Exhibit “D4”

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re reexamination of:	Confirmation No.: 2214
Frederic B. RICHARDSON, III	Art Unit: 3992
Control No.: 90/010,831	Examiner: HENEGHAN, Matthew
Filed: January 22, 2010	Atty. Docket: 2914.001REX0
For: **System for Software Generation**	

Reply to Office Action in Ex Parte Reexamination

Mail Stop Ex Parte Reexamination

Central Reexamination Unit
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Patent Owner hereby replies to the Office Action in the above-captioned *ex parte* reexamination dated September 28, 2010. The due date for reply is November 29, 2010.

Status of the Claims is reflected in the listing of claims, which begins on page 3 of this paper.

Remarks begin on page 7 of this paper.

If additional fees are necessary to prevent abandonment of this reexamination, then such fees are hereby authorized to be charged to our Deposit Account No. 19-0036.

Table of Contents

Listing of Claims

Original claims 1-20 from U.S. Patent No. 5,490,216 to Richardson ("the '216 patent") are subject to *ex parte* reexamination. No claims are cancelled or amended.

1. A registration system for licensing execution of digital data in a use mode, said digital data executable on a platform, said system including local licensee unique ID generating means and remote licensee unique ID generating means, said system further including mode switching means operable on said platform which permits use of said digital data in said use mode on said platform only if a licensee unique ID first generated by said local licensee unique ID generating means has matched a licensee unique ID subsequently generated by said remote licensee unique ID generating means; and wherein said remote licensee unique ID generating means comprises software executed on a platform which includes the algorithm utilized by said local licensee unique ID generating means to produce said licensee unique ID.

2. The system of claim 1, wherein said local licensee unique ID generating means generates said local licensee unique ID by execution of a registration algorithm which combines information in accordance with said algorithm, said information uniquely descriptive of an intending licensee of said digital data to be executed in said use mode.

3. The system of claim 2, wherein said mode switching means permits operation of said digital data in said use mode in subsequent execution of said digital data only if said licensee unique ID generated by said local licensee unique ID generating means has not changed.

4. The system of claim 3, wherein said local licensee unique ID generating means comprises part of said digital data when executed on said platform.

5. The system of claim 4, wherein said mode switching means comprises part of said digital data when executed on said platform.

6. The system of claim 5, wherein the information utilized by said local licensee unique ID generating means to produce said licensee unique ID comprises prospective licensee details including at least one of payment details, contact details and name.

7. The system of claim 1, said system further including platform unique ID generating means, wherein said mode switching means will permit said digital data to run in said use mode in subsequent execution of said digital data on said platform only if said platform unique ID has not changed.

8. The system of claim 7, wherein said platform unique ID generating means comprises part of said digital data when executed on said platform.

9. The system of claim 8, wherein said platform unique ID generating means utilizes hard disc or other platform information to determine said platform unique ID.

10. The system of claim 1, wherein said platform comprises a computer operating system environment.

11. The system of claim 10, wherein said digital data comprises a software program adapted to run under said operating system environment.

12. A registration system attachable to software to be protected, said registration system generating a security key from information input to said software which uniquely identifies an intended registered user of said software on a computer on which said software is to be installed; and wherein said registration system is replicated at a registration authority and used for the purposes of checking by the registration authority that the information unique to the user is correctly entered at the time that the security key is generated by the registration system.

13. The registration system of claim 12, wherein said security key is generated by a registration number algorithm.

14. The registration system of claim 13, wherein said registration number algorithm combines information entered by a prospective registered user unique to that user with a serial number generated from information provided by the environment in which the software to be protected is to run.

15. The registration system of claim 12, wherein said registration system checks at the time of boot of said software as to whether it is a first boot of the software to be protected or a subsequent boot, and, if a subsequent boot is detected, then environment and user details are compared to determine whether the program reverts to a demonstration mode and a new user registration procedure is to commence or a full version run.

16. The registration system of claim 15, wherein said environment details comprise at least one element which is not user-configurable on the platform.

17. A method of control of distribution of software, said method comprising providing mode-switching means associated with said software adapted to switch said software between a fully enabled mode and a partly enabled or demonstration mode, said method further comprising providing registration key generating means adapted to generate a registration key which is a function of information unique to an intending user of the software; said mode-switching means switching said software into fully enabled mode only if an enabling key provided to said mode-switching means by said intending user at the time of registration of said software has matched identically with said registration key; and wherein said enabling key is communicated to said intending user at the time of registration of said software; said enabling key generated by a third party means of operation of a duplicate copy of said registration key generating means.

18. The method of claim 17, wherein said registration key is also a function of the environment in which said software is installed.

19. A remote registration station incorporating remote licensee unique ID generating means, said station forming part of a registration system for licensing execution of digital data in a use mode, said digital data executable on a platform, said system including local licensee unique ID generating means, said system further including mode switching means operable on said platform which permits use of said digital data in said use mode on said platform only if a licensee unique ID generated by said local licensee unique ID generating means has matched a licensee unique ID generated by said remote licensee unique ID generating means; and wherein said remote licensee unique ID generating means comprises software executed on a platform which includes the algorithm utilized by said local licensee unique ID generating means to produce said licensee unique ID.

20. A method of registration of digital data so as to enable execution of said digital data in a use mode, said method comprising an intending licensee operating a registration system for licensing execution of digital data in a use mode, said digital data executable on a platform, said system including local licensee unique ID generating means and remote licensee unique ID generating means, said system further including mode switching means operable on said platform which permits use of said digital data in said use mode on said platform only if a licensee unique ID generated by said local licensee unique ID generating means has matched a licensee unique ID generated by said remote licensee unique ID generating means; and wherein said remote licensee unique ID generating means comprises software executed on a platform which includes the algorithm utilized by said local licensee unique ID generating means to produce said licensee unique ID.

Remarks

The '216 patent has 20 total claims, of which claims 1, 12, 17, 19 and 20 are independent claims. Claims 1-20 are subject to *ex parte* reexamination and stand rejected in the Office Action dated September 28, 2010 ("Office Action"). The Patent Owner, Uniloc Singapore Private Limited ("Uniloc") respectfully traverses the rejections. Based on the following remarks, Uniloc respectfully requests that all outstanding rejections be reconsidered and withdrawn.

Section I provides a statement concerning the substance of the interview conducted on November 17, 2010. **Section II** provides some relevant background information, including the status of the litigation and an overview of the claimed invention with reference to Declarations from Messrs. Richardson and Marwaha under 37 CFR § 1.132 ("Rule 132"). **Section III** addresses issues of law that pertain to the Office Action, claim construction, and this response. **Section IV** addresses the adopted substantive claim rejections from the Office Action, with reference to the Rule 132 Declaration from William Rosenblatt. **Section V** addresses objective indicia of non-obviousness with reference to the Rule 132 Declaration from Brad Davis.

Also attached hereto are the following Exhibits:

Exhibit A: Rule 132 Declaration of William Rosenblatt

Exhibit B: Rule 132 Declaration of Ric B. Richardson

Exhibit C: Rule 132 Declaration of Brad Davis

Exhibit D: Rule 132 Declaration of Ravindra Marwaha

Exhibit E: Transcript of Martin E. Hellman, Uniloc USA, Inc. et al. v. Microsoft Corp., C.A. No. 03-440 (D.R.I.)

Exhibit F: *Uniloc USA, Inc. et al. v. Microsoft Corp.*, 447 F.Supp.2d 177 (D.R.I. 2006), Decision and Order Regarding Claim Construction

Exhibit G: *Uniloc USA et al. v. Microsoft Corp.*, Case No. 2008-1121, (Fed. Cir. 2008), Opinion, Including Affirmation of Claim Construction

I. STATEMENT OF THE SUBSTANCE OF THE INTERVIEW

An interview was held on Wednesday, November 17, 2010, with Primary Examiner Matthew Heneghan, and two conferees. Present at the interview for Uniloc were: Ric B. Richardson III (Inventor and Founder), Brad Davis (CEO, current Board member of Uniloc Singapore Private Limited), Sean D. Burdick (Uniloc Patent Counsel, Reg. No. 51,513), William Rosenblatt (Technical Expert), Robert G. Sterne (Reexam Counsel, Reg. No. 28,912), Jon E. Wright (Reexam Counsel, Reg. No. 50,720), Robert W. Molitors (Reexam Counsel, Reg. No. 66,726), James L. Etheridge (Uniloc Outside Counsel, Reg. No. 37,614.)

At the interview, Uniloc presented a PowerPoint presentation, a copy of which was provided to the panel for the record. As outlined in the presentation, the following areas were discussed:

- Introductions
- Background of Invention Claimed in U.S. Patent No. 5,490,216
- Overview of Uniloc
- Microsoft Alleged Infringement
- U.S. Patent No. 4,658,093 to Hellman in view of U.S. Patent No. 5,291,598 to Grundy and Why Claims 1-20 are patentable over the Combination
- Objective Indicia of Non-Obviousness

The substance of the interview followed this agenda. No agreement was reached on the claims in reexamination.

II. BACKGROUND INFORMATION

A. Status of Concurrent Litigation

Uniloc filed its initial suit against Microsoft Corporation in the United States District Court for the District of Rhode Island in September 2003 for infringement of the '216 patent. *See Uniloc USA, Inc. et al. v. Microsoft Corp.*, C.A. No. 03-440 (D.R.I.). In October 2007, the Rhode Island District court granted summary judgment of non-infringement in Microsoft's favor. Uniloc appealed to the United States Court of Appeals for the Federal Circuit. In August 2008, the Federal Circuit reversed and remanded the district court's grant

of summary judgment. *See Uniloc USA et al. v. Microsoft Corp.*, Case No. 2008-1121 (Fed. Cir. 2008).

On remand, in April 2009, a jury awarded Uniloc $388 million in damages based on Microsoft's infringement of the '216 patent. However, in September 2009, the district court granted Microsoft's motion for judgment as a matter of law (JMOL) for non-infringement. Uniloc filed an appeal with the United States Court of Appeals for the Federal Circuit in February 2010. The issue currently on appeal to the Federal Circuit is whether the district court properly entered a JMOL in this case on infringement and associated damages. That case was argued on September 7, 2010.

The issue of claim construction is not on appeal. The district court's August 22, 2006, claim construction order is attached as Exhibit F. The Federal Circuit reviewed the district court's claim construct de novo in its 2008 opinion and concluded that the "district court correctly construed the 'licensee unique ID' as a unique identifier associated with a licensee that can be, but is not limited to, personally identifiable information about the licensee or user." (See, Exhibit G, p. 12.) Furthermore, the district court concluded that "neither Hellman nor Wolfe disclose use of unique user information in lieu of a hardware identifier based system." *Uniloc USA, Inc. v. Microsoft Corp.*, 640 F.Supp.2d 150, 182 (D.R.I. 2009.)

B. Claimed Invention

1. Background

The concept behind the '216 patent was Ric Richardson's idea of "try before you buy" software. Mr. Richardson was involved in the computer music field in the early 1990's. He owned the rights to a computer music program, One-Step, which he wanted to sell. However, music stores at that time were not interested in stocking computer software. Mr. Richardson therefore had to figure out a method of distributing free samples of the program in a demonstration mode. Mr. Richardson wished to do so in the hopes that people would try the program and then be able to activate the software. Activation would occur from the piece of media containing the demonstration version (e.g., a personal computer), after purchasing the rights to do so. (*See,* Richardson Dec., ¶7.)

During Mr. Richardson's investigation, an Apple computer representative told Mr. Richardson that all machines coming off of the production line were "identical." Mr.

Richardson knew that could not be true. After some research, he discovered that there were ways to identify a "fingerprint" of a particular computer associated with a particular user that included information such as processor serial settings and branding, hard disk error maps, and information associated with the user. After additional research, and trial and error, Mr. Richardson drafted and filed a patent application in the Australian patent office in September 1992. About one year later, in September 1993, he filed the application with the U.S. Patent and Trademark Office. (*See,* Richardson Dec., ¶8.) Mr. Richardson also enlisted the help of some developers to transform the ideas claimed in the '216 patent into an actual product and concurrently moved forward with Uniloc Corporation in order to market and further develop the product activation software concept. (*See.* Richardson Dec., ¶9.)

Mr. Richardson then applied the new software product with the One-Step music software, later renamed TrueTime, and set off to fulfill his goal of selling computer music software. (*See,* Richardson Dec., ¶10.) But Mr. Richardson realized that companies were far more interested in applying the product activation software concept to their own software products. Companies wanted to know how Mr. Richardson could lock a computer program so people could use the software in a demonstration mode before deciding to purchase it. This locking prevented casual copying. Unlocking the software (or enabling full use) relied on a registration system that used, in part, attributes of the individual and the individual's own specific computer. (*See,* Richardson Dec., ¶11.) Mr. Richardson's focus accordingly shifted to corporate accounts with companies interested in the product activation software solution concept. His approach was to demonstrate the embedding of the software activation feature in a software title by adding the '216 patent activation software to an existing software program, a process Mr. Richardson called "demorize." Mr. Richardson would then actually demonstrate to a prospective software publisher how the product activation software solution software worked with their actual program. In fact, at one demonstration with WordPerfect, they were sure Mr. Richardson was practicing some type of magic and could not believe such a concept worked. No one else had developed such a concept as product activation software; indeed, these early demonstrations even preceded the prevalence of the Internet. (*See,* Richardson Dec., ¶12.)

In 1993, Mr. Richardson demonstrated the product activation software solution concept, based on the '216 patent technology, to a variety of manufacturing and software distribution companies. One company was IBM. The day after the first demonstration to

IBM in Boulder, Colorado, Mr. Richardson received a partnership proposal that resulted in a marketing agreement that continued through 1996. (*See,* Richardson Dec., ¶13.) (*See,* Marwaha Dec., ¶¶4-8.).

Under the IBM partnership, one of Uniloc's first successes was the sale of thousands of copies of a software package by the name of "First Aid," developed by CyberMedia, which was featured on the cover of Windows Sources Magazine in 1994. Uniloc also developed a relationship with the publisher Ziff Davis to distribute unlockable versions of software. These were featured on the front cover of their magazines, including Windows Sources Magazine. (*See,* Richardson Dec., ¶14.)

In 1997-1998, Uniloc produced preloaded, lockable editions of popular software products that were included on new personal computers. Distribution agreements had been reached with companies such as eMachines and Toshiba. Family PC magazine also featured Mr. Richardson's unlockable software on the cover of their magazine in 2000. (*See,* Richardson Dec., ¶15.) Uniloc prepared demonstration diskettes/CDs for over 1000 products. Retail sales included "end-cap" displays in retail software storefronts throughout the United States. (*See,* Richardson Dec., ¶16.) By the end of 2001 Uniloc was responsible for the distribution of over 1.4 million copies of CDs with over 1 million products pre-loaded and distributed in e-machine computers that incorporated the '216 patent technology. (*See,* Richardson Dec., ¶17.)

Business continued to expand including new business relationships with companies including Toshiba. For example, all Toshiba laptops shipped by mid-2002 included a DVD with thirty locked software titles using the '216 patented technology. (*See,* Richardson Dec., ¶18.)

2. Brief overview of the claimed invention

The '216 patent introduces the concept of controlling usage of software on a computer system by generating local and remote licensee unique IDs. A "local licensee unique ID" is generated for the intended licensee. It preferably combines information entered by a prospective user that is unique to that user, along with an identifier generated from information provided by the environment on which the protected software is to run. (*See,* Richardson Dec., ¶5.) The algorithm that generates the local licensee unique ID is duplicated at a remote location under the control of the licensor and generates a "remote licensee unique

ID" at the remote location. The local and remote licensee unique IDs are compared and if they match identically, the system will allow licensed operation (e.g., full, unrestricted use) of the software. (*See,* Richardson Dec., ¶6.)

III. LEGAL STANDARDS

The standard of review for determining patentability is "preponderance of the evidence." (MPEP § 706.I.) The examiner must weigh the evidence presented for and against patentability and if it is more likely than not that the claims are patentable, they must be allowed. (*Id.*) Patentability is determined through the lens of one having ordinary skill in the art at the time the application was filed. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc.) Further, the scope of the claims in patent applications is to be determined "not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction 'in light of the specification as it would be interpreted by one of ordinary skill in the art.'" *Id.* (quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)).

A. Claim Construction

Despite the fact that Patent Owner in reexamination does not have the same freedom to amend claims as applicants do during regular prosecution, the Office nonetheless uses the "broadest reasonable interpretation" standard during reexamination. MPEP 2258.G; *see also In re Trans Texas Holdings, Corp.*, 498 F.3d 1290, 1292 (Fed. Cir. 2007). However, even under that standard, the Office must still interpret "the scope of claims ... not solely on the basis of the claim language, but upon giving claims their broadest reasonable interpretation 'in light of the specification as it would be interpreted by one of ordinary skill in the art.' MPEP 2111; citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (emphasis added); *see also, In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

Indeed, the Federal Circuit has stated that the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification." *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997) (emphasis added). Claim construction under the "broadest reasonable

construction" rubric is thus not an unfettered license to divorce the claims from the specification of which they are a part. For instance, in *In re Buszard*, the Federal Circuit found the PTO's alleged "broadest reasonable interpretation" to be unreasonable where the claims and the specification specifically supported the applicant's construction and were contrary to the Office's construction. *In re Buszard*, 504 F.3d 1364, 1367 (Fed. Cir. 2007). It is thus well settled that under the "broadest reasonable interpretation" standard, the Office is still required to interpret the claims in a reasonable manner and in light of the specification.

B. Means Plus Function Limitations

Several claimed elements are presented in the functional format permitted by 35 U.S.C. § 112, paragraph 6, in "means-plus-function language." (*See*, Office Action, p. 5.) Where means-plus-function language is used to define characteristics, the "[d]isclosure may be express, implicit, or inherent," and "USPTO personnel are to give the claimed means plus function limitations their broadest reasonable interpretation consistent with all corresponding structures or materials described in the specification and their equivalents including the manner in which the claimed functions are performed." (MPEP 2106(II)(C); citing *Kemco Sales, Inc. v. Control Papers Company, Inc.*, 208 F.3d 1352 (Fed. Cir. 2000).

For example, the structure corresponding to the claim 1 term "local licensee unique ID generating means," is disclosed in the '216 patent as structure corresponding to both software, in the form of an algorithm, and hardware in the form of a summer. Specifically with respect to software, the '216 patent states that the "algorithm, in this embodiment, combines by addition the serial number 50 with the software product name 64 and customer information 65 and previous user identification 22 to provide registration number 66." (*See,* '216 patent, 11:53-56.) Specifically with respect to hardware, the '216 patent states that, for example, "[s]ummer 85 acts as a local licensee unique ID generating means by combining, by addition, customer information C, product information P and serial number S in order to provide a local licensee unique ID here designated Y." (*See,* '216 patent 12:62-65.)

Based on the disclosed structure from the '216 patent specification, a person of skill in the art would readily appreciate that, for example, the "local licensee unique ID generating means" of claim 1 is directed to the function of generating a local licensee unique ID/registration key. And the corresponding structural component is a summation algorithm or a summer as described in the specification, in addition to all equivalents. With respect to

the "remote licensee unique ID generating means," the '216 specification similarly discloses the corresponding structure both as a software algorithm and as hardware in the form of a summer.

As noted, the Office recognized the means-plus-function nature of some of the claimed elements and specifically noted the corresponding structure in the '216 patent specification. (Office Action p. 5.) But the Office did not explicitly recognize that a range of equivalent structures may also fall within the claim scope. The district court's 2008 claim construction analysis for the means-plus-function claims is therefore set forth below for ease of reference.

Term	District Court Construction
local licensee unique ID Generating Means:	"[T]he '216 Patent discloses as corresponding structure both software, in the form of an algorithm, see '216 Patent, col. 11, ll. 53-56, and hardware, in the form of a summer. See id, at col. 12, ll. 62-65." (*Uniloc USA, Inc. v. Microsoft Corp.*, 447 F.Supp.2d 177, 191 (D.R.I. 2006).) "Function: to generate a local or remote licensee unique ID/registration key; Structure: a summation algorithm or a summer and equivalents thereof." *Id.* at 192.
remote licensee unique ID Generating Means:	"[T]he '216 Patent discloses as corresponding structure both software, in the form of an algorithm, see '216 Patent, col. 11, ll. 53-56, and hardware, in the form of a summer. See id, at col. 12, ll. 62-65." *Id.* at 191. "Function: to generate a local or remote licensee unique ID/registration key; Structure: a summation algorithm or a summer and equivalents thereof." *Id.* at 192.
Mode Switching Means:	"[T]he specification discloses both hardware, in the form of a comparator, see '216 Patent, col. 13, ll. 37-40 ('[c]omparator 90 together with gates 91, 92 and relay 93 comprise one particular form of mode switcher or switching platform 83 of various kinds of code such as the code of types D and U'), and software, in the form of code. Id. at col. 6, ll. 12-14 ('[m]ode switching means can comprise execution of the code portion which additionally performs a comparison of the locally and remotely generated registration numbers'.)" *Id.* at 199. "Function: to permit the digital data or software to run in a use mode/fully enabled mode if the locally generated licensee unique ID/registration key matches with the remotely generated a licensee unique ID/enabling key; Structure: program code which performs a comparison of two numbers or a comparator and equivalents thereof." *Id.* at 200.

Platform Unique ID Generating Means:	"In this case, the structure disclosed is software logic, *See, e.g.*, '216 Patent, col. 3, ll. 54-55, and the box in figure 8 labeled as a 'platform unique I.D. generator.'" *Id.* at 207. "Function: to generate a platform unique ID; Structure: a summation algorithm or a summer and equivalents thereof." *Id.* at 208.
Registration Key Generating Means:	"[T]he '216 Patent discloses as corresponding structure both software, in the form of an algorithm, see '216 Patent, col. 11, ll. 53-56, and hardware, in the form of a summer. See id, at col. 12, ll. 62-65." *Id.* at 191. "Function: to generate a local or remote licensee unique ID/registration key; Structure: a summation algorithm or a summer and equivalents thereof." *Id.* at 192.

C. Legal Overview of Obviousness Rejections Under 35 U.S.C. § 103

"A patent may not be obtained ... if the differences between the subject matter sought to be patented and the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art to which the subject matter pertain." 35 U.S.C. §103(a.) In *KSR Int'l v. Teleflex* 550 U.S. 398 (2006), the Supreme Court reaffirmed its decision in *Graham v. John Deere* that held that "the scope and content of the prior art [must] be determined; differences between the prior art and the claims at issue [must] be ascertained; and the level of ordinary skill in the pertinent art [must be] resolved" in order to support a finding of obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966.) *Graham* also set forth "secondary considerations" relevant to nonobviousness such as "commercial success, long felt but unsolved needs, [and] failure of others." *Id.* at 17-18.

In order to support a rejection under 35 U.S.C. 103 each element claimed must be shown in the prior art. M.P.E.P. section 2143 states, emphasis added:

> "To reject a claim based on this rationale, Office personnel must resolve the *Graham* factual inquiries. Then, Office personnel must articulate the following: (1) a *finding that the prior art included each element claimed*, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference...."

If each claimed element is not present in the cited art, then no *prima facie* case of obviousness is established. And "if the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness." M.P.E.P. 2142

D. The Hellman/Grundy SNQ is Improper Because Grundy was Previously Considered During Original Examination

In a recent Board of Patent Appeals and Interferences (BPAI) decision, the BPAI held that a SNQ cannot exist where a "reference was previously considered during the original examination for the same or substantially the same purpose as it is now being considered in the reexamination." *See Ex parte Muzzy Products Corporation*, No. 2009-011350, slip op. at 11 (BPAI September 1, 2010).

During original prosecution the Examiner stated that "Grundy teaches a registration system for licensing execution of digital data in a use mode ..., the system including local licensee unique ID generating means ... and remote licensee unique ID generating means (registration code decoded to retrieve User Data and converted to authorization code." (See, Office Action – 3/30/95, pg. 2.) In nearly identical fashion, the instant Office Action states that "Grundy discloses an analogous algorithm for unique ID generation, wherein the unique ID, a registration code, is produced by performing a checksum of the user data component fields." (Office Action, p. 7.) In both the original prosecution and this reexamination, Grundy is used to allegedly disclose unique ID generation. Therefore, the Grundy reference was used in this reexamination for substantially the same purpose as during the original examination.

The facts in this case are slightly different because Grundy is used in combination with another reference not previously applied by the Office. But Uniloc urges the Office to extend the decision in *Ex Parte Muzzy* to strengthen the SNQ requirement by not permitting Grundy to be used in precisely the same way it was during original prosecution. Such use should not rise to the level of an SNQ as the issues it presents are neither "substantial" nor "new" to the question of patentability in this case. The Patent Owner respectfully requests that the Examiner withdraw the SNQs in this case that are based in any way on Grundy.

IV. RESPONSE TO THE ADOPTED SUBSTANTIVE CLAIM REJECTIONS

A. Overview of Rejections Under 35 U.S.C. § 103, Hellman in view of Grundy

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 4,658,093 to Hellman[1] ("Hellman") in view of U.S. Patent No. 5,291,598 to Grundy ("Grundy".) (Office action, p. 6.) Patent Owner traverses the rejection.

The invention implements a unique identifier that is associated with a licensee as a means for licensing execution (or controlling use) of software to (or by) an intended licensee. This feature is present in each of the independent claims. For example, in independent claims 1, 19 and 20, this feature is a "licensee unique ID." In claim 12 this feature is a "security key." In claim 17 this feature is a "registration key" and an "enabling key." Hellman and Grundy both fail to disclose this claimed element. (*See generally*, Rosenblatt Dec., ¶¶36-82.)

Rather than describe any unique identifier that is associated with an intended licensee, Hellman instead describes a "method and apparatus in which use of the software can be authorized for a particular base unit a specific number of times." (*See,* Hellman 4:38-40.) More specifically, Hellman further describes the disclosed authorization system as follows:

> A manufacturer of base units and software generates a random key and stores it in a base unit which is sold to a user. When wishing to use a certain software package, the user's base unit generates a random number and communicates it to the manufacturer of the software. The software manufacturer generates an authenticator which is a cryptographic function of the base unit's key, the software, the number of times use of the software is authorized, and the random number generated by the base unit. The authenticator is communicated to the user's base unit. The user's base unit then uses the same cryptographic function to generate a check value of the key, the software, the number of times use is authorized, and the random number which the base unit generated. If the check value and the authenticator agree, the base unit accepts the authenticator as valid and increments the number of times use of that software is authorized. (*See,* Hellman, 4:46-63)

---

[1]The Office Action on page 4 refers to U.S. Patent No. 5,490,216 to Hellman, U.S. Patent No. 4,796,220 to Grundy, and U.S. Patent No. 5,291,598 to Wolfe. Patent Owner respectfully submits that the Examiner meant the references to be for U.S. Patent No. 4,658,093 to Hellman, U.S. Patent No. 5,291,598 to Grundy, and U.S. Patent No. 4,796,220 to Wolfe, and will respond accordingly in this reply. Patent Owner notes that the Wolfe reference is not relied upon by the Examiner in any claim rejection.

Therefore, Hellman discloses an authorization system for use of a software program based on a key identifier associated with a base unit, e.g., a personal computer. That identifier is generated by the manufacturer of the base unit and is not associated with the user, or intended licensee of the software program.

Hellman further teaches that "base unit 12 generates and communicates to authorization and billing unit 13 a signal representing a user originated request for software use," where "[t]his request consists of several parts SOFTWARE NAME, SERIAL NUMBER, N, R, and BILLING INFORMATION. (Hellman, 5:57-61.) Hellman defines these terms where "SOFTWARE NAME is the name of the software package to be used;" "SERIAL NUMBER is a serial number, identification, user name or similar identifier unique to base unit 12;" "N is the number of additional uses of software requested;" and "R is a random number, counter value, or other non-repeating number generated by the base unit 12." (Hellman 5:62-68.) As described more fully below, the "request" and "authorization" are based upon information regarding the desired software program to be authorized, the number of uses the software package is to be authorized, a non-unique random number, and a serial number unique to the computer base unit. Therefore, Hellman fails to teach or suggest a unique identifier that is associated with a licensee.

Grundy does not cure this deficiency of Hellman. The Office alleges that the unique identifier associated with the licensee is disclosed by Grundy's "checksum." But Grundy's checksum is solely used to verify the accuracy of user-entered information—it is not a unique identifier associated with a licensee. More specifically, Grundy describes a "method and apparatus that monitors and controls the use of information stored on a storage medium." (Grundy, 4:21-24.) As part of that method, Grundy teaches generating a checksum of the user data upon entry of the user data, and then packing and encoding the checksummed user data along with other data (i.e., hardware ID, anti-virus checksum, and previous owner ID number) to generate a "registration code." (*See*, Grundy 18:10-33 and 18:58-64.) Grundy discloses that the "registration code is decrypted and then unpacked into its component fields 308." (Grundy, 15:4-6.) Grundy discloses that once the data is unpacked the "user data cross-reference code and the second checksum 309 are compared 310," and "[i]f these do not match it is an indication that the User Data as entered by the Manufacturer Control Agency operator 301 does not match the User Details as originally entered by the new user." (Grundy, 15:17-22.) Thus, Grundy's "checksum" is not uniquely associated with an intended

licensee. Rather, Grundy's checksum can only be used to indicate whether the user (i.e., the intended licensee) correctly entered the requested data.

As stated above, each of the independent claims requires a unique identifier associated with a licensee. In claims 1, 19 and 20, this is a "licensee unique ID." In claim 12 this feature is a "security key." In claim 17 this feature is a "registration key" and an "enabling key." As demonstrated more specifically below, neither Hellman nor Grundy teaches, discloses, or suggests this claimed feature.

B. Independent Claims 1, 19 and 20

1. Independent Claim 1

Independent claim 1 recites the following (with key claim terms italicized):

> A registration system for licensing execution of digital data in a use mode,
>
> said digital data executable on a platform,
>
> said system including local *licensee unique ID* generating means and remote *licensee unique ID* generating means,
>
> said system further including mode switching means operable on said platform which permits use of said digital data in said use mode on said platform only if a *licensee unique ID* first generated by said *local licensee unique ID* generating means has matched a *licensee unique ID* subsequently generated by said remote *licensee unique ID* generating means; and
>
> wherein said remote *licensee unique ID* generating means comprises software executed on a platform which includes the algorithm utilized by said local *licensee unique ID* generating means to produce said *licensee unique ID*.

As noted above, the invention relies on a unique identifier that is associated with a licensee as a means for controlling use of software by an intended licensee. In independent claims 1, 19 and 20, this feature is expressed in the "licensee unique ID." According to the '216 patent specification, the "code portion includes an algorithm adapted to generate a registration number which is *unique to an intending licensee* of the digital data based on information supplied by the licensee which characterizes the licensee." ('216 patent, 2:65-3:2, emphasis added.) The '216 specification further states that "[t]his information, *unique to*

the user, is passed through a registration number algorithm 14 (represented symbolically in FIG. 1) which generates a *registration number or security key from the information unique to the user*." The '216 patent specification thus supports Uniloc's construction of "licensee unique ID" as a unique identifier associated with a licensee.

Furthermore, the district court also construed Licensee unique ID/Security Key, Registration key, and Enabling key to mean "A unique identifier associated with a licensee." *Uniloc USA, Inc. v. Microsoft Corp.*, 447 F.Supp. 2d 177, 183 (D.R.I. 2006). This district court claim construction was later affirmed by the Federal Circuit and stated that the "district court correctly construed the 'licensee unique ID' as a unique identifier associated with a licensee that can be, but is not limited to, personally identifiable information about the licensee or user." (See, Exhibit G, p. 12.) Therefore, the "licensee unique ID" must be a unique identifier that is associated with an intended licensee. The same is true for the "security key" and "registration key" and "enabling key." All of these terms are synonymous.

In rejecting claims 1, 19 and 20, the Office action states that "Hellman discloses a system including local licensee unique ID (see column 10, lines 14-18) and remote licensee unique ID generation (see column 6, line 62 to column 7, line 2.)" (Office action, p. 6.) For the reasons discussed below, the Patent Owner respectfully disagrees.

(a) Hellman Does Not Teach or Suggest the "Licensee Unique ID" of Claim 1

As discussed above, the term "licensee unique ID" should be construed as "a unique identifier associated with a licensee." Hellman fails to disclose an identifier associated with a ***licensee***. Hellman also fails to disclose an identifier associated with a licensee that is also ***unique.***

With respect to the local licensee unique ID, the Office action points to Hellman's cryptographic function generator 38 and its associated inputs. It states that "Hellman discloses a system including local licensee unique ID (see column 10, lines 14-18.)" (Office Action, p. 6.) For ease of reference, the cited portion of the Hellman specification for local licensee unique ID is shown below:

> FIG. 7 depicts an implementation of the cryptographic check unit 34. Signals representing K, N, R, and H are applied as

> inputs to a cryptographic function generator 38 which generates a check value C as an output signal.

With respect to the remote licensee unique ID, the Office cites to Hellman's cryptographic function generator 23 and its associated inputs, which are substantially identical to the inputs to cryptographic function generator 38. Specifically, the Office Action states that Hellman discloses "remote licensee unique ID generation (see column 6, line 62 to column 7, line 2.)" For ease of reference, the cited portion of the Hellman specification for remote licensee unique ID is shown below:

> The signal H which is the output of the one-way hash function generator 22 is applied as one of four input signals to cryptographic function generator 23 to produce a signal representing authorization A which is communicated to base unit 12 over channel 11. The other three input signals to generator 23 are R and N which were received over channel 11 from base unit 12 and SK which is obtained from authorization and billing unit's table of serial numbers and secret keys.

However, as discussed next, none of the input signals to Hellman's cryptographic function generator 38 (or 23)—namely, K (or SK), N, R and H—are unique to a licensee and therefore cannot disclose the "local licensee unique ID" of claim 1.

Hellman discloses that on a local system a "base unit" that generates "a request for software use," and then later verifies "the validity of the received authorization for additional software use." (Hellman 8:62-9:2.) According to Hellman, the "operation of the base unit 12 during verification of an authorization A to use a software package an additional number of times" is shown in FIG. 6. (Hellman 9:16-18; FIG. 6.) As shown in FIG. 6, the "Crypto Check Unit" accepts four inputs to generate an output that is compared to the received authorization value "A" in order to validate the authorization value.

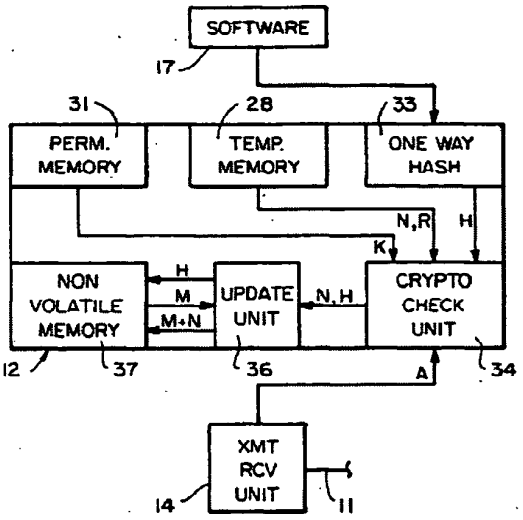

FIG_6

Hellman's FIG. 7 "depicts an implementation of the cryptographic check unit 34," where "[s]ignals representing K, N, R, and H are applied as inputs to a cryptographic function generator 38 which generates a check value C as an output signal." (Hellman 10:14-18 and FIG. 7 below.)

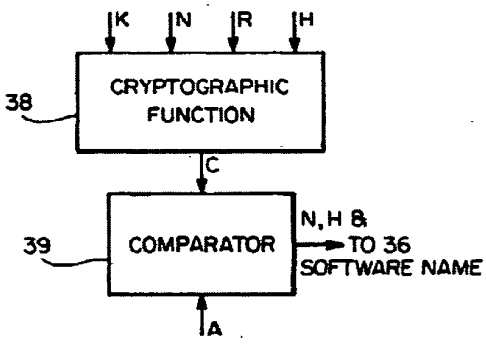

FIG_7

None of the inputs to the cryptographic function 38 is a unique identifier associated with a licensee, as required by the claimed "licensee unique ID." (See, Rosenblatt, ¶¶41-47.) For example, Hellman discloses that "the base unit 12 has a base unit key, K, stored in a permanent memory 31, for example a PROM which is burned in during manufacture of the base unit." (Hellman, 9:29-32.) Hellman further discloses that "where K and SK are equal to one another," that "[i]n that case K must be stored in a secure memory, inaccessible to the

user," as "if the user can learn K, in this case he has learned SK, and he can generate authorizations to himself to use any software package without paying for its use." (Hellman, 9:36-40.) Thus, K is a number associated with the base unit that is purposely withheld from the user. (See, Rosenblatt, ¶38.) K is therefore not uniquely associated with an intended licensee.

Nor are inputs H, R or H. Hellman discloses that the next input "N" is "the number of additional uses of software requested." Like K, N is not uniquely associated with an intended licensee. The next input "R" is "a random number." A random number is not uniquely associated with an intended licensee. The next input "H" is "used as an 'abbreviation' or name for describing the software package 21," where "any two software packages with the same H value are considered equivalent." (Hellman, 5:65 - 6:45.) Input "H," like N and R, is also not uniquely associated with an intended licensee.

In sum, the signals representing K, N, R, and H are applied as inputs to cryptographic function generator 38 which generates a check value C as an output signal. None of these signals are uniquely associated with the licensee and the resulting value C therefore cannot be equated to the claimed "licensee unique ID" of independent claim 1. (Rosenblatt Dec., ¶¶36-47.)

Hellman also discloses a remote system in its "authorization and billing unit for generating an authorization for additional software use in the pay per use software control system." (Hellman 5:3-6; Fig. 2.) However, this remote system also cannot be equated to the means for generating a "licensee unique ID" for essentially the same reasons discussed above with respect to the crypto check unit and the cryptographic function. More specifically, "[a]uthorization and billing unit 13 receives the signal representing the user originated request for software use, generates a signal representing an authorization A for that particular base unit 12 to use the software package 17 an additional N times, and communicates the signal representing authorization A to base unit 12." (Hellman, 6:3-8.) "FIG. 2 depicts an implementation of authorization and billing unit 13." (Hellman 6:16-17 and at Figure 2 below.)

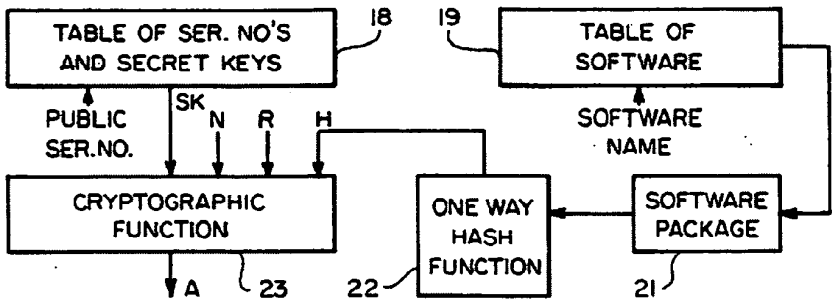

FIG_2

Like the local version, Hellman uses four inputs to generate authorization signal "A" in the remote cryptographic function generator 23. These four inputs consist of H, R, N, and SK, are also not uniquely associated with the intended licensee. Inputs H, R, and N are the same as described above with respect to the local cryptographic function generator 38 and are not uniquely associated with the licensee. The remaining input signal, SK, is "obtained from authorization and billing unit's table of serial numbers and secret keys." (Hellman 7:1-2.) SK is a base unit's secret key where "[a]uthorization and billing unit 13 contains a memory 18 having a table of serial numbers and secret keys which allows authorization and billing unit 13 to determine a based unit's secret key, SK, from knowledge of the base unit's public serial number." (*See,* Hellman 6:19-21.) (*See,* Rosenblatt Dec., ¶38.) SK is therefore not uniquely associated with an intended licensee.

In addition to the fact that none of the inputs to either of the cryptographic function generators 38 an 23 are uniquely associated with an intended licensee, Hellman does not teach that the respective authorization signals C and A are themselves unique values. The only discussion of signals H, R, N, and K (or SK) having any type of unique value is where Hellman states that "it is important to note that because no two users share the same secret key ... it will not allow any other user to avoid payment for use of software." (*See,* Hellman 9:41-45.) But even assuming that SK (or K) is a unique value, SK (or K) is being used by Hellman as the input key to the cryptographic function. See figure 4 below.

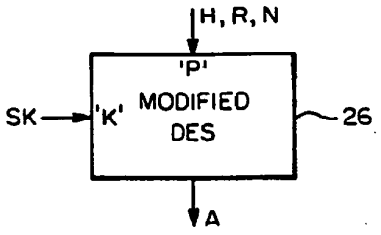

FIG_4

Hellman discloses that a "modified DES 26 would have the secret key *SK as input to its key port* and H, R, and N would be the input to the plaintext port," and the "authorization A would be obtained as the output of the ciphertext port." (*See,* Hellman 8:24-28, emphasis added.) Thus, as known to one of ordinary skill in the art, a cryptographic function with non-unique inputs, even with a key that is unique, will not produce a unique output, represented as "A" in figure 4. (*See,* Rosenblatt Dec., ¶¶41-46.) For all of these reasons, Hellman fails to disclose a "licensee unique ID" as recited in claim 1.

As a final matter, Uniloc's position on Hellman was further substantiated by sworn testimony given by the inventor himself, Professor Martin E. Hellman on March 31, 2009 during the *Uniloc USA, Inc. et al. v. Microsoft Corp.* Rhode Island District Court trial. During trial Professor Hellman was questioned concerning his patent on whether he intended to associate user information into the cryptographic function. In response, he admitted that his patent failed to teach such a requirement of the claims in the '216 patent. (See Exhibit F Trial Transcript, p. 61:17 - p. 62:4.) The pertinent portion of the transcript is shown below for convenience as follows:

> [Attorney] Question: If you wanted to indicate that information associated with the user, unique information was input into the cryptographic function, you certainly had the ability to disclose that in the figures, if you so chose.
> [Hellman] Answer: Correct.
> [Attorney] Question: And you didn't?
> [Hellman] Answer: Correct.
> [Attorney] Question: And you also had the ability to describe in the patent, if you so chose?
> [Hellman] Answer: In the specification? Yes.
> [Attorney] Question: And you didn't?
> [Hellman] Answer: Correct

Uniloc's position is thus supported by Hellman himself.

(b) Grundy Does Not Cure the Deficiencies of Hellman with Respect to Claim 1

Grundy does not cure the above noted deficiencies of Hellman. The Office action, in rejecting independent claim 1, attempts to equate Grundy's "checksum" feature with the claimed unique identifier that is associated with a licensee. However, Grundy's checksum cannot meet these limitations as it cannot be equated to claim 1's "licensee unique ID." As explained more fully below, Grundy's checksum is used for nothing more than verifying that the licensee correctly entered data. It is not uniquely associated with any intended licensee and cannot be used to identify any intended licensee.

More specifically, Grundy discloses an authorization process where "[t]o obtain the authorization code, the new user will conduct, on the user's computer, a registration process." (*See,* Grundy 4:59-60.) Grundy further discloses the information contained within the encrypted registration code as including "a user data cross-reference code [checksum], a hardware identification code, an anti virus-checksum, and a previous Owner Identification Number." (*See,* Grundy 15:7-10.) "The user data cross-reference code as extracted 309 is *the checksum originally calculated (505 FIG. 5) from the owner data* as entered by the user during the registration process." (*See,* Grundy 15:10-13, emphasis added.)

Once the registration code is generated, the "new user transmits the [encrypted] registration code to the Central Authority," and "[a]t the Central Authority, an authorization process takes place." (*See,* Grundy 5:3-5.) This authorization includes decrypting and unpacking the registration code into its component fields. (*See,* Grundy 15:4-6.)

It appears that the Office Action's characterization that the registration code is unique is relying on improper speculation of what the reference ***may*** be teaching. The registration code comprises non-unique components; indeed, Grundy makes no mention that these fields are ever required or intended to be unique. Furthermore, the registration code is not "produced by performing a checksum of the user data component fields," as alleged by the Office Action. Rather, the registration code is produced by encrypting multiple fields, of which one of those fields is a checksum of user data, none of which produce a unique value. The Office's interpretation of Grundy is thus incorrect.

Properly understood, Grundy discloses the use of checksums as a method of error checking where a "second checksum based on the user data as entered via the input/output device 16 by the Manufacture Control Agency operator is also Calculated 309." (*See,*

Grundy 15:10-16.) "The user data cross-reference code and the second checksum 309 are compared 310," where "If these do not match it is an indication that the User Data as entered by the Manufacture Control Agency operator 301 does not match the User Details as originally entered by the new user at step 212." (*See,* Grundy 15:17-22, emphasis added.) Thus, Grundy uses the checksum of the user data as an indicator that the user data has been correctly entered. Grundy does not teach or suggest that the checksum, or the registration code that includes the checksum as one of the fields, represents a unique identifier associated with intended registered user.

A person of ordinary skill in the art would understand "checksum" to represent a small number of check digits that are typically appended to data in order to ensure the data's integrity when it is stored or transmitted. To calculate a checksum of some data, the data is added up (e.g., broken up into C-byte chunks, where C is a small number such as 1, 2, 4, or 8, and summed); the sum is chopped to a fixed length (e.g., a byte or C bytes) and appended to the data before storage or transmission. Checksum algorithms used in practice are variations on this scheme. When the data is received or retrieved later, the checksum is re-calculated to ensure that the result is the same as the original checksum; if the result differs then the data must have been corrupted. (*See,* Rosenblatt Dec., ¶52.)

A checksum is therefore much smaller in length than its input data. For example, a 16-bit (2-byte) or 64-bit (8-byte) checksum may be calculated on thousands, millions, or billions of bytes of data. This fulfills the checksum's intended purpose well, given that most errors in data storage or transmission are small and localized, making it highly likely that the resulting checksum will differ from the one originally calculated, and extremely unlikely that corrupted data will produce the same checksum as the original one. For example, if one or two bits are altered, the checksum will differ. (*See,* Rosenblatt Dec., ¶56.)

Therefore, a checksum cannot preserve the uniqueness of the input data. Grundy shows the input data to the checksum routine in Fig. 2, 212, "ENTER NEW USER DETAILS." This is "new user data, such as the user's name, address and telephone number" (Grundy at 12:37-38.) Such data might take up roughly a hundred bytes of data. A checksum of this data would not preserve its uniqueness; many different sets of user data could produce the same checksum. Therefore the checksum is not a generator of unique identifiers. (*See,* Rosenblatt Dec., ¶62.) Accordingly, Grundy does not cure the Examiner's

alleged deficiencies of Hellman, and the two references cannot be used to establish a *prima facie* case of obviousness.

As a final matter, the Office appears to agree with Uniloc's position. Specifically, in its Decision Granting *Ex Parte* Examination, the Office acknowledges that "*[c]hecksums are not unique fields, even if there [sic] are at least in part derived from unique data.*" (Office Action - Decision Granting *Ex Parte* Examination mailed April 9, 2010, p. 9; emphasis added.) The Office's position on Grundy thus appears to be internally inconsistent.

(c) Summary with respect to Hellman and Grundy with respect to independent claim 1.

For one or more of the reasons detailed above, Hellman and Grundy, alone or in combination, fail to teach each and every feature of independent claim 1. Thus, the Office Action has failed to establish a prima facie case of obviousness for claim 1. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

Claims 2-11 depend from, directly or indirectly, independent claim 1. For at least the above reasons and further in view of their own features, dependent claims 2-11 are also patentable over the combination of Hellman and Grundy. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

2. Independent Claim 19:

Independent claim 19 recites the following:

> A remote registration station incorporating remote *licensee unique ID* generating means,
>
> said station forming part of a registration system for licensing execution of digital data in a use mode,
>
> said digital data executable on a platform, said system including local *licensee unique ID* generating means,
>
> said system further including mode switching means operable on said platform which permits use of said digital data in said use mode on said platform only if a *licensee unique ID* generated by said *local licensee unique ID* generating means has matched a *licensee unique ID* generated by said remote licensee unique ID generating means; and
>
> wherein said remote licensee unique ID generating means comprises software executed on a platform which includes the algorithm utilized by said local licensee unique ID generating means to produce said licensee unique ID.

The Office Action states that "Hellman discloses a system including local licensee unique ID generation (see column 10, lines 14-18)," and "wherein said remote licensee unique ID generation comprises software executed on a platform which includes the algorithm utilized by said local licensee unique ID generation to produce said licensee unique ID (see column 10, lines 14-18.)" (Office Action, p. 12.) Patent Owner respectfully disagrees. Referring to independent claim 19, Hellman does not teach or suggest a "licensee unique ID." (*See,* Rosenblatt Dec., ¶¶41-46.)

Independent claim 19 is similar to independent claim 1 in that it also uses the term "licensee unique ID" to refer to the unique identifier that is associated with an intended licensee. Claim 19 differs in that it is claimed from the perspective of the remote registration system. But this does not change its distinguishing features from those described above with respect to independent claim 1.

(a) Hellman Does Not Teach or Suggest the "Licensee Unique ID" of Claim 19

As discussed above, the term "licensee unique ID" should be construed as "a unique identifier associated with a licensee." Hellman fails to disclose an identifier associated with a ***licensee***. Hellman also fails to disclose an identifier associated with a licensee that is also ***unique.***

As with independent claim 1, the Office action alleges that "Hellman discloses a system including local licensee unique ID (see column 10, lines 14-18.)" (Office Action, p. 12.) For ease of reference, the cited portion of the Hellman specification is shown below:

> FIG. 7 depicts an implementation of the cryptographic check unit 34. Signals representing K, N, R, and H are applied as inputs to a cryptographic function generator 38 which generates a check value C as an output signal.

For substantially the same reasons stated above with respect to claim 1, Hellman fails to disclose a licensee unique ID because none of the inputs into cryptographic function generator 38 (K, N, R and H) is associated with an intended licensee. (*See,* Rosenblatt Dec., ¶¶36-47.) Therefore, for the reasons previously discussed regarding claim 1, Hellman fails to disclose the "licensee unique ID" recited in claim 19. (*See,* Rosenblatt Dec., ¶¶80-83.)

(b) Grundy Does Not Cure the Deficiencies of Hellman with Respect to Claim 19

Again, for substantially the same reasons discussed above with respect to claim 1, Grundy does not cure the noted deficiencies in Hellman's disclosure. As previously discussed, a checksum cannot preserve the uniqueness of the input data and thus the checksum is not a generator of unique identifiers. (See, Rosenblatt Dec., 62.) Accordingly, as Grundy does not cure the Examiner's alleged deficiencies of Hellman, the references cannot be used to establish a prima facie case of obviousness. For one or more of the reasons detailed above, Hellman and Grundy, alone or in combination, fail to teach each and every feature of independent claim 19. Thus, the Office Action has failed to establish a prima facie case of obviousness for claim 19. Reconsideration and withdrawal of the rejection is therefore respectfully requested. (See, Rosenblatt Dec., 48-65.)

3. Independent Claim 20:

Independent claim 20 recites the following:

> A method of registration of digital data so as to enable execution of said digital data in a use mode,
>
> said method comprising an intending licensee operating a registration system for licensing execution of digital data in a use mode,
>
> said digital data executable on a platform,
>
> said system including local *licensee unique ID* generating means and remote *licensee unique ID* generating means,
>
> said system further including mode switching means operable on said platform which permits use of said digital data in said use mode on said platform only if a *licensee unique ID* generated by said *local licensee unique ID* generating means has matched a *licensee unique ID* generated by said remote licensee unique ID generating means; and
>
> wherein said remote *licensee unique ID* generating means comprises software executed on a platform which includes the algorithm utilized by said local *licensee unique ID* generating means to produce said *licensee unique ID*.

The Office Action states that Hellman discloses a "system including local licensee unique ID generation (see column 10, lines 14-18)," and "wherein said remote licensee

unique ID generation comprises software executed on a platform which includes the algorithm utilized by said local licensee unique ID generation to produce said licensee unique ID (see column 10, lines 27-32.)" (Office Action, p. 13.) Patent Owner respectfully disagrees. Referring to independent claim 20, Hellman does not teach or suggest a "licensee unique ID." (*See,* Rosenblatt Dec., ¶¶36-47.)

Independent claim 20 is similar to independent claim 1 in that it also uses the term "licensee unique ID" to refer to the unique identifier that is associated with an intended licensee. Claim 20 differs in that it is a method claim corresponding to independent claim 1. But this does not change its distinguishing features from those described above with respect to independent claim 1.

(a) Hellman Does Not Teach or Suggest "Licensee Unique ID" of Claim 20

As discussed above, the term "licensee unique ID" should be construed as "a unique identifier associated with a licensee." Hellman fails to disclose an identifier associated with a ***licensee***. Hellman also fails to disclose an identifier associated with a licensee that is also ***unique.***

As with independent claim 1, the Office action alleges that "Hellman discloses a system including local licensee (see column 10, lines 14-18.)" (Office Action, p. 13.) For ease of reference, the cited portion of the Hellman specification is shown below:

> FIG. 7 depicts an implementation of the cryptographic check unit 34. Signals representing K, N, R, and H are applied as inputs to a cryptographic function generator 38 which generates a check value C as an output signal.

For substantially the same reasons stated above with respect to claim 1, Hellman fails to disclose a licensee unique ID because none of the inputs into cryptographic function generator 38 (K, N, R and H) is associated with an intended licensee. (*See,* Rosenblatt Dec., ¶¶36-47.) Therefore, for the reasons previously discussed regarding claim 1, Hellman fails to disclose the "licensee unique ID" as recited in claim 20. (*See,* Rosenblatt Dec., ¶¶80-83.)

(b) Grundy Does Not Cure the Deficiencies of Hellman with Respect to Claim 20

Again, for substantially the same reasons discussed above with respect to claim 1, Grundy does not cure the noted deficiencies in Hellman's disclosure. As previously discussed, a checksum cannot preserve the uniqueness of the input data and thus the checksum is not a generator of unique identifiers. (See, Rosenblatt Dec., 62.) Accordingly, as Grundy does not cure the Examiner's alleged deficiencies of Hellman, the references cannot be used to establish a prima facie case of obviousness. For one or more of the reasons detailed above, Hellman and Grundy, alone or in combination, fail to teach each and every feature of independent claim 20. Thus, the Office Action has failed to establish a prima facie case of obviousness for claim 20. Reconsideration and withdrawal of the rejection is therefore respectfully requested. (See, Rosenblatt Dec., 48-65.)

C. Independent Claim 12:

Independent claim 12 recites the following:

> A registration system attachable to software to be protected,
>
> said registration system generating a *security key* from information input to said software *which uniquely identifies an intended registered user of said software on a computer on which said software is to be installed*; and
>
> wherein said registration system is replicated at a registration authority and used for the purposes of checking by the registration authority that *the information unique to the user* is correctly entered at the time that the *security key* is generated by the registration system.

The Office Action states that "Hellman discloses a registration system generating a security key from information input to said software (see column 10, lines 14-18 and 27-32.)" (Office Action, pp. 8-9.) Patent Owner respectfully disagrees. Hellman does not teach or suggest "generating a *security key* from information input to said software which *uniquely identifies an intended registered user* of said software on a computer on which said software is to be installed." (*See,* Rosenblatt Dec., ¶¶66-71.)

1. Hellman Does Not Teach or Suggest "Generating a Security Key" of Claim 12

As discussed above with respect to the "licensee unique ID" term in independent claims 1, 19 and 20, the term "Security Key" in claim 12 should be construed as "a unique identifier associated with a licensee." For substantially the same reasons discussed above with respect to the "licensee unique ID" term in claim 1, Hellman fails to disclose an identifier associated with a *licensee*. Hellman also fails to disclose an identifier associated with a licensee that is also *unique*. (*See,* Rosenblatt Dec., ¶¶36-47.) Indeed, the Office action admits that Hellman "does not disclose that the information input for the security key to said software uniquely identifies an intended registered user of said software on a computer on which said software is to be installed." (*See,* Rosenblatt Dec., ¶66.) Therefore, there is no dispute that Hellman fails to disclose generating a security key, as recited in claim 12.

2. Grundy Does Not Cure the Deficiencies of Hellman with Respect to Claim 12

The Office action relies on Grundy to teach the claimed "security key." Specifically, the Office action alleges that Grundy "discloses the generation of a checksum, which is used as a security key that is derived at least in part from the user data."

But as fully discussed above with respect to independent claim 1, a checksum is not unique and therefore cannot be a unique identifier associated with a licensee. Specifically, Grundy is not using the checksum to represent a security key, but rather uses the checksum of the user data as an indicator that the user data has been correctly entered. Grundy does not teach or suggest that the checksum represents a unique identifier of an intended registered user. Accordingly, as Grundy does not cure the Examiner's alleged deficiencies of Hellman, the references cannot be used to establish a prima facie case of obviousness.

For one or more of the reasons detailed above, Hellman and Grundy, alone or in combination, fail to teach each and every feature of independent claim 12. Thus, the Office Action has failed to establish a prima facie case of obviousness for claim 12. Reconsideration and withdrawal of the rejection is therefore respectfully requested. (*See,* Rosenblatt Dec., ¶¶66-71.) Claims 13-16 depend from, directly or indirectly, independent claim 12. For at least the above reasons and further in view of their own features, dependent

claims 13-16 are also patentable over the combination of Hellman and Grundy. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

D. Independent Claim 17:

Independent claim 17 recites the following:

> A method of control of distribution of software,
> said method comprising providing mode-switching means associated with said software adapted to switch said software between a fully enabled mode and a partly enabled or demonstration mode,
> said method further comprising providing *registration key* generating means adapted to generate a *registration key* which is a function of information unique to an intending user of the software;
> said mode-switching means switching said software into fully enabled mode only if an enabling key provided to said mode-switching means by said intending user at the time of registration of said software has matched identically with said *registration key*; and
> wherein said *enabling key* is communicated to said intending user at the time of registration of said software; said enabling key generated by a third party means of operation of a duplicate copy of said registration key generating means.

The Office Action states, regarding claim 17, that Hellman discloses a "method further comprising providing registration key generation" and where "said enabling key generated by a third party means of operation of a duplicate copy of said registration key generation (generated by Authorization and Billing Unit, see column 6, lines 3-8.)" (Office Action, p. 11.) Patent Owner respectfully disagrees. Hellman does not teach or suggest a "method further comprising providing registration key generating means adapted to generate a registration key which is a function of information unique to an intending user of the software." (*See,* Rosenblatt Dec., ¶¶72-79.)

1. Hellman Does Not Teach or Suggest "Generating a Registration Key" of Claim 17

As discussed above, with respect to the "licensee unique ID" term in independent claims 1, 19 and 20, the term "Registration Key" in claim 17 should be construed as "a unique identifier associated with a licensee." For substantially the same reasons discussed

above with respect to the "licensee unique ID" term in claim 1, Hellman fails to disclose an identifier associated with a ***licensee***. Hellman also fails to disclose an identifier associated with a licensee that is also ***unique***. (*See,* Rosenblatt Dec., ¶¶41-46.) Indeed, the Office action admits that "Hellman's registration key generation is not a function of information unique to an intending user of the software." (*See,* Rosenblatt Dec., ¶72.) Therefore, there is no dispute that Hellman fails to disclose generating a registration key, as recited in claim 17.

2. Grundy Does Not Cure the Deficiencies of Hellman with Respect to Claim 17

The Office action relies on Grundy to teach the claimed "registration key." Specifically, the Office action alleges that Grundy "discloses the generation of a checksum, which is used as a registration key, that is derived at least in part from the user data." (*See,* Office Action page 11.)

But as fully discussed above with respect to independent claim 1, a checksum is not unique and therefore cannot be a unique identifier associated with a licensee. Specifically, Grundy is not using the checksum to represent a security key, but rather uses the checksum of the user data as an indicator that the user data has been correctly entered. Grundy does not teach or suggest that the checksum represents a unique identifier of an intended registered user. Accordingly, as Grundy does not cure the Examiner's alleged deficiencies of Hellman, the references cannot be used to establish a prima facie case of obviousness.

For one or more of the reasons detailed above, Hellman and Grundy, alone or in combination, fail to teach each and every feature of independent claim 17. Thus, the Office Action has failed to establish a prima facie case of obviousness for claim 17. Reconsideration and withdrawal of the rejection is therefore respectfully requested. (*See,* Rosenblatt Dec., ¶¶72-79.) Claim 18 depends from independent claim 17. For at least the above reasons and further in view of its own features, dependent claim 18 is also patentable over the combination of Hellman and Grundy. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

V. OBJECTIVE INDICIA OF NON-OBVIOUSNESS

Uniloc has articulated numerous technical arguments why claims 1-20 are not obvious over Hellman in view of Grundy. In addition to these technical arguments, there is substantial evidence of other objective indicia, *i.e.*, secondary considerations, that weigh against any finding of obviousness under 35 U.S.C. § 103(a). Though not necessary where, as here, no prima facie case has been established, such secondary indicia are "essential components of the obviousness determination." *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998.) These considerations "may be highly probative, as they are 'tributes to ingenuity.'" *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 957 (Fed. Cir. 1997). As provided in MPEP § 2145, "[o]ffice personnel should consider all rebuttal arguments and evidence presented by applicants," including evidence relating to the secondary considerations as set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). These objective indicia include commercial success and licensing of others to use the patented inventions. Here, evidence related to secondary considerations weighs against any finding of obviousness of the claimed inventions.

The commercial success of an invention is evidence of its non-obviousness. *Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.*, 321 U.S. 275, 279 (1944); *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1325-26 (Fed. Cir. 1999.) Other secondary indicia of non-obviousness include copying and praise. *Allen Archery, Inc. v. Browning Mfg. Co.*, 819 F.2d 1087, 1092 (Fed. Cir. 1987.) A nexus is required between the secondary considerations and the claimed features. *Simmons Fastener Corp. v. Ill. Tool Works, Inc.*, 739 F.2d 1573, 1575 (Fed. Cir. 1984.) The term "nexus" designates a factually and legally sufficient connection between the objective evidence of non-obviousness and the claimed invention so that the evidence is of probative value in the determination of non-obviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988.) Secondary indicia of non-obviousness are not just a cumulative or confirmatory part of the obviousness calculus, but constitute independent evidence of non-obviousness. *Ortho-McNeill Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1365 (Fed. Cir. 2008.) Courts are obligated to consider objective evidence of non-obviousness when such evidence is present. *Knoll Pharm. Co. v. Teva Pharms, USA, Inc.*, 367 F.3d 1381, 1385 (Fed. Cir. 2004); *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 960-61 (Fed. Cir. 1986.)

Uniloc designs systems and software that include the claimed subject matter of the '216 patent. Uniloc sells and distributes such software. Uniloc also licenses its intellectual property and patents, including the '216 patent, to other companies for manufacture and sale of various commercial products. As explained more fully below, products incorporating the claimed subject matter of the '216 patent have enjoyed commercial success, either by Uniloc directly or through its licensees. All these factors point to the commercial success and other secondary indicia that weigh against the allegation that the claimed inventions in the '216 patent are obvious.

A. Commercial Success

Uniloc's software activation technology has achieved substantial commercial success. Since 1993, Uniloc's software activation based product sales and licensing have grown significantly. All of these sales involved products and services that incorporated Uniloc's proprietary software activation technology covered in the claims of the '216 patent. (*See*, Davis Dec., ¶¶9-12.)

For instance, since its founding, Uniloc has developed software products, including SoftAnchor, which incorporate the '216 patented technology. Uniloc, through its SoftAnchor product, provides a full range of turn-key software activation development kits and server-side software. Clients, such as third party software publishers, license and use SoftAnchor to implement and manage software activation copy control systems. (*See*, Davis Dec., ¶11.)

Uniloc also developed and sells an additional software product, NetAnchor, that leverages the Uniloc technology platform to protect critical infrastructure networks. NetAnchor also incorporates the '216 patented technology to secure its own authorization server software. (*See*, Davis Dec., ¶12.) Further, in July 2010, Uniloc spun off a product division called BlueCava that focuses on online fraud and online marketing. (*See*, Davis Dec., ¶13.)

B. The Uniloc '216 Patent Has Been and Continues to Be Extensively Licensed

In addition to the commercial success noted above, Uniloc has extensively licensed the '216 patent. The first major license secured by Uniloc Australia for its '216 patented

software activation system was with IBM Australia in 1993. The Uniloc software activation system subsequently became the underlying technology for the IBM CD Showcase software distribution program launched by IBM USA in 1993. (*See*, Davis Dec., ¶16.) Between the IBM CD Showcase program and other Uniloc licensing efforts, Uniloc has licensed the '216 patented technology directly, or indirectly, to hundreds of software publishers. (*See*, Davis Dec., ¶17.)

C. Uniloc's Technology and Inventions Have Been Praised by Others

The Uniloc SoftAnchor product was recognized as a Software & Information Industry Association (SIIA) CODiE Award Finalist in 2007 and again in 2009. The CODiE awards are annual awards for excellence in software development within the software industry. (*See*, Davis Dec., ¶14.) Further, the Uniloc NetAnchor product was named "Best New or Updated ITS Industry Product" by the Intelligent Transportation Society of America ("ITSA") in 2008. Uniloc was also named by the ITSA as an "Emerging Vendor" in response to the NetAnchor product in 2008. (*See*, Davis Dec., ¶15.)

D. The '216 Patented Technology Meets a Long-Felt Need

Prior to the introduction of the '216 software activation solution to the software publishing market, unauthorized copying of software, or "software piracy," was a very significant problem. The advent of the Internet, enabling peer-to-peer sharing of software, turned the problem of casual copying into a crisis for software publishers. A letter widely published on the Internet from Bill Gates in 1976, addressed to hobbyists, expressed Mr. Gates concern that a majority of the hobbyist audience stole the software that they used. Twenty years later, circa 1996, research by the Business Software Alliance ("BSA") found that about $15 billion in software was stolen each year. According to trial exhibits in the district court case, Microsoft internal documents estimated that the company believed it was losing over 50% worldwide software revenue due to the piracy problem in approximately 1997. (*See*, Davis Dec., ¶18.)

E. A Nexus Exists Between the Commercial Success of Uniloc's Software Activation and Fraud Prevention Solutions and the Claims of the '216 Patent

Both the SoftAnchor and NetAnchor products incorporate the design of a unique identifier associated with a licensee, such as the "licensee unique ID," of claim 1, 19 amd 20 in the '216 patent. The licensee unique ID is generated in the SoftAnchor and NetAnchor products, based on a unique serial number, or product key, that is assigned to each copy of the software when it is shipped. Each unique identifying number is associated with the purchaser of each copy of the software, which may or may not be combined with parameters about the end user's computer on which the software is to be loaded and executed. (*See*, Davis Dec., ¶19.)

F. Conclusion with Respect to Secondary Indicia of Non-Obviousness

The '216 patent is embodied in Uniloc's software activation and fraud prevention products. Products incorporating the claimed subject matter of the '216 patent have enjoyed commercial success. The '216 patent has also been extensively licensed. There is a nexus between the secondary indicia and the claims of the '216 patent. Therefore, in addition to the technical differences presented above in Section IV, the secondary indicia of non-obviousness presented above weigh against the asserted obviousness rejections. For this additional reason, Patent Owner respectfully requests that the Examiner reconsider and withdraw the Section 103 rejection of claims 1-20.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Patent Owner therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Patent Owner believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Robert Greene Sterne
Attorney for Patent Owner
Registration No. 28,912

Jon E. Wright
Attorney for Patent Owner
Registration No. 50,720

Robert W. Molitors
Attorney for Patent Owner
Registration No. 66,726

Date: November 29, 2010

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600