Here, in their joint motion to terminate, the parties represent that they agreed to settle their respective claims against each other in the settlement agreement executed by the parties. Paper 6, 1–2. The parties also indicate that they have resolved their disputes. *Id.* In particular, the district court proceedings[1] related to the instant proceeding have been dismissed. *Id.* at 2. The parties agreed to refrain, to the extent permitted by law, from further participation in this proceeding. *Id.* at 3.

Apple's petition was filed on January 8, 2016, but Ancora has not filed its patent owner preliminary response. Further, the Board has not decided whether to institute a covered business method patent review. Even if the Board institutes a review and commences a trial, Apple will no longer participate. That means even if a review is instituted, Apple will not file a reply to any patent owner response or an opposition to any motion to amend

[1] *Ancora Techs., Inc. v. Apple, Inc.*, No. 4:11-cv-6357 (N.D. Cal.), filed December 15, 2011, and *Ancora Techs., Inc. v. Apple, Inc.*, No. 4:15-cv-3659 (N.D. Cal.), filed August 11, 2015.

claims. Apple also will not be conducting any cross examination of Ancora's witnesses. In addition, Ancora may not have an opportunity to cross examine Apple's witness whose testimony is relied upon by Apple's petition.

As no trial has been instituted based on Apple's petition, the instant proceeding is in the preliminary proceeding stage.[2] Based on the particular facts of this case, it is appropriate to enter judgment.[3]

In consideration of the foregoing, it is:

ORDERED that the joint motion to terminate CBM2016-00023 is *granted*, and this proceeding hereby is terminated as to all parties including Apple and Ancora; and

FURTHER ORDERED that the parties' joint request to have their settlement agreement treated as business confidential information under 37 C.F.R. § 42.74(c) is *granted*.

---

[2] A preliminary proceeding begins with the filing of a petition for instituting a trial and ends with a written decision as to whether a trial will be instituted. 37 C.F.R. § 42.2.

[3] A judgment means a final written decision by the Board, or a termination of a proceeding. 37 C.F.R. § 42.2.

PETITIONER:

David L. Fehrman
Richard S. J. Hung
Diek Van Nort
MORRISON & FOERSTER LLP
dfehrman@mofo.com
rhung@mofo.com
dvannort@mofo.com

PATENT OWNER:

John P. Rondini
John S. LeRoy
Mark A. Cantor
Marc Lorelli
Mark A. Jotanovic
BROOKS KUSHMAN P.C.
Ancc0112cbmr1@brookskushman.com

AO 120 (Rev. 08/10)

| TO: | Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Northern District of California on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 4:15-cv-03659 | 8/11/2015 | Northern District of California |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | Apple, Inc. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6411941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

See attached Order of Dismissal e-filed 4/21/16.

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Susan Y. Soong | Clara Pierce | 4/22/2016 |

**Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy**

**UNITED STATES DISTRICT COURT**

**NORTHERN DISTRICT OF CALIFORNIA**

**OAKLAND DIVISION**

| | |
|---|---|
| ANCORA TECHNOLOGIES, INC.<br>Plaintiff,<br>v.<br>APPLE, INC.,<br>Defendant. | Case No. 15-cv-03659-YGR |
| APPLE, INC.<br>Counterclaimant,<br>v.<br>ANCORA TECHNOLOGIES, INC.<br>Counterdefendant. | **~~[PROPOSED]~~ ORDER OF DISMISSAL** |

On April 19, 2016, Plaintiff ANCORA TECHNOLOGIES, INC. and Defendant APPLE INC. announced to the Court that they have settled their respective claims for relief asserted in this cause. The Court, having considered this request, is of the opinion that their request for dismissal should be granted.

IT IS THEREFORE ORDERED that all claims for relief asserted against APPLE INC. by ANCORA TECHNOLOGIES, INC. herein are dismissed, with prejudice, and all counterclaims for relief against ANCORA TECHNOLOGIES, INC. by APPLE INC. are dismissed without prejudice; and

IT IS FURTHER ORDERED that all attorneys' fees, costs of court, and expenses shall be borne by each party incurring the same.

Signed this 21st day of April, 2016.

Yvonne Gonzalez Rogers
U.S. District Court Judge

AO 120 (Rev. 3/04)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Central District of California on the following ☑ Patents or ☐ Trademarks:

| DOCKET NO. CV10-10045 | DATE FILED | U.S. DISTRICT COURT ~~Central District of California~~ Northern, CA |
|---|---|---|
| PLAINTIFF C-11-6357-YGR<br>ANCORA TECHNOLOGIES, INC., a Delaware Corporation | | DEFENDANT<br>APPLE, INC., a California Corporation |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6411941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

FILED
10 DEC 29 PM 2:58
CLERK U.S. DISTRICT COURT
CENTRAL DIST. OF CALIF.
LOS ANGELES
BY: JP

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| [redacted] |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Susan Y. Soong | Clara Pierce | 4/22/2016 |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

**UNITED STATES DISTRICT COURT**

**NORTHERN DISTRICT OF CALIFORNIA**

**OAKLAND DIVISION**

| | |
|---|---|
| ANCORA TECHNOLOGIES, INC.<br>Plaintiff,<br>v.<br>APPLE, INC.,<br>Defendant. | Case No. 11-cv-06357-YGR |
| APPLE, INC.<br>Counterclaimant,<br>v.<br>ANCORA TECHNOLOGIES, INC.<br>Counterdefendant. | **~~[PROPOSED]~~ ORDER OF DISMISSAL** |

On April 19, 2016, Plaintiff ANCORA TECHNOLOGIES, INC. and Defendant APPLE INC. announced to the Court that they have settled their respective claims for relief asserted in this cause. The Court, having considered this request, is of the opinion that their request for dismissal should be granted.

IT IS THEREFORE ORDERED that all claims for relief asserted against APPLE INC. by ANCORA TECHNOLOGIES, INC. herein are dismissed, with prejudice, and all counterclaims for relief against ANCORA TECHNOLOGIES, INC. by APPLE INC. are dismissed without prejudice; and

IT IS FURTHER ORDERED that all attorneys' fees, costs of court, and expenses shall be borne by each party incurring the same.

This Order terminates Docket Number 205.

Signed this 21st day of April, 2016.

Yvonne Gonzalez Rogers
U.S. District Court Judge

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Western District of Washington on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 2:16-cv-01919 | 12/15/2016 | Western District of Washington |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | HTC America, Inc. and HTC Corporation |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| WILLIAM MCCOOL | s/ Donna Jackson | 12/16/2016 |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Western District of Washington on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 2:16-cv-01919 | 12/15/2016 | Western District of Washington |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | HTC America, Inc. and HTC Corporation |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| WILLIAM MCCOOL | s/ Donna Jackson | 12/16/2016 |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: | Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court W/D of Texas - Waco Division on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 6:19-cv-385-ADA | 6/21/2019 | W/D of Texas - Waco Division |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | | SEE ATTACHED |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Jeannette J. Clack | Jencha Damian | 6/21/2019 |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: | Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court W/D of Texas - Waco Division on the following

☐ Trademarks or X Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 6:19-cv-384-ADA | 6/21/2019 | W/D of Texas - Waco Division |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | LG Electronics, Inc. and LG Electronics, U.S.A., Inc. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | | SEE ATTACHED |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Jeannette J. Clack | Jencha Damian | 6/21/2019 |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Western District of Texas - Waco Division on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 6:19-cv-00384 | 10/25/2019 | Western District of Texas - Waco Division |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | LG Electronics, Inc. et al |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | | See attached |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Jeannette J. Clack | Brianna Winter | 10/25/2019 |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | **REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK** |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Western District of Texas, Austin Division on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 1:20-CV-034-ADA | 1/13/2020 | Western District of Texas, Austin Division |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | LG Electronics, Inc. et al |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Jeannette J. Clack | | January 13, 2020 |

**Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy**

**IN THE UNITED STATES DISTRICT COURT**
**FOR THE WESTERN DISTRICT OF TEXAS**
**WACO DIVISION**

| | |
|---|---|
| ANCORA TECHNOLOGIES, INC.,<br><br>Plaintiff,<br>v.<br><br>LG ELECTRONICS INC. and LG ELECTRONICS U.S.A., INC.,<br><br>Defendants. | CIVIL ACTION NO. 6:19-CV-00384<br><br>JURY TRIAL DEMANDED |
| ANCORA TECHNOLOGIES, INC.,<br><br>Plaintiff,<br>v.<br><br>SAMSUNG ELECTRONICS CO., LTD. and SAMSUNG ELECTRONICS AMERICA, INC.,<br><br>Defendants. | CIVIL ACTION NO. 6:19-CV-00385<br><br>*CONSOLIDATED INTO CIVIL ACTION NO. 6:19-CV-00384*<br><br>JURY TRIAL DEMANDED |

**ORDER**

The Court, having reviewed and considered the Joint Stipulation to Transfer Venue to the Austin Division, does hereby **ORDER** that the above-captioned actions be **TRANSFERRED** to the Austin Division, but remain on the docket of United States District Judge Alan D. Albright.

SIGNED this 12th day of January, 2020.

Alan D. Albright
United States District Judge

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Central District of California on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 8:13-cv-2192 | 11/12/2019 | for the Central District of California |

| PLAINTIFF | DEFENDANT |
|---|---|
| TCT MOBILE (US) INC. AND HUIZHOU TCL MOBILE COMMUNICATION CO. LTD. | ANCORA TECHNOLOGIES, INC. |

| | PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|---|
| 1 | 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| | | |

**Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: | Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Eastern District of Texas on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 4:19-cv-624 | 8/27/2019 | for the Eastern District of Texas |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | TCL Corp., TCL Communication Ltd., TCL Communication Technology Holdings Ltd., and TCL Communication Holdings Ltd. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| | | |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: | Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court District of Delaware on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT District of Delaware |
|---|---|---|
| PLAINTIFF<br>Ancora Technologies, Inc. | | DEFENDANT<br>Lenovo Group Ltd.,<br>Lenovo (United States) Inc.,<br>Motorola Mobility, LLC |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| | | |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | **REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK** |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court District of Delaware on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT District of Delaware |
|---|---|---|
| PLAINTIFF<br>Ancora Technologies, Inc. | | DEFENDANT<br>Sony Corporation, Sony Mobile Communications AB, Sony Mobile Communications (USA) Inc., and Sony Mobile Communications, Inc. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| | | |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

Trials@uspto.gov
571-272-7822

Paper 11
Entered: January 5, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

SAMSUNG ELECTRONICS CO., LTD. and
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioner,

v.

ANCORA TECHNOLOGIES, INC.,
Patent Owner.

---

IPR2020-01184
Patent 6,411,941 B1

---

Before THU A. DANG, JONI Y. CHANG, and KEVIN W. CHERRY,
*Administrative Patent Judges.*

CHANG, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
*35 U.S.C. § 314*

# I. INTRODUCTION

Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, "Petitioner") filed a Petition requesting an *inter partes* review ("IPR") of claims 1–3 and 6–17 ("the challenged claims") of U.S. Patent No. 6,411,941 B1 (Ex. 1001, "the '941 patent"). Paper 1 ("Pet."), 1. Ancora Technologies, Inc. ("Patent Owner") filed a Preliminary Response (Paper 7, "Prelim. Resp."). Pursuant to our authorization, Petitioner filed a Reply (Paper 8, "Reply"), and Patent Owner filed a Sur-reply (Paper 10, "Sur-reply").

For the reasons stated below, we exercise our discretion under § 314(a) and deny institution of *inter partes* review in the instant proceeding.

## *A. Related Matter*

The parties indicate that the '941 patent is involved in *Ancora Tech., Inc. v. LG Electronics, Inc.*, No. 1-20-cv-00034-ADA (W.D. Tex.), in which Petitioner is a co-defendant. Pet. 1; Paper 4, 2. The '941 patent also was involved in *ex parte* Reexamination No. 90/010,560. Ex. 1001, 8–9 (*Ex Parte* Reexamination Certificate issued on June 1, 2010, confirming the patentability of claims 1–19 and indicating that no amendments have been made to the patent).

## *B. The '941 patent*

The '941 patent discloses 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, code (57). According to the '941 patent, the

method includes the steps of selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification. *Id.*

Figure 1 of the '941 patent is reproduced below.

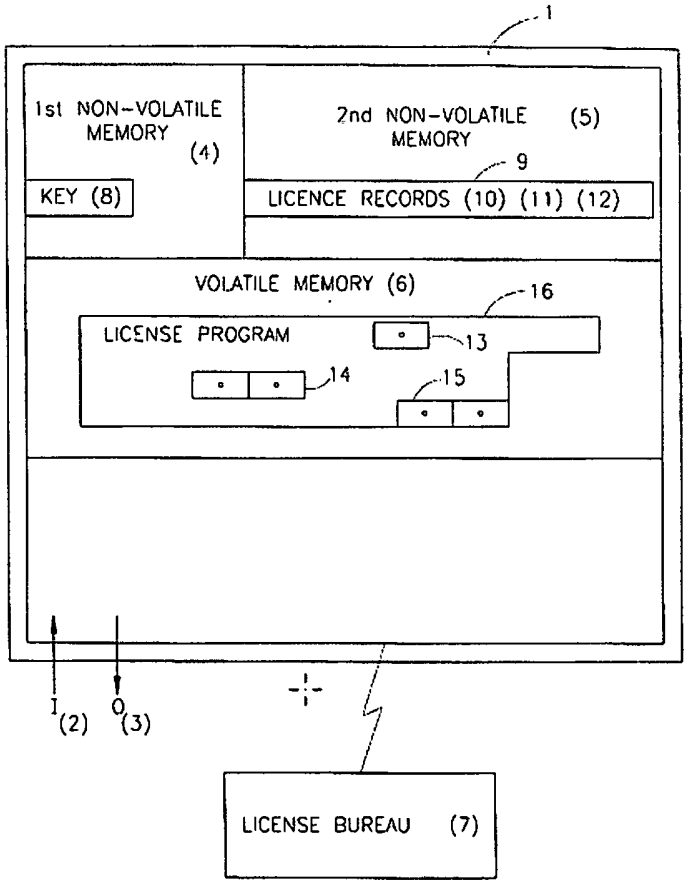


Figure 1 above shows a schematic diagram of computer processor 1 and license bureau 7. *Id.* at 5:9–19. Computer processor 1 is associated with input operations 2 and output operations 3. *Id.* Computer processor 1 contains first non-volatile memory area 4 (e.g., the ROM section of the Basic Input / Output System ("BIOS")), second non-volatile memory area 5

(e.g., the $E^2$PROM section of the BIOS), and volatile memory area 6 (e.g., the internal RAM memory of the computer). *Id.*

### *C. Illustrative Claim*

Of the challenged claims, claim 1 is independent. Claims 2, 3, and 6–17 directly or indirectly depend from claim 1. Claim 1 is illustrative:

> 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.

Ex. 1001, 6:59–7:4.

#### *1. Prior Art Relied Upon*

Petitioner relies upon the references listed below (Pet. 3–4):

| **Reference** | **Date** | **Exhibit No.** |
|---|---|---|
| Schwartz, US 6,153,835 | issued Nov. 28, 2000, filed June 7, 1995 | 1005 |
| Hasebe, US 5,935,243 | issued Dec. 22, 1998, filed Mar. 28, 1996 | 1007 |
| Shipman, US 5,852,736 | issued Dec. 22, 1998, filed Mar. 28, 1996 | 1008 |

| Reference | Date | Exhibit No. |
|---|---|---|
| Yee, "Using Secure Coprocessors," Carnegie-Mellon University, CMU-CS-94-149 (1994). | 1994 | 1006 |

*2. Asserted Grounds of Unpatentability*

Petitioner asserts the following grounds of unpatentability (Pet. 3):

| Claims | Basis | References |
|---|---|---|
| 1–2, 6–17 | § 103[1] | Schwartz, Yee |
| 1–3, 6–15, 17 | § 103 | Hasebe, Shipman |

## II. ANALYSIS

*A. Discretionary Denial Under 35 U.S.C. § 314(a)*

Institution of an *inter partes* review is discretionary. Section 314(a) of title 35 of the United States Code provides that "[t]he Director may not authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition . . . and any

[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the application from which the '941 patent issued was filed before this date, the pre-AIA version of § 103 applies.

response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." The Supreme Court of the United States has explained that, because § 314 includes no mandate to institute review, "the agency's decision to deny a petition is a matter committed to the Patent Office's discretion." *Cuozzo Speed Techs., LLC v. Lee*, 136 S.Ct. 2131, 2140 (2016); *see also Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that under § 314(a), "the PTO is permitted, but never compelled, to institute an IPR proceeding"). The Director has delegated his authority under § 314(a) to the Board. 37 C.F.R. § 42.4(a) ("The Board institutes the trial on behalf of the Director.").

In this proceeding, Patent Owner argues that we should exercise discretion to deny institution under § 314(a) because institution of a trial here "would be an inefficient use of Board resources in light of the 'advanced state' of the parallel district court litigation in which Petitioner has raised the same invalidity challenges and a verdict will be reached in April 2021." Prelim. Resp. 35. Patent Owner contends that each of the factors identified in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*"), weighs in favor of discretionary denial here. Prelim. Resp. 35. Patent Owner avers that this Petition also resembles the circumstances of *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential). Prelim. Resp. 36.

In *Fintiv*, the Board ordered supplemental briefing on a nonexclusive list of factors for consideration in analyzing whether the circumstances of a

parallel district court action are a basis for discretionary denial of trial institution under *NHK*. *Fintiv*, Paper 11 at 5–16. Those factors include:

> 1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
>
> 2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
>
> 3. investment in the parallel proceeding by the court and the parties;
>
> 4. overlap between issues raised in the petition and in the parallel proceeding;
>
> 5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
>
> 6. other circumstances that impact the Board's exercise of discretion, including the merits.

*Id.* at 5–6. Here, we consider these factors to determine whether we should exercise discretion to deny institution. In evaluating the factors, we take a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review. *Fintiv*, Paper 11 at 6.

*Factor 1: whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

Petitioner states that the U.S. District Court of Western District of Texas ("WDTX") "has not granted a stay" nor "indicated whether it would grant a stay if an IPR proceeding is instituted." Pet. 66. Petitioner argues that it "intends to seek a stay if the Board institutes trial." *Id.*

Patent Owner counters that "there is no indication that, even if IPR were instituted, a stay would be granted given the advanced stage of the case." Prelim. Resp. 36. Patent Owner indicates that the "trial is scheduled

to begin in WDTX on April 19, 2021," and that "U.S. District Court Judge Alan Albright is presiding over the parallel proceeding and has previously denied a motion to stay when an IPR was instituted after claim construction was fully briefed and shortly before the claim construction hearing." *Id.* at 36–37 (citing *MV3 Partners LLC v. Roku Inc.*, No. 6:18-cv-00308 (W.D. TX); Ex. 2005, 53). Patent Owner also contends that the parallel litigation "is much further along than the proceeding in *MV3 Partners* at the time Judge Albright denied the motion to stay." *Id.* at 37. According to Patent Owner, "the *Markman* hearing occurred in May 2020" and "the Court's *Markman* Order issued on June 2, 2020." *Id.* (citing Ex. 1011 (the District Court's Claim Construction Order)).

In its Reply, Petitioner argues that "[t]his factor may be neutral because Patent Owner . . . points to no specific evidence in this case of how the district court will rule on the intended motion." Reply 1.

In its Sur-reply, Patent Owner argues that Petitioner's Reply fails to rebut Patent Owner's evidence that a stay is unlikely even if the *inter partes* review were instituted. Sur-reply 1.

On the record before us, neither party has produced evidence that a stay has been requested or that the District Court has considered a stay in the parallel litigation. Petitioner's assertion that it "intends to seek a stay if the Board institutes trial" (Pet. 66) is not sufficient evidence that a stay will likely be granted. A court determines whether to grant a stay based on the facts and circumstances of each specific case. Although Patent Owner cites to two cases in which the District Court denied stays (Prelim. Resp. 37; Sur-reply 1–2), we decline to infer, based on actions taken in a different case

with different facts, how the District Court would decide a stay should one be requested by the parties in the parallel related case.

Therefore, we find that this factor does not weigh for or against exercising our discretion to deny institution under § 314(a).

*Factor 2: proximity of the court's trial date to the Board's projected statutory deadline for a final written decision*

It is undisputed that the parallel trial is scheduled to begin on April 19, 2021. Pet. 67; Prelim. Resp. 36; Reply 1; Ex. 2001, 2. Nevertheless, Petitioner argues that "the Covid-19 pandemic has created substantial uncertainty as to the tentative trial date" and that "the Board has found this factor to be in favor of not exercising its discretion to institute under § 314(a)." Pet. 67 (citing *Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 9–10 (June 16, 2020) (informative)).

Patent Owner counters that, even though the District Court in the parallel litigation has amended its Scheduling Order several times, "it has never ordered a change in the final fact or expert discovery deadlines and has never indicated any willingness to move the trial date." Prelim. Resp. 39 (citing Ex. 2019). Patent Owner argues that the circumstances here are different from those in *Sand Revolution*, where "the Board pointed to the district court's express inclusion of the qualifier 'or as available' for each calendared trial date as a factor weighing against discretionary denial." *Id.* Patent Owner contends that "[t]he Petition should also be denied because the parallel WDTX trial will occur nine months before a Final Written Decision

is due," and that even if the trial date were to be delayed, e.g., by three months, "the trial still would precede a final written decision by six months." *Id.* at 37–38 (citing Ex. 2001).

In its Reply, Petitioner advances two main arguments. First, Petitioner argues that, "even if the related litigation proceeds on schedule and the jury verdict occurs approximately nine months before the [Final Written Decision], the related litigation is expected to continue for another several months until *post-trial* motions are briefed and decided." Reply 1 (emphasis added).

Second, Petitioner argues that the Board "has recognized that district court trial dates, including in the WDTX, are uncertain given the ongoing COVID-19 pandemic." *Id.* at 2 (citing Ex. 1038 (The WDTX Tenth Supplemental Order Regarding Court Operations under the Exigent Circumstances Created by the COVID-19 Pandemic issued on November 18, 2020 ("WDTX Supplemental Order")); Ex. 1039 (Forth Standing Order Relating to Entry into the United States Courthouse Waco, Texas, issued on October 27, 2020, by Judge Albright ("Standing Order Relating to Entry into Waco Courthouse")). As support, Petitioner argues that "Chief Judge Gilstrap recently postponed patent trials in the Eastern District of Texas until March 2021," and that "[i]n the WDTX, Judge Albright will not resume patent jury trial until *mid-January 2021*." *Id.* (citing Ex. 1040 ("With Infections 'Dangerously Rising,' East Texas Federal Judge Halts Jury Trials Through March 2021"); Ex. 1041 (Order entered in *Solas Oled Ltd. v. Samsung Display Co., Ltd.*, 2:19-cv-00152-JRG (E.D. Tex.)); *Intri-Plex Technologies v. NHK International Corp.*, 3:17-cv-01097-EMC (N.D. Cal);

Exs. 1042, 1043) (emphasis added). Petitioner also avers that "Judge Albright has held only one patent jury trial, and that occurred after delays," so that "that trial did not begin until nearly two years after the complaint was filed." *Id.* (citing Ex. 1045 (setting trial for June 2020, but rescheduling for October 5, 2020, due to pandemic and litigants' concerns)). Petitioner argues that "Judge Albright currently has ten patent cases that are currently scheduled to go to trial before the trial in the related litigation." *Id.* at 3. Petitioner further contends that "according to one study, in '70% of trial dates . . . relied upon by the [Board] to [discretionarily] deny petitions' in view of WDTX litigation, the trial dates were continued after the Board's denial." *Id.*

In its Sur-reply, Patent Owner argues that Petitioner's "Reply fails to rebut [Patent Owner's] evidence that the scheduled trial date precedes *by 9 months* the Board's projected statutory deadline for a final written decision." Sur-reply 2. Patent Owner also contends that "Petitioner states, generically, that COVID-19 is causing delays, without providing any evidence of the likely impact on the *particular litigation* at issue," and that "Judge Albright has not changed the April 2020 trial date." *Id.* at 3.

We agree with Patent Owner, and we are not persuaded by Petitioner's arguments. At the outset, Petitioner's argument that "the related litigation is expected to continue for another several months until *post-trial* motions are briefed and decided" is misplaced. Reply 1 (emphasis added). We do not speculate as to the schedule for the *post-trial* motions. As the Board explained in *Fintiv*, "[i]f the court's *trial date* is earlier than the projected statutory deadline, the Board generally has weighed this factor in

favor of exercising authority to deny institution under *NHK*." *Fintiv*, Paper 11 at 9 (emphasis added). Here, the parallel trial in the District Court is scheduled to begin on April 19, 2021, more than *eight months* before a Final Written Decision would be due in this IPR proceeding. Pet. 67; Prelim. Resp. 36; Ex. 2001, 2. Therefore, this factor weighs in favor of exercising our discretion to deny institution under § 314(a).

Petitioner's reliance on *Sand Revolution* also is misplaced. Pet. 67. In *Sand Revolution*, the district court's trial date was changed several times. IPR2019-01393, Paper 24 at 8–9 (noting that "the parties have jointly moved the district court to extend schedule deadline twice; these motions were granted"); *id.* at 8 n.4 (noting that "it appears that the district court also amended its scheduling order at least two times"); IPR2019-01393, Ex. 1012 (updated trial date of September 28, 2020 (or as available) changed to November 9, 2020 (as available)); IPR2019-01393, Ex. 2004 (original trial date was April 7, 2020, changed to July 20, 2020 (or as available)); IPR2019-01393, Ex. 3003 ("Order Amending Scheduling Order" responding to a joint motion by the parties). In contrast here, Petitioner does not show that the trial date for the parallel litigation has been (or likely will be) changed. Indeed, as Patent Owner points out, the District Court "has never indicated any willingness to move the trial date" in this case. Prelim. Resp. 39; Ex. 2019; Ex. 2001, 2. Therefore, Petitioner's reliance on *Sand Revolution* is misplaced.

We also are not persuaded by Petitioner's argument that "the Covid-19 pandemic has created substantial uncertainty as to the tentative trial date." Pet. 67; Reply 2–3. Although we acknowledge the possibility of

a Covid-19 related delay, we generally take courts' trial schedules at face value absent some strong evidence to the contrary. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15, 12–13 (PTAB May 13, 2020) (informative) ("*Fintiv DI*"). Moreover, even accounting for the possibility of a Covid-19 related delay, given the close proximity of the trial date to this Decision and the amount of time before our Final Written Decision (i.e., eight and a half months), we are unpersuaded that any such delay should materially alter our weighing of this factor. As Patent Owner points out (Prelim. Resp. 38–39; Sur-reply 2–3), Petitioner fails to provide sufficient evidence to show that the trial date has been changed or will be postponed. Exs. 2001, 2019 (the Scheduling Order still shows a trial date of April 19, 2021). Judge Albright has stated that he "definitely intend[s] to keep this case on track." Ex. 2002 (Telephonic Discovery Hearing, July 27, 2020) 39:6–12; *see also* Ex. 2003 (Telephonic Discovery Hearing, September 9, 2020) 21:20–22.

Furthermore, Petitioner's evidence regarding other cases (e.g., Chief Judge Gilstrap's cases in the Eastern District of Texas or other Judge Albright's cases) does not support Petitioner's position that the April 19, 2021, trial date for the parallel litigation will be postponed. Reply 2–3. The evidence relied upon by Petitioner shows that the presiding judges in the WDTX determine whether to postpone a trial based on the facts and circumstances of each specific case. Ex. 1038.

Notably, the WDTX Supplemental Order states that "[t]he court recognizes that not every division within the district is similarly situated" because "[t]he Western District of Texas is geographically large" and "[t]he public health situation related to the novel coronavirus in each division may

differ." *Id.* at 2. The WDTX Supplemental Order also states that "judges in individual divisions may determine that the conditions in their communities safely allow for an adequate spectrum of jurors and sufficient availability of attorneys" so that "courts in the district may opt to conduct jury trials within their respective division." *Id.* And "[a]ll civil and criminal jury trials scheduled to begin on any date from now through December 31, 2020, are continued to a date to be reset by each Presiding Judge."

Moreover, the Order Transferring Trial Venue in *VLSI Tech. LLC, v. Intel Corp.*, 6:19-cv-00254 (W.D. Tex.) (Ex. 1043), relied upon by Petitioner, shows that the courthouse in Waco "is currently open—for the scheduled trial in January" and that "the Court ORDERS that if the Austin courthouse does not reopen in time for a January trial, the trial for the -0254 case will be held in Waco." Ex. 1043, 1; *see also* Ex. 1039 (Standing Order Relating to Entry into Waco Courthouse) (stating that the courthouse in Waco "will remain open for business, but access to the building will be restricted").

Therefore, Petitioner's evidence regarding other cases does not support Petitioner's position that the April 19, 2021 trial date for the parallel litigation will likely be postponed.

In addition, we are not persuaded by Petitioner's assertion that "according to one study, in '70% of trial dates . . . relied upon by the [Board] to [discretionarily] deny petitions' in view of WDTX litigation, the trial dates were continued after the Board's denial." Reply 3 (citing Ex. 1044 (An article entitled "District Court Trial Dates Tend to Slip After PTAB Discretionary Denials" by Scott McKeown on July 24, 2020)). That study

expressly states that "WDTX shows a lower average delay"—namely, an average of *23 days*. Ex. 1044, 3. Even if we were to take that delay into account, this factor would still weigh in favor of exercising our discretion to deny institution under § 314(a) because the parallel trial in the District Court would begin more than *six months* before a Final Written Decision would be due in this proceeding. *See NHK*, Paper 8 at 20 (finding that "the advanced state of the district court proceeding . . . weighs in favor of denying the Petition under § 314(a)" because the district court trial was set to begin six months before the IPR proceeding concluded); *see also Fintiv*, Paper 15 at 13 (finding that "[b]ecause the currently scheduled District Court trial is scheduled to begin two months before our deadline to reach a final decision, this factor weighs somewhat in favor of discretionary denial in this case).

For the forgoing reasons, we are not persuaded by Petitioner's argument that "the Covid-19 pandemic has created substantial uncertainty as to the tentative trial date." Pet. 67; Reply 2–3.

Because the currently scheduled District Court trial is scheduled to begin *eight and a half months* before our deadline to reach a final decision, we find that this factor weighs in favor of exercising our discretion to deny institution under § 314(a).

*Factor 3: investment in the parallel proceeding by the court and the parties*

In its Petition, Petitioner argues that "[a]side from the Court's Claim Construction Order, much of the Court's investment relates to matters untethered to validity." Pet. 70. Petitioner contends that "[u]nder similar

circumstances, the Board found that this factor at most weighed marginally in favor of denial of institution or was possibly neutral." *Id.* (citing *Sand Revolution*, Paper 24 at 10–11).

In its Preliminary Response, Patent Owner counters that "the parties and the WDTX court have invested heavily in the district court litigation—to the point that claim construction, all fact discovery, and all expert work will be complete before an institution decision is even issued." Prelim. Resp. 40–42 (citing Ex. 2018 (District Court's Claim Construction Order); Ex. 2001, 1 (First Amended Scheduling Order, showing "Close of Fact Discovery" was due on November 13, 2020, and "Opening Expert Reports" were due on November 20, 2020)).

In its Reply, Petitioner argues that its delay in filing the Petition "was reasonable and efficient in avoiding the submission of conflicting claim construction positions to the Board, and also reduces the likelihood of inconsistent claim construction findings." Reply 3.

In its Sur-reply, Patent Owner avers that "Petitioner admits intentionally waiting to file its Petition until after the *Markman* ruling" and that "Petitioner essentially admits strategically using the parallel litigation for purposes its future IPR petition." Sur-reply 4. Patent Owner also argues that, because "Petitioner served four separate expert reports relating to invalidity on November 20, 2020" and Patent Owner's "rebuttals to those reports are due December 18, 2020," Patent Owner "and its experts will have spent considerable time and resources analyzing and responding to Petitioner's Invalidity Contentions and invalidity reports long before the Board's deadline to issue its institution decision." *Id.*

We are not persuaded by Petitioner's arguments. Petitioner's reliance on *Sand Revolution* is misplaced. In *Sand Revolution*, the Board found that (1) "the district court's two-page *Markman* Order . . . does not demonstrate the same high level of investment of time resources as the detailed *Markman* Order in *Fintiv*"; (2) fact discovery was still ongoing; and (3) expert reports were not yet due. *Sand Revolution*, Paper 24 at 10–11 (citing *Fintiv DI* (denied institution because *Fintiv* factors weighed in favor of exercising discretion to deny institution)). In contrast here, after the parties each filed three briefs addressing claim construction issues in the District Court, i.e., opening, responsive, and reply briefs, the District Court issued a Final Claim Construction Order and a detailed Supplemental Claim Construction Order. Exs. 1011, 1019, 2018. In addition, the District Court's Scheduling Order shows the following deadlines have passed: Final Infringement and Invalidity Contentions, amendment to pleadings, fact discovery, opening expert reports, and rebuttal expert reports. Exs. 1019, 2001, 2019. Therefore, we find that the parties have invested significant resources in the parallel litigation, with some of the work relevant to patent validity, including claim construction, fact discovery, opening expert reports, and rebuttal expert reports.

Petitioner's timing in filing the Petition is also relevant to this factor. If the petitioner, "faced with the prospect of a looming trial date, waits until the district court trial has progressed significantly before filing a petition," that decision "may impose unfair costs to a patent owner." *Fintiv*, Paper 11 at 11. On the other hand, "[i]f the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the

claims being asserted, this fact has weighed against exercising the authority to deny institution." *Id.*

Here, the record does not show that Petitioner acted expeditiously in filing this Petition. As Patent Owner points out, "Petitioner served its preliminary invalidity contentions, which included the references in the Petition, in early February 2020, yet chose to wait until the very last day of the one-year period in late June 2020 to file the Petition." Prelim. Resp. 42–43. Petitioner also admits waiting until after the *Markman* ruling to file its Petition and using the District Court's claim construction determination for purposes of its Petition. Sur-reply 4.

Therefore, weighing the facts in this particular case, including the time invested by the parties and the District Court in the parallel litigation, the extent to which the investment in the District Court proceeding relates to issues of patent validity, and the timing of the filing of the Petition, we find that this factor weighs in favor of exercising our discretion to deny institution under § 314(a).

*Factor 4: overlap between issues raised in the petition and in the parallel proceeding*

This factor evaluates "concerns of inefficiency and the possibility of conflicting decisions" when substantially identical prior art is submitted in both the district court and the *inter partes* review proceedings. *Fintiv*, Paper 11 at 12.

In this regard, Petitioner argues that "[t]here will be no overlap between issues raised in this Petition and the related litigation" because

"Petitioner stipulates that, should an IPR be instituted, the art used in the grounds in this Petition will not be raised during trial in the related litigation," including Schwartz, Yee, Hasebe, Shipman, and the DMI specification. Pet. 70–71 & 71 n.9; Reply 4. Petitioner also argues that "the Petition asserts invalidity of claims 15 and 17, which are not being asserted in the litigation (and whose validity therefore cannot be challenged in the litigation)." Pet. 71. In its Reply, Petitioner further argues that "Petitioner challenges claims 3, 8, and 13–17, which are not asserted in the related litigation." Reply 4.

Patent Owner counters that Petitioner's stipulation would not bind Petitioner's co-defendants in the related litigation and Petitioner would benefit from its co-defendants' continued pursuit of invalidity on these grounds. Prelim. Resp. 43; Sur-reply 5. Patent Owner further avers that "Petitioner does not argue that the non-overlapping claims differ significantly in some way or that it would be harmed if institution of the non-overlapping claims is denied." Prelim. Resp. 44; Sur-reply 5.

We agree with Patent Owner that there is a significant overlap between the issues raised in the Petition and in the related parallel proceeding. Prelim. Resp. 43. And we are not persuaded by Petitioner's arguments.

At the outset, Petitioner argues in its Petition (Pet. 71) that claims 15 and 17 are not asserted in the related litigation, and then Petitioner argues in its Reply (Reply 4) that claims 3, 8, and 13–17 are not asserted in the related litigation. However, Petitioner submits no evidence to support either argument. "Attorney argument is not evidence." *Icon Health & Fitness,*

*Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017). It is Petitioner's burden (not the Board's) to provide documents or other evidence that support Petitioner's arguments. *See Ericsson Inc. v. Uniloc 2017, LLC*, IPR2020-00420, Paper 10, 3 (PTAB Sept. 9, 2020) (Decision Denying Petitioner's Request for Rehearing) (noting that "the Board could not be faulted for not searching and reviewing every single document in the related litigation").

Also, the mere existence of non-overlapping claims does not support Petitioner's assertion that "[t]here will be no overlap between issues raised in this Petition and the related litigation." Pet. 70–71; Reply 4. Rather, "[t]he existence of non-overlapping claim challenges will weigh for or against exercising discretion to deny institution under *NHK* depending on the similarity of the claims challenged in the petition to those at issue in the district court." *Fintiv*, Paper 11 at 13 & 13 n.25 (citing *Next Caller, Inc. v. TRUSTID, Inc.*, IPR2019-00961, Paper 10 at 14 (PTAB Oct. 16, 2019) (denying institution, even though the petitions jointly involve all 52 claims of the patent and the district court parallel proceeding involves only 7 claims, because the claims all are directed to the same subject matter and petitioner does not argue that the non-overlapping claims differ significantly in some way or argue that it would be harmed if institution of the non-overlapping claims is denied)).

Here, Petitioner challenges the patentability of claims 1–3 and 6–17, which are directed to "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." Ex. 1001, 6:59–8:31. As

Patent Owner points out, "Petitioner does not argue that the non-overlapping claims differ significantly in some way or that it would be harmed if institution of the non-overlapping claims is denied." Prelim. Resp. 44; Sur-reply 5; Pet. 70–71; Reply 4. Therefore, notwithstanding that there are some non-overlapping claims, this factor does not weigh against exercising our discretion to deny institution under § 314(a). *Fintiv*, Paper 11 at 13 & 13 n.25; *Next Caller*, Paper 10 at 14.

In addition, Petitioner's stipulation does not mitigate the "concerns of inefficiency and the possibility of conflicting decisions," nor does it ensure that an *inter partes* review is a "true alternative" to the parallel District Court proceeding. *Fintiv*, Paper 11 at 12.

In particular, Petitioner's stipulation is narrow, not a broad stipulation that includes "any ground raised, or that *could have been reasonably raised*." *See Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12, 19 (PTAB Dec. 1, 2020) (precedential) (noting that "Petitioner broadly stipulates to not pursue 'any ground raised or that could have been reasonably raised'") (emphasis added); *see also Sand Revolution*, Paper 24 at 12 n.5 (noting that a broad stipulation better addresses concerns of duplicative efforts and potentially conflicting decisions in a much more substantial way). Moreover, Petitioner does not dispute that its stipulation would not bind Petitioner's co-defendants in the parallel litigation. Prelim. Resp. 43; Reply 4. As Patent Owner points out, Petitioner's co-defendants remain free to pursue invalidity on the same grounds asserted in the Petition. Sur-reply 5.

Therefore, notwithstanding the stipulation, there will likely be overlap between the issues raised in the Petition and the parallel litigation. Because overlapping claims are challenged based on the same prior art in both the Petition and in the parallel litigation, we find that this factor weighs slightly in favor of exercising our discretion to deny institution under § 314(a).

*Factor 5: whether the petitioner and the defendant in the parallel proceeding are the same party*

It is undisputed that Petitioner is a co-defendant in the parallel litigation. Pet. 71–72; Prelim. Resp. 44; Reply 5; Sur-reply 5. Petitioner argues that "[t]his factor should be neutral given the AIA's goal to provide an alternative forum for questions of patentability." Reply 5.

"If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact *against exercising discretion* to deny institution under *NHK*." *Fintiv*, Paper 11 at 13–14 (emphasis added). The Board determined in *Sand Revolution* that "[a]lthough it is far from an unusual circumstance that a petitioner in *inter partes* review and a defendant in a parallel district court proceeding are the same, or where a district court is scheduled to go to trial before the Board's final decision would be due in a related *inter partes* review, this factor weighs in favor of discretionary denial." *Sand Revolution*, Paper 24 at 12–13. In *Fintiv DI*, the Board determined that "[b]ecause the petitioner and the defendant in the parallel proceeding are the same party, this factor weighs in favor of discretionary denial." *Fintiv DI*, Paper 15 at 15.

Here, as noted above, it is undisputed that Petitioner is a co-defendant in the parallel litigation. Pet. 71–72; Prelim. Resp. 44; Reply 5; Sur-reply 5. Therefore, this factor weighs in favor of exercising our discretion to deny institution under § 314(a).

*Factor 6: other circumstances that impact the Board's exercise of discretion, including the merits.*

The final *Fintiv* factor is a catch-all that takes into account any other relevant circumstances. The decision whether to exercise discretion to deny institution under § 314(a) is based on "a balanced assessment of all relevant circumstances in the case, including the merits." Consolidated Trial Practice Guide 58. A full merits analysis is not necessary as part of deciding whether to exercise discretion not to institute, but rather the parties may point out, as part of the factor-based analysis, particular "strengths or weaknesses" to aid the Board in deciding whether the merits tip the balance one way or another. *See Fintiv*, Paper 11 at 15–16.

Petitioner advances two main arguments for this factor. Pet. 72–73; Reply 5. First, Petitioner argues that "[i]t would be an efficient use of Board's resources to institute trial because this one proceeding would resolve the validity of the '941 patent for Petitioner, all other present defendants, and any future defendants." Pet. 72; *see also* Reply 5.

However, Petitioner's argument presumes that Petitioner will prevail in this IPR proceeding. If the Board were to institute and Petitioner ultimately loses, it would not resolve validity challenges raised by unrelated third parties, including the defendants in the District Court proceeding. The

District Court proceeding, in contrast, will resolve the validity issues between Patent Owner, Petitioner, and the other defendants, regardless who wins or loses in court.

Petitioner also does not explain why the parallel litigation could not resolve the validity of the asserted claims that are directed to the same or substantially the same subject matter. Pet. 72; Reply 5. We agree with Patent Owner that institution of a trial here "would be an inefficient use of Board resources in light of the 'advanced state' of the parallel district court litigation." Prelim. Resp. 35; *see also NHK*, Paper 8 at 20; *Fintiv*, Paper 11 at 13; *Next Caller*, Paper 10 at 14. Therefore, Petitioner's argument that "[i]t would be an efficient use of Board's resources to institute trial" is unavailing.

Second, Petitioner argues that "[t]he Petition is strong" as it provides two independent grounds of unpatentability for each of claims 1–2, 6–15 and 17 using combinations that the Office never substantively considered during prosecution of the application that resulted in the '941 patent. Pet. 73; Reply 5. However, our initial inspection of the merits on this preliminary record suggests Petitioner's challenges contain certain weaknesses and, taken as a whole, the strengths of the merits do not outweigh other factors in favor of discretionary denial. For example, Patent Owner identifies at least one weakness in each of the grounds asserted in the Petition. Prelim. Resp. 10–17, 22–25, 33–35; Sur-reply 6.

In the parallel litigation, Petitioner suggested that "memory of the BIOS" should be construed as "a memory that: (i) stores the BIOS; (ii) is not recognized by an operating system as a storage device; and (iii) does not

have a file system." Ex. 2012 (Defendants' Opening Claim Construction Brief), 19. Instead of applying its own claim construction, Petitioner's prior art analysis in the Petition applies a claim construction that was allegedly advanced by Patent Owner in the District Court. Pet. 10–11 n.4, 34–35. Even if we were to assume that Petitioner adopts that claim construction here in this IPR proceeding, Petitioner does not explain why that claim construction is a proper construction of the term "memory of the BIOS" in light of the Specification or prosecution history of the '941 patent. *Id.*

In its Preliminary Response, Patent Owner indicates that "Petitioner has misrepresented Patent Owner's claim construction arguments in the district court" and that Patent Owner "never argued that 'memory of a BIOS' includes *any* memory" as Petitioner suggests. Prelim. Resp. 12–14. Indeed, in its brief filed in the District Court, Patent Owner stated that the term "non-volatile memory of the BIOS" "does not require separate construction." Ex. 1009 (Plaintiff's Opening Claim Construction Brief), 16–17.[2] Patent Owner simply stated that, "consistent with the plain meaning of the word 'of,' the Federal Circuit has described the 'non-volatile memory of [a/the] BIOS' as 'memory space <u>associated with</u> the computer's basic input/output system (BIOS), <u>rather than other memory space</u>." *Id.* at 12 (quoting *Ancora Techs., Inc. v. Apple Inc.*, 744 F.3d 732, 733 (Fed. Cir. 2014) ("*Ancora v. Apple*")).

---

[2] Our citations to Exhibit 1009 refer to the page number on the bottom, right corner added by Petitioner.

In its Petition, Petitioner takes the position that Schwartz's EEPROM 250a teaches the claimed "non-volatile memory of the BIOS" under the Federal Circuit's interpretation in *Ancora v. Apple* "because it stores *part of* BIOS module 309." Pet. 9–11 n.4 (citing Ex. 1005, 8:17–19, Fig. 9) (emphasis added). However, other parts of Schwartz's EEPROM 250a store configuration module 307 and zip/zone module 305. Ex. 1005, 8:17–19, Fig. 9. Petitioner does not allege that these other modules themselves are associated with the computer's BIOS. Pet. 10–11. Significantly, Petitioner does not explain adequately why the entirety of EEPROM 250a, including the memory space that stores configuration module 307 and zip/zone module 305, is a "non-volatile memory of BIOS." Pet. 10–14. Moreover, Petitioner admits that claim 1 "requires the 'verification structure' to . . . be stored in the 'erasable, non-volatile memory of the BIOS,'" and that Schwartz's "authorization number (and hence the electronic signature) is stored in *configuration module 307*," not BIOS module 309. Pet. 14 (citing Ex. 1001, 6:64–67; Ex. 1005, 8:16–20, 10:25–28, 10:51–54, 11:37–38; Ex. 1002 ¶¶ 176–178) (emphasis added).

In addition, Petitioner takes the position that, under the Federal Circuit's interpretation in *Ancora v. Apple*, Shipman's BIOS memory 130 and *general-purpose* data storage 140 "are an erasable, non-volatile memory area of a BIOS" because the BIOS controls the access to general-purpose storage areas 140. Pet. 34–35 (citing Ex. 1008, 2:66–3:4, 3:25–29, Fig. 1). As Patent Owner points out (Prelim. Resp. 34–35), Petitioner in its District Court brief asserted that a "BIOS memory is 'used for storing programs that assist in the start-up of a computer,' *i.e.*, the BIOS software, and not any

other memory that is merely associated with the BIOS software," and that "[t]he Federal Circuit explicitly distinguished 'BIOS memory' from 'other memory in the computer,' and highlighted that the inventors were using the BIOS memory [b]ecause one could argue that every memory in a computer can somehow be 'associated with' the BIOS software in some way." Ex. 2014 (Defendants' Responsive Claim Construction Brief), 18 (citing *Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343 (Fed. Cir. 2018) ("*Ancora v. HTC*")).[3] Significantly, Petitioner's argument that Shipman's general-purpose data storage is a "non-volatile memory of the BIOS" seems to be inconsistent with its position advanced in the parallel litigation and the Federal Circuit's interpretation in *Ancora v. HTC*. Pet. 6, 34–35, 41.

As noted above, a full analysis of the merits is not necessary to evaluate this factor. *See Fintiv*, Paper 11 at 15–16. It is sufficient here that at least certain aspects of Petitioner's grounds as to claim 1 (the sole independent challenged claim) appear to be weak. The merits, taken as a whole, do not tip the balance in favor of Petitioner and instead also weigh in favor of discretionary denial in a balanced assessment of all the circumstances.

*Conclusion on Discretionary Denial Under § 314(a)*

As noted in *Fintiv*, we consider the above six factors when taking "a holistic view of whether efficiency and integrity of the system are best

[3] Our citations to Exhibit 2014 reference the page number on the bottom left corner of the page.

served by denying or instituting review." *Fintiv*, Paper 11 at 6. As discussed above, factor 1 does not weigh for or against exercising our discretion to deny institution. Factor 4 weighs slightly in favor of exercising our discretion to deny institution. Factors 2, 3, 5, and 6 weigh in favor of exercising our discretion to deny institution under § 314(a). Accordingly, we exercise our discretion under § 314(a) to deny institution of review in the instant proceeding.

## III. CONCLUSION

For the foregoing reasons, based on a balanced assessment of the circumstances of this case, we exercise our discretion under § 314(a) and deny the instant Petition requesting institution of *inter partes* review of the '941 patent.

## IV. ORDER

For the foregoing reasons, it is hereby

ORDERED that the Petition is *denied* as to all challenged claims and no trial is instituted.

PETITIONER:

Anupan Sharma
Peter Chen
Gregory Discher
Sinan Utku
Richard Rainey
COVINGTON & BURLING LLP
asharma@cov.com
pchen@cov.com
gdischer@cov.com
sutku@cov.com
rrainey@cov.com
Samsung-Ancora-IPR@cov.com

PATENT OWNER:

Lawrence Cogswell
Timothy Meagher
Keith Wood
HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
lawrence.cogswell@hbsr.com
timothy.meagher@hbsr.com
keith.wood@hbsr.com

Trials@uspto.gov
571-272-7822

Paper 7
Date: February 16, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

TCT MOBILE (US) INC.,
HUIZHOU TCL MOBILE COMMUNICATION CO. LTD., and
SHENZHEN TCL CREATIVE CLOUD TECHNOLOGY CO., LTD.,
Petitioner,

v.

ANCORA TECHNOLOGIES, INC.,
Patent Owner.

---

IPR2020-01609
Patent 6,411,941 B1

---

Before THU A. DANG, JONI Y. CHANG, and KEVIN W. CHERRY,
*Administrative Patent Judges.*

CHANG, *Administrative Patent Judge.*

DECISION
Granting Institution of *Inter Partes* Review
*35 U.S.C. § 314*

# I. INTRODUCTION

TCT Mobile (US) Inc., Huizhou TCL Mobile Communication Co., Ltd., and Shenzhen TCL Creative Cloud Technology Co., Ltd. (collectively, "Petitioners") filed a Petition requesting an *inter partes* review ("IPR") of claims 1–3, 6–14, and 16 ("the challenged claims") of U.S. Patent No. 6,411,941 B1 (Ex. 1001, "the '941 patent"). Paper 1 ("Pet."), 1. Ancora Technologies, Inc. ("Patent Owner") filed a Preliminary Response (Paper 7, "Prelim. Resp.").

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the petition "shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." For the reasons stated below, we determine that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one claim. We hereby institute an *inter partes* review as to all of the challenged claims of the '941 patent and all of the asserted grounds of unpatentability.

## *A. Related Matters*

The parties indicate that the '941 patent is involved in the following proceedings: *Ancora Technologies, Inc. v. TCT Mobile (US) Inc.*, 2:20-cv-01252 (C.D. Cal.); *Ancora Technologies, Inc. v. Lenovo Group Limited*, No. 1:19-cv-01712 (D. Del.); *Ancora Technologies, Inc. v. Sony Corp.*, No. 1:19-cv-01703 (D. Del.); *Ancora Technologies, Inc. v. LG Electronics, Inc.*, No. 1:20-cv-00034 (W.D. Tex.); *Ancora Technologies, Inc. v. Samsung Electronics Co., Ltd.*, No. 6:19-cv-00385 (W.D. Tex.); *Ancora Technologies,*

*Inc. v. HTC America, Inc.*, No. 2:16-cv-01919 (W.D. Wash.); and *Samsung Electronics Co., Ltd. v. Ancora Technologies, Inc.*, IPR2020-01184 (PTAB). Pet. 1; Paper 5, 1–2. The '941 patent also was involved in *ex parte* Reexamination No. 90/010,560. Ex. 1001, 8–9 (*Ex Parte* Reexamination Certificate issued on June 1, 2010, confirming the patentability of claims 1–19 and indicating that no amendments have been made to the patent).

*B. The '941 patent*

The '941 patent discloses 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, code (57). According to the '941 patent, the method includes the steps of selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification. *Id.*

Figure 1 of the '941 patent is reproduced below.

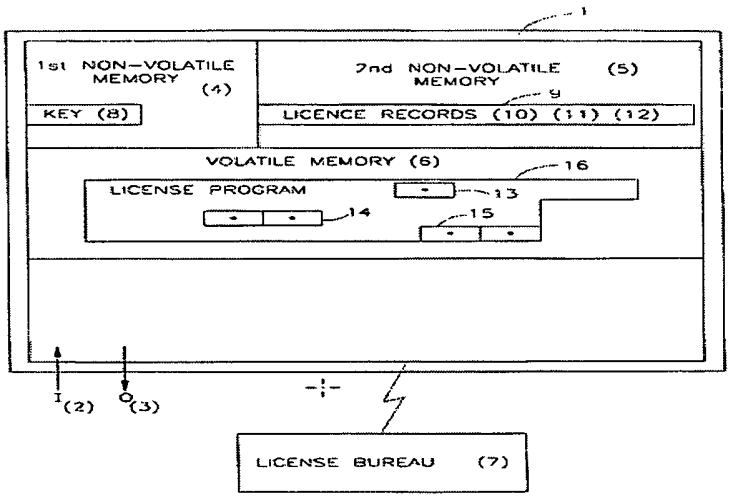

Figure 1 above shows a schematic diagram of computer processor 1 and license bureau 7. *Id.* at 5:9–19. Computer processor 1 is associated with input operations 2 and output operations 3. *Id.* Computer processor 1 contains first non-volatile memory area 4 (e.g., the ROM section of the Basic Input / Output System ("BIOS")), second non-volatile memory area 5 (e.g., the $E^2$PROM section of the BIOS), and volatile memory area 6 (e.g., the internal RAM memory of the computer). *Id.*

### *C. Illustrative Claim*

Of the challenged claims, only claim 1 is independent. Claims 2, 3, 6–14, and 16 directly or indirectly depend from claim 1. Claim 1 is illustrative:

> 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.

Ex. 1001, 6:59:67–7:4 (emphasis added).

### *1. Prior Art Relied Upon*

Petitioner relies upon the references listed below (Pet. 5):

| **Reference** | **Date** | **Exhibit No.** |
|---|---|---|
| Hellman | Apr. 14, 1987 | Ex. 1004 |
| Chou | Apr. 6, 1999 | Ex. 1005 |
| Schneck | Aug. 3, 1999 | Ex. 1006 |

### *2. Asserted Grounds of Unpatentability*

Petitioner asserts the following grounds of unpatentability (Pet. 6):

| **Claims Challenged** | **35 U.S.C. §** | **References** |
|---|---|---|
| 1, 2, 11, 13 | 103(a) | Hellman, Chou |
| 1–3, 6–14, 16 | 103(a) | Hellman, Chou, Schneck |

## II. ANALYSIS

### *A. Claim Construction*

In an *inter partes* review, we construe a patent claim "using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b)." 37 C.F.R. § 42.100(b) (2019). Under this standard, the words of a claim are generally given their "ordinary and customary meaning," which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the

entire patent including the specification. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner asserts that the claims of the '941 patent have been construed by several courts, and it does not believe that any claim construction are needed for the purposes of this review. Pet. 20–21 (citing Exs. 1011–1014). Patent Owner asserts that those district court constructions should be adopted for this proceeding and that all other claim terms be given their plain and ordinary meaning. Prelim. Resp. 6.

In light of the parties' arguments and supporting evidence in this preliminary record, we find that it is necessary to construe only the claim term "license record" expressly for purposes of this Institution Decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (noting that "we need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy'").

*"license record"*

Claim 1 recites "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*." Ex. 1001, 6:64–67 (emphasis added).

In its Preliminary Response, Patent Owner argues that the term "license record" should be construed as "a record *from a licensed program* with information for *verifying that licensed program*," suggesting that a

"license record" is required to be *formed from* a licensed program. Prelim. Resp. 16–18. Patent Owner relies on the District Court's claim construction order entered in *Ancora Technologies, Inc. v. Apple Inc.*, No. 11:cv-06357 (N.D. Cal.) ("*Ancora v. Apple*") (Ex. 1011, 16–18) and the District Court's claim construction order entered in *Ancora Technologies, Inc. v. TCT Mobile (US), Inc.*, No. 1902192-GW-ADSx (C.D. Cal.) ("*Ancora v. TCT Mobile*") (Ex. 2002, 9–11), for support. Prelim. Resp. 16.

Based on the evidence in the present record, we decline to adopt Patent Owner's proposed claim construction because it would improperly import a limitation from a preferred embodiment disclosed in the Specification into the claims. The United States Court of Appeal for the Federal Circuit "has repeatedly cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification." *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1346–47 (Fed. Cir. 2015). Significantly, "it is the *claims*, not the written description, which define the scope of the patent right." *Id.* at 1346.

A claim term should be given its ordinary meaning in the pertinent context, unless the patentee has made clear its adoption of a different definition or otherwise disclaimed that meaning. *See, e.g.*, *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Here, as the District Court explained in *Ancora v. Apple*, "[n]either the claim nor the specification [of the '941 patent] defines 'license record.'" Ex. 1011, 17. Patent Owner does not explain why the plain and ordinary meaning of the term "license record," in the context of the '941 patent, requires a "license record" to be *formed from* a licensed program. Prelim. Resp. 16–18.

The Specification does not support Patent Owner's position that a "license record" is required to be formed from a licensed program. The Specification expressly discloses that "according to the invention, each application program that is to be licensed to run on the specified computer, *is associated with a license record*." Ex. 1001, 1:53–55 (emphasis added). A license record "consists of author name, program name and number of licensed users (for network)." *Id.* at 1:55–57. As the District Court explained in *Ancora v. TCT Mobile*, the Specification shows that "[t]he license record *may* be formed from fields or contends of the licensed program," but it is not required to. Ex. 2002, 9 (citing Ex. 1001, 5:46–51, 6:7–10) (emphasis added).

Only in the "Detailed Description of a Preferred Embodiment" section, the Specification describes "the licensed-software-program includes contents used to form a license-record." Ex. 1001, 5:25–29, 6:7–10. Notably, claim 1 itself does not recite such a requirement. Therefore, adopting Patent Owner's proposed claim construction would improperly import a limitation from a preferred embodiment into the claim. *Williamson*, 792 F.3d at 1346–47.

Furthermore, Patent Owner's reliance on the District Court's claim construction order in *Ancora v. Apple* (Ex. 1011, 16–18) is misplaced. Prelim. Resp. 16. The District Court in *Ancora v. Apple* did not address the issue of whether a "license record" is required to be formed from a licensed program. Ex. 1011, 16–18. The District Court was merely resolving the issue of "whether the term 'license record' is a record that identifies the licensed program and the number of licensed user, as Apple urges, or more

broadly, information for verifying a licensed program, as Ancora contends." *Id.* at 16–18. Therefore, Patent Owner's reliance on the District Court's claim construction order in *Ancora v. Apple* is misplaced.

Also Patent Owner's reliance on the District Court's claim construction order in *Ancora v. TCT Mobile* is misplaced, as the District Court in that case was resolving the issue of "whether a license record requires 'information indicating a right to use the program' or just information for verifying the program." Ex. 2002, 9. Contrary to Patent Owner's proposed claim construction that requires a "license record" to be formed from a licensed program, the District Court in *Ancora v. TCT Mobile* made clear that "[t]he license record *may* be formed from fields or contents of the licensed program," but it is not required to. *Id.* at 9 (citing Ex. 1001, 5:46–51; 6:7–10). Therefore, Patent Owner's reliance on the District Court's claim construction order in *Ancora v. TCT Mobile* is misplaced.

In light of the claim language, the Specification, and the evidence in this present record, we determine that a "license record" associated with a licensed program is "a record having information for verifying that licensed program" for purposes of this Decision. And we decline to adopt Patent Owner's proposed construction that requires a "license record" to be formed from a licensed program.

*B. Principles of Law*

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective indicia of nonobviousness.[1] *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

*C. Level of Ordinary Skill in the Art*

In determining the level of ordinary skill in the art, various factors may be considered, including the "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (quotation marks omitted).

Here, Petitioner asserts that a person of ordinary skill in the art in the context of the '941 patent "would have had been at least a B.S. degree in computer science, computer engineering, or electrical engineering (or equivalent experience)" and "at least two years of experience with computer science and computer engineering, including information encryption, computer architecture, and firmware programming," citing to the declaration

[1] Neither party presents evidence or arguments regarding objective evidence of nonobviousness in the instant proceeding at this time.

of Andrew Wolfe, Ph.D., for support. Pet. 21 (citing Ex. 1003 ¶¶ 21–25). At this juncture, Patent Owner does not dispute that assessment. *See generally* Prelim. Resp.

For purposes of this Decision, we adopt the level of ordinary skill as articulated by Petitioner because, based on the current record, this proposal appears to be consistent with the '941 patent, the asserted prior art, and supported by the testimony of Dr. Wolfe.

*D. Overview of the Asserted Prior Art*

Hellman (Exhibit 1004)

Hellman discloses a method and an apparatus in which use of a software package can be authorized for a particular base unit a specific number of times. Ex. 1004, 4:37–40. Figure 1 of Hellman is reproduced below:

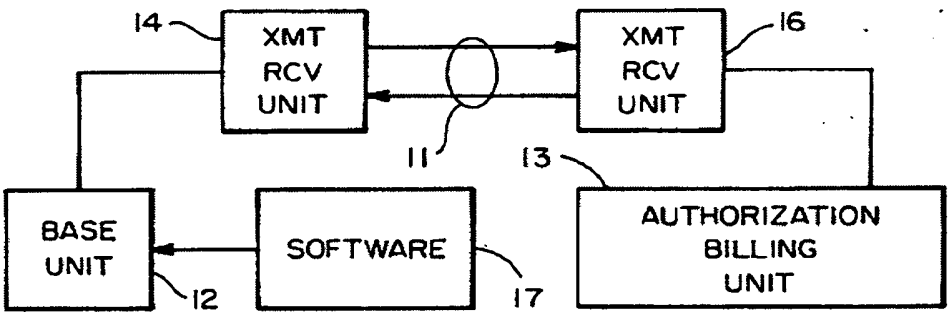


Figure 1 above illustrates a block diagram of a pay-per-use software control system. *Id.* at 5:1–2. Base unit 12 communicates with authorization and billing unit 13 over an insecure communication channel 11, using transmitter-receiver units 14, 16. *Id.* at 5:39–42. The user at base unit 12 obtains software package 17 by purchasing it and requests for software use.

*Id.* at 5:51–59. Authorization and billing unit 13 receives the user's request, generates authorization A for unit 12 to use software package 17 an additional N times, and sends authorization A to base unit 12. *Id.* at 6:3–8.

Figure 8 of Hellman is reproduced below.

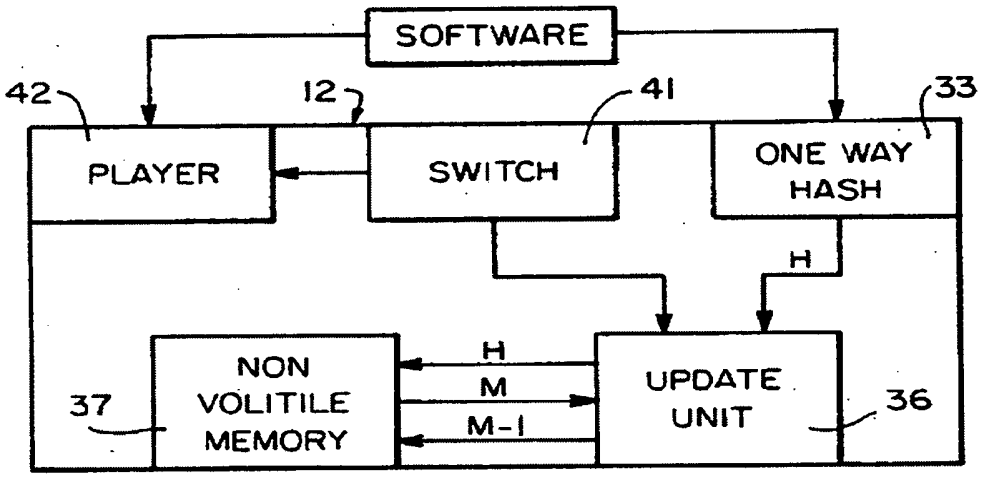


Figure 8 above depicts an implementation of base unit 12 during use of a software package. *Id.* at 10:33–34. Software package 17 is connected to base unit 12 and a signal representing software package 17 is operated on by one-way hash function generator 33 to produce an output signal which represents hash value H. *Id.* at 10:34–38. Signal H is transmitted to update unit 36 to indicate which software package is being used. *Id.* at 10:38–40. Update unit 36 uses value H as an address to non-volatile memory 37, which responds with a signal representing M, the number of uses of software package 17 which are still available. *Id.* at 10:40–43.

If value M is greater than 0, then update unit 36 sends a control signal to switch 41 which activates software player 42, allowing it to use software package 17. *Id.* at 10:44–46. Update unit 36 also decrements M to M–1 and stores this as the new value in address H in non-volatile memory 37. *Id.* at

10:46–49. If M=0, then update unit 36 does not change the contents of non-volatile memory 37, but neither does it send a control signal to activate software player 42. *Id.* at 10:50–53. Thus, the user is prevented from using software package 17 for which he does not have current authorized use. *Id.* at 10:53–54.

Chou (Exhibit 1005)

Chou discloses an apparatus and a method for discouraging computer theft. Ex. 1005, code (57). Chou's invention requires that a user enters a unique word or number related to the particular computer each time the computer is powered up. *Id.* at 2:11–14. Chou discloses a security routine that is stored in the BIOS memory. *Id.* at 2:14–16. The security routine requires verification of a password entered by the user, or a verification of a quantity read from an externally connected memory device. *Id.* at 2:16–18.

Chou also discloses that, at the time of its invention, "[r]ecent changes in the computer BIOS memory storage devices permit writing data to the BIOS memory, offering the opportunity to provide password protection within the same memory which stores the BIOS routines." *Id.* at 1:63–66. And, "any attempt to delete the protection will result in the BIOS routine being disabled, disabling the boot up process." *Id.* at 1:66–2:1. "EEPROM flash devices may be programmed with BIOS routines which permit the user to enter data without requiring the computer to be returned to the manufacture." *Id.* at 2:2–4. According to Chou, its "invention makes use of these new BIOS memory devices for effecting security measures which discourage theft." *Id.* at 2:4–7.

Schneck (Exhibit 1006)

Schneck discloses a technique that "controls access to and use and distribution of data." Ex. 1006, 6:49–50. Schneck's technique can be used to "control how much of the software's functionality is available." *Id.* at 6:53–56. Schneck prevents the authorization to use software on one device from being used on another, unauthorized device, to address the "secondary distribution" problem. *Id.* at 2:40–67, 6:57–62.

### *E. Obviousness Over Hellman, Chou, and Schneck*

Petitioner asserts that claims 1–2, 11, and 13 are unpatentable under § 103(a) as obvious over Hellman and Chou, and that claims 1–3, 6–14, 16 are unpatentable as obvious over Hellman, Chou, and Schneck. Pet. 21–64.

a. Claim 1

*The preamble of claim 1*

The preamble of claim 1 recites 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." Ex. 1001, 6:59–62. Petitioner asserts that, regardless of whether the preamble is limiting, the combination Hellman and Chou teaches or suggests the elements recited in the preamble of claim 1 because Hellman discloses a "method of limiting use of software within authorized uses." *Id.* (citing Ex. 1004, 9:29–10:13, 10:33–54, 10:55–65; Ex. 1003 ¶¶ 98–104). According to Petitioner, Hellman discloses a computer (base unit 12) that includes "the claimed 'erasable, non-volatile memory area of a BIOS of the

computer, and a volatile memory area.'" *Id.* at 33–34. Petitioner notes that Hellman's base unit 12 has temporary memory 28, e.g., RAM (Random Access Memory), and non-volatile memory 37, which could be implemented as EEPROM. *Id.* at 34 (citing Ex. 1004, 8:67–68, 10:1–4, Fig. 6; Ex. 1003 ¶¶ 98–104).

Petitioner acknowledges that Hellman does "not explicitly disclose the computer (base unit 12) had BIOS stored in memory." *Id.* at 35. Nevertheless, Petitioner points out that Chou discloses a BIOS EEPROM on a computer, and a person of ordinary skill in the art would have understood that EEPROM was a type of erasable, non-volatile memory. *Id.* (citing Ex. 1005, 1:54–2:7, 3:21–35, Figs. 1, 3, 7; Ex. 1003 ¶¶ 104–106). Petitioner argues that, in light of Chou, such an artisan would have stored both the license information and the BIOS in Hellman's erasable, non-volatile memory 37 (e.g., EEPROM). *Id.*; *see also id.* at 28–33.

Regardless of whether the preamble of claim 1 is limiting, we determine that Petitioner has shown sufficiently for purposes of this Decision that the combination of Hellman and Chou discloses the subject matter recited in the preamble of claim 1. At this juncture, Patent Owner does not make any argument regarding the preamble of claim 1. *See generally* Prelim. Resp.

*"selecting a program residing in the volatile memory"*

As to the limitation "selecting a program residing in the volatile memory," Petitioner argues that Hellman discloses selecting software package 17 (a computer program) residing in temporary RAM memory 28

(volatile memory). Pet. 35–37 (citing Ex. 1004, 5:57–61, 8:67–9:2, 9:15–28, 10:33–11:3; Ex. 1003 ¶¶ 121–129). Based on the evidence in this current record, we determine that Petitioner has shown sufficiently for purposes of this Decision that Hellman discloses the limitation "selecting a program residing in the volatile memory," as recited in claim 1. At this juncture, Patent Owner does not make any argument regarding this limitation. *See generally* Prelim. Resp.

*"the verification structure accommodating data that includes at least one license record"*

Claim 1 recites "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*" (the "license record" limitation). As discussed in our claim construction analysis above (Section II, A), we determine that a "license record" associated with a licensed program, is "a record having information for verifying that licensed program" for purposes of this Decision.

For this limitation, Petitioner asserts that Hellman discloses using update unit 36 (acting as the required "agent") to set up a verification structure in non-volatile EEPROM memory 37 (the required "erasable, non-volatile memory"). Pet. 38 (citing Ex. 1004, 10:1–4; Ex. 1003 ¶¶ 133–138). According to Petitioner, "update unit 36 sets up the required 'verification structure' in the non-volatile memory 37 at least in the form of storing the value M at a specific address H for a software program identified by that hash value H." *Id.* (citing Ex. 1003 ¶¶ 133–138). Petitioner argues

that "value M is the required 'license record', because it indicates the scope of authorized use—the number of uses, where 'M' is the number—for the specific software package 17 identified by hash value H." *Id.* Petitioner contends that "[s]toring the value M at the address H constitutes setting up a versification structure because it includes storing a license record at a specific license record location that corresponds to the licensed program." *Id.* (citing Ex. 1001, 1:59–62, 6:17–21; Ex. 1003 ¶¶ 133–138).

Patent Owner counters that value M in Hellman does not include any information "from a licensed program" as the District Court claim constructions require. Prelim. Resp. 16–18.

However, as discussed in our claim construction analysis above (Section II.A), we decline to adopt Patent Owner's proposed claim construction that requires a "license record" to be formed from a licensed program, as it would improperly import a limitation from a preferred embodiment into the claim. *Williamson*, 792 F.3d at 1346–47. For purposes of this Decision, we determine that a "license record" associated with a licensed program is "a record having information for verifying that licensed program." Patent Owner's reliance on the District Court claim construction orders enter in *Ancora v. Apple* and in *Ancora v. TCT Mobile* is misplaced because neither District Court claim construction order requires a "license record" to be formed from a licensed program. Ex. 1011, 16–18; Ex. 2002, 9–11. Therefore, Patent Owner's argument is unavailing at this time.

Upon consideration of the parties' contentions and evidence in this current record, we determine that Petitioner has shown adequately for purposes of this Decision that the combination of Hellman and Chou teaches

or suggests the aforementioned "license record" limitation as recited in claim 1.

*"verifying the program using at least the verification structure from the erasable non-volatile memory of the BIOS"*

Claim 1 also recites "verifying the program using at least the verification structure from the erasable non-volatile memory of the BIOS." Petitioner argues that Hellman discloses this limitation because Hellman discloses using value M (the required "license record") that is stored in non-volatile memory 37 to verify software package 17 (the required "program"). Pet. 39 (citing Ex. 1004, 10:33–54; Ex. 1003 ¶¶ 151–152). In particular, Hellman discloses that when an attempt is made to run software package 17, value H is generated and sent to update unit 36, which uses value H as an address in non-volatile memory to verify if a license exists for software package 17. Ex. 1004, 10:33–54. If a license does exist, update unit 36 retrieves the number of remaining authorized uses value M, and a determination is made as to whether the number of authorized uses is greater than zero. *Id.*

Based on the evidence in this current record, we determine that Petitioner has shown sufficiently for purposes of this Decision that Hellman discloses the limitation "selecting a program residing in the volatile memory," as recited in claim 1. At this juncture, Patent Owner does not make any argument regarding this limitation. *See generally* Prelim. Resp.

*"acting on the program according to the verification"*

Lastly, claim 1 recites "acting on the program according to the verification." Petitioner argues that Hellman discloses this limitation because it discloses allowing software package 17 to be used if a license record is found in non-volatile memory 37 and there are authorized uses remaining. Pet. 39 (citing Ex. 1004, 10:40–49; Ex. 1003 ¶¶ 154–155). Based on the evidence in this current record, we determine that Petitioner has shown sufficiently for purposes of this Decision that Hellman discloses the limitation "acting on the program according to the verification," as recited in claim 1. At this juncture, Patent Owner does not make any argument regarding this limitation. *See generally* Prelim. Resp.

*Motivation to combine Hellman and Chou*

Petitioner acknowledges that Hellman does not explicitly disclose that base unit 12 (a computer) has a BIOS and that non-volatile memory 37 would be used to store the BIOS for the computer. Pet. 28. Petitioner asserts that it was well-known at the time of the invention that "a computer would have BIOS and that it would be common to store it in EEPROM memory," as evidenced by Chou. *Id.* at 29 (citing Ex. 1005, 1:54–62, 2:2–7, 3:21–35; Ex. 1003 ¶¶ 105–111; Ex. 1002, 51 (Prosecution History of the '941 patent—Office Action Response, dated February 5, 2002) (noting that "all computers must have a BIOS")). Petitioner asserts that a person of ordinary skill in the art would have been motivated to use Hellman's non-volatile memory 37 for storing the BIOS and the license information, because such an artisan would have recognized "non-volatile memory 37

(e.g., EEPROM) as an appropriate type of memory module for BIOS and one that would help prevent tampering with the license information." *Id.* at 30–31 (citing Ex. 1005, 3:21–35, 3:52–2; Ex. 1003 ¶¶ 112–116).

Petitioner points out that Chou discloses that, by storing sensitive information in the BIOS memory, any attempt to delete or disable the sensitive information would also disable the BIOS program. *Id.* at 32 (citing Ex. 1005, 1:63–2:1 (disclosing that "EEPROM flash devices may be programmed with BIOS routines which permit the user to enter data without requiring the computer to be returned to the manufacture," and that "[t]he present invention makes use of these new BIOS memory devices for effecting security measures which discourage theft")). Dr. Wolfe testifies that a person of ordinary skill in the art "would have been motivated to store BIOS together with the values M in the non-volatile memory 37, in order to discourage users from tampering with the values M." Ex. 1003 ¶ 115.

Based on the evidence in this current record, we determine that Petitioner has articulated a sufficient reason to combine the teachings of Hellman and Chou, for purposes of this Decision. At this juncture, Patent Owner does not make any argument regarding this limitation. *See generally* Prelim. Resp.

*Motivation to combine Hellman, Chou, and Schneck*

For the combination of Hellman, Chou, and Schneck, Petitioner asserts that, in light of Schneck's teachings, a person of ordinary skill in the art would have stored Hellman's licensing information, authorization A which includes value M, in *encrypted* form in non-volatile memory 37.

Pet. 42–46. Petitioner argues that Schneck discloses that "licensing information is transmitted in encrypted form," and that information stored on a non-volatile memory "should be stored in encrypted form to prevent an unauthorized use of a licensed software." *Id.* at 44 (citing Ex. 1006, 9:46–59 ("The packaged data 108 may include access rules 116 in encrypted form."), 25:64–67 ("Since all storage of data on internal non-volatile memory devices (for example, disks, flash memory, and the like) is encrypted, this ensures that a physical attack on the system will not result in compromise of plaintext.")). According to Petitioner, because when an "unlimited number of uses" is licensed, the unlimited license value could be duplicated for any other software package, an ordinarily skilled artisan would have recognized that it would have been important to protect that default value in encrypted form in non-volatile memory 37. *Id.* at 42–46, 48–49 (citing Ex. 1004, 10:50–54; Ex. 1003 ¶ 148); *see also* Ex. 1004, 10:55–57 (disclosing that "[i]t is also possible to sell unlimited number of uses of a software package, by reserving one value of M to represent infinity").

Based on the evidence in this current record, we determine that Petitioner has articulated a sufficient reason for purposes of this Decision to combine the teachings of Hellman, Chou, and Schneck. At this juncture, Patent Owner does not make any argument regarding this limitation. *See generally* Prelim. Resp.

*Conclusion on Claim 1*

Upon consideration of the parties' contentions and evidence in this current record, we determine that Petitioner has shown adequately for purposes of this Decision that claim 1 is unpatentable under § 103(a) as obvious over the combination of Hellman and Chou, as well as over the combination of Hellman, Chou, and Schneck. We also determine that Patent Owner's arguments do not undermine Petitioner's obviousness showing at this time.

b. Remaining challenged claims

Petitioner accounts for claims 2, 3, 6–14, and 16. Pet. 40–64. Petitioner provides detailed explanations as to how the prior art combinations teach or suggest these claims and articulates reasons to combine the prior art teachings, citing Dr. Wolfe's testimony for support. *Id.* (citing Ex. 1004; Ex. 1005; Ex. 1003), Patent Owner does not make any additional arguments in its Preliminary Response regarding these remaining claims. *See generally* Prelim. Resp. Having reviewed Petitioner's arguments and supporting evidence in the present record, we determine that Petitioners has established a reasonable likelihood of prevailing on its assertion that claims 2, 11, and 13 are unpatentable under § 103(a) as obvious over Hellman and Chou, and that claims 2, 3, 6–14, and 16 are unpatentable under § 103(a) as obvious over Hellman, Chou, and Schneck.

c. Conclusion on Obviousness

Based on the evidence in the present record, we are persuaded that Petitioner has established a reasonable likelihood of prevailing on its

assertion that claims 1, 2, 11, and 13 are unpatentable under § 103(a) as obvious over Hellman and Chou, and that claims 1–3, 6–14, and 16 are unpatentable under § 103(a) as obvious over Hellman, Chou, and Schneck.

## III. CONCLUSION

For the foregoing reasons, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail with respect to challenged claims 1–3, 6–14, and 16 of the '941 patent. At this juncture in the proceeding, we have not made a final determination with respect to the patentability of the challenged claims, or with respect to claim construction.

## IV. ORDER

For the foregoing reasons, it is

ORDERED that pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted for the following asserted grounds:

| **Claims Challenged** | **35 U.S.C. §** | **References** |
|---|---|---|
| 1–2, 11, 13 | 103(a) | Hellman, Chou |
| 1–3, 6–14, 16 | 103(a) | Hellman, Chou, Schneck |

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial will commence on the entry date of this Decision.

PETITIONER:

John P. Schnurer
Yun (Louise) Lu
Kyle R. Canavera
PERKINS COIE LLP
schnurer-ptab@perkinscoie.com
lu-ptab@perkinscoie.com
canavera-ptab@perkinscoie.com

PATENT OWNER:

John P. Rondini
John S. LeRoy
Marc Lorelli
BROOKS KUSHMAN P.C.
jrondini@brookskushman.com
jleroy@brookskushman.com
mlorelli@brookskushman.com

Trials@uspto.gov
571-272-7822

Paper 17
Date: June 10, 2021

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.

---

IPR2021-00570
Patent 6,411,941 B1

---

Before THU A. DANG, JONI Y. CHANG, and KEVIN W. CHERRY,
*Administrative Patent Judges.*

CHANG, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
*35 U.S.C. § 314*

Denying Motion for Joinder
*35 U.S.C. § 315(c); 37 C.F.R. § 42.122*

# I. INTRODUCTION

HTC Corporation and HTC America, Inc. (collectively, "Petitioner" or "Petitioner HTC") filed a Petition requesting an *inter partes* review ("IPR") of claims 1–3, 6–14, and 16 ("the challenged claims") of U.S. Patent No. 6,411,941 B1 (Ex. 1001, "the '941 patent"). Paper 1 ("Pet."). Petitioner HTC also filed a Motion for Joinder (Paper 3, "Mot."), seeking to join as a party to *TCT Mobile (US) Inc. v. Ancora Technologies, Inc.*, IPR2020-01609 (the "TCT IPR"), and a Reply (Paper 10, "Reply"). Ancora Technologies, Inc. ("Patent Owner") filed an Opposition to Petitioner HTC's Motion for Joinder (Paper 9, "Opp."), a Sur-reply (Paper 15, "Sur-reply"), and a Preliminary Response (Paper 16, "Prelim. Resp."). For reasons discussed below, we do not institute an *inter partes* review of the challenged claims and deny the Motion for Joinder.

## *A. Related Matters*

The parties indicate that the '941 patent is involved in the following district court proceedings: *Ancora Technologies, Inc. v. TCT Mobile (US) Inc.*, No. 8:19-cv-02192 (C.D. Cal.); *Ancora Technologies, Inc. v. Lenovo Group Limited*, No. 1:19-cv-01712 (D. Del.); *Ancora Technologies, Inc. v. Sony Corp.*, No. 1:19-cv-01703 (D. Del.); *Ancora Technologies, Inc. v. LG Electronics, Inc.*, No. 1:20-cv-00034 (W.D. Tex.); *Ancora Technologies, Inc. v. Samsung Electronics Co.*, No. 6:19-cv-00385 (W.D. Tex.); *Ancora Technologies, Inc. v. HTC America, Inc.*, No. 2:16-cv-01919 (W.D. Wash.); and *Ancora Technologies, Inc. v. Apple Inc.*, No. 2:10-cv-10045-AG-MLG (N.D. Cal.) (the "Ancora v. Apple case"). Pet. 3–4; Paper 4, 1–2.

The '941 patent also was involved in *ex parte* Reexamination No. 90/010,560. Ex. 1001, 8–9 (*Ex Parte* Reexamination Certificate issued on June 1, 2010, confirming the patentability of claims 1–19 and indicating that no amendments have been made to the patent).

In addition, the '941 patent was involved in the following proceedings: *Apple Inc. v. Ancora Technologies, Inc.*, CBM2016-00023 (Institution Denied); *HTC America, Inc. v. Ancora Technologies, Inc.*, CBM2017-00054 (Institution Denied); *Samsung Electronics Co. v. Ancora Technologies, Inc.*, IPR2020-01184 (Institution Denied).

The '941 patent is currently involved in the following: *TCT Mobile (US) Inc. v. Ancora Technologies, Inc.*, IPR2020-01609; *LG Electronics, Inc. v. Ancora Technologies, Inc.*, IPR2021-00581; *Samsung Electronics Co. v. Ancora Technologies, Inc.*, IPR2021-00583; and *Sony mobile Communications AB v. Ancora Technologies, Inc.*, IPR2021-00663.

### *B. The '941 patent*

The '941 patent discloses 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, code (57). According to the '941 patent, the method includes the steps of selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification. *Id.*

Figure 1 of the '941 patent is reproduced below.

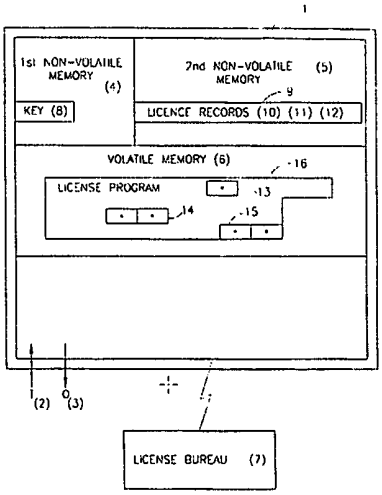


Figure 1 above shows a schematic diagram of computer processor 1 and license bureau 7. *Id.* at 5:9–19. Computer processor 1 is associated with input operations 2 and output operations 3. *Id.* Computer processor 1 contains first non-volatile memory area 4 (e.g., the ROM section of the Basic Input / Output System ("BIOS")), second non-volatile memory area 5 (e.g., the $E^2$PROM section of the BIOS), and volatile memory area 6 (e.g., the internal RAM memory of the computer). *Id.*

### *C. Illustrative Claim*

Of the challenged claims, only claim 1 is independent. Claims 2, 3, 6–14, and 16 directly or indirectly depend from claim 1. Claim 1 is illustrative:

> 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.

Ex. 1001, 6:59:67–7:4.

*D. Prior Art Relied Upon*

Petitioner HTC relies upon the references listed below (Pet. 5):

| **Reference** | **Issue Date** | **Exhibit No.** |
|---|---|---|
| Hellman, U.S. Patent No. 4,658,093 | Apr. 14, 1987 | Ex. 1004 |
| Chou, U.S. Patent No. 5,892,906 | Apr. 6, 1999 | Ex. 1005 |
| Schneck, U.S. Patent No. 5,933,498 | Aug. 3, 1999 | Ex. 1006 |

*E. Asserted Grounds of Unpatentability*

Petitioner HTC asserts the following grounds of unpatentability:

| **Claims Challenged** | **35 U.S.C. §**[1] | **References** |
|---|---|---|
| 1, 2, 11, 13 | 103(a) | Hellman, Chou |
| 1–3, 6–14, 16 | 103(a) | Hellman, Chou, Schneck |

[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the '941 patent was filed before March 16, 2013, the effective date of the relevant amendment, the pre-AIA version of § 103 applies.

## II. ANALYSIS

"To join a party to an instituted IPR, the plain language of § 315(c) requires two different decisions." *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1332 (Fed. Cir. 2020). First, we "determine whether the joinder applicant's petition for IPR 'warrants' institution under § 314." *Id.* Second, if the petition warrants institution, we then "decide whether to 'join as a party' the joinder applicant." *Id.* In short, before determining whether to join Petitioner HTC as a party to the TCT IPR, we first determine whether the petition warrants institution under § 314(a).

Institution of an *inter partes* review is discretionary. 35 U.S.C. § 314(a). The Supreme Court of the United States has explained that, because § 314 includes no mandate to institute review, "the agency's decision to deny a petition is a matter committed to the Patent Office's discretion." *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016); *see also Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that under § 314(a), "the PTO is permitted, but never compelled, to institute an IPR proceeding"). The Director has delegated his authority under § 314(a) to the Board. 37 C.F.R. § 42.4(a) ("The Board institutes the trial on behalf of the Director.").

Under *General Plastic*, the Board may deny a petition based on the Director's discretionary authority of § 314(a). *General Plastic Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 15 (PTAB Sept. 6, 2017) (precedential). Thus, before determining whether to join HTC as a party to the TCT IPR, even though the Petition is a "copycat petition," we first determine whether application of the General Plastic factors warrants

the exercise of discretion to deny the Petition under § 314(a). *See Apple Inc. v. Uniloc 2017 LLC*, IPR2020-00854, Paper 9 at 5 (PTAB Oct. 28, 2020) (precedential) ("*Uniloc*").

*Discretionary Denial — General Plastic*

In this proceeding, Patent Owner argues that we should exercise our discretion to deny this Petition by applying the *General Plastic* factors. Opp. 11–15 (citing *General Plastic*, Paper 19 at 16–17); Sur-reply 2–4. For the reasons set forth below, we determine to exercise our discretion to deny institution.

In *General Plastic*, the Board articulated a list of non-exclusive factors to be considered in determining whether to exercise discretion under § 314(a) to deny a petition:

> 1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;
>
> 2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
>
> 3. whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition;
>
> 4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;
>
> 5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;
>
> 6. the finite resources of the Board; and

> 7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

*General Plastic*, Paper 19 at 16 (citing *NVIDIA Corp. v. Samsung Elec. Co.*, IPR2016–00134, Paper 9 at 6–7 (PTAB May 4, 2016)). In our analysis below, we address each of these factors in turn.

*Factor 1: "whether the same petitioner previously filed a petition directed to the same claims of the same patent"*

Patent Owner argues that Petitioner HTC already challenged the '941 patent in CBM2017-00054, in which the Board denied institution. Opp. 12; CBM2017-00054, Paper 7 (Decision denying institution). Patent Owner contends that it filed a Preliminary Response in CBM2017-00054, addressing the merits. *Id.* Patent Owner also avers that Petitioner HTC "has benefitted from petitions and corresponding responses filed in other proceedings, including CBM2016-00023, filed by Apple, and IPR2020-01184, filed by Samsung." *Id.*

In its Reply, Petitioner HTC argues that Factor 1 weighs only slightly against institution. Reply 5. Petitioner also avers that Patent Owner did not substantively address the prior art in its Preliminary Response in CBM2017-00054, and that the Board denied institution on the basis that the claims were not CBM eligible without reaching the prior art. *Id.* (citing CBM2017-00054, Paper 6 (Preliminary Response) and Paper 7 (Decision denying institution)). Petitioner HTC further contends that Patent Owner did not file a preliminary response in CBM2016-00023 filed by Apple and the Board

exercised its discretion to deny the petition in IPR2020-01184, without reaching the prior art grounds. *Id.*

In its Sur-reply, Patent Owner argues that it is irrelevant whether the Board did not substantively address the prior art in CBM2017-00054 because Petitioner HTC had the opportunity back in 2017 to file an *inter parties* review petition. Sur-reply 4. Patent Owner also contends that Petitioner HTC does not identify any reason for delaying more than four years after it was served with a complaint, to file the Petition in this proceeding. *Id.*

We are not persuaded by Petitioner HTC's arguments. All of the claims challenged in the Petition were challenged by the same petitioner in CBM2017-00054. The instant Petition challenges claims 1–3, 6–14, and 16 of the '941 patent, while the petition in CBM2017-00054 challenges claims 1–19 of the '941 patent. Pet. 5; CBM2017-00054, Paper 1 at 1.

We recognize that the Petition in CBM2019-00054 was denied because the '941 patent was held to be ineligible for a CBM review, without reaching the merits of the prior art ground. CBM2017-00054, Paper 7 at 2, 11. But, as Patent Owner points out, Petitioner HTC fails to identify an adequate reason for delaying more than *four years* after it was served with a complaint, to file the instant Petition. Petitioner HTC could have filed an IPR petition concurrently with its petition in CBM2019-00054.
As discussed below, Petitioner HTC should have known Hellman and Chou, the primary reference and secondary reference asserted in both grounds here when filing its first petition in 2017. Moreover, Petitioner HTC has

benefitted from petitions filed in other proceedings, including CBM2016-00023 filed by Apple and IPR2020-01184 filed by Samsung.

In light of the foregoing, we determine that Factor 1 of *General Plastic* weighs against institution.

> *Factor 2: "whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it"*

Patent Owner argues that this factor weighs against institution because Petitioner HTC knew or should have known of the asserted prior art. Opp. 13. Patent Owner asserts that the public record of the *Ancora v. Apple* case makes clear that Hellman and Chou were available and known to accused infringer of the '941 patent by August 25, 2015. *Id.* (citing Ex. 2004 (Apple's 2015 Invalidity Contentions), 2, 3, 31).

Petitioner HTC argues that Factor 2 only weighs only slightly against institution because Petitioner did not learn of Schneck until it began preparing its invalidity contentions in 2019. Reply 5 (citing Ex. 2005).

In its Sur-reply, Patent Owner contends that Hellman and Chou were available and could be found much easier than the art relied upon within Petitioner HTC's CBM petition demonstrates this factor weighs strongly against institution. Sur-reply 3.

We agree with Patent Owner that Petitioner HTC should have known of Hellman and Chou asserted in both grounds in the instant Petition, at the time of filing of the first petition. As Patent Owner points out, Apple's 2015 Invalidity Contentions in a district court litigation involving the '941 patent makes clear that Hellman and Chou were publicly available and known to

accused infringer of the '941 patent by August 25, 2015. Ex. 2004, 2, 3, 31. Therefore, we determine that Factor 2 of *General Plastic* factor weighs against institution.

> *Factor 3: "whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review of the first petition"*

Patent Owner and Petitioner HTC argue Factor 1 and Factor 3 together. Opp. 12; Reply 5–6; Sur-reply 3–4. For the same reasons stated above, we conclude that Factor 3 also weights against institution.

> *Factor 4: "the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition"*

Patent Owner argues that this factor weighs against institution. Opp. 13; Sur-reply 3. Patent Owner points out that Petitioner HTC was first served with a complaint alleging infringement of the '941 patent on December 27, 2016—more than four years before filing this Petition. Opp. 13. Patent Owner contents that Petitioner HTC has ample time to identify art, long before filing this Petition because Hellman and Chou were available and known to accused infringers of the '941 patent as early as August 2015. *Id.* (citing Ex. 2004, 2, 3, 31).

Petitioner HTC argues that Factor 4 is neutral because any delay is due to the fact that Petitioner HTC's ability to bring a joinder-type IPR petition did not arise until another party filed its own petition. Reply 5. According to Petitioner, it did not learn of the art in this Petition until after

the Federal Circuit appeal when the district court proceedings resumed in late 2018. *Id.*

As discussed above, we agree with Patent Owner that Petitioner HTC should have known of Hellman and Chou at the time of filing of the first petition. Apple's 2015 Invalidity Contentions in a district court litigation involving the '941 patent makes clear that Hellman and Chou were publicly available and known to accused infringer of the '941 patent by August 25, 2015. Ex. 2004, 2, 3, 31. Petitioner HTC could have filed an IPR petition concurrently with its petition in CBM2019-00054, instead of waiting more than 4 years to join with another IPR proceeding. Therefore, Factor 4 of *General Plastic* weighs against institution.

> *Factor 5: "whether the petitioner provides adequate explanation for the time elapsed between filings of multiple petitions directed to the same claims of the same patent"*

Patent Owner argues that this factor weighs against institution because Petitioner has not explained the four-year time elapsed between the filing of the Petition filed in CBM2017-00054 and this Petition. Opp. 13–14.

In its Reply, Petitioner HTC argues this factor weighs heavily in favor of institution because Petitioner filed its Motion for Joinder only three days after institution of IPR2020-01609. Reply 4.

In its Sur-reply, Patent Owner argues that Petitioner fails to address adequately the four-year time period that elapsed between the first Petition and this Petition, and improperly focuses on its filing of the Motion for Joinder. Sur-reply 2.

We agree with Patent Owner. As discussed above, Petitioner should have known of Hellman and Chou at the time of filing of the first Petition. Apple's 2015 Invalidity Contentions in a district court litigation involving the '941 patent makes clear that Hellman and Chou were publicly available and known to accused infringer of the '941 patent by August 25, 2015. Ex. 2004, 2, 3, 31. Petitioner does not explain why it could not have filed an IPR petition concurrently with its Petition filed in CBM2017-00054. Therefore, Factor 5 of *General Plastic* weighs against institution.

*Factor 6: "the finite resources of the Board"*

Patent Owner argues that the resources spent by the Board on this Petition would duplicate various district court efforts, including trial between Ancora and Samsung that is scheduled in April 2021, and trial between Ancora and LG that is scheduled to begin on June 7, 2021. Opp. 14 (citing Ex. 2008); Sur-reply 2.

In its Reply, Petitioner argues that this factor heavily favors institution because "this IPR would be more likely to conclude before the district court would decide dispositive motions on validity, much less trial." Reply 3–4.

As discussed above, the instant Petition is Petitioner HTC's second petition challenging the '941 patent. Like in *Uniloc*, joinder in this circumstance would allow Petitioner HTC to continue a proceeding even after settlement with the primary petitioner, based on a second attempt by Petitioner HTC. *See Uniloc*, Paper 9 at 11–12. Therefore, we determine the sixth *General Plastic* factor weighs in favor of denying institution.

*Factor 7: "the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review"*

Patent Owner argues that this factor weighs against institution because "the only way to conduct a trial in this proceeding is to delay the Original Proceeding by at least two mounts and likely more." Opp. 15. Petitioner counters that Factor 7 favors institution because Petitioner "agreed to adhere to the operative schedule in IPR2020-01609 and that has not changed," and that the Patent Owner "speculates about delay in the IPR schedule." Reply 3. We agree with Petitioner.

Therefore, we determine the seventh *General Plastic* factor does not weigh in favor of exercising discretion to deny institution.

*Conclusion on the General Plastic Factors*

Upon consideration of all *General Plastic* factors and the arguments presented by the parties for and against the exercise of discretionary denial under § 314(a), we conclude that on balance, the majority of the factors (Factors 1–3, 5, and 6) weigh in favor of denying institution. Therefore, we exercise our discretion under § 314(a) to deny the instant Petition.

## III. DENIAL OF MOTION FOR JOINDER

As stated above, the Director may join a party to an ongoing IPR only if the filed petition warrants institution under § 314. 35 U.S.C. § 315(c). Because we are exercising discretion to deny institution under § 314, we deny Petitioner HTC's Motion for Joinder.

## IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), the Petition is *denied*; and

FURTHER ORDERED that the Motion for Joinder is *denied*.

PETITIONER:

Irfan Lateef
Brian Claassen
Daniel Kiang

KNOBBE MARTENS
Boxhtc57@knobbe.com
2bcc@knobbe.com
2dck@knobbe.com

PATENT OWNER:

Nicholas Peters
David Gosse
Paul Henkelmann

FITCH, EVEN, TABIN & FLANNERY LLP
ntpete@fitcheven.com
dgosse@fitcheven.com
phenkelmann@fitcheven.com

John Rondini
John LeRoy
Marc Lorelli

BROOKS KUSHMAN P.C.
ancc0120IPR@brookskushman.com
jrondini@brookskushman.com

Trials@uspto.gov
571-272-7822

Paper 16
Entered: June 10, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

LG ELECTRONICS, INC. and LG ELECTRONICS U.S.A. INC.,
Petitioner,

v.

ANCORA TECHNOLOGIES, INC.,
Patent Owner.

---

IPR2021-00581
Patent 6,411,941 B1

---

Before THU A. DANG, JONI Y. CHANG, and KEVIN W. CHERRY,
*Administrative Patent Judges*.

CHANG, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
*35 U.S.C. § 314*

Denying Motion for Joinder
*35 U.S.C. § 315(c); 37 C.F.R. § 42.122*

# I. INTRODUCTION

LG Electronics, Inc. and LG Electronics U.S.A. Inc. (collectively, "Petitioner" or "Petitioner LG") filed a Petition requesting an *inter partes* review ("IPR") of claims 1–3, 6–14, and 16 ("the challenged claims") of U.S. Patent No. 6,411,941 B1 (Ex. 1001, "the '941 patent"). Paper 1 ("Pet."). Petitioner LG also filed a Motion for Joinder (Paper 3, "Mot."), seeking to join as a party to *TCT Mobile (US) Inc. v. Ancora Technologies, Inc.* IPR2020-01609 (the "TCT IPR"), and a Reply (Paper 10, "Reply"). Ancora Technologies, Inc. ("Patent Owner") filed an Opposition to Petitioner LG's Motion for Joinder (Paper 9, "Opp."), a Sur-reply (Paper 11, "Sur-reply"), and a Preliminary Response (Paper 14, "Prelim. Resp.").

For reasons discussed below, we do not institute an *inter partes* review of the challenged claims and deny the Motion for Joinder.

## *A. Related Matters*

The parties indicate that the '941 patent is involved in the following district court proceedings: *Ancora Technologies, Inc. v. TCT Mobile (US) Inc.*, No. 8:19-cv-02192 (C.D. Cal.); *Ancora Technologies, Inc. v. Lenovo Group Limited*, No. 1:19-cv-01712 (D. Del.); *Ancora Technologies, Inc. v. Sony Corp.*, No. 1:19-cv-01703 (D. Del.); *Ancora Technologies, Inc. v. LG Electronics, Inc.*, No. 1:20-cv-00034 (W.D. Tex.) (the "LG case"); *Ancora Technologies, Inc. v. Samsung Electronics Co.*, No. 6:19-cv-00385 (W.D. Tex.); and *Ancora Technologies, Inc. v. HTC America, Inc.*, No. 2:16-cv-01919 (W.D. Wash.). Pet. 3–4; Paper 4, 1–2.

The '941 patent also was involved in *ex parte* Reexamination No. 90/010,560. Ex. 1001, 8–9 (*Ex Parte* Reexamination Certificate issued on June 1, 2010, confirming the patentability of claims 1–19 and indicating that no amendments have been made to the patent).

In addition, the '941 patent was involved in the following proceedings: *Apple Inc. v. Ancora Technologies, Inc.*, CBM2016-00023 (Institution Denied); *HTC America, Inc. v. Ancora Technologies, Inc.*, CBM2017-00054 (Institution Denied); *Samsung Electronics Co., Ltd. v. Ancora Technologies, Inc.*, IPR2020-01184 (Institution Denied).

The '941 patent is currently involved in the following: *TCT Mobile (US) Inc. v. Ancora Technologies, Inc.*, IPR2020-01609; *HTC Corporation v. Ancora Technologies, Inc.*, IPR2021-00570; *Samsung Electronics Co., Ltd. v. Ancora Technologies, Inc.*, IPR2021-00583; and *Sony Mobile Communications AB v. Ancora Technologies, Inc.*, IPR2021-00663.

### *B. The '941 patent*

The '941 patent discloses 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, code (57). According to the '941 patent, the method includes the steps of selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification. *Id.*

Figure 1 of the '941 patent is reproduced below.

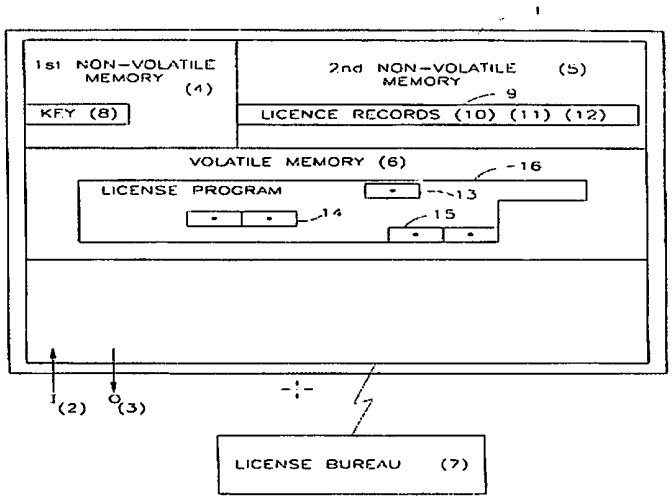


Figure 1 above shows a schematic diagram of computer processor 1 and license bureau 7. *Id.* at 5:9–19. Computer processor 1 is associated with input operations 2 and output operations 3. *Id.* Computer processor 1 contains first non-volatile memory area 4 (e.g., the ROM section of the Basic Input / Output System ("BIOS")), second non-volatile memory area 5 (e.g., the $E^2$PROM section of the BIOS), and volatile memory area 6 (e.g., the internal RAM memory of the computer). *Id.*

### *C. Illustrative Claim*

Of the challenged claims, only claim 1 is independent. Claims 2, 3, 6–14, and 16 directly or indirectly depend from claim 1. Claim 1 is illustrative:

> 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.

Ex. 1001, 6:59:67–7:4.

*D. Prior Art Relied Upon*

Petitioner LG relies upon the references listed below (Pet. 5–6):

| **Reference** | **Issue Date** | **Exhibit No.** |
|---|---|---|
| Hellman, U.S. Patent No. 4,658,093 | Apr. 14, 1987 | Ex. 1004 |
| Chou, U.S. Patent No. 5,892,906 | Apr. 6, 1999 | Ex. 1005 |
| Schneck, U.S. Patent No. 5,933,498 | Aug. 3, 1999 | Ex. 1006 |

*E. Asserted Grounds of Unpatentability*

Petitioner LG asserts the following grounds of unpatentability (Pet. 6):

| **Claims Challenged** | **35 U.S.C. §**[1] | **References** |
|---|---|---|
| 1, 2, 11, 13 | 103(a) | Hellman, Chou |
| 1–3, 6–14, 16 | 103(a) | Hellman, Chou, Schneck |

[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the '941 patent was filed before March 16, 2013, the effective date of the relevant amendment, the pre-AIA version of § 103 applies.

## II. ANALYSIS

*Discretionary Denial Under 35 U.S.C. § 314(a)*

"To join a party to an instituted IPR, the plain language of § 315(c) requires two different decisions." *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1332 (Fed. Cir. 2020). First, we "determine whether the joinder applicant's petition for IPR 'warrants' institution under § 314." *Id.* Second, if the petition warrants institution, we then "decide whether to 'join as a party' the joinder applicant." *Id.* In short, before determining whether to join Petitioner LG as a party to the TCT IPR, we first determine whether the petition warrants institution under § 314(a).

Institution of an *inter partes* review is discretionary. 35 U.S.C. § 314(a). The Supreme Court of the United States has explained that, because § 314 includes no mandate to institute review, "the agency's decision to deny a petition is a matter committed to the Patent Office's discretion." *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016); *see also Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that under § 314(a), "the PTO is permitted, but never compelled, to institute an IPR proceeding"). The Director has delegated his authority under § 314(a) to the Board. 37 C.F.R. § 42.4(a) ("The Board institutes the trial on behalf of the Director.").

In this proceeding, Patent Owner argues that we should exercise discretion to deny institution under § 314(a) because each of the factors identified in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB

Mar. 20, 2020) (precedential) ("*Fintiv*"), weighs in favor of discretionary denial here. Opp. 16–21.

In *Fintiv*, the Board ordered supplemental briefing on a nonexclusive list of factors for consideration in analyzing whether the circumstances of a parallel district court action are a basis for discretionary denial of trial institution under *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential). *Fintiv*, Paper 11 at 5–16. Those factors include:

> 1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
>
> 2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
>
> 3. investment in the parallel proceeding by the court and the parties;
>
> 4. overlap between issues raised in the petition and in the parallel proceeding;
>
> 5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
>
> 6. other circumstances that impact the Board's exercise of discretion, including the merits.

*Id.* at 5–6. Here, we consider these factors to determine whether we should exercise discretion to deny institution. In evaluating the factors, we take a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review. *Fintiv*, Paper 11 at 6.

*Factor 1: whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

Patent Owner argues that no stay has been requested in the parallel district court proceedings, nor is one likely to be granted. Opp. 17. On the record before us, neither party has produced evidence that a stay has been requested or that the district court has considered a stay in the parallel litigation, the LG case. Therefore, we find that Factor 1 is neutral.

*Factor 2: proximity of the court's trial date to the Board's projected statutory deadline for a final written decision*

As the Board explained in *Fintiv*, "[i]f the court's *trial date* is earlier than the projected statutory deadline, the Board generally has weighed this fact[or] in favor of exercising authority to deny institution under *NHK*." *Fintiv*, Paper 11 at 9 (emphasis added). Here, as of the time of this Decision, the parallel trial in the LG case would appear to have already started, more than *eight months* before a Final Written Decision would be due in the proceeding which Petitioner seeks to join. Reply 7; Sur-reply 4; Ex. 2008 (Fourth Amended Scheduling Order), 3; IPR2020-01609, Paper 7 (Institution Decision entered on February 16, 2021). Therefore, this factor weighs against institution.

*Factor 3: investment in the parallel proceeding by the court and the parties*

Patent Owner argues that this factor weighs against institution because the facts in this case demonstrate extensive investment in the parallel proceedings. Opp. 18–19. We agree with Patent Owner. According to the

Fourth Amended Scheduling Order in the parallel litigation, the parties have already finished claim construction and expert discovery, and dispositive motions including summary judgment are fully briefed. Ex. 2008, 3.

Therefore, weighing the facts in this particular case, including the time invested by the parties and the district court in the parallel litigation, the extent to which the investment in the district court proceeding relates to issues of patent validity, and the timing of the filing of the Petition, we find that this factor weighs against institution.

*Factor 4: overlap between issues raised in the petition and in the parallel proceeding*

This factor evaluates "concerns of inefficiency and the possibility of conflicting decisions" when substantially identical prior art is submitted in both the district court and the *inter partes* review proceedings. *Fintiv*, Paper 11 at 12. In this regard, Petitioner LG argues that it "stipulates that if its joinder petition is instituted before the trial date of June 7, 2021, it will not subsequently assert invalidity in the district court on the same grounds asserted in the IPR or on the basis of the Hellman reference, either alone or in combination with any other reference." Reply 7.

Patent Owner counters that Petitioner LG's stipulation will not avoid duplication of effort because it falls short of the stipulation in *Sotera* that includes "any other ground . . . that was raised *or could have been reasonably raised* in an IPR." Sur-reply 3–4 (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (PTAB Dec. 1, 2020) (precedential).

We agree with Patent Owner that there is a significant overlap between the issues raised in the Petition and in the parallel district court proceeding. Petitioner LG's stipulation, however, somewhat mitigates the "concerns of inefficiency and the possibility of conflicting decisions." We note that Petitioner LG's stipulation is narrow, not a broad stipulation that includes "any ground raised, or that *could have been reasonably raised*." *See Sotera*, Paper 12 at 19; *see also Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 12 n.5 (PTAB June 16, 2020) (informative) (noting that a broad stipulation better addresses concerns of duplicative efforts and potentially conflicting decisions in a much more substantial way). Therefore, we find that this factor weighs marginally against denying institution.

*Factor 5: whether the petitioner and the defendant in the parallel proceeding are the same party*

"If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact *against exercising discretion* to deny institution under *NHK*." *Fintiv*, Paper 11 at 13–14 (emphasis added). Where the petitioner is also a defendant in an earlier court proceeding, this factor has generally weighed in favor of discretionary denial. *Sand Revolution*, Paper 24 at 12–13. Here, it is undisputed that Petitioner LG is a co-defendant in the parallel litigation. Pet. 3. Therefore, this factor weighs in favor of denying institution.

*Factor 6: other circumstances that impact the Board's exercise of discretion, including the merits.*

The final *Fintiv* factor is a catch-all that takes into account any other relevant circumstances. The decision whether to exercise discretion to deny institution under § 314(a) is based on "a balanced assessment of all relevant circumstances in the case, including the merits." Consolidated Trial Practice Guide 58. A full merits analysis is not necessary as part of deciding whether to exercise discretion not to institute, but rather the parties may point out, as part of the factor-based analysis, particular "strengths or weaknesses" to aid the Board in deciding whether the merits tip the balance one way or another. *See Fintiv*, Paper 11 at 15–16.

Petitioner LG argues that "the Board has *already* determined that there is a reasonable likelihood that the ['941] patent is invalid." Reply 7. But, the mere fact that a party may have met its institution burden is not the same as an argument as to the particular strengths (or weaknesses) of the challenged. Based on this preliminary record and absence of substantive argument highlighting any particular strengths of the challenge, we find that Factor 6 of *Fintiv* is neutral.

*Conclusion on Discretionary Denial under § 314(a)*

As noted in *Fintiv*, we consider the above six factors when taking "a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review." *Fintiv*, Paper 11 at 6. As discussed above, Factors 1 and 6 are neutral, Factors 2, 3, and 5 weigh in favor of exercising our discretion to deny institution, and Factor 4 weighs

marginally against exercising our discretion to deny institution. Accordingly, we exercise our discretion under § 314(a) to deny institution of this proceeding.

## III. DENIAL OF MOTION FOR JOINDER

As stated above, the Director may join a party to an ongoing IPR only if the later-filed petition warrants institution under § 314(a). 35 U.S.C. § 315(c). Because we are exercising discretion to deny institution under § 314(a), we deny Petitioner LG's Motion for Joinder.

## IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), the Petition is *denied*; and

FURTHER ORDERED that the Motion for Joinder is *denied*.

PETITIONER:

David McCombs
Gregory Huh
HAYNES AND BOONE, LLP
david.mccombs.ipr@haynesboone.com
gregory.huh.ipr@haynesboone.com

PATENT OWNER:

Nicholas Peters
David Gosse
Paul Henkelmann
FITCH, EVEN, TABIN & FLANNERY LLP
ntpete@fitcheven.com
dgosse@fitcheven.com
phenkelmann@fitcheven.com

John Rondini
BROOKS KUSHMAN P.C.
jrondini@brookskushman.com

Trials@uspto.gov
571-272-822

Paper 17
Date: June 10, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

SONY MOBILE COMMUNICATIONS AB, SONY MOBILE COMMUNICATIONS, INC., SONY ELECTRONICS INC., and SONY CORPORATION,
Petitioner,

v.

ANCORA TECHNOLOGIES, INC.,
Patent Owner.

---

IPR2021-00663
Patent 6,411,941 B1

---

Before THU A. DANG, JONI Y. CHANG, and KEVIN W. CHERRY, *Administrative Patent Judges*.

CHANG, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
*35 U.S.C. § 314*

Granting Motion for Joinder
*35 U.S.C. § 315(c); 37 C.F.R. § 42.122*

# I. INTRODUCTION

Sony Mobile Communications AB, Sony Mobile Communications, Inc., Sony Electronics Inc., and Sony Corporation (collectively, "Petitioner Sony") filed a Petition requesting an *inter partes* review ("IPR") of claims 1–3, 6–14, and 16 ("the challenged claims") of U.S. Patent No. 6,411,941 B1 (Ex. 1001, "the '941 patent"). Paper 1 ("Pet."). Petitioner Sony also filed a Motion for Joinder (Paper 4, "Mot."), seeking to join as a party to *TCT Mobile (US) Inc. v. Ancora Technologies, Inc.* IPR2020-01609 (the "TCT IPR"), and a Reply (Paper 14, "Reply"). Ancora Technologies, Inc. ("Patent Owner") filed an Opposition to Petitioner Sony's Motion for Joinder (Paper 10, "Opp."), a Preliminary Response (Paper 13, "Prelim. Resp."), and a Sur-reply (Paper 16, "Sur-reply").

For reasons discussed below, we institute an *inter partes* review of the challenged claims and grant Petitioner Sony's Motion for Joinder.

## *A. Related Matters*

The parties indicate that the '941 patent is involved in the following district court proceedings: *Ancora Technologies, Inc. v. TCT Mobile (US) Inc.*, No. 8:19-cv-02192 (C.D. Cal.); *Ancora Technologies, Inc. v. Lenovo Group Limited*, No. 1:19-cv-01712 (D. Del.); *Ancora Technologies, Inc. v. Sony Corp.*, No. 1:19-cv-01703 (D. Del.) (the "Sony case"); *Ancora Technologies, Inc. v. LG Electronics, Inc.*, No. 1:20-cv-00034 (W.D. Tex.) (the "LG case"); *Ancora Technologies, Inc. v. Samsung Electronics Co.*, No. 6:19-cv-00385 (W.D. Tex.); and *Ancora Technologies, Inc. v. HTC America, Inc.*, No. 2:16-cv-01919 (W.D. Wash.). Pet. 3–4; Paper 9, 1–2.

The '941 patent also was involved in *ex parte* Reexamination No. 90/010,560. Ex. 1001, 8–9 (*Ex Parte* Reexamination Certificate issued on June 1, 2010, confirming the patentability of claims 1–19 and indicating that no amendments have been made to the patent).

In addition, the '941 patent was involved in the following proceedings: *Apple Inc. v. Ancora Technologies, Inc.*, CBM2016-00023 (Institution Denied); *HTC America, Inc. v. Ancora Technologies, Inc.*, CBM2017-00054 (Institution Denied); and *Samsung Electronics Co., Ltd. v. Ancora Technologies, Inc.*, IPR2020-01184 (Institution Denied).

The '941 patent is currently involved in the following: *TCT Mobile (US) Inc. v. Ancora Technologies, Inc.*, IPR2020-01609; *HTC Corporation v. Ancora Technologies, Inc.*, IPR2021-00570; *LG Electronics, Inc. v. Ancora Technologies, Inc.*, IPR2021-00581; and *Samsung Electronics Co. v. Ancora Technologies, Inc.*, IPR2021-00583.

### *B. The '941 patent*

The '941 patent discloses 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, (57). According to the '941 patent, the method includes the steps of selecting a program residing in the volatile memory, setting up a verification structure in the non-volatile memories, verifying the program using the structure, and acting on the program according to the verification. *Id.*

Figure 1 of the '941 patent is reproduced below.

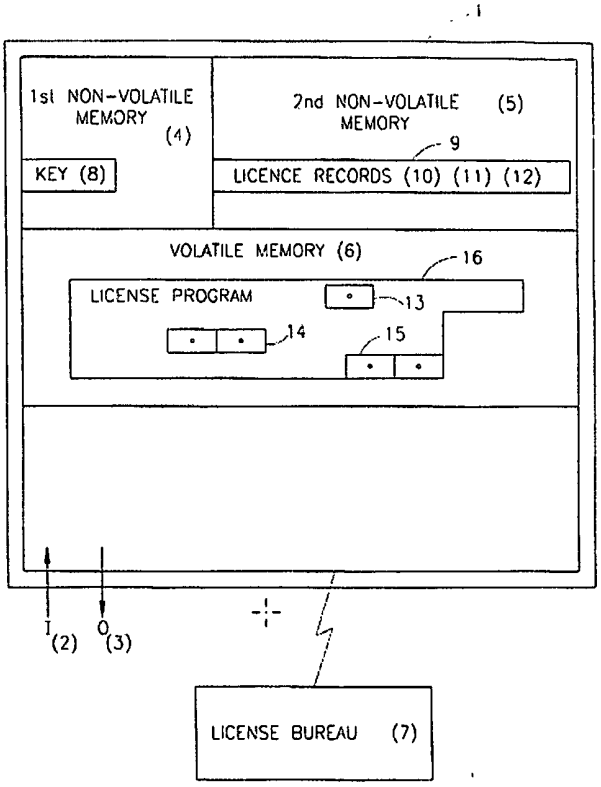


Figure 1 above shows a schematic diagram of computer processor 1 and license bureau 7. *Id.* at 5:9–19. Computer processor 1 is associated with input operations 2 and output operations 3. *Id.* Computer processor 1 contains first non-volatile memory area 4 (e.g., the ROM section of the Basic Input / Output System ("BIOS")), second non-volatile memory area 5 (e.g., the $E^2$PROM section of the BIOS), and volatile memory area 6 (e.g., the internal RAM memory of the computer). *Id.*

### *C. Illustrative Claim*

Of the challenged claims, only claim 1 is independent. Claims 2, 3, 6–14, and 16 directly or indirectly depend from claim 1. Claim 1 is illustrative:

> 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.

Ex. 1001, 6:59:67–7:4 (emphasis added).

### *D. Prior Art and Other Evidence Relied Upon*

Petitioner Sony relies upon the references listed below (Pet. 5):

| **Reference** | **Date** | **Exhibit No.** |
|---|---|---|
| Hellman, U.S. Patent No. 4,658,093 | Apr. 14, 1987 | Ex. 1004 |
| Chou, U.S. Patent No. 5,892,906 | Apr. 6, 1999 | Ex. 1005 |
| Schneck, U.S. Patent No. 5,933,498 | Aug. 3, 1999 | Ex. 1006 |

Petitioner Sony also relies upon the Declaration of Erez Zadok, Ph.D. Ex. 1015. Dr. Zadok testifies that he agrees with the facts, analysis, and conclusions in the Declaration of Andrew Wolfe, Ph.D. (Ex. 1003), and he adopts the testimony in sections I.C–IV of Dr. Wolfe's Declaration as his own for purposes of this proceeding. Ex. 1015 ¶ 33.

*E. Asserted Grounds of Unpatentability*

Petitioner Sony asserts the following grounds of unpatentability (Pet. 6):

| Claims Challenged | 35 U.S.C. §[1] | References |
|---|---|---|
| 1, 2, 11, 13 | 103(a) | Hellman, Chou |
| 1–3, 6–14, 16 | 103(a) | Hellman, Chou, Schneck |

II. DISCRETIONARY DENIAL

"To join a party to an instituted IPR, the plain language of § 315(c) requires two different decisions." *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1332 (Fed. Cir. 2020). First, we "determine whether the joinder applicant's petition for IPR 'warrants' institution under § 314." *Id.* Second, if the petition warrants institution, we then "decide whether to 'join as a party' the joinder applicant." *Id.* In short, before determining whether to join Petitioner Sony as a party to the TCT IPR, we first determine whether the petition warrants institution under § 314(a).

Institution of an *inter partes* review is discretionary. 35 U.S.C. § 314(a). The Supreme Court of the United States has explained that, because § 314 includes no mandate to institute review, "the agency's decision to deny a petition is a matter committed to the Patent Office's discretion." *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140

[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the '941 patent was filed before March 16, 2013, the effective date of the relevant amendment, the pre-AIA version of § 103 applies.

(2016); *see also Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that under § 314(a), "the PTO is permitted, but never compelled, to institute an IPR proceeding"). The Director has delegated his authority under § 314(a) to the Board. 37 C.F.R. § 42.4(a) ("The Board institutes the trial on behalf of the Director.").

As the Consolidated Trial Practice Guide ("Consolidated Practice Guide")[2] at 56 noted, the AIA was "designed to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs." H.R. Rep. No. 112–98, pt. 1, at 40 (2011), *reprinted in* 2011 U.S.C.C.A.N. 67, 69 (Post grant reviews were meant to be "quick and cost effective alternatives to litigation"); *see also* S. Rep. No. 110–259, at 20 (2008). The Board recognized these goals of the AIA, but also "recognize[d] the potential for abuse of the review process by repeated attacks on patents." *Gen. Plastic Indus. Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16–17 (PTAB Sept. 6, 2017) (§ II.B.4.i designated precedential).

### *A. General Plastic Factors*

In this proceeding, Patent Owner argues that we should exercise our discretion to deny this Petition by applying the *General Plastic* factors. Opp. 11–15; Sur-reply 2–3. For the reasons set forth below, we decline to exercise our discretion to deny institution under *General Plastic* factors.

---

[2] *Available at* https://www.uspto.gov/TrialPracticeGuideConsolidated; *see also* 84 Fed. Reg. 64,280 (Nov. 21, 2019).

In *General Plastic*, the Board articulated a list of non-exclusive factors to be considered in determining whether to exercise discretion under § 314(a) to deny a petition:

> 1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;
>
> 2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
>
> 3. whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition;
>
> 4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;
>
> 5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;
>
> 6. the finite resources of the Board; and
>
> 7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

*General Plastic*, Paper 19 at 16 (citing *NVIDIA Corp. v. Samsung Elec. Co.*, IPR2016-00134, Paper 9 at 6–7 (PTAB May 4, 2016)). In our analysis below, we address each of these factors in turn.

*Factor 1: "whether the same petitioner previously filed a petition directed to the same claims of the same patent"*

The *General Plastic* analysis applies to multiple petitions filed by different petitioners that have a "significant relationship," challenging the same claims of the same patent. *Valve Corp. v. Elec. Scripting Prods., Inc.*,

IPR2019-00062, Paper 11 at 9–10 (PTAB Apr. 2, 2019) (precedential) (holding that the petitioner and the prior petitioner have a "significant relationship" because they "were co-defendants in the District Court litigation and were accused of infringing the [challenged] patent based on the [same] devices").

Here, Patent Owner acknowledges that Petitioner Sony did not previously file a petition directed to the '941 patent. Opp. 13. Nevertheless, Patent Owner argues that other accused infringers had filed prior petitions challenging the '941 patent—namely, Apple in CBM2016-00023, HTC in CBM2017-00054, and Samsung in IPR2020-01184. *Id.* Patent Owner contends that "[t]hese accused infringers sell similar, competing products and are consequently motivated to pursue similar approaches to invalidating the '941 patent—as evidenced by the flurry of me-too petitions filed after institution of IPR2021-01609." *Id.*

In its Reply, Petitioner Sony counters that this factor weighs in favor of institution because the number of petitions filed by other petitioners challenging the '941 patent is the result of Patent Owner's litigation activity. Reply 4. Petitioner Sony also argues that it "is neither a co-defendant with any other petitioners nor has it contributed to or coordinated with their IPR filings." *Id.* at 3.

In its Sur-reply, Patent Owner argues that this factor weighs against institution because Petitioner Sony did not timely file a petition within the one-year statutory deadline under § 315(b) and Petitioner Sony has had the benefit of reviewing several prior petitions. Sur-reply 2.

Based on the evidence of record, we find that Factor 1 of *General Plastic* weighs against denying institution because Petitioner Sony did not

file a prior petition challenging the '941 patent, nor does it have a significant relationship with any of the prior petitioners. As Patent Owner admits, Petitioner Sony did not previously file a petition directed to the '941 patent. Opp. 13. The instant Petition is the first petition filed by Petitioner Sony challenging the '941 patent, and Petitioner Sony has not filed a second petition challenging the same patent. There is no evidence on this record that Petitioner Sony has used the review process as tools for harassment through repeated attacks on the same patent. The efficiency and fairness concerns that underlie the *General Plastic* analysis are not implicated in this proceeding.

Furthermore, unlike *Valve*, Petitioner Sony does not have a significant relationship with the prior petitioners (Apple, HTC, and Samsung) challenging the '941 patent. Notably, Patent Owner sued Petitioner Sony separately from its competitors, Apple, HTC, and Samsung in different forums. Ex. 2007 (Complaint against Sony only). Patent Owner also admits that Petitioner Sony and the other prior petitioners sell "competing products," not the same product. Opp. 13. Further, we agree with Petitioner Sony that the number of petitions filed by other petitioners challenging the '941 patent is the result of Patent Owner's litigation activity in that it has sued more than ten different parties in lawsuits staggered over twelve years. Reply 4; Opp. 2–6. Each prior petitioner filed a petition in response to Patent Owner's lawsuit for infringement. Opp. 2–6. A common desire to challenge the validity of the asserted patent without more is insufficient to establish that Petitioner Sony has a significant relationship with the other prior petitioners. As Petitioner Sony notes, it "is neither a co-defendant with any other petitioners nor has it contributed to or coordinated with their IPR

filings." Reply 3. In short, we find that Petitioner Sony does not have a significant relationship with the other petitioners.

In addition, we are not persuaded by Patent Owner's argument that Petitioner Sony did not timely file a petition with the one-year statutory deadline under § 315(b). Sur-reply 2. That time limitation does not apply to this proceeding because the Petition is accompanied by a request for joinder and joinder is granted. *See* 35 U.S.C. § 315(b) (stating that "[t]he time limitation set forth in the preceding sentence shall not apply to a request for joinder"); 37 C.F.R. § 42.122(b); *see also Facebook*, 973 F.3d at 1333 ("Beginning with the statutory language, § 315(b) articulates the time-bar for when an IPR 'may not be instituted.' 35 U.S.C. § 315(b). But § 315(b) includes a specific exception to the time bar. By its own terms, '[t]he time limitation . . . shall not apply to a request for joinder under subsection (c).' *Id.*"). Unlike *Apple Inc. v. Uniloc 2017 LLC*, IPR2020-00854, Paper 9 at 2 (PTAB Oct. 28, 2020) (precedential) ("*Uniloc*"), where the petitioner had filed a prior petition before filing a joinder petition, Petitioner Sony here has not filed a prior petition challenging the '941 patent.

In light of the foregoing, we determine that Factor 1 of *General Plastic* weighs in favor of institution.

*Factor 2: "whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it"*

Patent Owner argues that "Sony knew or should have known long ago about the art" because the "public record from *Ancora v. Apple* makes clear that the Hellman and Chou references were publicly available and were

likely known when Sony served its invalidity contentions." Opp. 13–14; Sur-reply 2–3.

Patent Owner's argument is unavailing. It is irrelevant that Petitioner Sony knew of the prior art asserted in this proceeding when Petitioner Sony served its invalidity contentions. This factor is based on whether the petitioner knew of the prior art asserted in the *second petition* at the time of filing of the *first petition*. *General Plastic*, Paper 19 at 16.

Patent Owner improperly presumes the instant Petition is Petitioner Sony's second petition challenging the '941 patent. As discussed above, the instant Petition is Petitioner Sony's *first petition* challenging the '941 patent, not the second. Patent Owner admits that Petitioner Sony did not previously file a petition directed to the '941 patent. Opp. 13. Unlike *Valve*, Petitioner Sony does not have a significant relationship with other prior petitioners challenging the same patent. Therefore, this case is distinguished on its facts from those facts decisive in *General Plastic* and *Valve*. *See Netflix, Inc. v. Broadcom Corp.*, IPR2020-01423, Paper 7 at 5–6 (PTAB Mar. 11, 2021) (a prior petition filed by an unrelated petitioner is not a basis for denial of institution).

In light of the foregoing, we find that Factor 2 of *General Plastic* weighs strongly in favor of institution.

> *Factor 3: "whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review of the first petition"*

Patent Owner argues that this factor weighs against institution because Petitioner "Sony has benefitted from petitions and corresponding responses filed in prior proceedings." Opp. 14; Sur-reply 2.

Patent Owner's argument is unavailing. This factor is based on whether the petitioner already received the patent owner's preliminary response or the decision on institution to the *first petition* at the time of filing of the *second petition*. *General Plastic*, Paper 19 at 16. As discussed above, this instant Petition is Petitioner Sony's *first petition* challenging the '941 patent, and Petitioner Sony has not filed a second petition challenging the same patent. Unlike *Valve*, Petitioner Sony does not have a significant relationship with other petitioners that filed prior petitions challenging the '941 patent. Patent Owner improperly presumes that the instant Petition is Petitioner Sony's second petition challenging the '941 patent. Patent Owner also improperly presumes that the prior petitions filed by other petitioners are Petitioner Sony's first petition.

In light of the foregoing, we find that Factor 3 of *General Plastic* weighs strongly in favor of institution.

> *Factor 4: "the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition"*

Patent Owner argues that this factor weighs against institution. Opp. 14–15. According to Patent Owner, Petitioner Sony was first served with a complaint alleging infringement of the '941 patent on September 11,

2019, more than 18 months before filing this Petition. *Id.* Patent Owner avers that the asserted prior art, Hellman and Chou, were available and known to accused infringers of the '941 patent as early as August 2015. *Id.* (citing Ex. 2004 (Apple's Invalidity Contentions)); Sur-reply 2–3.

Again, Patent Owner improperly presumes that the instant Petition is Petitioner Sony's second petition challenging the '941 patent. This factor is based on the elapsed time between the time of the petitioner learned of the prior art asserted in the *second petition* and the filing of the *second petition.* As discussed above, this instant Petition is Petitioner Sony's *first petition* challenging the '941 patent, and there is no filing of a second petition challenging the same patent by Petitioner Sony. Unlike *Valve*, Petitioner Sony does not have a significant relationship with the other petitioners.

In light of the foregoing, we find that Factor 4 of *General Plastic* weighs strongly in favor of institution.

> *Factor 5: "whether the petitioner provides adequate explanation for the time elapsed between filings of multiple petitions directed to the same claims of the same patent"*

Patent Owner argues that this factor is neutral because the instant Petition is time barred. Opp. 15; Sur-reply 2. That argument is unavailing. As discussed above, the one-year statutory time period under § 315(b) does not apply to this proceeding because the Petition is accompanied by a request for joinder and joinder is granted. *See* 35 U.S.C. § 315(b); 37 C.F.R. § 42.122(b); *Facebook*, 973 F.3d at 1333. Unlike *Uniloc* where the petitioner had filed a prior petition before filing a joinder petition, Petitioner Sony here did not file a prior petition challenging the '941 patent. *Uniloc*,

Paper 9 at 2. In light of the foregoing, we determine that Factor 5 of *General Plastic* weighs strongly in favor of institution.

*Factor 6: "the finite resources of the Board"*

Patent Owner argues that the resources spent by the Board on the Petition would duplicate the district court's efforts because the court's trial in the Sony case is set to occur beginning October 17, 2022. Opp. 15–16 (citing Ex. 2001 at 25). Patent Owner also contends that the Board "will have to address the contrasting positions Dr. Zadok (Sony's expert) is attempting to take to support Sony's joinder motion." Sur-reply 3.

We find Factor 6 of *General Plastic* weighs against exercising discretion to deny the Petition. Petitioner Sony filed a Motion for Joinder, seeking to join as a party to IPR2020-01609, the only prior petition that has been instituted. Other joinder petitions in IPR2021-00570, IPR2021-00581, and IPR2021-00583 also seek to join with IPR2020-01609. Other prior petitions in CBM2016-00023, CBM2017-00054, and IPR2020-01184 have been denied institution. The Board's finite resources would not be strained to maintain only one proceeding challenging the '941 patent. And we have addressed Patent Owner's argument regarding the allegedly inconsistent testimonial evidence below. Moreover, unlike *Uniloc* where the petitioner had filed a prior petition before filing a joinder petition, Petitioner Sony here has not filed a prior petition challenging the '941 patent.

In addition, we instituted the trial in IPR2020-01609 on February 16, 2021, and a Final Written Decision is currently due on February 16, 2022, more than eight months before the parallel district court trial begins.

Resolving the validity issue of the challenged claims of the '941 patent in IPR2020-01609 would simplify the issues in the parallel district court trial.

In light of the foregoing, we determine that Factor 6 of *General Plastic* weighs in favor of institution.

*Factor 7: "the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review"*

Patent Owner argues that this factor weighs against institution because "the only way to conduct a trial in this proceeding is to delay the Original Proceeding by at least two months and likely more." Opp. 16; Sur-reply 3. As discussed above, Petitioner Sony filed a Motion for Joinder under § 315(c), seeking to join as a party to IPR2020-01609. The one-year statutory requirement under § 316(a)(11) to issue a final determination may be adjusted in the case of joinder under § 315(c), as here. 35 U.S.C. § 316(a)(11). As such, we determine that Factor 7 of *General Plastic* weighs in favor of institution.

*Conclusion on the General Plastic Factors*

As discussed above, all of the *General Plastic* factors weigh strongly in favor, or in favor, of institution. Based on the particular facts of this proceeding, we conclude that the *General Plastic* factors do not weigh in favor of exercising discretion to deny institution.

*B. Fintiv Factors*

In this proceeding, Patent Owner also argues that each of the factors identified in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*"), weighs in favor of denying

institution. Opp. 16–22. For the reasons set forth below, we decline to exercise our discretion to deny institution under the *Fintiv* factors.

In *Fintiv*, the Board ordered supplemental briefing on a nonexclusive list of factors for consideration in analyzing whether the circumstances of a parallel district court action are a basis for discretionary denial of trial institution under *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential). *Fintiv*, Paper 11 at 5–16. Those factors include:

> 1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
>
> 2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
>
> 3. investment in the parallel proceeding by the court and the parties;
>
> 4. overlap between issues raised in the petition and in the parallel proceeding;
>
> 5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
>
> 6. other circumstances that impact the Board's exercise of discretion, including the merits.

*Id.* at 5–6. Here, we consider these *Fintiv* factors to determine whether we should exercise discretion to deny institution. In evaluating the factors, we take a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review. *Id.* at 6.

*Factor 1: whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

Patent Owner argues that this factor is neutral because no stay has been requested in the district court proceeding. Opp. 18; Sur-reply 3.

Petitioner Sony counters that the parallel district court proceeding is in an early stage such that there is a good chance a stay would be granted. Reply 5–6 (citing Ex. 2001 (Scheduling Order), 26–27). On the record before us, neither party has produced evidence that a stay has been requested or that the district court has considered a stay in the parallel litigation. Accordingly, we find that Factor 1 of *Fintiv* is neutral.

*Factor 2: proximity of the court's trial date to the Board's projected statutory deadline for a final written decision*

It is undisputed that the parallel district court trial will not occur until October 2022. Opp. 5. Nevertheless, Patent Owner argues that this factor weighs against institution because "the majority of the Sony's validity arguments will happen in the district court litigation before a final written decision in this proceeding." Opp. 18–19; Sur-reply 3–4. Petitioner Sony counters that the parallel district court trial is not scheduled until October 17, 2022, and a final decision in this IPR proceeding would occur well before any trial. Reply 6. According to the Scheduling Order of the parallel litigation, the district court trial is scheduled to begin on October 17, 2022, which is about eight months *after* a Final Written Decision would be due on February 16, 2022 in the joined proceeding, IPR2020-01609. Ex. 2001, 27. Even assuming a modest schedule adjustment is needed to accommodate joinder, we do not foresee an adjustment more than eight months. Most likely, our Final Written Decision in the joined IPR proceeding will be entered before the district court trial begins on October 17, 2022, which will simplify or fully resolve the overlapping invalidity issues for the district court trial. Therefore, we find that Factor 2 of *Fintiv* weighs in favor of institution.

*Factor 3: investment in the parallel proceeding by the court and the parties*

Patent Owner argues that the claim construction in the parallel district court proceeding will be fully briefed before a final decision in this IPR proceeding, and that the claim construction ruling will be issued before our issuance of an institution decision in this IPR proceeding. Opp. 19–20; Sur-reply 3–4. Petitioner Sony counters that the parallel district court proceeding is in an early stage in that the *Markman* hearing is four months away, no depositions have been noticed, fact discovery closes in October 2021, and expert discovery closes April 1, 2022. Reply 6–7 (citing Ex. 2001).

Based on the present record, we are persuaded by Petitioner Sony's showing that the district court and the parties have not invested substantially in the merits of the invalidity positions. There is no indication in the record that the parties have completed significant discovery on the merits. We agree with Petitioner Sony that the district court proceeding remains at the very early stages and a significant portion of work still remains to be done in the district court proceeding—e.g., filing joint claim construction brief (June 29, 2021), *Markman* hearing (August 10, 2021), the completion of fact discovery (October 31, 2021), opening expert reports (December 21, 2021), expert discovery (April 1, 2022), and dispositive motion deadline (May 20, 2022). Ex. 2001, 26–27. Therefore, weighing the facts in this particular case, including the time invested by the parties and the district court in the parallel litigation, and the extent to which the investment in the district court proceeding relates to issues of patent validity, we find that Factor 3 of *Fintiv* weighs in favor of institution.

*Factor 4: overlap between issues raised in the petition and in the parallel proceeding*

Patent Owner argues that Petitioner Sony has "asserted grounds of invalidity based on Hellman in combination with Chou—just like its petition here." Opp. 20 (citing Ex. 2002 (Sony's Invalidity Contentions); Ex. 2003 (Appendices A–E to Sony's Invalidity Contentions), 14–15). Patent Owner also contends that Petitioner Sony has not entered any stipulation to mitigate the overlap between the Petition and the parallel district court proceeding. *Id.* at 20–21. Petitioner Sony counters that it asserted invalidity based on numerous additional, non-overlapping references in the parallel district court proceeding. Reply 7.

As discussed above, the district court trial will begin about eight months after the due date for the Final Written Decision in the joined proceeding. Ex. 2001, 27. Most likely, we will address the overlapping validity issues prior to the district court trial, and our Final Written Decision will simplify or fully resolve the issues for the district court trial. *See, e.g.*, *GAF Materials LLC v. Kirsch Research and Dev., LLC*, IPR2021-00192, Paper 14 at 14–15 (PTAB May 25, 2021) ("[I]f the Board will address the overlapping validity issues prior to the district court reaching them at trial, the Board's final written decision will simplify or fully resolve the issues for trial in the litigation."); *see also MED-EL Elektromedizinische Geraete GmbH v. Sonova AG*, IPR2020-00176, Paper 13 at 15 (PTAB June 3, 2020) ("As to the fourth factor, the parties do not dispute that overlap exists between the invalidity issues in this case and in the district court. This overlap may inure to the district court's benefit, however, by simplifying issues for trial should we reach our determination on the challenges raised in

the Petition before trial."). Therefore, we determine that Factor 4 of *Fintiv* weighs in favor of institution.

*Factor 5: whether the petitioner and the defendant in the parallel proceeding are the same party*

It is undisputed that Petitioner Sony is a defendant in the parallel litigation. Opp. 21; Reply 7. Because we will issue a Final Written Decision prior to the conclusion of the parallel district court proceeding, this factor weighs in favor of instituting *inter partes* review.

*Factor 6: other circumstances that impact the Board's exercise of discretion, including the merits.*

The final *Fintiv* factor is a catch-all that takes into account any other relevant circumstances. The decision whether to exercise discretion to deny institution is based on "a balanced assessment of all relevant circumstances in the case, including the merits." Consolidated Trial Practice Guide November 2019 at 58, *available at* https://www.uspto.gov/TrialPractice GuideConsolidated. "For example, if the merits of a ground raised in the petition seem particularly strong on the preliminary record, . . . the institution of a trial may serve the interest of overall system efficiency and integrity because it allows the proceeding to continue in the event that the parallel proceeding settles or fails to resolve the patentability question presented in the PTAB proceeding." *Fintiv*, Paper 11 at 14–15. A full merits analysis is not necessary as part of deciding whether to exercise discretion not to institute, but rather the parties may point out, as part of the factor-based analysis, particular "strengths or weaknesses" to aid the Board

in deciding whether the merits tip the balance one way or another. *Id.* at 15–16.

Patent Owner argues that, by adopting the expert declaration filed in IPR2020-01609, Petitioner Sony's expert, Dr. Zadok, would "have to go against his own prior testimony" as to how the term "agent" should be construed. Opp. 21–22 (citing Ex. 2011 ¶¶ 54–60). Patent Owner contends that "[w]eaknesses in the petition also merit discretionary denial." *Id.*

Petitioner Sony counters that the merits favor institution in view of the institution in IPR2020-01609. Reply 7. Petitioner Sony argues that its expert "stated no terms other than 'license record' needed construction in view of the institution decision," and the expert's prior declaration in the LG case regarding the term "agent" was not accepted by the court in that case in August 2020, seven months before institution in IPR2020-01609. *Id.* (citing Ex. 1013; Ex. 1015 ¶ 33).

Patent Owner's argument regarding conflicting expert testimony is unavailing. Based on this current record, we find Dr. Zadok's testimony submitted in this proceeding is consistent with the court's claim construction order entered on August 19, 2020, in the LG case. Ex. 1013 (Supplemental Claim Construction Order in the LG case), 34–36. Dr. Zadok's prior testimony (Ex. 2011 ¶¶ 54–60) that the term "agent" should be construed pursuant to 35 U.S.C. § 112, ¶ 6, was not accepted by the district court. Ex. 1013, 34–36. Dr. Zadok's testimony in this IPR proceeding merely reflects the district court's claim construction regarding the term "agent."

Furthermore, we address each of Patent Owner's arguments regarding the asserted grounds of unpatentability below (Section III). As discussed below, on this record, we determine that Petitioner Sony has demonstrated

sufficiently for purposes of this Decision that the challenged claims of the '941 patent are unpatentable, and Patent Owner's arguments do not undermine Petitioner Sony's showing at this time. Based on this preliminary record and absence of substantive argument highlighting any particular strengths of the challenge, we find that Factor 6 of *Fintiv* is neutral.

*Conclusion on the Fintiv Factors*

As noted in *Fintiv*, we consider the above six factors when taking "a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review." *Fintiv*, Paper 11 at 6.

Under the particular circumstances of this case, we are not persuaded that the interests of efficiency and integrity of the system would be best served by invoking our authority under § 314(a) to deny institution of a potentially meritorious Petition.

## III. INSTITUTION OF *INTER PARTES* REVIEW

The instant Petition is a "copycat" petition, substantively identical to the TCT's petition, challenging the same claims of the same patent based on the same grounds of unpatentability and essentially supported by the same expert declaration. *Comparing* Pet. 5–61, *with* IPR2020-01609, Paper 1 at 5–64; Mot. 1. In the TCT IPR, we instituted a review as to all of the challenged claims and all of the grounds asserted in the TCT's petition. IPR2020-01609, Paper 7 (Decision Granting Institution), 5–23. In view of the identity of the grounds in the instant Petition and in the TCT's petition, we determine that Petitioner Sony has established sufficiently that instituting an *inter partes* review is warranted for the same reasons stated in our Decision Granting Institution in the TCT IPR. *Id.*

In its Preliminary Response, Patent Owner advances several arguments. Prelim. Resp. 6–34. For the reasons discussed below, we determine that Patent Owner's arguments do not undermine Petitioner Sony's showing at this time for purposes of instituting a review. We address each of Patent Owner's arguments in turn below.

First, Patent Owner argues that the instant Petition should be denied because Petitioner Sony's claim construction position in this proceeding is inconsistent with Petitioner Sony's proposed claim construction in the parallel district court litigation. Prelim. Resp. 13–14 (citing Ex. 2012).

Patent Owner's argument is unavailing. In the instant Petition, Petitioner Sony makes clear that "[b]ased on the similarities between the claims of the '941 Patent and the prior art cited" in this proceeding, Petitioner Sony "does not believe that any claim constructions are needed for the purposes of this review." Pet. 19. Upon consideration of the Petitioner Sony's prior art arguments and supporting evidence in the present record, we find Petitioner Sony's claim construction position in its Petition to be reasonable. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (noting that "we need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy'").

In addition, Patent Owner does not explain meaningfully how the allegedly inconsistent position would impact our preliminary claim construction set forth in our Institution Decision in the TCT IPR. In our Decision, we determined that it was necessary to construe only the claim term "license record" expressly for purposes of the instituting a review,

because we declined to adopt Patent Owner's proposed claim construction of the term "license record," as it would improperly import a limitation (requiring "license record" to be formed from a licensed program) from a preferred embodiment disclosed in the Specification into the claims. IPR2020-01609, Paper 7, 5–9. Therefore, Patent Owner's argument that Petitioner Sony takes an inconsistent claim construction position is unavailing.

Second, Patent Owner argues that the Hellman and Chou combination is cumulative of Schwartz (Ex. 1005 in IPR2020-01184) and the combination of Misra (Ex. 2022) and Ewetz (Ex. 2023), which have already been considered by the Office. Prelim. Resp. 14–23.

However, Patent Owner fails to recognize the advancements in BIOS EEPROM storage devices disclosed in Chou. As Petitioner Sony points out (Pet. 25–26), Chou discloses that, at the time of its invention, "[r]ecent changes in the computer BIOS memory storage devices permit writing data to the BIOS memory, offering the opportunity to provide password protection within the same memory which stores the BIOS routines." Ex. 1005, 1:63–66. Chou also discloses "EEPROM flash devices may be programmed with BIOS routines which permit the user to enter data without requiring the computer to be returned to the manufacture." *Id.* at 2:2–4. Chou further discloses that its "invention makes use of these new BIOS memory devices for effecting security measures which discourage theft." *Id.* at 2:4–7. Chou teaches storing security routines in the BIOS EEPROM to prevent tampering by a user. *Id.* at 3:52–62. Patent Owner does not explain where in Schwartz or the combination of Misra and Ewetz teaches these advancements in BIOS EEPROM storage devices. Prelim. Resp. 14–23. In

short, Patent Owner's argument that the Hellman and Chou combination is cumulative of art already considered by the Office is unavailing.

Third, Patent Owner argues that Hellman and Chou "disclose incompatible (and thus un-combinable) techniques for storing critical data," citing to the Declaration of David Martin, Ph.D., for support. Prelim. Resp. 23–24 (citing Ex. 2015 ¶¶ 106–107).

Patent Owner's argument is conclusory. To support Patent Owner's argument, Dr. Martin testifies that "[i]f BIOS memory . . . is also taken to be addressable by hash values and used for storage of authorization counts based solely on the output of a hashing algorithm (hash value H), then the purchase of a software package with an unfortunate hash value H *could cause* a base unit to overwrite the BIOS instructions or other critical BIOS information." Ex. 2015 ¶ 107 (emphasis added). Dr. Martin's testimony is speculative and unsupported. Dr. Martin's testimony also does not take into account Chou's teachings that storing sensitive information, such as security routines, in the BIOS EEPROM reduces the risk of tampering. Ex. 1005, Abstract, 1:54–2:7, 3:52–62. Therefore, Patent Owner's argument that Hellman and Chou are incompatible and un-combinable is conclusory.

Fourth, Patent Owner argues that it would not have been obvious to modify Hellman to include the recited BIOS memory because one of ordinary skill in the art "would have understood that BIOS is simply irrelevant to the goals and objectives of Hellman's invention" and "Hellman mentions neither BIOS nor an operating system." Prelim. Resp. 25–28 (citing Ex. 2015 ¶¶ 99–106).

However, Patent Owner admitted that "all computers must have a BIOS" during prosecution. Ex. 1002, 51. As noted above, Chou teaches

storing sensitive information, such as security routines, in the BIOS EEPROM to reduce the risk of tampering with that information. Ex. 1005, Abstract, 1:54–2:7, 3:52–62. Dr. Wolfe testifies that, in light of Chou, one of ordinary skill in the art would have been motivated to store Hellman's license information in the BIOS EEPROM, in order to discourage users from tampering the license information and to provide extra protection to the sensitive information. Ex. 1003 ¶¶ 112–116.

In addition, attacking Hellman individually does not undermine Petitioner Sony's obviousness showing that is based on a combination of Hellman and Chou. Non-obviousness cannot be established by attacking references individually where, as here, the ground of unpatentability is based upon a combination of references. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). Rather, the test for obviousness is whether the combination of references, taken as a whole, would have suggested the claimed subject matter to one of ordinary skill in the art. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Therefore, Patent Owner's argument that it would not have been obvious to modify Hellman fails to take into account the teachings of Chou and is unavailing for purposes of instituting a review.

Fifth, Patent Owner argues that "Hellman is a *hardware* device and does not disclose an OS-level *software* 'agent' for setting up a verification structure as Claim 1 requires." Prelim. Resp. 28–34 (emphases added). According to Patent Owner, "[b]ased on Hellman's disclosure (and its embodiment with respect to the record industry), a [person of ordinary skill in the art] would [have understood] the base unit is not a general-purpose computer and that the *agent* is implemented exclusively in specialized *hardware*." *Id.* at 33 (the first emphasis is ours).

Patent Owner admits that Hellman discloses an agent and does not dispute that Hellman's agent performs the claimed function "to set up a verification structure in the erasable, non-volatile memory." *Id.* Patent Owner improperly presumes that Hellman's agent is "implemented *exclusively* in specialized *hardware*." *Id.* (emphases added).

Dr. Wolfe testifies that a person of ordinary skill in the art would have recognized that Hellman's "update unit 36 would have been implemented by a software routine, potentially along with a hardware module," and that "authorization and billing unit 13 may cooperate with the update unit 36 to act as the 'agent.'" Ex. 1003 ¶¶ 137–138. According to Dr. Wolfe, Hellman discloses that "authorization and billing unit 13 stores a table of software in memory 19 that allows it to determine a software package 21 from the software name provided in the request, and software package 21 is identical to software package 17." *Id.* ¶ 138 (citing Ex. 1004, 6:16–30). Dr. Wolfe explains that "[b]ecause authorization and billing unit 13 generates the authorization A that leads to the updating of the authorized use value M in the non-volatile memory 37, a [person of ordinary skill in the art] would have recognized that the authorization and billing unit 13 may be considered an agent." *Id.* As such, the evidence in this current record suggests that Hellman's agent is a combination of software and hardware implementation.

At this stage, we decline to import a negative limitation into the claim term "agent" to exclude a combination of software and hardware. Patent Owner has submitted several district court claim constructions, but has not proffered arguments as to why we should adopt any specific district court constructions. Prelim. Resp. 6–13. Apart from the claims, the Specification of the '941 patent does not use the term "agent," much less sets forth a

definition for the term "agent" that excludes an implementation of software and hardware. The term "agent" was added during prosecution. Ex. 1013 (District Court Claim Construction Order entered in the LG case), 29. Although the claim does not describe how the "agent" fits in structurally with the other components of the system, Patent Owner argued in the LG case that "E2PROM manipulation commands as an example of 'how [the agent] accomplished operation'" of setting up a verification structure in the EEPROM. *Id.* at 30. However, the Specification does not disclose any EEPROM manipulation commands. Therefore, Patent Owner's argument that Hellman does not disclose a software "agent" is unavailing at this time for purposes of institution.

For the foregoing reasons, we determine that Petitioner Sony has established sufficiently that instituting an *inter partes* review is warranted.

## IV. GRANT OF MOTION FOR JOINDER

Joinder in *inter partes* review is subject to the provisions of § 315(c):

> (c) JOINDER.—If the Director institutes an inter partes review, the Director, in his or her discretion, may join as a party to that inter partes review any person who properly files a petition under section 311 that the Director, after receiving a preliminary response under section 313 or the expiration of the time for filing such a response, determines warrants the institution of an inter parties review under section 314.

"Any request for joinder must be filed, as a motion under § 42.22, no later than one month after the institution date of any inter partes review for which joinder is requested." 37 C.F.R. § 42.122(b). As the moving party, Petitioner Sony bears the burden of proving that it is entitled to the requested relief. 37 C.F.R. § 42.20(c). A motion for joinder should: (1) set forth the

reasons joinder is appropriate; (2) identify any new grounds of unpatentability asserted in the petition; (3) explain what impact (if any) joinder would have on the trial schedule for the existing review; and (4) addresses specifically how briefing and/or discovery may be simplified. *See* Frequently Asked Question H5, https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/ptab-e2e-frequently-asked-questions; *see also Kyocera Corp. v. SoftView LLC*, IPR2013-00004, Paper 15 at 4 (PTAB Apr. 24, 2013) (representative) (Order Authorizing Third Party to File Motion for Joinder).

*Factor 1: Reasons Joinder is Appropriate*

Petitioner Sony asserts that its Motion for Joinder is submitted timely within the time set forth in 37 C.F.R. § 42.122(b), not later than one month after institution of the TCT IPR. Mot. 3–4. Petitioner Sony avers that joinder with the TCT IPR is appropriate because this Petition challenges the same claims of the '941 patent on identical grounds to those in the TCT IPR. *Id.* at 5. According to Petitioner Sony, there are no substantive differences between this Petition and TCT's Petition, and Petitioner Sony relies on substantially the same supporting evidence as that in the TCT IPR. *Id.* Petitioner Sony argues that a consolidated proceeding will therefore be more efficient and less wasteful. *Id.* at 5–6. We agree.

Patent Owner argues that it has settled with TCT, and that we should terminate the TCT IPR completely, which would moot Petitioner Sony's Motion for Joinder. Opp. 6–9.

As Patent Owner acknowledges (Opp. 8), the decision to terminate an IPR proceeding with respect to both parties after the parties file a settlement

agreement is discretionary. 35 U.S.C. § 317(a); 37 C.F.R. § 42.72. The decision to grant joinder also is discretionary. 35 U.S.C. § 315(c). The Board decides those motions on a case-by-case basis upon consideration of the totality of the circumstances.

Here, Petitioner Sony's Motion for Joinder was timely filed in accordance with 35 U.S.C. § 315(c), 37 C.F.R §§ 42.22, and 42.122(b), prior to the filing of the joint Motion to Terminate in the TCT IPR. Petitioner Sony's Petition is a "copycat" petition, challenging the same claims of the same patent based on the same grounds of unpatentability and essentially supported by the same expert declaration. Thus, there are no new grounds of unpatentability or new evidence asserted in the Petition. Also, we expect the impact of joinder on the existing schedule, briefing, and discovery to be minimal.

As the AIA legislative history explained:

> The Office anticipates that *joinder will be allowed as of right*—if an inter partes review is instituted on the basis of a petition, for example, a party that files *an identical petition will be joined to that proceeding*, and thus allowed to file its own briefs and make its own arguments.

157 Cong. Rec. S1376 (daily ed. Mar. 8, 2011) (statement of Sen. Kyl) (emphases added).

Petitioner Sony filed its Petition and Motion for Joinder prior to Patent Owner's Motion to Terminate the TCT IPR. Thus, continuation of the TCT IPR was foreseeable and any prejudice to Patent Owner due to continuation is not undue.

In light of the foregoing, we determine that the first factor weighs in favor of joinder.

*Factor 2: Any New Grounds of Unpatentability*

Petitioner Sony asserts that its Petition is substantively identical to the petition in the TCT IPR. Mot. 4, 6–7. Indeed, as noted above, Petitioner Sony presents the same grounds of unpatentability, the same prior art, and essentially the same declarant testimony as the petition in the TCT IPR. *Compare* Pet. 5–61, *with* IPR2020-01609, Paper 1 at 5–64. Petitioner Sony does not assert any new ground of unpatentability that is not already being considered in the TCT IPR, relying on substantially the same arguments and evidence. Accordingly, we determine that the second factor weighs in favor of joinder.

*Factor 3: What Impact Joinder Would Have on the Trial Schedule*

Patent Owner argues that undue delay in the original proceedings alternatively requires denying Petitioner Sony's Motion for Joinder. Opp. 9–11. Petitioner Sony asserts that joinder would not affect the schedule in any forthcoming trial and its participation should result in no changes to the schedule. Mot. 7–8. We agree with Petitioner Sony. Joinder will have minimal impact, if any, on the TCT IPR trial schedule because the instant Petition presents no new issues or grounds of unpatentability and Petitioner Sony consents to the existing trial schedule in the TCT IPR. *Id.* Accordingly, we determine that the third factor weighs in favor of joinder.

*Factor 4: How Briefing and/or Discovery May be Simplified*

Petitioner Sony has agreed, as long as TCT remains as a party to the TCT IPR, to take an "understudy" role, which will simplify briefing and discovery. Mot. 8–10. We agree with Petitioner Sony that joinder would

simplify briefing and discovery because Petitioner Sony agrees to an "understudy" role and consents to the current trial schedule set forth in the TCT IPR. Accordingly, we determine that the fourth factor weighs in favor of joinder.

*Conclusion on Motion for Joinder*

For the reasons stated above, we determine granting Petitioner Sony's Motion for Joinder is warranted.

## IV. ORDER

In view of the foregoing, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted for the following grounds of unpatentability:

| **Claims Challenged** | **35 U.S.C. §** | **References** |
|---|---|---|
| 1, 2, 11, 13 | 103(a) | Hellman, Chou |
| 1–3, 6–14, 16 | 103(a) | Hellman, Chou, Schneck |

FURTHER ORDERED that Petitioner Sony's Motion for Joinder with IPR2020-01609 is *granted*; and Petitioner Sony is joined as a party to IPR2020-01609;

FURTHER ORDERED that the grounds on which trial in IPR2020-01609 were instituted are unchanged, and no other grounds are added in IPR2020-01609;

FURTHER ORDERED that the Scheduling Order entered in IPR2020-01609 (Paper 8) and schedule changes agreed to by the parties in

IPR2020-01609 (pursuant to the Scheduling Order) shall govern the trial schedule in IPR2020-01609;

FURTHER ORDERED that, throughout the trial, all filings in IPR2020-01609 will be consolidated, and no filing by Petitioner Sony alone will be considered without prior authorization by the Board;

FURTHER ORDERED that a copy of this Decision will be entered into the record of IPR2020-01609;

FURTHER ORDERED that the instant proceeding is terminated under 37 C.F.R. § 42.72 and all further filings shall be made in IPR2020-01609; and

FURTHER ORDERED that the case caption in IPR2020-01609 shall be changed to reflect joinder with the instant proceeding in accordance with the attached example.

PETITIONER:

Gregory Gewirtz
Jonathan David

LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP
litigation@lernerdavid.com
ggewirtz@lernerdavid.com
jdavid@lernerdavid.com

PATENT OWNER:

Nicholas Peters
David Gosse
Paul Henkelmann

FITCH, EVEN, TABIN & FLANNERY LLP
ntpete@fitcheven.com
dgosse@fitcheven.com
phenkelmann@fitcheven.com

John Rondini
John LeRoy
Marc Lorelli

BROOKS KUSHMAN P.C.
jrondini@brookskushman.com
mlorelli@brookskushman.com
ancc0120IPR@brookskushman.com

Trials@uspto.gov
571-272-7822

Paper 17
Date: July 23, 2021

*Example Case Caption for Joined Proceeding*

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

TCT MOBILE (US) INC.,
HUIZHOU TCL MOBILE COMMUNICATION CO. LTD., SHENZHEN TCL CREATIVE CLOUD TECHNOLOGY CO., LTD.,
SONY MOBILE COMMUNICATIONS AB, SONY MOBILE COMMUNICATIONS, INC., SONY ELECTRONICS INC., and SONY CORPORATION,
Petitioner,

v.

ANCORA TECHNOLOGIES, INC.,
Patent Owner.

---

IPR2021-00663[3]
Patent 6,411,941 B1

---

[3] Sony Mobile Communications AB, Sony Mobile Communications, Inc., Sony Electronics Inc., and Sony Corporation who filed a petition in IPR2021-00663 have been joined with this proceeding.

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Central District of California on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 8:19-cv-2192 | 11/12/2019 | for the Central District of California |

| PLAINTIFF | DEFENDANT |
|---|---|
| TCT MOBILE (US) INC. AND HUIZHOU TCL MOBILE COMMUNICATION CO. LTD. | ANCORA TECHNOLOGIES, INC. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| Order of Dismissal |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Kiry K. Gray | Margo M. Mead | 6/17/2021 |

**Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Eastern District of Texas on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 4:19-cv-624 | 8/27/2019 | for the Eastern District of Texas |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | TCL Corp., TCL Communication Ltd., TCL Communication Technology Holdings Ltd., and TCL Communication Holdings Ltd. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

Case transferred from the Eastern District of Texas to the Central District of California on 2/7/2020, and assigned case number 2:20-cv-01252 GW (ASx) . See attached Order of Dismissal.

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| Kiry K. Gray | Margo Mead | 6/17/2021 |

**Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy**

Trials@uspto.gov
571-272-7822

Paper 20
Date: July 16, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

SONY MOBILE COMMUNICATIONS AB, SONY MOBILE COMMUNICATIONS, INC., SONY ELECTRONICS INC., and SONY CORPORATION,
Petitioner,

v.

ANCORA TECHNOLOGIES, INC.,
Patent Owner.

---

IPR2020-01609[1]
IPR2021-00663
Patent 6,411,941 B1

---

Before THU A. DANG, JONI Y. CHANG, and KEVIN W. CHERRY, *Administrative Patent Judges.*

CHANG, *Administrative Patent Judge.*

TERMINATION
Due to Settlement After Institution of Trial
*35 U.S.C. § 317; 37 C.F.R. § 42.74*

---

[1] Sony Mobile Communications AB, Sony Mobile Communications, Inc., Sony Electronics Inc., and Sony Corporation (collectively "Petitioner Sony"), who filed a Petition in IPR2021-00663, have been joined with IPR2020-01609. IPR2020-01609 was terminated with respect to TCT Mobile (US) Inc., Huizhou TCL Mobile Communication Co., Ltd., and Shenzhen TCL Creative Cloud Technology Co., Ltd. Paper 21.

Petitoiner Sony and Ancora Technologies, Inc. ("Patent Owner") filed a Joint Motion to Terminate in each of the above-identified proceedings. Paper 24 ("Mot.").[2] The parties also filed a true copy of their Settlement Agreement in connection with the termination as required by 35 U.S.C. § 317(b) and 37 C.F.R. § 42.74(b). Ex. 2026. Pursuant to 37 C.F.R. § 42.74(c), the parties filed a joint request to treat the Settlement Agreement as business confidential information kept separate from the file of the involved patent. Paper 23.

For the reasons set forth below, the Joint Motions to Terminate are *granted.* Also, the Joint Requests to File Settlement Agreement as Business Confidential Information are *granted.*

Under the Leahy-Smith America Invents Act, settlement between the parties to a proceeding is encouraged. Notably, 35 U.S.C. § 317(a), in part, provides the following:

> (a) IN GENERAL.—An inter partes review instituted under this chapter shall be terminated with respect to any petitioner upon the joint request of the petitioner and the patent owner, unless the Office has decided the merits of the proceeding before the request for termination is filed. If the inter partes review is terminated with respect to a petitioner under this section, no estoppel under section 315(e) shall attach to the petitioner, or to the real party in interest or privy of the petitioner, on the basis of that petitioner's institution of that inter partes review.

In the Joint Motions, the parties indicate that they "reached the mutual decision to settle this proceeding and their related district court litigation regarding the '941 patent." Mot. 2. Although the instant *inter partes* reviews have been instituted, we have not entered a final written decision.

---

[2] Our citations refer to IPR2020-01609.

*Id.* In addition, the parties "certify that there are no collateral agreements or understandings made in connection with, or in contemplation of, the termination of the present proceeding." *Id.* at 3.

Upon review of the procedural posture of these proceedings and the facts before us, we determine that the contentions presented in the Joint Motion have merit, and that it is appropriate to terminate these proceedings.

In consideration of the foregoing, it is hereby:

ORDERED that the Joint Motion to Terminate filed in each above-identified proceeding is *granted*;

FURTHER ORDERED that both IPR2020-001609 and IPR2021-00663 are terminated;

FURTHER ORDERED that the Joint Request to File Settlement Agreement as Business Confidential Information and to keep such settlement agreement separate from the patent file, and to make it available only to Federal Government agencies on written request, or to any person on a showing of good cause, pursuant to 35 U.S.C. § 317(b) and 37 C.F.R. § 42.74(c), filed in each above-identified proceeding is *granted.*

For PETITIONER:

Gregory Gewirtz
Jonathan David
LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP
Jdavid.ipr@ldlkm.com
ggewirtz.ipr@ldlkm.com

For PATENT OWNER:

John Rondini
Marc Lorelli
BROOKS KUSHMAN P.C.
jrondini@brookskushman.com
mlorelli@brookskushman.com

Trials@uspto.gov
571-272-7822

Paper 25
Date: July 16, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

SONY MOBILE COMMUNICATIONS AB, SONY MOBILE COMMUNICATIONS, INC., SONY ELECTRONICS INC., and SONY CORPORATION,
Petitioner,

v.

ANCORA TECHNOLOGIES, INC.,
Patent Owner.

---

IPR2020-01609[1]
IPR2021-00663
Patent 6,411,941 B1

---

Before THU A. DANG, JONI Y. CHANG, and KEVIN W. CHERRY, *Administrative Patent Judges.*

CHANG, *Administrative Patent Judge.*

TERMINATION
Due to Settlement After Institution of Trial
*35 U.S.C. § 317; 37 C.F.R. § 42.74*

---

[1] Sony Mobile Communications AB, Sony Mobile Communications, Inc., Sony Electronics Inc., and Sony Corporation (collectively "Petitioner Sony"), who filed a Petition in IPR2021-00663, have been joined with IPR2020-01609. IPR2020-01609 was terminated with respect to TCT Mobile (US) Inc., Huizhou TCL Mobile Communication Co., Ltd., and Shenzhen TCL Creative Cloud Technology Co., Ltd. Paper 21.

Petitoiner Sony and Ancora Technologies, Inc. ("Patent Owner") filed a Joint Motion to Terminate in each of the above-identified proceedings. Paper 24 ("Mot.").[2] The parties also filed a true copy of their Settlement Agreement in connection with the termination as required by 35 U.S.C. § 317(b) and 37 C.F.R. § 42.74(b). Ex. 2026. Pursuant to 37 C.F.R. § 42.74(c), the parties filed a joint request to treat the Settlement Agreement as business confidential information kept separate from the file of the involved patent. Paper 23.

For the reasons set forth below, the Joint Motions to Terminate are *granted.* Also, the Joint Requests to File Settlement Agreement as Business Confidential Information are *granted.*

Under the Leahy-Smith America Invents Act, settlement between the parties to a proceeding is encouraged. Notably, 35 U.S.C. § 317(a), in part, provides the following:

> (a) IN GENERAL.—An inter partes review instituted under this chapter shall be terminated with respect to any petitioner upon the joint request of the petitioner and the patent owner, unless the Office has decided the merits of the proceeding before the request for termination is filed. If the inter partes review is terminated with respect to a petitioner under this section, no estoppel under section 315(e) shall attach to the petitioner, or to the real party in interest or privy of the petitioner, on the basis of that petitioner's institution of that inter partes review.

In the Joint Motions, the parties indicate that they "reached the mutual decision to settle this proceeding and their related district court litigation regarding the '941 patent." Mot. 2. Although the instant *inter partes* reviews have been instituted, we have not entered a final written decision.

---

[2] Our citations refer to IPR2020-01609.

*Id.* In addition, the parties "certify that there are no collateral agreements or understandings made in connection with, or in contemplation of, the termination of the present proceeding." *Id.* at 3.

Upon review of the procedural posture of these proceedings and the facts before us, we determine that the contentions presented in the Joint Motion have merit, and that it is appropriate to terminate these proceedings.

In consideration of the foregoing, it is hereby:

ORDERED that the Joint Motion to Terminate filed in each above-identified proceeding is *granted*;

FURTHER ORDERED that both IPR2020-001609 and IPR2021-00663 are terminated;

FURTHER ORDERED that the Joint Request to File Settlement Agreement as Business Confidential Information and to keep such settlement agreement separate from the patent file, and to make it available only to Federal Government agencies on written request, or to any person on a showing of good cause, pursuant to 35 U.S.C. § 317(b) and 37 C.F.R. § 42.74(c), filed in each above-identified proceeding is *granted.*

For PETITIONER:

Gregory Gewirtz
Jonathan David
LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP
Jdavid.ipr@ldlkm.com
ggewirtz.ipr@ldlkm.com

John Schnurer
Kyle Canavera
Yun Lu
PERKINS COIE LLP
Schnurer-ptab@perkinscoie.com
Canavera-ptab@perkinscoie.com
Lu-ptab@perkinscoie.com

For PATENT OWNER:

Nicholas Peters
David Goose
Paul Henkelmann
FITCH, EVEN, TABIN & FLANNERY LLP
ntpete@fitcheven.com
dgosse@fitcheven.com
phenkelmann@fitcheven.com

John Rondini
John LeRoy
Marc Lorelli
BROOKS KUSHMAN P.C.
jrondini@brookskushman.com
jleroy@brookskushman.com
mlorelli@brookskushman.com

AO 120 (Rev. 08/10)

| TO: | Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court District of Delaware on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 19-1703-CFC | | District of Delaware |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | Sony Corporation, Sony Mobile Communications AB, Sony Mobile Communications (USA) Inc., and Sony Mobile Communications, Inc. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| Notice of Dismissal with Prejudice. |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| John A. Cerino | /s/ F. Scarpato | 7/14/2021 |

**Copy 1—Upon initiation of action, mail this copy to Director** **Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director** **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court W/D of Texas - Waco Division on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 6:21-cv-00735 | 7/16/2021 | W/D of Texas - Waco Division |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | Google, Inc. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| | | |

**Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court W/D of Texas - Waco Division on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 6:21-cv-00737 | 7/16/2021 | W/D of Texas - Waco Division |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | Roku, Inc. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above---entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above---entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| | | |

**Copy 1---Upon initiation of action, mail this copy to Director Copy 3---Upon termination of action, mail this copy to Director**
**Copy 2---Upon filing document adding patent(s), mail this copy to Director Copy 4---Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court W/D of Texas - Waco Division on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 6:21-cv-00738 | 7/16/2021 | W/D of Texas - Waco Division |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | NINTENDO CO., LTD., and<br>RETRO STUDIOS, INC. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| | | |

**Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy**

AO 120 (Rev. 08/10)

| TO: Mail Stop 8<br>Director of the U.S. Patent and Trademark Office<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court W/D of Texas - Waco Division on the following

☐ Trademarks or ☑ Patents. ( ☐ the patent action involves 35 U.S.C. § 292.):

| DOCKET NO. | DATE FILED | U.S. DISTRICT COURT |
|---|---|---|
| 6:21-cv-739 | 7/16/2021 | W/D of Texas - Waco Division |

| PLAINTIFF | DEFENDANT |
|---|---|
| Ancora Technologies, Inc. | Vizio, Inc. |

| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
|---|---|---|
| 1 6,411,941 | 6/25/2002 | Ancora Technologies, Inc. |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| DATE INCLUDED | INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading | |
|---|---|---|
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| DECISION/JUDGEMENT |
|---|
| |

| CLERK | (BY) DEPUTY CLERK | DATE |
|---|---|---|
| | | |

**Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director**
**Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy**