

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No.	SACV 19-2192-GW-ADSx	Date	November 12, 2020
Title	<i>Ancora Technologies, Inc v. TCT Mobile (US), Inc., et al.</i>		

Present: The Honorable	GEORGE H. WU, UNITED STATES DISTRICT JUDGE
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PROCEEDINGS: TELEPHONIC MARKMAN HEARING

The Court's Final Ruling on Claim Construction (*Markman*) Hearing is circulated and attached hereto. Court and counsel confer. For reasons stated on the record, the hearing is continued to November 19, 2020 at 8:30 a.m. The parties are to meet and confer, and attempt to resolve this matter. A joint status report is to be filed by noon on November 17, 2020.

_____: _____
Initials of Preparer JG

Ancora Techs., Inc. v. TCT Mobile (US) Inc. et al.; Case No. 8:19-cv-02192-GW-(ASx) (Lead Case);
Case No. 2:20-cv-01252-GW-(ASx) (Consolidated Case)
Final Ruling on Claim Construction (*Markman*) Hearing

I. Introduction

Plaintiff Ancora Techs., Inc. (“Plaintiff” or “Ancora”) filed suit against TCL Corp., TCL Commc’n Ltd., TCL Commc’n Holdings Ltd., and TCL Commc’n Tech. Holdings Ltd. on August 27, 2019, alleging infringement of U.S. Patent No. 6,411,941 (“the ’941 Patent”). *Ancora Techs., Inc. v. TCL Corp. et al.*, Case No. 2:20-cv-01252-GW-(ASx) (“*Consolidated Case*”), Docket No. 1; *see also* Docket No. 12 (Consolidated Case Amended Complaint).

On November 12, 2019, TCT Mobile (US) Inc. and Huizhou TCL Mobile Commc’n Co., Ltd., separately filed suit against Plaintiff, seeking declaratory judgement of non-infringement of the ’941 Patent. *TCT Mobile (US) Inc. et al. v. Ancora Techs., Inc.*, Case No. 8:19-cv-02192-GW-(ASx) (“*Lead Case*”), Docket No. 1. The two actions have been consolidated so that Plaintiff now accuses TCT Mobile (US) Inc., Huizhou TCL Mobile Commc’n Co., Ltd., Shenzhen TCL Creative Cloud Tech. Co., Ltd., TCL Corp., TCL Commc’n Ltd., TCL Commc’n Holdings Ltd., and TCL Commc’n Tech. Holdings Ltd., TCT Mobile (US) Holdings Inc., TCT Mobile, Inc., TCT Mobile Int’l Ltd. (collectively, “Defendant” or “TCL”) of infringing the ’941 Patent. Docket No. 29; *see also* Docket No. 23 (stipulation to realign parties); Docket No. 24 (First Amended Complaint); Docket No. 44 (Second Amended Complaint).¹

Now pending are some of the parties’ claim construction disputes. The parties have submitted a Joint Claim Construction and Prehearing Statement. *See* Docket No. 49. The parties have also filed various claim construction briefs and supporting documents:

- Plaintiff Ancora’s Opening Claim Construction Brief (Docket No. 52); Defendant TCL’s Opening Claim Construction Brief (Docket No. 53)
- Plaintiff Ancora’s Responsive Claim Construction Brief (Docket No. 54); Defendant TCL’s Responsive Claim Construction Brief (Docket No. 55)

The Court construes the disputed terms as stated herein.

II. Background

For purposes of the parties’ claim construction disputes, the parties request construction of

¹ Citations are to the *Lead Case* unless otherwise noted.

seven terms in the asserted claims of the '941 Patent, titled "Method of Restricting Software Operation Within a License Limitation." The '941 Patent issued on June 25, 2002. The '941 Patent relates to "a method and system of identifying and restricting an unauthorized software program's operation." '941 Patent at 1:6-8.

Claim 1 of the '941 Patent recites:

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.

'941 Patent, Claim 1.

III. Legal Standard

Claim construction is an interpretive issue "exclusively within the province of the court." *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). It is "a question of law in the way that we treat document construction as a question of law," with subsidiary fact-finding reviewed for clear error to Fed. R. Civ. P. 52(a)(6). *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-40 (2015). The claim language itself is the best guide to the meaning of a claim term. *See Vederi, LLC v. Google, Inc.*, 744 F.3d 1376, 1382 (Fed. Cir. 2014). This is because the claims define the scope of the claimed invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). But a "person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent." *Id.* at 1313. Thus, claims "must be read in view of the specification," which is "always highly relevant to the claim construction analysis." *Phillips*, 415 F.3d at 1315 (internal quotations omitted).

Although claims are read in light of the specification, limitations from the specification must not be imported into the claims. *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1288 (Fed. Cir. 2009). "[T]he line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court's focus remains on understanding how a person of ordinary skill in the art would understand the claim terms." *Phillips*, 415 F.3d at 1323.

The prosecution history may lack the clarity of the specification, but it is “another established source of intrinsic evidence.” *Vederi*, 744 F.3d at 1382. “Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” *Phillips*, 415 F.3d at 1317 (citations omitted). “Furthermore, like the specification, the prosecution history was created by the patentee in attempting to explain and obtain the patent.” *Id.* “Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.*

Claim construction usually involves resolving disputes about the “ordinary and customary meaning” that the words of the claim would have had “to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1312-13 (internal quotations and citations omitted). But in some cases, claim terms will not be given their ordinary meaning because the specification defines the term to mean something else. “[A] claim term may be clearly redefined without an explicit statement of redefinition,” so long as a person of skill in the art can ascertain the definition by a reading of the patent documents. *Id.* at 1320; *see also Trustees of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1364 (Fed. Cir. 2016).

Where the patent itself does not make clear the meaning of a claim term, courts may look to “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean,” including the prosecution history and “extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Phillips*, 415 F.3d at 1314 (internal quotations omitted). Sometimes, the use of “technical words or phrases not commonly understood” may give rise to a factual dispute, the determination of which will precede the ultimate legal question of the significance of the facts to the construction “in the context of the specific patent claim under review.” *Teva*, 135 S. Ct. at 841, 849. “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. “In such circumstances, general purpose dictionaries may be helpful.” *Id.*

IV. Discussion

A. Agreed Claim Terms

The parties have agreed to constructions for the following claim terms (*see* Docket

No. 49):

Term	Asserted Claim(s)	Parties' Agreed Claim Construction
"non-volatile memory area of the BIOS"	1	"memory area of BIOS whose data is maintained when the power is removed"
"BIOS"	1	An acronym for Basic Input/Output System. It is the set of essential startup operations that run when a computer is turned on, which test hardware, starts the operating system, and support the transfer of data among hardware devices

B. Disputed Claim Terms

1. "volatile memory" (Claim 1)

Plaintiff's Proposed Construction	Defendant's Proposed Construction
"memory area whose data is not maintained or becomes inaccessible when the power is removed"	"memory whose data is not maintained when the power is removed"

The parties agree that "volatile memory" is "memory whose data is not maintained when the power is removed." Docket Nos. 52 at 7; 53 at 21. The only dispute is whether "volatile memory" also includes "memory whose data becomes inaccessible after the power is removed."

As Defendant highlights, Plaintiff has accepted Defendant's proposed construction on two separate occasions. See *Ancora Techs., Inc. v. Apple Inc.*, No. 11-cv-06357-YGR, 2012 WL 6738761, at *4 (N.D. Cal. Dec. 31, 2012) ("*Apple I*"); Docket No. 53-10 at 1 (dated July 29, 2019). Plaintiff now seeks to broaden this construction based on the Federal Circuit's decision in *Ancora v. Apple, Inc.*, 744 F.3d 732 (Fed. Cir. 2014) ("*Apple II*").

In *Apple II*, the Federal Circuit affirmed the lower court's holding that the term "volatile memory" was not indefinite despite the '941 Patent specification stating that a hard disk is "volatile memory." *Id.* at 737-39; see also '941 Patent at 1:21; 3:9; 4:53. The Circuit acknowledged that a hard disk is not normally considered a "volatile memory," *i.e.* "a hard disk maintains data when the power is removed." *Id.* at 738. But the Circuit also agreed that "it is well known that a computer's hard disk is routinely used as 'virtual' memory to provide temporary storage when

there is insufficient RAM to complete an operation, in which case (it is undisputed) the data become inaccessible through the usual means once power is removed (even if the data can still be found on the hard disk by more sophisticated means).” *Id.* (internal citations omitted). Based on this, the Federal Circuit agreed that the term “volatile memory” was not indefinite.

Plaintiff argues that the term “volatile memory” should also include “memory whose data becomes inaccessible after the power is removed” due to the above language. Defendant does not seem to dispute that the Federal Circuit’s decision provided an exception to its construction, but instead argues that Plaintiff’s construction is incomplete. *See* Docket Nos. 53 at 22-23; 55 at 21.

The Western District of Texas’s construction of this term is instructive. Having considered similar arguments, that court construed the term “volatile memory” to mean “memory whose data is not maintained when the power is removed,” but with one exception. *See* Docket No. 52-4 at 2. In a footnote “not for the jury,” the court added: “For the corner case where the hard disk drive is used as virtual RAM, the data is not accessible by normal means after the power is removed.” *Id.* This strikes the correct balance.

Accordingly, this Court construes the term “volatile memory” to mean “memory whose data is not maintained when the power is removed,” with the exception that “where the hard disk drive is used as virtual RAM, the data is not accessible by normal means after the power is removed.”

2. “selecting a program residing in the volatile memory” (Claim 1)

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning	“accessing a program to be verified in the volatile memory”

The parties’ dispute is unclear. Plaintiff spends its briefs arguing that replacing the word “selecting” with “accessing” adds ambiguity and reads out embodiments. *See* Docket Nos. 52 at 8-11; 54 at 16. Defendant states in its responsive brief, however, that the significance of its construction is not in the difference between the words “selecting” and “accessing,” but that “the program is present in the volatile memory – by accessing, selecting, or otherwise in the “selecting . . .” step – prior to being verified in the “verifying . . .” step.” *See* Docket No. 54 at 19.² Because

² To the extent that Defendant argues that the “selecting” step must come before the “verifying” step, the Court notes that the Western District of Texas has found that the “selecting” step may be performed at any time. *See* Docket No. 52-5 at 7-10, 37. Given that the parties do not appear to dispute the order of the steps, however, the Court does not decide this issue.

the parties' dispute is unclear, the Court declines to construe this term.

3. "set up a verification structure" (Claim 1)

Plaintiff's Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning	"store information encrypted with a key unique to the computer"

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*," and "verifying the program using at least *the verification structure* from the erasable non-volatile memory of the BIOS." '941 Patent, Claim 1 (emphasis added). The parties dispute whether setting up this verification structure requires encrypting information with a key unique to the computer. Specifically, Defendant claims that the specification and prosecution history show a clear disavowal of claim scope. *See* Docket No. 53 at 15.

Starting with the specification, Defendants argues that the "Summary of the Invention" states that the invention requires the use of a key, which states:

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.

'941 Patent, 1:38-43 (emphasis added); *see also* Docket No. 53 at 15. "When a patent thus describes the features of the 'present invention' as a whole, this description limits the scope of the invention." *Regents of Univ. of Minnesota v. AGA Med. Corp.*, 717 F.3d 929, 936 (Fed. Cir. 2013). This description of the present invention matches the language recited in Claim 1, which states that "the verification structure accommodate[es] data that includes at least one license record." '941 Patent, Claim 1. Further, the specification states that "[t]he *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*." '941 Patent at 4:55-58 (emphasis added). But that is where the description of the present invention ends.

The specification does not support Defendant's construction. As both parties acknowledge, the rest of the specification describes "non-limiting example[s]" or "operations performed according to one embodiment of the invention." *See* Docket No. 54 at 10; *see also* Docket No. 52 at 15 ("While most of the '941 Patent disclosure is phrased in the language of 'non-limiting examples' and 'embodiments,' the [Summary of the Invention] is not."). Defendant argues that

these examples are limiting as they provide “context for the characterization of the invention as a whole,” and because “the specification never discloses any embodiment where the license record in the verification structure is **not** encrypted using the unique key.” See Docket No. 53 at 15-16. But as Plaintiff notes, claim terms should not be limited just because the specification discloses a single embodiment. See Docket No. 54 at 10 (citing *Phillips*, 415 F.3d at 1323).

Further, Claim 1 recites that the “verification structure” is set up “in the erasable, non-volatile memory of the BIOS.” ’941 Patent, Claim 1. Claim 7 recites that the “set[ting] up a verification structure” step of Claim 1 includes 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.” ’941 Patent, Claim 7. Similarly, the specification states that setting up the verification structure only requires establishing (or certifying the existence of) a key and at least one license-record location in the non-volatile memory:

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.

’941 Patent at 6:18-22. These references to the “set[ting] up a verification structure” step without mentioning encryption suggest that encryption is not required.³

Defendant asserts that the description of the “[s]etting up (18) the verification structure” in the specification is followed by an explanation that the “establishing a license-record” step includes “forming a license-record by encrypting of the contents used to form a license-record ... using the key.” See Docket No. 55 at 12-13 (citing ’941 Patent at 6:23-26). The specification states that the “establishing a license-record” step further includes “establishing the encrypted **license-record** in one of the **at least one established license-record locations**.” ’941 Patent at 6:26-28 (emphasis added). As Defendant admits, however, “the cited passage describes sub-steps that can be included in the step of ‘[s]etting up (18) the verification structure.’” See Docket 55 at

³ The specification also discloses that the “license record may be held in either encrypted or explicit form.” See Docket No. 52 at 11 (citing ’941 Patent at 1:55). As Defendant points out, however, the next paragraph shows that this excerpt describes the state of the license-record **before** the verification structure is set in the BIOS. See Docket No. 55 at 13-14 (citing ’941 Patent at 1:59-62 (“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.”)). But later the specification states that “[a]ny component [of a license-record] may, if desired, be encrypted.” ’941 Patent at 5:39.

12. Claim 8 already includes both of these-sub-steps. See '941 Patent, Claim 8. Defendant has not shown that the “set[ting] up a verification structure” step of Claim 1 requires storing encrypted information.

The prosecution history does not support Defendant’s construction either. The applicant’s arguments during prosecution suggest that setting up a verification structure requires the use of a key. The applicant stated that “the client system ID of Misra, is similar to the pseudo-unique key recited in claims 1 and 20.” See Docket No. 52-3 at ANCC000151 (emphasis in original). As Defendant argues, then-pending Claim 1 did not explicitly recite a “pseudo-unique key,” suggesting that the term “verification structure” includes a pseudo-unique key. See Docket No. 53 at 16-17; Docket No. 52-3 at ANCC000130. Further, the applicant argued that “[i]n the present method, the verification structure is formed by using a unique key for each computer and license record information in the software.” Docket No. 52-3 at ANCC000095. Although these statements may not amount to an “explicit disclaimer of subject matter sufficient to vary the scope of the claim,” they are still helpful in determining the ordinary meaning of the term “verification structure” within the relevant art. See *Novartis Pharm., Corp. v. Eon Labs Mfg. Inc.*, 363 F.3d 1306, 1311 (Fed. Cir. 2004).⁴

Applicant’s remarks on encryption, however, are ambiguous at best. The applicant argued that “[t]he license ID of Misra is similar to the verification structure and license information recited in claims 1 and 20, respectively.” Docket No. 52-3 at ANCC000151 (emphasis in original). According to Defendant, Misra discloses cryptographically signing the license ID with “a signing key,” showing that setting up the verification structure requires encryption. See Docket No. 53 at 17 (citing Docket No. 53-9 at 10:60-67). But this is not included in the applicant’s remarks. At most, the applicant argued that the license ID “may be a digital certificate.” Docket No. 52-3 at ANCC000151. This is not enough to limit the term “set[ting] up a verification structure.”

Finally, “set[ting] up a verification structure” does not require a key “unique to the computer.” As stated throughout, the key may be “pseudo-unique,” which the specification states “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

⁴ Plaintiff’s argument that the prosecution history describes embodiments without using a key is unpersuasive. See Docket No. 54 at 12 (citing Docket No. 52-3 at ANCC000092). Applicant’s statement that “[i]n a preferred embodiment, a key resides in a first non-volatile part of a computer’s memory,” describes one possible location for the key, not that the key is optional.

two computers, where the first volatile memories of these two computers have the same key.” ’941 Patent at 4:13-18. Thus, the key may be “pseudo-unique” rather than “unique.”

Accordingly, the Court does not construe this term at this time.

4. “license record” (Claim 1)

Plaintiff’s Proposed Construction	Defendant’ Proposed Construction
“a record from a licensed program with information for verifying that licensed program”	“information indicating a right to use the program”

The parties dispute whether a license record requires “information indicating a right to use the program” or just information for verifying the program. Plaintiff argues that two other courts have already adopted Plaintiff’s construction or a substantially similar one. *See* Docket No. 52 at 13. The Court agrees with those courts.

The specification shows that a license-record is any information from a licensed program used by the verification structure to verify the program. The specification states that a license-record “consists of author name, program name and number of licensed users (for network),” and is associated with “each application program that is to be licensed to run on the specified computer.” ’941 Patent at 1:53-57. The license record may be formed from fields or contents of the licensed program. *See id.* at 5:46-51; 6:7-10. The specification provides the following examples of contents used to form the license-record: “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.” *Id.* at 6:11-17. Further, “the license record is not necessarily bound to continuous fields,” and the license-record contents may be “centralized or decentralized” or “embedded in various locations in the application.” *Id.* at 5:35-39; 6:11. Thus, the information itself does not need to indicate anything so long as it is capable of being used to verify the program.

Figure 1 and its description confirm that the license-record is the information from the program used to verify the program. Describing Figure 1, the specification states that “[t]he 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),” while “[t]he volatile memory accommodates a license program (16) having license record fields (13-15) appended thereto.” ’941 Patent at 5:26-30. The license-record fields shown in Figure 1 are found at various locations in the license program. *See*

id., Fig. 1 (reproduced below). The specification provides the following examples of the license-record fields: “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).” *Id.* at 5:30-34. The description and figure show that the license-record is comprised of assorted information from the program without necessarily indicating a right to use the program.

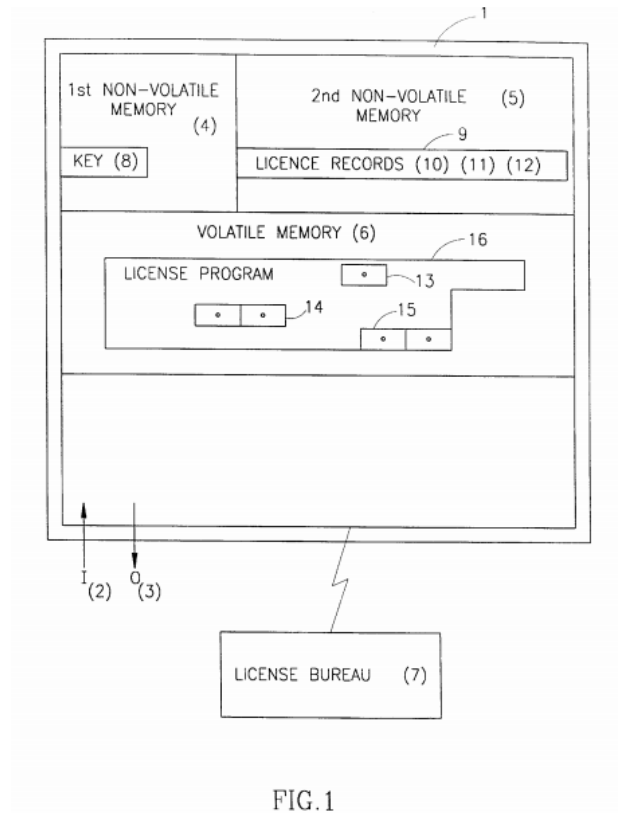


FIG. 1

Defendant has not shown that the plain and ordinary meaning of a license-record to one of ordinary skill in the art when viewed in light of the specification is limited to information indicating a “right to use.” The specification states consistently that the program is licensed “to run” and suggests that the terms “licensed” and “verified” are synonymous. See ’941 Patent at 1:54-55 (“each application program that is to be licensed to run on the specified computer”); 1:61-62 (“the specified program is licensed to run on the specified computer”); 2:20 (“the program is verified to run on the computer”); 2:28 (“attempt to run a program at an unlicensed site”); 2:30 (“verified to run”); 2:36 (“Suppose now that a hacker attempts to run...”). Defendant also relies on the applicant’s remarks about the “license ID” of the prior art made during prosecution of the ’941 Patent. See Docket No. 53 at 19. The applicant stated that the license ID “*may* be a digital certificate indicating the right to use” and “*is similar to* the verification structure and license

information.” *See* Docket No. 52-3 at ANC000151 (emphasis added). These statements do not change the scope of the term “license-record” when read in light of the specification.

Defendant’s issues with Plaintiff’s construction are also unfounded. Defendant’s argument that Plaintiff’s construction is dissociated from the plain meaning of the term “license” is based on Defendant’s overly narrow construction of the term “license.” *See* Docket No. 53 at 20. Defendant also complains that Plaintiff’s construction does not provide what the licensed program is verified to do. *See* Docket No. 55 at 18. A person of ordinary skill in the art would be able to understand the verification process from reading the specification, though.

Finally, Defendant argued at the hearing that there is a distinction between the license-record in the erasable, non-volatile memory and the license-record in the volatile memory. *See, e.g.*, Docket No. 61 at 5:16-7:2. Specifically, Defendant argued that the license record recited in Claim 1 is stored in the erasable, non-volatile memory of the BIOS, which includes different information than the license record stored in the volatile memory. *See id.* at 7:7-9:3. But as Defendant admitted, the ’941 Patent discloses that a program is verified when the contents of the two license records match. *See id.* at 9:15-23 (explaining that the way verification “is done is by pulling up the record ... and doing a comparison, and saying no, I don’t see this, ... you are not authorized ... or there is a match, and that indicates that you are licensed to operate this program”).

For instance, the ’941 Patent describes as an example a situation where a hacker attempts to run a specified program in a second computer. ’941 Patent at 2:10-59. The verification structure first establishes a license record encrypted with a first computer’s identification code (k1) that was stored in the first computer’s erasable, non-volatile memory, *i.e.* (LR)_{k1}. *Id.* The verification structure then compares that encrypted license record with the license record encrypted with a second identification code (k2) generated from the volatile memory, *i.e.* (LR)_{k2}. *Id.* As shown in this example, the license record (LR) is identical; only the identification code is different. Thus, according to this example, the license record itself does not indicate a right to use a program, but rather has information used to verify the program in combination with the identification code.

Accordingly, the Court construes the term “license-record” to mean “a record from a licensed program with information for verifying that licensed program.”

5. “memory of the BIOS” (Claim 1)

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning	“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”
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Defendant asks that the term “memory of the BIOS” be limited based on the doctrine of prosecution disclaimer. See Docket No. 53 at 10. The Court finds that prosecution disclaimer does not apply.

Defendant relies on arguments the applicant made during the prosecution of the ’941 Patent to overcome a rejection under 35 U.S.C. § 103 in light of two prior art references, *i.e.* Misra and Ewertz. See Docket No. 54 at 12-13. Produced below is the relevant part of the file history:

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 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 data 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.

See Docket No. 52-3 at ANC000154 (emphasis added). Defendant argues that these remarks “are a textbook case of prosecution disclaimer.” See Docket No. 54 at 13.

The cited remarks do not amount to prosecution disclaimer. Statements made during prosecution that “merely provide an example to illustrate differences between the invention and the prior art” do not amount to prosecution disclaimer. *Gemstar-TV Guide Int’l, Inc. v. Int’l Trade Comm’n*, 383 F.3d 1352, 1375 (Fed. Cir. 2004); see also *Purdue Pharma L.P. v. Endo Pharm. Inc.*, 438 F.3d 1123, 1136 (Fed. Cir. 2006) (“While it is true that Purdue relied on its ‘discovery’ of the four-fold dosage range to distinguish its claimed oxycodone formulations from other prior

art opioids, Purdue’s statements do not amount to a clear disavowal of claim scope.”). The remarks cited by Defendant describe the prior art methods of storing verification programs and explain that the claimed method “proceeds against conventional wisdom in the art.” Docket No. 52-3 at ANC000154. The two reasons the applicant gave for why an ordinary skilled person “would not consider the BIOS a storage medium” were: 1) the lack of operating system (OS) support and recognition, and 2) the lack of associated file system. *Id.* After describing each reason, the applicant concluded that a person of ordinary skill in the art would not conventionally consider the BIOS to be a storage medium. *Id.* (“an ordinary person skilled in the art **would not consider** the BIOS for any operation, including writing to the BIOS” and “OS level application programmers **would not consider** the BIOS as a storage medium for license data,” respectively) (emphasis added). These remarks were not intended to limit the invention but rather to describe conventional reasons why the BIOS was not used before the claimed method.

The Examiner’s remarks do not support prosecution disclaimer either. Defendant highlights that the Examiner stated in his reasons for allowing the ’941 Patent that “it is well known to those of ordinary skill in the art that a computer BIOS is not setup to manage a software license verification structure.” See Docket No. 54 at 13 (citing Docket No. 52-3 at ANC000162). In the next sentence, however, the Examiner stated that “[t]he present invention overcomes this difficulty by using an agent to set up a verification structure in the erasable, non-volatile memory of the BIOS.” Docket No. 52-3 at ANC000162. The Examiner also stated that “the closest prior art systems ... do not teach licensed programs running at the OS level” interacting with the BIOS, which the claimed method is supposed to overcome. *Id.* Thus, the Examiner also understood the applicant’s remarks to refer to conventional wisdom at the time and the prior art.

Notably, the Federal Circuit also found that these remarks described the prior art when analyzing the prosecution history to construe the term “program.” See *Ancora Techs., Inc. v. Apple, Inc.*, 744 F.3d 732 (Fed. Cir. 2014). Summarizing the file history, the Circuit stated that “[t]he applicants explained that their invention differed from the prior art in that it both operated as an application running through an operating system and used the BIOS level for data storage and retrieval – a combination that was not previously taught and that an ordinarily skilled application writer would not employ[.]” *Id.* at 735-36. In other words, the applicant argued that the claimed method could operate in a way contrary to conventional methods.

The specification also does not support narrowing the term “memory of a BIOS.”

Defendant argues that the specification discloses using a “conventional BIOS,” not a new BIOS. *See* Docket No. 55 at 3-7. To Defendant, this means the same issues described in the prosecution history would apply to the claimed BIOS. The Court is not persuaded. First, the prosecution history shows that the use of the agent to store the verification structure in the BIOS was intended to overcome the issues with the conventional BIOS. Thus, the stated improvement could be at the OS level, not the BIOS level.⁵ Second, the ’941 Patent does not use the terms “file system,” “operating system,” or “OS” at all, so the specification provides no support for these limitations.

The Court agrees with Plaintiff’s construction the term should be given its plain and ordinary meaning. As Defendant emphasized at the *Markman* hearing, however, the phrase “associated with” is both overly broad and unnecessarily vague. *See* Docket No. 61 at 24:21-27:11. The Court agrees with Defendant that the correct plain and ordinary meaning of the term “memory of the BIOS” is “a memory that stores the BIOS.” Plaintiff took the phrase “associated with” from the “Background” section of the Federal Circuit’s opinion in *Apple II*, which states that the specification “discloses using the memory space associated with the computer’s basic input/output system (BIOS) rather than other memory space.” 744 F.3d at 733 (citing ’941 Patent at 1:46-2:5; 4:45-48; 5:19-24). The portions the Federal Circuit cited do not actually use the phrase “associated with” and just describe the memory that stores the BIOS.

Accordingly, the Court construes the term “memory of the BIOS” to mean “a memory that stores the BIOS.”⁶

6. “first non-volatile memory area of the computer” (Claims 7 and 13)

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning	“a non-volatile memory that is different from the erasable, non-volatile memory of the BIOS”

Claim 1 recites that the “verification structure” is set up “in the erasable, non-volatile memory of the BIOS” and accommodates data that includes “at least one license record.” ’941 Patent, Claim 1. Claim 7 depends on Claim 6, which in turn depends on Claim 1. Claim 7

⁵ Defendant provides no reason why that the operating system’s ability to recognize the BIOS as a storage medium must be handled at the BIOS level. Similarly, Defendant provides no evidence that a new BIOS would be necessary to associate a file system with a BIOS.

⁶ Additionally, the Court is not persuaded that the use of the word “area” in the preamble necessitates a different construction. The term the parties asked the Court to construe does not include the word “area.” Assuming it did, the Court is still not persuaded that the language “associated with” is necessary. A memory area of the BIOS would still be a memory that stores the BIOS.

of the '941 Patent recites: “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.” ’941 Patent, Claim 7 (emphasis added). Claim 13 also depends on Claim 1 and recites: “wherein a unique key is stored in **a first non-volatile memory area of the computer**.” *Id.*, Claim 13 (emphasis added). According to Defendant, the two recited memories of Claim 7 must be different.⁷ See Docket No. 53 at 23.

The language of Claim 7 suggests that the two memories are different. The plain and ordinary meaning for the term “first” suggests that there is a separate “second” memory. *C.f.* *3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003) (“use of the terms ‘first’ and ‘second’ is a common patent-law convention to distinguish between repeated instances of an element or limitation”). The claims do not recite an explicit second memory, however, so the Court turns to the rest of the claim to determine what the term “first non-volatile memory area of the computer” means. “The disjunctive ‘or’ plainly designates that a series describes alternatives.” See *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1199 (Fed. Cir. 2013). Further, construing “a first nonvolatile memory area” to include “the erasable, non-volatile memory area of the BIOS” would render “or in the erasable, non-volatile memory area of the BIOS” superfluous. See *Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”). Thus, the language of the claim implies that the “erasable, non-volatile memory of the BIOS” is a separate “second” memory.

The Court next looks to the specification for what the “first” non-volatile memory is where no explicit “second” memory is recited in the claims. “Without a customary meaning of a term within the art, the specification usually supplies the best context for deciphering claim meaning.” *Honeywell Int’l Inc. v. Universal Avionics Sys. Corp.*, 488 F.3d 982, 991 (Fed. Cir. 2007) (citing *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir.2004)). The Abstract

⁷ The parties do not dispute that this term should have the same meaning in both claims. See *In re Varma*, 816 F.3d 1352, 1363-64 (Fed. Cir. 2016) (“[T]he principle that the same phrase in different claims of the same patent should have the same meaning is a strong one, overcome only if ‘it is clear’ that the same phrase has different meanings in different claims.”).

states that the disclosed method has “a first non-volatile memory area,” and “a second non-volatile memory area,” where the verification structure is set up “*in the non-volatile memories.*” ’941 Patent, Abstract (emphasis added). Similarly, the specification states that “[i]n its broadest aspect,” the disclosed method includes “a first non-volatile memory area” and “a second non-volatile memory area,” with the verification structure set up “*in the non-volatile memories.*” *Id.* at 2:62-3:1 (emphasis added). The specification also states that the disclosed 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.” *Id.* at 1:40-43. Thus, the broadest embodiment of the ’941 Patent makes no distinction between the non-volatile memories.

In describing a “non-limiting” exemplary embodiment, the specification states with regard to the key used with the verification structure that “[i]t 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.” ’941 Patent at 1:50-52. The specification then states that the verification structure is set in the BIOS of this embodiment by storing a license-record in “another (second) non-volatile section of the BIOS, e.g. E2PROM (or the ROM).” ’941 Patent at 1:59-2:1; *see also id.* at 1:50-52. The specification notes that “unlike the first non-volatile section, the data in the second non-volatile memory may optionally be erased or modified.” ’941 Patent at 2:1-3. Thus, according to this embodiment, the first non-volatile section of the BIOS that contains the key cannot also be the second, erasable, non-volatile section that contains the license-record.

Under the “Detailed Description of a Preferred Embodiment,” the specification describes the “[s]etting up (18) the verification structure” step of the described preferred embodiment (shown in Fig. 2). This description matches the language of Claim 7 except that the license-record location is established in “the first or the second” nonvolatile memory area, and not limited to the BIOS. ’941 Patent at 6:18-22 (“establishing at least one license-record location in *the first or the second* nonvolatile memory area”) (emphasis added). Rather than explicitly using the terms “erasable” or “non-erasable,” this section describes the two memories with examples: “a first non-volatile memory area (4) (e.g. the ROM section of the BIOS)” and “a second non-volatile memory area (5) (e.g. the E²PROM section of the BIOS).” ’941 Patent at 5:12-15. The section also states that “[t]he first non-volatile memory includes a pseudo-random identification key (8)” and “[t]he second non-volatile memory includes a license-record are (9) e.g. which contains at least one encrypted license-record.” *Id.* at 5:19-27. Thus, the language describing this embodiment suggests

at least a preference for two separate memories.

The Court next looks to the prosecution history for context. Similar to the described preferred embodiment of the specification, Claim 7 as originally filed recited that the license-record location is established in “the first or the second” nonvolatile memory area, and not limited to the BIOS. *See* Docket Nos. 53 at 24; 53-2 at 3. Claim 1 as originally filed recited that the verification structure is set up “in the non-volatile memories,” however. *See id.* at 2.

The applicant also amended the relevant language of Claims 1 and 7 several times during prosecution of the '941 Patent. The applicant first amended Claim 1 so that the first and second non-volatile memory areas as recited were “non-erasable,” the first non-volatile memory “accommodate[d] data that includes unique key,” and the verification structure was set up “in the second non-volatile memory.” *See* Docket No. 52-3 at ANC000101. Claim 1 was also revised to recite that the verification structure “accommodates data that includes at least one license record.” *Id.* In the Remarks, the applicant explained that “in a preferred embodiemt [sic], a key resides in a first non-volatile part of a computer’s memory,” while the verification structure “is formed to include one or more license records ... and resides in a second non-volatile part of the memory.” *Id.* at ANC000092. Despite the added “non-erasable” limitation, however, the applicant clarified that “[t]he second non-volatile part is erasable and therefore license data in the verification structure can be modified.” *Id.*

Subsequently, the applicant amended Claim 1 to remove two relevant limitations: “first, non-erasable, non-volatile memory area” and “the first non-volatile memory accommodates data that includes unique keys.” *See id.* at ANC000130. The “second, non-erasable, non-volatile memory area” limitation was also revised to read “an **erasable**, non-volatile memory area **of a (BIOS) of the computer.**” *Id.* (emphasis added); *see also id.* at ANC000160 (changing “(BIOS)” to “BIOS”). Claim 1 was further revised to recite “using an agent to set up a verification structure in the erasable, non-volatile memory of the BIOS.” In the Remarks, the applicant explained that the “identification information of Ewertz corresponds to the pseudo-unique key 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.” *Id.* at ANC000152 (emphasis in original).

With regard to the addition of the “using an agent,” the Examiner had previously rejected Claim 1 under 35 U.S.C. § 112, first paragraph, because “[t]he Applicants [did] not teach the device necessary to edit [secondary non-volatile storage such as 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.” *Id.* at ANC000108. In an Interview Summary following this rejection, the form stated that the participants discussed “[s]torage of license data using BIOS 112 corrections,” and “[e]diting independent claim language.” *Id.* at ANC000119. And in the Notice of Allowance, the Examiner stated that “it was well known to those of ordinary skill of the art that a computer BIOS is not setup to manage a software license verification structure,” but that the claimed method “[overcame] this difficulty by using an agent to set up a verification structure in the erasable, non-volatile memory of the BIOS.” *Id.* at ANC000162. In sum, the prosecution history demonstrates that the focus of the claims is that the verification structure is in the erasable portion of the non-volatile memory and uses the key in the separate non-erasable portion.

After considering both the specification and file history, the Court finds that the claims recite two distinct memories. Both the specification and the file history show that the key is established in the non-erasable, non-volatile memory, while the license-record is established in the erasable, non-volatile memory. Both Claims 7 and 13 recite “establishing” or storing the key in the first non-volatile memory, suggesting that the first non-volatile memory is the non-erasable memory. This contrasts with the erasable, non-volatile memory of the BIOS, which stores the verification structure that accommodates at least one license-record. Further, while Claim 7 recites that the license-record *location* may be established in either the first non-volatile memory area or the erasable, non-volatile memory of the BIOS, the specification and prosecution history show that at least one license-record must be stored in the erasable, non-volatile memory of the BIOS.

Accordingly, the Court construes the term “first non-volatile memory area of the computer” to be “a non-volatile memory that is different from the erasable, non-volatile memory of the BIOS.”

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.” (Claim 8)

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning	<u>This language recites nonlimiting information.</u>

The parties’ dispute pertains to the whole of Claim 8. Claim 8 depends on Claim 6, which in turn depends on Claim 1. Claim 6 recites:

6. 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.

'941 Patent, Claim 6.

Defendant argued at the hearing that Claim 6 and Claim 8 refer to different steps as best evidenced by Claim 6's recitation that the "licensed-software-program" is established in the volatile memory while the specification discloses that the license-record is established in the second, non-volatile memory. *See* Docket No. 61 22:8-18; *see also* '941 Patent at 6:23-28. Defendant also explained that the contents used to form a license record are not the license-record itself. *See* Docket No. 61 at 22:19-22.

The Court agrees with Defendant that Claim 6 and Claim 8 refer to different steps. Notably, Figure 2 depicts the "selecting (17)," "setting up (18)," "verifying (19)," and "acting (20)" steps described in the specification, but the "establishing" step is absent. *See* '941 Patent at 6:4-52. From the context of the specification, the "establishing" step is either its own independent step or further describes the "setting up (18)" step, but the specification's description of the "setting up (18)" step does not mention establishing a license-record.

Claim 1, however, recites "set[ting] up a verification structure ... accommodating data that includes at least one license record." "When the meaning of the claim would reasonably be understood by persons of ordinary skill when read in light of the specification, the claim is not subject to invalidity upon departure from the protocol of 'antecedent basis.'" *Energizer Holdings, Inc. v. Int'l Trade Comm'n*, 435 F.3d 1366, 1370 (Fed. Cir. 2006) (finding that the term "an anode gel comprised of zinc" provided an implicit antecedent basis for the term "said zinc anode"). As Defendant admits, the portion of the specification describing the "establishing" step "describes sub-steps that can be included in the step of '[s]etting up (18) the verification structure.'" *See* Docket 55 at 12. Although the "set[ting] up" step recited in Claim 1 does not explicitly recite "establishing a license-record," a person of ordinary skill in the art would understand with reasonable certainty that Claim 8 further limited the "set[ting] up" step of Claim 1.

Accordingly, the Court declines to construe the language of Claim 8.

V. Conclusion

For the reasons stated, the Court would construe the disputed terms as follows:

Term	Asserted Claim(s)	Court's Construction
"volatile memory"	Claim 1	"memory whose data is not maintained when the power is removed," with the exception that "where the hard disk drive is used as virtual RAM, the data is not accessible by normal means after the power is removed"
"selecting a program residing in the volatile memory"	Claim 1	No construction
"set up a verification structure"	Claim 1	No construction
"license record"	Claim 1	"a record from a licensed program with information for verifying that licensed program"
"memory of the BIOS"	Claim 1	"a memory that stores the BIOS"
"first non-volatile memory area of the computer"	Claims 7 and 13	"a non-volatile memory that is different from the erasable, non-volatile memory of the BIOS"
"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."	Claim 8	No construction