

United States District Court,
C.D. California.

TARGET TECHNOLOGY COMPANY, LLC,
Plaintiff.

v.
WILLIAMS ADVANCED MATERIALS, INC., et al,
Defendants.

No. SA CV 04-1083 DOC (MLGx)

Feb. 6, 2007.

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Christopher E. Blank, Hiscock and Barclay, Rochester, NY, David Lawrence Aronoff, Saul S. Rostamian, Winston and Strawn LLP, Stuart A. Shanus, Reed Smith, Robert Steinberg, Latham and Watkins, Los Angeles, CA, Douglas J. Nash, Gabriel M. Nugent, John D. Cook, Hiscock and Barclay, Syracuse, NY, Halina F. Osinski, Law Office of Halina F. Osinski, Richard S. Rockwell, Richard S. Rockwell Law Offices, Tustin, CA, Ivan S. Kavrukov, Tonia A. Sayour, William E. Pelton, Cooper and Dunham, Gerald H. Kiel, Reed Smith LLP, New York, NY, for Defendants.

ORDER [1] DENYING CROSS MOTIONS FOR SUMMARY JUDGMENT ON STANDING; [2] HOLDING IN ABEYANCE DEFENDANTS' MOTION FOR TERMINATING SANCTIONS; [3] CONSTRUCTING CLAIMS; [4] DENYING DEFENDANTS' MOTION FOR SUMMARY JUDGMENT ON PATENT ISSUES; [5] DENYING CINRAM'S MOTION FOR SUMMARY JUDGMENT OF NON-INFRINGEMENT AND [6] DENYING PLAINTIFF'S MOTION FOR BIFURCATION

DAVID O. CARTER, **District Judge.**

Before the Court are the following motions: (1) Defendants Williams Advanced Materials, Inc., National Film Laboratories d/b/a Crest National Optical Media, Deluxe Media Services, Inc., Evatone, Inc., High Speed Video, Inc., International Disc Manufacturers, Inc., Symcon, Inc., Takasaki Corporation of America, JVC Disc America Company, Replitech, Inc., and Tapematic USA's (collectively "the Williams Defendants") Motion for Summary Judgment on Standing, which Defendant Cinram International Inc. ("Cinram") joins; (2) Plaintiff Target Technology Company LLC's ("Plaintiff") Motion for Partial Summary Judgment that Target owns the '503 Patent and has Standing to Bring this Action ("Plaintiff's Motion for Partial Summary Judgment on Standing"); (3) the Williams Defendants' Motion for Terminating Sanctions, which Cinram joins; (4) the Williams Defendants' Motion for Claim Construction, which Cinram joins; (5) the Williams Defendants' Motion for Summary Judgment on Patent Issues, which Cinram joins; (6)

Defendant Cinram's Motion for Summary Judgment of Non-Infringement, which the Williams Defendants join; and (7) Plaintiff's Motion for Bifurcation of Defendants' Inequitable Conduct Allegations from the Jury Trial and Request for Bench Trial on these Issues ("Bifurcation Motion"). After considering the moving, opposing, and replying papers, as well as oral arguments, the Court hereby DENIES Defendants' Motion for Summary Judgment on Standing, DENIES Plaintiff's Motion for Partial Summary Judgment on Standing, HOLDS IN ABEYANCE Defendants' Motion for Terminating Sanctions, DENIES the Williams Defendants' Motion for Summary Judgment on Patent Issues, DENIES Cinram's Motion for Summary Judgment of Non-Infringement, and DENIES Plaintiff's Bifurcation Motion.

I. BACKGROUND

A. Factual Background

Plaintiff Target Technology Company LLC ("Target") alleges that Defendants have willfully infringed its patent, U.S. Patent No. 6,790,503 ("the '503 patent") related to the use of silver-based alloys in the manufacture of optical storage medium, such as Digital Video Discs ("DVDs"). The named inventor of the '503 patent is Hanphire Nee ("Nee"), who is the founder and president of Target. Target contends that Nee assigned the '503 patent to Target. The claims of the '503 patent are directed to the use of silver copper alloys in the semi-reflective layer of DVDs. The '503 patent developed from the continuing application of Nee's first patent, also purportedly assigned to Target, U.S. Patent No. 6,007,889 ("the '889 patent").

Williams is a refiner, producer and supplier of high-purity metals and alloys, and manufactures "sputtering targets," which are used by its customers to deposit or "sputter" thin metal layers onto a base, during the manufacture of optical storage devices, including the semi-reflective layer of DVDs. The other Defendants are Williams' customers.

1. The Technology

At issue is the technology used to make optical storage devices used to store and display movies, songs and pictures. Generally speaking optical storage media consist of several layers bonded together. A CD, for example, has the following layers: (1) a "substrate" typically made from polycarbonate material; (2) an information layer either formed into the substrate (a prerecorded CD) or formed by a separate composition layer; (3) a reflecting layer to reflect some portion of the laser beam; and (d) a protective layer over the reflecting layer. Optical storage media store digital information in a continuous spiral or "track" in the information layer, which is similar to the continuous groove of a phonograph record. The track is read by pointing a laser beam onto the surface of the information layer.

Prerecorded DVDs are similar to CDs, except they store data in microscopic "pits" and "lands," which are alternating recessed and flat areas on the information layer formed into the substrate. The pits and lands are the vehicles that store digital information on a DVD. DVD formats include DVD-5s, which have only one information layer, DVD-10s, which are essentially two DVD-5s bonded together and read from opposite sides, and DVD-9s, which have two information/reflecting layers with pits and lands that can be read from the same side of the disc by using a less reflective coating on the layer closest to the laser beam and a more reflective coating on the information layer further from the laser. The reflecting layers of the DVD-9 each reflect different amounts of laser light. The laser beam inside a DVD player can focus at two different levels so that it can look through the "semi-reflective" layer to read the data on the second "reflective" layer underneath. Unlike the DVD-5 which allows for storage of only five gigabytes of information, a DVD-9 allows for storage of nine gigabytes of information and thus, the user can play longer movies without having

to flip the disc over as with the DVD-10 or change discs as with the DVD-5.

The controversy in this case concerns the use of a semi-reflective layer of a particular composition in multi-layer optical storage media, most of which are DVD-9s. The reflective layers of a DVD-9 are normally applied to each substrate using what is called a "sputtering" process," which uses a "sputtering target" to apply a thin metal layer onto each media "substrate" in which the pits and lands are formed. A sputtering target, consisting of a metal or metal alloy, is placed into a chamber with the substrate. Air is pumped out of the chamber to create a vacuum. Argon gas is then introduced into the sputtering chamber and ionized. The ionized gas is accelerated toward the sputtering target, and the impact of the ionized gas on the sputtering target physically knocks metal atoms or ions loose from the sputtering target's surface. The metal atoms condense onto the face of the substrate. This sputtering process produces a very fine metal layer on the substrate.

The reflectivity of the metal layer depends on the type of metal or metal alloy used and the thickness of the layer. The semi-reflective layer of a DVD-9 must have certain characteristics: (1) the metal must easily coat the pits and lands in a thin, even layer; (2) it must be partially transmissive and partially reflective; (3) it must withstand corrosion (from humidity, sunlight, heat, etc.) despite its thinness; and (4) it must allow the laser light to pass from the reflective layer to the sensor without reflecting the laser light backward (toward the reflective layer). Historically, gold and silicon targets were used to produce the semi-reflective layer. However, there are problems with each. Gold, when sufficiently thin, will reflect and transmit light, has outstanding corrosion resistance, and is relatively easy to sputter into a coating of uniform thickness, but it is quite expensive when compared to other metals. Silicon is a reasonable alternative to gold, but there are two problems with using silicon: (1) because it is a semiconductor, it is not easy to sputter into a coating of uniform thickness and (2) its use causes delays because it has a tendency to react with oxygen and nitrogen during sputtering, generating silicon dust that must be frequently removed.

2. Sequence of Events

Nee founded Target in 1998 to develop alternative metal alloys to gold and silicon. Nee founded Target while he was an employee of Digital Audio Disc Corporation ("DADC"), a Sony subsidiary. DADC was the first optical disc manufacturing facility in the U.S.; it began operations in 1984. Def. Ex. H, Decl. of Douglas Nash in Support of the Defs.' Mot. for Summ. J. on Standing ("Nash Standing Decl.").

On December 11, 1991, Sony Music offered Nee a position at Sony Disc Technology ("SDT") in Japan. Def. Ex. E, Decl. of Gabriel Nugent in Opp'n to Pl.'s Mot. for Summ. J. ("Nugent Standing Decl."). While awaiting his work visa from the Japanese Consulate, Nee joined DADC (another Sony subsidiary) in January of 1992. One term of his employment at SDT was that he would be active on all DADC employee plans while in Japan. *Id.* Sony's offer also provided that DADC would pay Nee \$14,600 per year, in addition to his base salary from SDT, while he was on assignment in Japan. *Id.* Under the agreement, after his first year at SDT, DADC would pay Nee an additional \$7,300 per year incentive payment; for a total of \$21,900 per year from DADC. *Id.* On January 8, 1992, Nee signed a DADC Employee Patent and Confidential Information agreement ("DADC Patent Agreement") and began working in Indiana at DADC. Def. Ex. D, Nash Standing Decl. Under the DADC Patent Agreement, Nee agreed that:

In consideration of my employment or continuing employment in any capacity with Digital Audio Disc Corporation ("DADC") ... and of the salary or wages paid for my services in the course of employment and for my being permitted access to information pertaining to the business of DADC, I agree:

(A) To promptly disclose to DADC and I hereby assign and agree to assign without further compensation, to DADC or its designee, my entire right, title and interest in and to each invention, technological innovation, including all rights to obtain, perfect and enforce patents and other proprietary interests therein, in which I participate during the period of my employment with DADC, whether or not during working hours, which pertain to any line of work or investigation by DADC or is aided by the use of time, material, or facilities of DADC, or in which DADC expresses an interest.

Id. On April 10, 1992, Nee assumed his position at SDT in Japan. Prior to Nee joining SDT, Nee received a commitment from DADC that (1) Nee's name would remain in DADC's organization while he was at SDT and (2) that after Nee finished his assignment in Japan he could return to work at DADC. Def. Ex. C, Nugent Standing Decl. "When Nee was expatriated to Japan, it was with the understanding that he would return." Def. Ex. G, Dep. of Michael Mitchell ("Mitchell Dep."), Tr. p.29, Nugent Standing Dep. While he was at SDT, Nee received part of his compensation from DADC and received DADC benefits. Def. Ex. E, Nugent Standing Decl.

In 1995, Nee transferred back to DADC as a Manager of Technical Support. Def. Ex. F, Nugent Standing Decl. Nee's last day of employment with DADC was March 31, 1998. Mitchell Dep., Tr. 42:17-19. On February 23, 1998, the Vice President of Human Resources, Warren Maccaroni wrote Nee a letter, outlining the discussion Maccaroni and Nee's boss Michael Mitchell had with Nee on February 19, 1998 about the elimination of Nee's position effective March 31, 1998. Pl.Ex. 4, Pl. Resp. in Opp'n to Williams Def.'s Mot. for Terminating Sanctions ("Pl. Opp'n to Sanctions"). At the meeting, Nee agreed to finish up any open projects with which he was involved and Maccaroni and Mitchell told Nee that he was not required to report to work after March 31, 1998. *Id.* Handwritten notes from this meeting record Nee's hire date at DADC as January 9, 1991 and indicate that his termination is effective March 31, 1998.

On March 30, 1998, Nee sent a twelve page "patent disclosure" document to his attorney, Kurt Jones. Def. Ex. E, Nash Standing Decl. The Patent Disclosure was entitled "Metal Alloys For Reflective And Semi-reflective Layer Of Optical Disc." *Id.* The inventor is listed as Nee and the assignee as Target. *Id.* The Abstract describes

A copper or silver based alloy thin film is provided for the highly reflective or semi-reflective layer of optical discs. Alloy additions to silver include gold, palladium, copper, rhodium, ruthenium, osmium, iridium and platinum singly or in combination. Alloy additions to copper include silver, cadmium, gold, magnesium, aluminum, and nickel singly or in combination. These alloys have moderate to high reflectivity and reasonable corrosion resistance in the ambient environment.

Id. In the document, Nee describes the background of the invention, gives a summary of the invention as well as a detailed description that includes several examples of various alloy combinations of the elements listed in the Abstract, and asserts eighteen claims. *Id.* The March 30, 1998 letter to his attorney that accompanied the Patent Disclosure asks the attorney to "make necessary corrections and proceed to file a provisional patent application to the Patent Office. *Id.* In the letter, Nee also asks the attorney to conduct a patent search "as discussed about a month ago when I visited your office." *Id.* Nee finally requests a "nondisclosure agreement" or "confidential agreement" because he is planning to contact different companies "to try to reduce those ideas in the disclosure to practice." *Id.*

On April 2, 1998, Nee sent an email to three SDT employees saying that he "designed a special metallic

target" for the DVD "that is significantly lower in cost than gold, but will have similar reflectivity compared to gold, and with good corrosion resistance without the problem of sputtering a semiconductor like silicon." Def. Ex. I, Nash Standing Decl. In April 9, 1998 letter to Dale Butrymowicz ("Butrymowicz"), Nee told Butrymowicz that he had recently formed Target, which was "in the business of supplying special or custom sputtering targets for the optical disc industry." Pl.Ex. 8, Pl. Opp'n to Sanctions. Nee also told Butrymowicz that "a special metallic target is designed that has similar reflectivity as gold, but the cost is substantially lower than gold, and without the complications of silicon." *Id.* Nee was "seeking a partnership with a major sputtering machine supplier or a line integrator to develop this technology." *Id.* On April 20, 1998, Nee's attorney received the patent search results. Pl.Ex. 10, Pl. Opp'n to Sanctions. On April 27, 1998, Nee began a notebook after reviewing the patents researched by his attorney. Pl.Ex. 12, p. 60, Pl. Opp'n to Sanctions. On June 22, 1998, Nee filed his first patent application, from which the '889 patent issued on December 28, 1999. Pl.Ex. 14, Pl. Opp'n to Sanctions. The abstract for the '889 patent is identical to that of the Patent Disclosure except that the phrase "singly or in combination" is removed from the list of alloy additions to silver and copper. *Id.*

On September 26, 2000, DADC's counsel wrote to Nee claiming ownership of the '889 patent under the DADC Patent Agreement Nee had signed, assigning inventions or technological innovations in which he participated while a DADC employee that related to DADC's business to DADC. Pl.Ex. 22, Pl. Mot. for Partial Summ. J. ("Pl.Summ. J. Mot."). The letter asserted that Nee was a DADC employee through July 31, 1998 because he was on payroll and received benefits through that date. *Id.* Nee's attorney responded on December 7, 2000 disagreeing with DADC's position that Nee invented the subject matter of the '889 patent as a DADC employee. Def. Ex. B, Nash Standing Decl. Nee's attorney asserted that Nee's last day of employment was no later than March 31, 1998 because under Indiana law the severance pay Nee received from April 1 through July 31, 1998 did not make Nee an employee for that time period. *Id.* The letter contended that "unless [DADC] has reason to believe that Mr. Nee made his inventions before March 31, 1998 to possibly invoke the employment agreement, DADC has no reason to make claim to any of Mr. Nee's patents for which he makes application after March 31, 1998." *Id.*

3. The Patents

There are several other silver alloy patents in the chain between Nee's first patent, the '889 patent and the '503 patent at issue in this case; these include U.S. Patent Nos 6,280,811 ("the '811 patent"), 6,481,402 ("the '402 patent") and U.S. Patent No. 6,764,735 ("the '735 patent"). The '811 patent was filed on November 12, 1999 and issued on August 28, 2001. *See* Def. Ex. 7, Decl. of Douglas Nash in Support of Defs.' Mot. for Summ. J. on Patent Issues ("Nash Patent Issues Decl."). The '402 patent was filed on September 13, 2000 and issued on September 17, 2002. *See* Def. Ex. 6, Nash Patent Issues Decl. The '735 patent was filed on March 4, 2002 and issued on July 20, 2004. *See* Def. Ex. 5, Nash Patent Issues Decl. The '503 patent was filed on January 15, 2003 and issued on September 14, 2004. Pl.Ex. 1, Pl. Summ. J. Mot.

i. Prosecution History of the '503 Patent FN1

FN1. The following facts are from Defendants' Statement of Uncontroverted Facts as to their Motion for Summary Judgment on Patent Issues. Target only purports to dispute some of these facts. However, Target's statement of genuine issues fails to rebut such facts because Target simply responds that it "disputes this fact as it is written." Target fails to present evidence supporting the dispute as required under Local Rule 56-3. Therefore, the Court accepts as uncontroverted, facts for which Target fails to offer evidence establishing a dispute.

During the prosecution of the '503 patent, Target and Williams were involved in litigation in the Western District of New York ("the New York litigation"). FN2 Nee and his attorneys did not disclose to the Patent and Trademark Office ("PTO") during the prosecution of the ' 503 patent that Target had asserted many of Nee's related silver-alloy patents, including those to which the ' 503 patent claimed priority, against Williams in the New York litigation. The same lawyers and law firms represented Target and Nee in connection with the prosecution of the ' 503 patent and the New York litigation. During the prosecution of the ' 503 patent, Nee and his attorneys also failed to inform the PTO that Williams (1) challenged the validity and enforceability of Nee's patents related to the ' 503 patent and (2) raised the issue of inequitable conduct in the prosecution of Nee's earlier patents in the New York litigation.

FN2. This litigation is ongoing.

During the prosecution of the '503 patent, Nee and his attorneys filed a petition to "make special," which accelerates the time line for the prosecution of a patent application, by arguing that there was an infringing article for sale. Nee and his attorneys relied on evidence Target had gathered in the New York litigation to support its application to make special. During the '503 prosecution, Nee and his attorneys disclosed to the PTO a number of prior art references that Williams cited in the New York litigation, but did not tell the PTO that the disclosure was related to the litigation, nor that Williams argued that such prior art rendered the patents' invalid.

In connection with the New York litigation Target produced documents relating to a reference Nee had obtained from the Japanese Patent Office website. Nee and his attorneys failed to disclose this same reference, Japanese Patent Publication No. 10293945 ("the Japanese patent") to the PTO. Nee had first come across the Japanese patent three years before he applied for the '503 patent. An entry, dated May 25, 1999, in Nee's notebook: references the Japanese patent as "Japan Patent Publication No. 10293945," noting that it was filed "4/21/97" and published "4/11/98," and states that it teaches a "silver-copper alloy for use in 'Dual Layer Optical disk's semi-transparent layer." Def. Ex. 34, Nash Patent Issues Decl.

B. Procedural Background

Target filed this action on September 14, 2004, the same day that the '503 patent issued, alleging that Defendants willfully infringed the '503 patent. In its Second Amended Complaint, Target asserted that DADC had no rights to its patents because "Mr. Nee did not conceive of any of the inventions protected by United States Letters Patent Nos. 6007889, 6280811, 6451402, 6544616, 6764735, and 6790503 prior to March 31, 1998." Second Am. Compl. para. 264. During his depositions, Nee likewise denied that he had the silver-alloy idea before his employment with DADC ended. For example, at his November 20, 2003 deposition, Nee gave the following answers:

Q When did you first come up with the idea of using copper-based or silver-based alloys in optical media?

A After I was laid off, between that time and the time I filed the patents.

Q Okay. So that prior to leaving Digital Audio [DADC], you had not thought of using this process at all?

A No.

Nee Dep. 48:18-49:1, Def. Ex. H, Nash Standing Decl. Similarly in his May 20, 2005 deposition, in response to a question about when he first had the idea for the primarily silver alloys in his patents, Nee answered by referencing his first entry in his notebook on April 27, 1998. Nee Dep. 84:5-25, Def. Ex. H, Nash Standing Decl. When asked if that was the first time he thought about using silver in the manufacture of either the semi-reflective layer or reflective layer of optical storage medium, he answered yes again. *Id.* Nee also stated that he did not think of any solutions when he first recognized the problems with respect to gold and silicon; when asked if that was true through March 31, 1998, Nee answered "right." Nee Dep. 85:7-25, Def. Ex. H, Nash Standing Decl. When asked about the April 1998 email saying he envisioned a "better solution," Nee said that he didn't envision anything at DADC. Nee Dep. 110:18-25, Def. Ex. H, Nash Standing Decl. Nee also denied that he conceived of any of his patents before April 1, 1998. Nee Dep. 171:6-8, Def. Ex. H, Nash Standing Decl. When asked about when he disclosed the alloy to his attorney, Nee said it was about a month or two before filing the patent. Nee Dep. 134:21-135:6, Def. Ex. H, Nash Standing Decl. The questioner then asked if that would have been sometime in April since the '889 patent was filed on June 22, 1998. *Id.* Nee responded probably not April, but sometime in May. *Id.* Then Nee is asked "Was it before you left DADC?" to which he responds "Yeah." *Id.* The errata sheet later served by Target's counsel upon the Williams Defendants changed Nee's "Yeah" to "No" because "Mr. Nee left DADC on March 31, 1998, which is before the April 1998 date referenced in the prior question." Errata Sheet, Def. Ex. Q, Nash Standing Decl.

On August 8, 2006, the Court compelled the production of three items on Target's privilege log. As a result, Target produced these documents designated as Attorney Eyes Only on October 17, 2006. The Defendants' attorneys therefore saw the March 30, 1998 Patent Disclosure and letter from Nee to his attorney, his attorney's letter to another attorney requesting a patent search and the results of the patent search for the first time approximately two years into the litigation.

II. LEGAL STANDARD

Summary judgment is proper if "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed.R.Civ.P. 56(c).

The Court must view the facts and draw inferences in the manner most favorable to the non-moving party. *United States v. Diebold, Inc.*, 369 U.S. 654, 655, 82 S.Ct. 993,994 (1962); *Chevron Corp. v. Pennzoil Co.*, 974 F.2d 1156, 1161 (9th Cir.1992). The moving party bears the initial burden of demonstrating the absence of a genuine issue of material fact for trial, but it need not disprove the other party's case. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 256, 106 S.Ct. 2505, 2514, 91 L.Ed.2d 202 (1986); *Celotex Corp. v. Catrett*, 477 U.S. 317, 323-25, 106 S.Ct. 2548, 2553-54, 91 L.Ed.2d 265 (1986). When the non-moving party bears the burden of proving the claim or defense, the moving party can meet its burden by pointing out the absence of evidence of a genuine issue of material fact from the non-moving party. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 806-07 (Fed.Cir.1999).

Once the moving party meets its burden, the "adverse party may not rest upon the mere allegations or denials of the adverse party's pleading, but the adverse party's response, by affidavits or as otherwise provided in this rule, must set forth specific facts showing that there is a genuine issue for trial. If the adverse party does not so respond, summary judgment, if appropriate, shall be entered against the adverse party." Fed.R.Civ.P. 56(e); *see also Anderson*, 411 U.S. at 248-49, 106 S.Ct. at 2510. Furthermore, a party

cannot create a genuine issue of material fact simply by making assertions in its legal papers. There must be specific, admissible evidence identifying the basis for the dispute. *S.A. Empresa de Viacao Aerea Rio Grandense v. Walter Kidde & Co., Inc.*, 690 F.2d 1235, 1238 (9th Cir.1980). "The mere existence of a scintilla of evidence ... will be insufficient; there must be evidence on which the jury could reasonably find for [the opposing party]." *Anderson*, 477 U.S. at 252, 106 S.Ct. at 2512.

III. DISCUSSION

A. Target's Standing to Sue under the '503 Patent

As a DADC employee, Nee was obligated to assign to the company his interest in any invention he participated in while employed at DADC. Williams asserts that Nee conceived of the invention claimed in the '889 patent during his employment with DADC, and thus Target lacks standing to sue on the '503 Patent. Target counters that the DADC Patent Agreement did not apply to Nee's "second" employment with DADC from 1995 to 1998, that even if it did, the agreement ceased to operate after February 19, 1998 when Nee was told his position would be eliminated effective March 31, 1998, and that Nee did not have an "invention" under the agreement when he left DADC.

In patent cases, standing is a jurisdictional question. *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1551 (Fed.Cir.1995). To bring suit for patent infringement, the plaintiff must have legal title to the patent and "come forward with specific facts to support its claim of ownership, and this evidence must be sufficient ... to infer that [Target] holds title to the patent." *TM Patents, L.P. v. Int'l B Machines Corp.*, 121 F.Supp.2d 349, 358, 367 (S.D.N.Y.2000).

A patentee has presumptive title to an invention. *See Beech Aircraft Corp. v. Edo Corp.*, 990 F.2d 1237, 1248 (Fed.Cir.1993). However, "[t]he present assignment of a future invention divests the inventor-assignor of ownership of the invention and automatically vests ownership of the invention, when invented in the assignee." *Imatec, Ltd. v. Apple Computers, Inc.*, 81 F.Supp.2d 471, 481 (S.D.N.Y.2000); *aff'd*, No. 00-1262, 2001 U.S.App. LEXIS 16841 (Fed.Cir. July 26, 2001). Thus, if an inventor assigned the rights in his future inventions, neither the inventor nor any subsequent assignee have standing to sue for infringement for a patent arising from a future invention. *Id.*; *see also FilmTec Corp. v. Allied-Signal Inc.*, 939 F.2d 1568, 1572 (Fed.Cir.1991). Therefore, whether Target has standing to sue under the '503 patent depends on: (1) whether the DADC Patent Agreement applies to Nee's employment from 1995 through March 31, 1998 after he returned to DADC from SDT; and (2) whether Nee participated in the invention or technological innovation ultimately patented in the '503 patent during his employment with DADC, i.e. before March 31, 1998 such that the DADC Patent Agreement applies to the ' 503 patent.

1. The DADC Patent Agreement

Target cites several cases for the proposition that the DADC Patent Agreement Nee signed on January 8, 1992 terminated when he transferred to SDT. *See Kennedy-Van Saun Mfg. & Eng'g Corp. v. Indus. Comm'n*, 355 Ill. 519, 189 N.E. 916, 919 (Ill.1934) (finding the evidence showed the original employment contract with the parent corporation was superceded by the employee's subsequent transfer to the subsidiary corporation); *Meredith v. Rockwell Int'l Corp.*, 826 F.2d 463, 465-66 (6th Cir.1987) (concluding that there was no evidence of a novation such that transfer from subsidiary to parent corporation would bind parent to alleged contract with subsidiary to employ employee until retirement). Thus, Target argues that because DADC did not have Nee sign a similar agreement when he returned to DADC in 1995, he did not assign any invention to DADC created after April 10, 1992. The problem with Target's reliance on the cited cases

is that they involve situations in which an employee was permanently transferred to the subsidiary or parent corporation. Thus, in both cases, the employee's relationship with the corporation with which it had signed the agreement had been fully terminated prior to the events at issue. In contrast, the evidence before the Court shows that Nee had a continuing relationship with DADC during his employment with SDT and returned to work for DADC when his SDT assignment ended—a situation that Target's cited cases do not address. While Nee was at SDT, DADC "kept" Nee's name in the organization and expected him to return to DADC after his work with SDT ended. In addition, DADC paid part of Nee's compensation while he worked for SDT—\$14,600 per year for the first year and \$21,900 for the next two years. Finally, Nee remained active on DADC employee plans while in Japan. These cases, therefore, do not resolve the instant issue of whether the DADC Patent Agreement remained in effect during Nee's transfer to SDT such that it applied to his "second" period of employment following his return to DADC in 1995.

Defendants argue that even if the DADC agreement expired when Nee transferred to DADC, his continued relationship with DADC was adequate consideration such that the DADC Patent Agreement remained in effect upon Nee's return to DADC in 1995. However, the cases Defendants cite address the situation when an agreement expired and the employee continued working for that employer and not a situation in which the employee left to work for another subsidiary and subsequently returned to work for the employer. *See e.g., Toledo Machine & Tool Co. v. Byerlein*, 9 F.2d 279, 280 (6th Cir.1925) (finding that after expiration of an employment contract requiring employee to assign rights to all inventions, employee's acceptance of offer of continued employment meant that he remained subject to patent assignment agreement because both parties must have had in mind the services that employee had been performing and there was no evidence that either party suggested a change).

There is evidence that DADC paid part of Nee's compensation and that Nee received DADC benefits while he worked at SDT. Moreover, DADC "kept his name in the organization" and expected Nee would return to DADC once his SDT assignment ended. The Court concludes that there is a triable issue as to whether Nee's relationship with DADC was sufficient to establish continuing employment or a continuing relationship while he was on assignment at SDT such that the Patent Agreement remained in effect upon his return to DADC in 1995.

2. Whether Nee Participated in an Invention or Technological Innovation such that the DADC Patent Agreement Applies to the '503 Patent

The parties agree that Indiana law applies to the interpretation of the DADC Patent Agreement because Nee and DADC executed the agreement in Indiana and performance occurred in Indiana. Under Indiana law, when the contract language is clear and unambiguous, the intent of the parties is determined from the four corners of the contract, giving the words their plain, usual, and ordinary meaning. *Samar, Inc. c. Hofferth*, 726 N.E.2d 1286, 1290 (Ind.Ct.App.2000); *Hinc v. Lime-O Sol Co.*, 382 F.3d 716, 720 (7th Cir.2004). The parties dispute whether patent assignment agreements are similar to noncompete agreements and restrictive covenants such that they should be strictly construed. Target cites an Iowa case treating noncompete agreements and patent assignment agreements as analogous and applying the same test to determine the enforceability of either. *See Revere Transducers, Inc. v. Deere & Co.*, 595 N.W.2d 751, 762 (Iowa 1999). Defendants, by contrast, cite a Third Circuit case to the effect that "restrictive covenant cases differ from assignment of patent rights because restrictive covenants hamper a person's ability to earn a living, whereas patent assignments affect only property rights to patents." *Harsco Corp. v. Zlotnicki*, 779 F.2d 906, 910 (3d Cir.1985); *see also Goldwasser v. Smith Corona Corp.*, 817 F.Supp. 263, 274 (D.Conn.1993); *aff'd*, 26 F.3d 137 (Fed.Cir.1994) ("employment agreements [assigning patent rights] such as the one at issue here are

valid and enforceable and they do not violate public policy against unreasonable restraint of trade"). None of these cases apply Indiana law and thus offer no guidance as to whether the patent agreement should be approached as a restrictive covenant under Indiana law. Moreover, the Court agrees with the Third Circuit that patent assignment agreements are distinguishable from restrictive covenants and therefore do not merit strict construction. For these reasons, the Court will apply general contract principles to interpret the DADC Patent Agreement.

Under the DADC Patent Agreement, Nee assigned to DADC his "entire right, title and interest in and to each invention, technological innovation, ... in which I participate during the period of my employment with DADC, whether or not during working hours, which pertain to any line of work or investigation by DADC." DADC produced optical storage media and thus, Target does not dispute that Nee's "invention" pertained to DADC's work. Thus, the key issue is whether Nee's March 30, 1998 Patent Disclosure establishes that Nee had "participated" in the "invention" or "technological innovation" that was patented in the '889 patent and, ultimately, the '503 patent, prior to leaving DADC.

Courts that have interpreted assignment agreements requiring the employee to assign inventions to an employer disagree as to what is required before such an invention exists under the assignment agreement. *See* 66 A.L.R.4th 1135 s. 18 (2005). Some courts have held that the invention dates from the written expression of the idea, while others require the completion of a specimen or prototype. *Id.*; *compare* *Bailey v. Chattem, Inc.*, 684 F.2d 386, 389 (6th Cir.1982) (upholding jury verdict finding that invention occurred prior to when the consulting contract, under which inventor assigned his right to patent invention, went into effect because inventor had thought of adding critical component to invention even though he had not yet described it in writing because jury could have found on the evidence that invention was complete prior to putting all the necessary steps into practice); *Andreaggi v. Relis*, 171 N.J.Super. 203, 219, 408 A.2d 455 (1979) (holding that where inventor has conceived of the basic idea, drawn schematics, assembled hardware, and documented the means of executing the idea while working for the employer, there was an invention under the assignment agreement and further that a "model does not have to be built to the point of a saleable product") *with* *Jamesbury Corp. v. Worcester Valve Co.*, 443 F.2d 205, 210, 213 (1st Cir.1971) (ruling that under Massachusetts state law definition of "invention," which coincided with the usage of "invention" under patent law, an idea did not become an invention until it was put into practice or embodied in a tangible form; thus because employee did not reduce ideas to drawings or writings until after he left his employment, there was no invention during his employment such that it was assignable under the assignment contract); *Conway v. White*, 9 F.2d 863, 868 (2d Cir.1925) (invention dated from completion of specimen, even though inventor had not yet made any model, drawing or written description representing the invention).

Nee went further than the inventor in *Jamesbury*, Although there is no evidence presently before the Court that he had created a prototype prior to March 31,1998, unlike the *Jamesbury* inventor, Nee had expressed his invention in tangible form (the twelve-page Patent Disclosure) prior to his last day of employment at DADC. In addition, the Supreme Court has observed that "[t]he primary meaning of the word 'invention' in the Patent Act unquestionably refers to the inventor's conception rather than to a physical embodiment of that idea." *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 60 119 S.Ct. 304 (1998) (as amended Oct. 21, 1999) (stating that there is no requirement that an invention must be reduced to practice before it can be patented). The Supreme Court's interpretation of the word "invention," therefore, contradicts the *Jamesbury* court's interpretation that an invention requires a reduction to practice or tangible embodiment. According to the Supreme Court, even though a reduction to practice often provides the best evidence that an invention is complete, proof of reduction to practice is not required as a party can prove that an invention is complete

before it has been reduced to practice. *See Pfaff*, 525 U.S. at 66. Moreover, in light of the fact that Nee assigned his right to inventions or technological innovations in which he "participated" and the word "participate" means "to take part" or "to have a part or share in something," FN3 even if the written Patent Disclosure was insufficient to constitute an "invention," it may be sufficient to constitute "participation" in an invention under the DADC Patent Agreement. The use of the term "participate" broadens the operation of the patent agreement. *See Jamesbury Corp. v. Worcester Valve Co.*, 318 F.Supp. 1 (D.Mass.1970) (stating that a broader contract covering "all patentable ideas" or "inventions conceived during employment" might have covered the employee's invention in the case, which he conceived, but did not write down prior to the termination of his employment). This is not a case where the defendants are arguing that a patent assignment agreement covered the inventor's thoughts or ideas, but rather a case where the issue is whether the DADC Patent Agreement covers the written expression of an invention, which is seemingly very similar to the invention ultimately patented.

FN3. Merriam-Webster Online Dictionary, www.m-w.com/dictionary/participate.

The Court concludes that the written expression in the March 30, 1998 Patent Disclosure is sufficient to show that Nee had conceived of his invention prior to leaving DADC. However, Defendants have not presented sufficient evidence for the Court to determine as a matter of law that the March 30 invention is the same invention ultimately patented in the '889 patent. Target has presented evidence that after reviewing the prior art, Nee discovered that his March 30 invention was not patentable and therefore, made material changes to it before filing his application for the '889 patent. Thus, the second triable issue for the jury is whether the invention discussed in the March 30, 1998 Patent Disclosure is similar enough to the invention ultimately patented in the '889 patent such that title to the '889 patent vested in DADC under the agreement. Finally, even if the rights to the '889 patent vested in DADC, the parties have not presented sufficient evidence at this time about whether and how this affects standing to sue under the '503 patent, which issued six years after Nee left DADC. Therefore, neither party is entitled to judgment as a matter of law as to Target's standing.

3. DADC

Target's argument that the lack of standing defense is barred by the statute of limitations has no merit. *See Imatec, Ltd.*, 81 F.Supp.2d at 483 n. 5. Whether DADC can successfully bring suit to establish its title to Target's patents is irrelevant to whether the Defendants in this case can present lack of standing as a defense. Moreover, arguably Indiana's ten-year statute of limitations for claims on written contracts would apply to any suit brought by DADC. In addition, even if a shorter statute of limitations period applies to DADC's claim, it may have been tolled by Target's assertion in response to DADC's initial inquiry about its rights to the '889 patent that DADC had no rights unless it had reason to believe that Nee made his invention prior to March 31, 1998. Even now, DADC does not know about the March 30, 1998 Patent Disclosure, demonstrating that Nee had at least conceived of the invention during his employment with DADC. Thus, DADC remains unaware of its potential rights to the '889 patent.

Defendants assert that DADC is a "necessary" party to Target's Motion for partial summary judgment that Target has standing, but not to Defendants' Motion for summary judgment that Target does not have standing. Defendants further assert that Federal Rule of Civil Procedure 19(c) requires DADC to be joined as a "necessary party" because DADC is subject to service of process, its joinder would not deprive the Court of jurisdiction, and DADC "claims an interest relating to the subject of the action and is so situated

that the disposition of the action in [DADC's] absence may (i) as a practical matter impair or impede [DADC's] ability to protect that interest." Fed.R.Civ.P. 19(a)(2). Target responds by asserting that DADC is not a necessary party under Rule 19. Because the Court has denied Target's Motion for partial summary judgment as to its ownership of the '503 patent and its standing to bring this action, the Court need not decide whether DADC was an indispensable party to Target's motion seeking a declaration that it (not DADC) owns the ' 503 patent.

However, the Court finds that DADC should be given the necessary information to allow it to decide whether to intervene. Consequently, because DADC is currently unaware of its potential rights, the Court hereby modifies the November 7, 2006 Order (docket no. 269) upholding the "attorney's eyes only" designation of Item Nos. 15-17 on Target's privilege log. While these documents retain the "attorney's eyes only" designation for other purposes, Defendants may share Item 15 (the March 30, 1998 letter from Nee to his attorney and the attached Patent Disclosure) with DADC to allow DADC to make an informed decision as to whether it should intervene.

B. TERMINATING SANCTIONS

Defendants request that the Court dismiss this action on the ground that Target's conduct amounts to the extreme circumstances required to warrant such drastic relief. The Court has inherent authority "to levy sanctions in response to abusive litigation practices," *Fjelstad v. Am. Honda Motor Co.*, 762 F.2d 1334, 1337 (9th Cir.1985) (citation omitted). While the Court is very concerned about the record of Nee and Target's misconduct, the Court does not believe that the drastic measure of dismissal is warranted at this time in light of Ninth Circuit case law discouraging terminating sanctions.

However, "[t]he general rule in the Ninth Circuit is that a party cannot create an issue of fact by an affidavit contradicting his prior testimony." *Bodett v. Coxcom, Inc.*, 366 F.3d 736, 748 (9th Cir.2004) (holding plaintiff could not create a material issue of fact by stating that she was placed on anti-depressants in her affidavit opposing defendant's summary judgment motion when she had testified at her deposition that she had not been placed on any medications as result of defendant's actions) (quoting *Kennedy v. Allied Mutual*, 952 F.2d 262, 266 (9th Cir.1991)). Under this rule, the Court will not rely on Nee's recent affidavit in ruling on the cross motions for summary judgment to the extent that the affidavit contradicts his prior testimony.

Although the Court is not granting terminating sanctions in this Order, the Court is deeply concerned about Nee's inconsistent statements regarding, *inter alia*, when he first conceived of his invention and the errata sheet changes made by Target's attorneys to the transcript of Nee's deposition. While the Court is reluctant to chill the litigation process, the evidence before the Court regarding the way in which Target and its attorneys have conducted this action is disturbing. Therefore, the Court is holding in abeyance Defendants' Motion for Terminating Sanctions pending live trial testimony. The Court will re-visit whether terminating or monetary sanctions are warranted during and after the trial, which will give the Court an opportunity to observe Nee and evaluate his credibility in order to determine whether sanctions are warranted.

C. CLAIM INTERPRETATION

Patent infringement analysis involves two steps: (1) an interpretation of the asserted claims, and (2) a comparison of the claims to the accused device. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed.Cir.1995) (en banc), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Claim interpretation is a matter of law, *Markman*, 52 F.3d at 979, and is thus amenable to summary judgment, even though the analysis involves both issues of law and questions of fact. *Phonometrics Inc. v. N. Telecom Inc.*, 133 F.3d

1459, 1463-64 (Fed.Cir.1998). Many courts, however, have chosen to hold a claim interpretation hearing, or *Markman* hearing, to facilitate the claim interpretation process. *See e.g.*, *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 93 F.3d 1572, 1577 (Fed.Cir.1996).

Claim interpretation begins with the language of the claim. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed.Cir.2002). Terms in the claim are generally given the ordinary and customary meaning they would have to a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed.Cir.2005) (en banc). However, the terms must be read in the context of the entire patent. *Id.* at 1314. In interpreting the claims, the court focuses primarily on the intrinsic evidence of record, including the claims themselves, the specification, and if in evidence, the prosecution history. *Id.* at 1312-17.

Among the intrinsic evidence, the specification is always highly relevant to the claim construction analysis—it is the single best guide to the meaning of a disputed term, and is usually dispositive. *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996)). "The specification is, thus, the primary basis for construing the claims." *Id.* (quoting *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed.Cir.1985)). In addition to the specification, the court will also consider the prosecution history, consisting of "the complete record" of the patent. *Id.* at 1317. However, because the prosecution history often lacks the clarity of the specification, it is less useful for claim interpretation purposes. *Id.*

While the court may also consider extrinsic evidence, including expert testimony, dictionaries, and learned treatises, as the Federal Circuit has recently made clear, such evidence is generally viewed as less reliable than intrinsic evidence. *Phillips*, 415 F.3d at 1317-18. Therefore, the court must use its discretion in admitting and weighing extrinsic evidence, keeping in mind its inherent flaws. *Id.* at 1319.

Target is asserting claims 1, 2, and 4 of the '503 patent. Claim 1 is an independent claim, whereas Claims 2 and 4 are dependent claims, whose only disputed interpretation involves an issue that will be resolved in the construction of Claim 1. The parties dispute the interpretation of the following underlined elements in the Claim 1:

An optical storage medium, comprising;

a first layer having a first pattern of features in at least one major surface;

a semi-reflective coating adjacent the first feature pattern; said semi-reflective coating including a first metal alloy;

a second layer having a second pattern of features in at least one major surface;

a reflective coating adjacent the second feature pattern, the reflective coating including a second metal alloy;

a spacer layer located between the first and the second layer; and

said first metal alloy including silver and copper wherein the relationship between the amount of silver and copper is defined by Ag_xCu_t where $0.900 < x < 0.999$ and $0.00 < t < 0.100$.

Claims 2 and 4 modify the amount of copper in the first metal alloy. Claim 2 claims "the medium of claim 1, wherein $0.001 < t < 0.05$." Claim 4 claims "the medium of claim 1, wherein $0.001 < t < 0.02$."

1. "An optical storage medium" (Claim 1)

Defendants propose that "an optical storage medium" be interpreted as "an optically readable disc, such as a CD, CD-R, DVD or DVD-R," whereas Target proposes no interpretation or if limited, "a medium that contains information that is retrieved using laser light." Contrary to Target's assertion, "an optical storage medium" is "necessary to give life, meaning, and vitality" to claim 1. *Catalina Mktg. Int'l v. Coolsavings.com*, 289 F.3d 801, 808 (Fed.Cir.2002). Thus, even though it is part of the preamble, it does require interpretation because without "an optical storage medium" there is no structurally complete invention. The specification makes clear that "an optical storage medium" is used as a general phrase to refer to optical devices containing data read by laser light. The examples of optical storage medium discussed in the specification are all optically readable discs. However, listing these examples in the definition of "an optical storage medium," as Defendants propose, would improperly narrow the claim. Thus, the Court concludes that an "optical storage medium" is "an optically readable disc or an optical device which is read by laser light."

2. "Comprising" (Claim 1)

The word "comprising" is a term of art in patent law that indicates an open-ended construction. *See Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc.*, 212 F.3d 1377, 1382-83 (Fed.Cir.2000) (contrasting "comprising" with "consisting of"-another term of art that signifies restriction and exclusion in patent law). Therefore "comprising" is interpreted to mean "including" or "containing" as proposed by Target, such that Claim 1 is not limited to the elements recited therein. The Court notes that Defendants have not opposed Target's proposed definition; instead, they have incorporated the word "comprising" into their proposed interpretation of a "first pattern of features" addressed next.

3. "First pattern of features" and "second pattern of features" (Claim 1)

Target proposes that these terms first and second "pattern of features" be interpreted as "a first pattern of pits corresponding to data that are readable by laser light" and "a second pattern of pits corresponding to data that are readable by laser light," respectively. In contrast, Defendants propose that the first and second "pattern of features" be interpreted as "information and/or data that is located at a major surface of the optical disc." The parties appear to agree that the "pattern of features" correspond to information and/or data stored on the disc. The disagreement centers around whether the information must be in the form of pits and lands as Target contends. The claimed language does not so limit the phrase "pattern of features" to pits and lands. In addition, although the specification references FIG. 3 as an "embodiment of this invention" and FIG. 3 is an optical storage medium with a first and second "data pit pattern," the specification also discusses a recordable compact disc, which does not have "a continuous spiral of pits," but instead "a continuous spiral groove" and "a layer of organic dye." '503 Patent, Col. 6, lines 8-22; Col. 2, lines 40-46. Moreover, as both parties agree the '503 patent incorporates by reference the Florczak patent (U.S. Patent No. 5,640,382), which lists "pits" as an example of a "pattern of features." For these reasons, the Court interprets a "pattern of features" as "a pattern corresponding to information or data in a major surface of the optical disc, however physically written onto it."

4. "Semi-reflective coating" (Claim 1)

Target proposes a "semi-reflective coating" be interpreted as "a coating that is reflective enough so that laser light can be used to read data corresponding to the pattern of pits that it is coating but also transparent enough so that laser light can be used to read the data corresponding to a pattern of pits coated by a second reflective coating behind it." Defendants propose an interpretation for the clause in which "semi-reflective coating" appears. Defendants' proposed interpretation is "a thin film located next to the first surface in the disc that contains information and/or data, the film being a silver and copper alloy within the claimed ranges that is thin enough to allow laser light to pass through it, but that also reflects a significant amount of the laser light." The Court finds that both proposed interpretations include words or phrases that would unnecessarily narrow this element beyond what appears from the claim and specification. As to Target's proposed construction, the patent covers recordable discs that do not have "pits," so "semi-reflective coating" should not be defined to require "pits." As to Defendants' proposed definition, there is nothing in this element requiring that the film be "silver and copper alloy within the claimed ranges." According to the specification, the semi-reflective layer has a reflectivity in the range of approximately eighteen to thirty percent and must reflect light, but also allow enough light to pass through so that the laser beam can reach the highly reflective layer below it. *See* '503 Patent Col. 3, lines 24-30. For these reasons, the Court adopts the following hybrid interpretation: the "semi-reflective coating" is "a coating that is reflective enough to allow laser light to read data corresponding to the first pattern it coats, but also transparent enough so that laser light can read the data corresponding to the pattern coated by the second reflective coating behind it."

5. "Reflective coating" (Claim 1)

Target proposed that "reflective coating" be interpreted as "a coating that is reflective enough so that laser light can be used to read the data corresponding to the pattern of pits that it is coating." Defendants, in contrast, propose that "reflective coating" be interpreted as "a thin film located next to the second surface in the disc that contains information and/or data, the film being a metal alloy that is thick enough to reflect more than 80 percent of the laser light." The specification states that "it is important to have a highly reflective coating on the disc to reflect the laser light from the disc and onto the detector." '503 Patent, Col. 2, lines 13-15. The specification also provides that the usual material for the reflective layer has an optical reflectivity of more than 80 percent. *Id.* at Col. 2, lines 16-18. Because the specification refers to what the reflective coating "usually" is, it does not limit the reflective material to elements with a reflectivity of more than 80 percent. Nevertheless, as the 706 expert pointed out, without defining the required reflectivity of the reflective layer, the construction of "reflective coating" fails to distinguish between it and the "semi-reflective coating." Therefore, the Court construes "reflective coating" as "a coating that is as reflective as possible, e.g. has a reflectivity of 80 percent or greater, so that laser light can be used to read the data corresponding to the pattern it coats."

6. "Spacer layer" (Claim 1)

Defendants propose that "spacer layer" be interpreted as "a layer that separates the semi-reflective and reflective coatings that is comprised of an optically transparent material." Target, in contrast, proposes a broader interpretation of "a layer that separates the first and second layer." Thus, the dispute is over whether the spacer layer must be "comprised of an optically transparent material." The Court does not find support in the '503 patent for the added requirement that the spacer layer be "comprised of an optically transparent material" and therefore adopts Targets' interpretation.

7. "Said first metal alloy including silver and copper wherein the relationship between the amount of silver and copper is defined by Ag_xCu_t where $0.900 < x < 0.999$ and $0.001 < t < 0.100$." (Claim 1)

Defendants propose that the first metal alloy be interpreted to mean "an alloy of *just* silver and copper." Target proposes that the first metal alloy be interpreted as "a metal alloy containing the elements Ag (silver) and Cu (copper) where additional elements may be present." The specification teaches that the alloy can contain additional metals beyond silver and copper. The specification specifically refers to the silver-based "binary [two metals] or ternary [three metals] alloy systems" that are "further alloyed with ruthenium, osmium, iridium, platinum, beryllium and copper or mixtures of these metals." '503 Patent Col. 8, lines 4-6. Thus, on its face, the '503 patent encompasses metals in addition to silver and copper. Defendants do not seriously challenge Target's interpretation in terms of the claims and specification of the '503 patent. Instead, Defendants, contend that Nee clearly and unambiguously disavowed a claim interpretation that would include elements other than just silver and copper when he and his attorneys distinguished a prior art reference to the examiner during the prosecution of the '503 patent. In addition, Defendants assert that Nee's deposition confirmed this distinction. The Court will not consider the extrinsic evidence of Nee's deposition testimony.

Therefore the Court only addresses the disagreement as to whether Nee disavowed an interpretation that would include elements other than just silver and copper during the prosecution of the '503 patent. In explaining why Florczak's silver, copper, gold alloy was different from the invention claimed in the '503 patent, Nee and his attorneys told the examiner that Florczak's "partially [semi-]reflective layer includes a metal alloy including two metals, one of which is gold." They also stated that Florczak discloses gold alloys with the general formula " Au_xM_y , wherein $10 < x < 90$ and $10 < y < 90$ and M is the second metal." They further stated that Florczak discloses gold silver alloys and gold copper alloys. Nee and his attorneys concluded that Florczak "does not disclose, any [silver-copper] alloys, for use as reflective or semi-reflective layers in optical recording devices." Defendants contend that the only way Florczak's silver, copper and gold alloy is not a silver-copper alloy is that the '503 patent is limited to just silver and copper. However, this argument ignores the fact that Florczak teaches a gold alloy with an additional metal (M) that can be either silver or copper. Thus, while Florczak claims cover gold-silver-copper alloys, the essential part of each such claimed alloy is either the ratio between gold and silver or the ratio between gold and copper, whereas the ratio between silver and copper is not addressed in the claims. Thus, Florczak does not cover silver-copper alloys without gold; Florczak requires gold. In addition, Defendants' argument ignores the fact that the ranges claimed in the '503 patent and Florczak are mutually exclusive, which Nee disclosed to the patent examiner.

Florczak's gold-silver alloy must have more than 10 to less than 90 atomic percent gold and silver and thus, the amount of silver is less than the amount of silver possible under the '503 patent and copper could be present in almost 80 percent, more than the amount permitted by the '503 patent. Florczak's gold-copper alloy must have more than 10 and less than 90 atomic percent gold and copper and thus, the amount of copper is greater than the amount possible under the '503 patent and silver could be present in less than 80 percent, less than the amount required under the '503 patent. By contrast, the '503 patent silver-copper alloys must have more than 90 atomic percent silver and less than 10 atomic percent copper. Nee and his attorneys disclosed the Florczak formulas dictating the relevant range of each element in the alloys and thus, their concluding comment distinguishing Florczak must be read in context. Under these circumstances, the Court finds that there is not sufficient evidence to conclude that Target clearly and unambiguously disavowed the claim interpretation that the metal alloys of the '503 patent may include metals in addition to silver and copper. Therefore, the Court adopts the first half of Target's proposed interpretation such that the "first metal alloy" is "a metal alloy containing the elements silver (Ag) and copper (Cu) where additional elements may be present."

However, because the Court finds that Target and Nee did not limit the scope of the '503 patent to binary alloys of only silver and copper, the Court must still address Defendants' challenge to the second part of Target's proposed definition regarding the interpretation of "atomic percent." To reiterate the element at issue is "said first metal alloy including silver and copper wherein the relationship between the amount of silver and copper is defined by Ag_xCu_t where $0.900 < x < 0.999$ and $0.001 < t < 0.100$." Target proposes the following construction regarding the atomic percent: "The alloy must have an atomic percent of silver of more than 90 and less than 99.9. The alloy also must have an atomic percent of copper of more than 0.1 and less than 10." The parties' dispute centers around whether the atomic percentage of silver and copper must be viewed in the relation to the entire alloy when the alloy includes other metals in addition to silver and copper, as Target argues, or whether it is limited to the relationship between silver and copper even when other metals are present, as Defendants argue.

Defendants argue that Target's construction is inconsistent with and contradicts the plain language of claim 1, which specifically states "the relationship between the amount of silver and copper." Defendants further assert that Defendants' construction is supported by the specification because when the specification discusses adding a third or fourth metal to the alloys, it provides that the additional metals be measured in relation to silver and not in relation to all of the metals in the alloy. Finally, Defendants argue that Target's proposed interpretation is inconsistent with the construction advocated by Target's technical expert, Dr. Mansuripur, in his initial report, where he opined that it was proper to look at the ratio of the amount of silver to copper independent of any other metal in the alloy. Target counters by arguing that numerous examples listed in the specification state the atomic percentage in terms of the entire alloy not with respect to silver and copper alone. Target also argues that the statement in Dr. Mansuripur's report to which Defendants refer was related to claim construction to which Williams had stipulated to infringing in the Western District of New York in a preliminary injunction hearing, which was never construed by the court and therefore is irrelevant. Because Dr. Mansuripur's opinion is extrinsic evidence, the Court will not give it any weight in constructing the meaning of atomic percent. Instead, the Court will examine the intrinsic evidence of the claim and the specification.

As the claims only discuss the atomic percent of silver and copper, the Court must look to the specification to determine whether the atomic percent of these metals must be viewed in relation to the composition of the entire alloy when other metals are present. The specification defines the term "atomic percent" or "a/o percent" as "the amount of a particular metal or the amount of a group of particular metals that is present in a particular alloy based upon the number of that metal's atoms that are present, or the number of that group's atoms that are present, whichever the case may be." '503 Patent, Col. 5, lines 31-37. On its face this definition appears to indicate that the atomic percent is viewed in relation to the amount present in the alloy as a whole. Defendants cite other portions of the specification, discussing the embodiments of the invention, to support their argument to the contrary that the atomic percent of copper and silver should be measured only in relationship to the amounts of these two metals present in the alloy. One of the portions cited by Defendants provides: "In relation to the amount of silver that is present in the above binary or ternary alloy systems, the amount of the above-identified metal [ruthenium, osmium, platinum, beryllium, copper] that may be preferably added ranges from about 0.01 a/o percent to about 5.0 a/o percent of the silver content." '503 Patent, Col. 8, lines 9-13. However, following this language, another embodiment of the invention provides "the relationship between the amounts of silver, palladium and copper ranges from about 0.1 a/o percent to about 15.0 a/o percent palladium, from about .01 a/o percent to about 5.0 a/o percent copper and from about 80.0 a/o percent to about 99.9 a/o percent silver." Id. Col. 8, lines 17-21. Thus, when the specification speaks in terms of "the relationship," the atomic percent is given in relation to the composition of the alloy as a whole and not simply in relation to one other metal. The specification goes on to give the

preferred atomic percent for the this embodiment of the invention: "from about 0.2 a/o percent to about 5.0 a/o percent palladium, from about 0.1 a/o percent to about 3.0 a/o percent copper, and from about 92.0 a/o percent to about 99.7 a/o percent silver." *Id.*, Col. 8, lines 21-24. The second portion cited by Defendants follows, which provides: "In relation to the amount of silver that is present in the above silver, palladium, and copper ternary alloy, the amount of the above-identified metal [ruthenium, osmium, iridium, platinum, rhodium, beryllium] that may be preferably added ranges from 0.01 a/o percent to about 5.0 a/o percent of the silver content." *Id.*, Col. 8, lines 27-32.

Target's argument that the specification supports its proposed interpretation that the atomic percent is properly interpreted in relation to the alloy as a whole points to several examples discussed in the '503 patent. In pertinent part, examples 6, 8, 9, and 10 all include metals beyond silver and copper and discuss the atomic percent in relation to the composition of the entire alloy. *See, e.g.* Example 6, Col. 14, lines 20-23 ("A silver based alloy sputtering target with the composition in a/o percent of approximately 2.4 percent gold, 1.3 percent palladium, 0.2 percent platinum, 0.7 percent copper and the balance-silver"); Example 8, Col. 14, lines 60-63 ("A copper based alloy sputtering target with composition in a/o of approximately 0.8 percent beryllium, 0.1 percent silver, 0.6 percent magnesium, 1.4 percent zinc and the balance copper"); Example 9, Col. 15, lines 31-33 ("A silver based alloy sputtering target with the composition in a/o % of approximately 1.5% beryllium, 0.3% platinum, 0.8% copper and the balance silver"); Example 10, Col. 15, lines 55-57 ("A silver alloy sputtering target having the composition in a/o % Pd, 1.2%; Pt, 0.5%, Cu, 0.3%; Au, 1.0% and balance silver"). As Target argues, these examples state the atomic percent in terms of the entire alloy and not in respect to just silver.

Thus, the specification contains provisions that support the interpretation urged by both sides: Although the specification discusses the percent of metals other than silver and copper in relation to the silver content, it also discusses the atomic percent of metals other than silver and copper in relation to the alloy as a whole. Given that the examples discussing alloys composed of silver, copper and other metals in the specification provide the atomic percent of each metal in relation to the alloy composition as a whole and that the specification's definition of atomic percent suggests that the atomic percent of each metal is given in relation to the alloy as a whole, the Court agrees with Target's proposed construction that the atomic percent is properly evaluated in relation to the alloy's entire composition and not merely the relationship between silver and copper regardless of whether other metals are present.

D. VALIDITY

A patent is presumed valid. 35 U.S.C. s. 282. The party challenging validity has the burden of proving by clear and convincing evidence that the patent is invalid. *Oakley, Inc. v. Sunglass Hut Int'l*, 316 F.3d 1331, 1339 (Fed.Cir.2003); *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1216 (Fed.Cir.1998).

1. Anticipation

Defendants argue that the '503 patent is invalid because of anticipation. A claim is anticipated under 35 U.S.C. s. 102 and thus invalid "if each and every limitation is found either expressly or inherently in a single prior art reference." *Bristol-Myers Squibb Co. v. Ben Venue Labs.*, 246 F.3d 1368, 1374 (Fed.Cir.2001). In deciding whether a particular prior art reference anticipates a given patent claim, the first step is to determine the priority date of the patent-in-suit. *See e.g. Baxter Int'l, Inc. v. McGaw, Inc.*, 149 F.3d 1321, 1332-34 (Fed.Cir.1998). The instant dispute over validity centers around whether the '503 patent is entitled to the filing date of the '889 patent or another earlier patent.

Section 120 of Title 35 provides the criteria that must be satisfied for a later patent to get the benefit of an earlier filing date: "An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States ... shall have the same effect, as to such invention, as though filed on the date of the prior application." 35 U.S.C. s. 120. Accordingly, the '503 patent may only claim priority to the earlier '889 patent application if the '889 patent application fulfills the requirements of s. 112. Section 112 requires, in part, that the application "shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same." *Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1253 (Fed.Cir.2004) (quoting 35 U.S.C. s. 112 para. 1).

Defendants first argue that the '889 and '503 patents do not satisfy the requirements of Section 112 because the claims of the '503 patent only explicitly mention a silver-copper alloy and the '889 Patent does not disclose an alloy of just silver and copper. However, under the Court's claim construction, the '503 Patent encompasses silver-copper alloys that contain a third element and thus, is not limited to alloys of just silver-copper. Nevertheless, the '503 patent does provide for alloys containing only silver and copper. Therefore the issue is whether the '889 patent's disclosure of silver-gold-copper, silver-palladium-copper and silver-gold-palladium-copper alloys would lead a person skilled in the art to make and use an alloy containing only silver and copper. Defendants argue that because the '889 patent does not say anything about alloys of just silver and copper, it does not support the "full scope of the claimed invention." Target counters that the '889 patent discloses the combination of silver and copper without other elements because the abstract refers to silver-based alloys that include a list of elements one of which is copper and there is nothing in this list to suggest that the alloy must contain anything in addition to silver and copper. Defendants argue that the broad claims of any silver-copper alloy were not disclosed in the '889 patent specification, which lists alloys containing silver and copper in four specific combinations with other elements. *See LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed.Cir.2005) (using the following analogy: if an inventor created a particular fuel efficient automobile engine and described it in detail in the specification, the specification would satisfy the Section 112 with respect to a claim for that particular engine, but not necessarily support a broad claim as to every possible type of fuel efficient engine).

In contrast, Target contends that Defendants improperly rely on the "omitted element" test. *See Reiffin v. Microsoft*, 214 F.3d 1342 (Fed.Cir.2000) (concluding that the district court erred in looking to a prior application to determine whether the patents at issue satisfied the written description requirement under Section 112). *Reiffin* explicitly distinguished its situation from that under Section 120- "the relevant specifications are those of the [patents at issue]; earlier specifications are relevant only when the benefit of an earlier filing date is sought under 35 U.S.C. s. 120." Target asserts that *Reiffin*'s discussion of the "omitted element" test is applicable to the instant issue of whether the specifications of the '889 patent entitle the '503 patent to the benefit of the '889 patent's earlier filing date. Defendants counter that *Reiffin*'s concurrence on which Target relies addressed the exact opposite situation as the '889 and '503 patents because the claims in the later patents were narrower than what was disclosed in the earlier patent's specifications, whereas Target's claims in the '503 patent are broader than the '889 patent.

The Court finds that the '889 patent disclosed silver-copper alloys, yet there remains a triable issue as to whether the specification disclosing silver and copper alloys combined with other elements was sufficient "as to enable any person skilled in the art to which it pertains ... to make and use" alloys of just silver and copper. Therefore, Defendants are not entitled to summary judgment as to whether the '503 patent is entitled to the filing date of the '889 patent. Because the next two patents in the chain U.S. Patent Nos 6,280,811

("the '811 patent") and 6,481,402 ("the '402 patent") disclose the same silver-copper plus additional element alloys as the '889 patent, there is also a genuine issue of fact as to whether these satisfy the requirements of Section 112 such that the '503 patent is entitled to their earlier filing dates.

In addition, because there is a genuine issue as to whether the '503 patent is entitled to '889 patent's filing date, the Court declines to address whether Japanese Patent Publication No. 10293945 ("the Japanese patent") and the '889 patent anticipate the '503 patent since any meaningful analysis of anticipation requires a determination as to whether the '503 patent is entitled to the '889 patent's filing date. If the '503 patent is entitled to the filing date of the '889 patent, then neither of these patents anticipate the '503 patent because the Japanese patent was published after the June 22, 1998 filing date of the '889 patent; however the '503 patent is likely anticipated by the Japanese patent if it is not entitled to the '889 patent's filing date and may possibly be anticipated by the '889 patent. *See* *Chester v. Miller*, 906 F.2d 1574, 1577 (Fed.Cir.1990) (discussing possibility that broader claim for a genus might not be enabled by a parent patent's disclosure of a species for purposes of filing date, yet the parent's species claim could still anticipate the later genus claim).

Regardless of whether the '503 patent is entitled to the filing date of the '889 patent, the '503 patent may be anticipated by patents issued prior to June 22, 1998. Therefore, the Court next turns to Defendants' argument that the claims of the '503 patent are anticipated by U.S. Patent No. 4,450,553 ("Holster"), which was filed in January 26, 1979 and issued on May 22, 1984. Defendants assert that Holster teaches a multi-layer disc with a reflective layer and at least one semi-reflective layer, which may be made using silver. Although Holster does not teach that the semi-reflective layer may be made with silver and copper, Defendants rely on the testimony of their expert Dr. Leslie Weinman. According to Dr Weinman, the commercially available silver in the late 1970's was at most 99.0% to 99.5% pure silver and the major impurity in silver is copper. Weinman Dep., Tr. 332:16-24, Ex. 17, Nash Patent Issues Decl. Defendants use the fact that Holster's "silver" would have actually been silver and copper within the ranges of Nee's silver-copper alloys to argue that Holster anticipates the '503 patent. The Court, however, is not convinced at this stage that one who is skilled in the art would have known that Holster's silver was in fact silver and copper. Moreover, Dr. Weinman qualifies his testimony, stating that he is "going back 20 to 30 years, but [his] memory of the targets that you purchased back then." Weinman Dep., Tr. 247:20-22, Ex. 17, Nash Patent Issues Decl. The Court is unwilling to rely on Dr. Weinman's memory as to the percent impurity of silver in the 1970s. Moreover, there is no evidence that one skilled in the art would have been aware of this impurity such that Holster's reference to pure silver for the semi-reflective layer inherently disclosed a silver-copper alloy within the ranges claimed in the '503 patent. Therefore, Defendants have not presented sufficient evidence to prove that Holster anticipates the '503 patent as a matter of law.

2. Obviousness

A purported invention is unpatentable if "differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. s. 103(a); *see also* *Graham v. John Deere Co.*, 383 U.S. 1, 13-14, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966). Obviousness is determined by analyzing the following factors: (i) scope and content of prior art, (ii) differences between the art and the claims at issue, (iii) the level of ordinary skill in the art, and (iv) objective evidence of nonobviousness, which may include commercial success, long felt but unresolved need, and acquiescence of others in the industry to the patent's validity. *Specialty Composites v. Cabot Corp.*, 845 F.2d 981, 989 (Fed.Cir.1988). Defendants argue that the invention claimed in the '503 patent was

obvious in light of Holster, U.S. Patent No. 4,709,363 ("Dirks"), Florczak, and/or the Japanese patent.

Holster discloses a semi-reflective layer which may be composed of silver. Florczak discloses a silver-copper-gold alloy for the semi-reflective layer with at least ten percent gold. Dirks discloses a highly reflective layer composed of a silver-copper-aluminum alloy of at least 40 percent silver and one percent copper or aluminum. Dirks does not address the semi-reflective layer, which has different requirements than the reflective layer: it must reflect enough light back to the detector to be read, but also transmit light so that the reflective layer underneath can be read through it. Pl.Ex. 12, Mansuripur Decl. para. 12. The Court does not believe that these three patents without more render the '503 patent obvious.

However, Defendants argue that these three U.S. patents and the Japanese patent together render the '503 patent obvious. The obviousness analysis therefore must take account of the fact that the Japanese patent, the application for which was filed on April 21, 1997, over a year before Nee filed his first patent application, appears to contain every element of the '503 patent. *See* Def. Exs. 11, 12, Nash Patent Issues Decl. The existence of the Japanese patent shows that someone, other than Nee reached the same invention as Nee-silver-copper alloys for use in the semi-reflective layer of an optical disc. The Japanese patent claims silver alloys of 0.5 percent to 10 percent copper, magnesium and/or tungsten with the remainder silver. Thus, the Japanese patent's silver alloys cover the range of the '503 patent's silver-copper alloys: 90 to 99.9 percent silver and 0.1 to 10 percent copper. In its Opposition, Target fails to explain how the '503 patent is nonobvious in light of the Japanese patent. In fact, the discussion of nonobviousness in Target's Opposition does not even address the Japanese patent. However, the Japanese patent is not conclusive proof that the prior art of Holster, Dirks and Florczak together render the claims of the '503 patent obvious because it is unclear whether the inventor of the Japanese patent had the benefit of this prior art. While Target is correct that Florczak, Dirks, and Holster were before the Patent and Trademark Office ("PTO") examiner during the prosecution of the '889 patent, the Court notes that the Japanese patent was not and thus, any PTO finding of nonobviousness did not take the Japanese patent into account. Moreover, Nee, who speaks fluent Japanese, had read the Japanese patent three years prior to filing his application for the '503 patent and thus, was aware of another patent claiming the same ranges of silver and copper as the alloys in the '503 patent when he filed his application.

Even though Defendants have presented a persuasive argument that the Japanese patent in combination with the relevant prior art of Dirks, Holster and Florczak, may render the '503 patent obvious, two remaining issues preclude a grant of summary judgment as to obviousness. First, as Target pointed out a oral argument, Defendants failed to present the required *Graham-Deere* analysis because, *inter alia*, they have not presented any argument as to the level of ordinary skill in the art. Without this benchmark, the Court cannot properly evaluate whether the '503 patent, in light of the prior art, would have been obvious to one with ordinary skill in the art. Second, Defendants' argument rests in large part on the fact that someone in Japan patented an invention disclosing the same ranges of silver and copper alloys for the semi-reflective layer of the optical discs as those claimed in the '503 patent. Because it is unclear whether the '503 patent is entitled to the '889 patent's filing date, it is likewise unclear whether the Japanese patent is prior art to the '503 patent. Without knowing whether the Japanese patent is prior art, the Court cannot properly evaluate Defendants' claim that the existence of this patent rendered the claims of the '503 patent obvious. Finally, the Court notes that if Defendants had presented clear and convincing evidence that the first three factors of the *Graham-Deere* analysis demonstrated obviousness, Target's attempted rebuttal as to the fourth factor would be insufficient because Target's failed to present any admissible evidence as to the objective factors of non-obviousness.FN4

FN4. The Court sustains Defendants' objections to the only evidence offered by Target in this regard. Target relies exclusively on the declaration of its technical expert, Dr. Mansuripur, which contains only inadmissible hearsay as to the objective factors of non-obviousness. Dr. Mansuripur is not an expert as to commercial success, etc. Moreover, his declaration is filled with phrases such as "[i]t has been written," "I have been told," and "[i]t is my understanding." Thus, because his testimony as to the objective factors of non-obviousness is not based on personal knowledge, the Court will not consider the portions of his declaration addressing this issue, i.e. paragraphs 27-30.

Defendants have not presented clear and convincing evidence that the '503 patent's claims are obvious. Thus, Defendants are not entitled to summary judgment as to this issue.

E. INFRINGEMENT

Because the Court finds that the '503 patent is not limited to alloys of just silver and copper, but encompasses alloys with other elements in addition to silver and copper, the Court does not address Defendants' argument that their products do not infringe the '503 patent because they have elements in addition to silver and copper. The Court, however, must address Defendant Cinram's argument that Target has failed to present any admissible evidence that its products infringe the '503 patent.FN5

FN5. The Williams Defendants attempt to join Cinram's Motion in their Reply in Support of their Motion for Summary Judgment on Patent Issues. However, by waiting until their reply, the Williams Defendants improperly raise an issue in the reply not addressed in their Motion. Given that the Williams Defendants challenged Target's evidence as to infringement at a point at which Target was unable to respond with its evidence, the Court only considers this Motion as to Defendant Cinram.

Target as the patent owner has the burden of proving infringement by a preponderance of the evidence. *Carroll Touch, Inc. v. Electro Mech. Sys.*, 15 F.3d 1573, 1578 (Fed.Cir.1993). The '503 patent's claims refer to optical discs and not the silver-copper alloys alone. Thus, to meet its burden of proof, Target must produce competent, admissible evidence that the optical discs manufactured by Cinram and Williams' other customers, the accused products, infringe the '503 patent. Specifically Target must present evidence that the composition of the semi-reflective coating on the DVD-9s manufactured and sold by Williams' customers contain silver and copper in the same ranges as those claimed in the '503 patent. *See Ultra-Text Surfaces, Inc. v. Hill Bros. Chem. Co.*, 204 F.3d 1360, 1364 (Fed.Cir.2000) (patentee bore the burden of proving the accused product's composition). Yet Target's testifying expert had no opinion or knowledge as to the composition of the semi-reflective coating of Cinram's DVD-9, conceding at his deposition that his opinion on infringement is premised on the assumption that the composition of the target is transferred to the DVD during the sputtering process. *See* May 16, 2005 Dep. of Dr. Masud Mansuripur, Ex. 3 281:2-4, 280:19-23, Decl. of Tonia A. Sayour ("Sayour Decl.") ("I have no opinion about the composition of that layer, because I have never measured that thing and I have not seen the measurement results" "In my report I have said that, assuming the same atomic composition from the target is transferred to the disc, then the disc infringes" "the composition of the target is close; but how close depends on other factors"). Testimony that the composition of the allegedly infringing disc is "close" is insufficient to establish infringement. *See Bayer AG. v. Biovail Corp.*, 279 F.3d 1340, 1346 (Fed.Cir.) (district court properly granted summary judgment as to non-infringement because evidence that the composition of raw material was in the accused range was insufficient and neither party had submitted evidence as to the composition of the accused product.)

In response to Cinram's Motion, Target filed a copy of a report from the Evans Analytical Group with results of tests of a Cinram DVD and several other DVDs. A court can only consider admissible evidence in ruling on a motion for summary judgment. *See* Fed.R.Civ.P. 56(e); *Orr v. Bank of Am.*, 285 F.3d 764, 773 (9th Cir.2002). Cinram objects to the report on the grounds of hearsay because statements of a third party are being offered to prove the truth of the matter asserted. The Court overrules this objection because Dr. Mansunpur relies on the Evans Report in his Second Supplemental Expert Report and was questioned about the results at his deposition on August 21, 2006. Cinram also objects to portions of Nee's declaration submitted in connection with the report based on his lack of personal knowledge or area of expertise. The Court overrules this objection because Nee witnessed the tests and thus, has personal knowledge. Finally, Cinram objects to portions of Dr. Mansuripur's declaration under Federal Rule of Civil Procedure 37(c) (1) because they contain conclusions based on test results that were first disclosed to Cinram after the close of discovery. However, because Cinram had the opportunity to examine Dr. Mansuripur about the Evans Report at his August 21, 2006 deposition, the Court finds that Cinram was not prejudiced by the delay in turning over the report. In addition, counsel for the Williams Defendants did question Dr. Mansuripur about the Evans testing of DVDs made using Williams' Sil-X sputtering target at this deposition.

"Summary judgment of noninfringement may only be granted if, after viewing the alleged facts in the light most favorable to the nonmovant and drawing all justifiable inferences in the nonmovant's favor, there is no genuine issue whether the accused device is encompassed by the patent claims." *Novartis Corp. v. Ben Venue Labs., Inc.*, 271 F.3d 1043, 1046 (Fed.Cir.2001) (citing *Pitney Bowes, Inc. v. Hewlett Packard Co.*, 182 F.3d 1298, 1304 (Fed.Cir.1999)). As shown in his deposition, Second Supplemental Expert Report, and declaration, Dr. Mansuripur now has an opinion as to the composition of Cinram's DVDs based on the Evans Report. Thus, because Target has presented evidence that the composition of the semi-reflective layer of Cinram's DVDs falls within the ranges claimed in the '503 patent, Cinram has failed to show an absence of a genuine issue as to whether Cinram's DVDs infringe the ' 503 patent. Consequently, Cinram is not entitled to judgment as a matter of law as to noninfringement.

F. INEQUITABLE CONDUCT

Patent applicants and their representative (e.g.attorneys) are obligated to prosecute patent applications with "candor, good faith, and honesty." *Semiconductor Energy Lab. Co. v. Samsung Elecs. Co.*, 204 F.3d 1368, 1373 (Fed.Cir.2000). Conduct violating this obligation may result in inequitable conduct, an equitable defense to infringement. "Inequitable conduct includes affirmative misrepresentation of a material fact, failure to disclose material information, or submission of false material information, coupled with an intent to deceive." *Molins PLC v. Textron*, 48 F.3d 1172,1178 (Fed.Cir.1995). The party asserting inequitable conduct as a defense to infringement must offer clear and convincing proof of materiality and intent to deceive. *Semiconductor Energy Lab. Co.*, 204 F.3d at 1373; *Molins PLC*, 48 F.3d at 1178. The district court's analysis involves a two-step inquiry: first, the court must determine whether the conduct meets a threshold level of materiality; second, the court must determine whether the evidence establishes a threshold level of intent to mislead the PTO. *PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc.*, 225 F.3d 1315, 1319 (Fed.Cir.2000). If the court finds a threshold of materiality and intent, then the court weighs these to determine "if equity warrants a finding of inequitable conduct." *Ulead Sys., Inc. v. Lex Computer & Mgmt. Corp.*, 351 F.3d 1139, 1144 (Fed.Cir.2003).

Defendants contend that the '503 patent is unenforceable due to the inequitable conduct of Nee and his attorneys during its prosecution before the PTO. Defendants allege two grounds for finding inequitable

conduct: (1) failure to disclose pending litigation concerning the validity and enforceability of related patents to the PTO and (2) failure to disclose the Japanese Patent to the PTO.

As to the first allegation, Defendants assert that Nee and his attorneys failed to disclose the pending litigation in the Western District of New York involving Nee's related patents (including the '889 patent to which the '503 patent claimed priority) to the PTO during the prosecution of the '503 patent. Defendants further argue that Nee and his attorneys failed to inform the PTO of Williams' allegations of inequitable conduct and invalidity in that litigation involving Nee's related patents. Such related litigation is material *per se*. See *Daimlerchrysler AG v. Fetting Advanced Techs., Inc.*, 276 F.Supp.2d 1054, 1061 (S.D.Cal.2003) (finding material omission because the fact that a parent patent was the subject of litigation challenging its validity was clearly information that a "reasonable [patent] examiner would consider important in deciding whether to allow the application to issue as a patent") (citations omitted). The Manual of Patent Examining Procedure provides that: "Where the subject matter for which a patent is being sought is, or has been, involved in litigation, the existence of such litigation and any other material information arising therefrom must be brought to the attention of the Patent and Trademark Office." MPEP s. 2001.06(c) (2001). Such other material information includes "evidence of possible prior public use or sales, questions of inventorship, prior art, allegations of fraud, inequitable conduct or violation of the duty of disclosure." *Id.*

At his deposition, Nee admitted that (a) he was aware of his duty of good faith and candor to the PTO, (b) he was aware of the New York litigation while the '503 patent was pending, (c) he was aware that in the New York litigation Williams challenged the validity of the '889 patent and alleged that he had committed inequitable conduct in connection with its prosecution, and (e) he did not disclose the New York litigation to the PTO. Target, therefore, does not dispute its failure to disclose the New York litigation to the PTO. Instead, Target argues that its duty to disclose the litigation was discharged when the New York court issued an opinion on August 11, 2004 (a month before the '503 patent issued) finding that Williams' allegations of invalidity and inequitable conduct did not have a likelihood of success on the merits after a preliminary injunction hearing. Defendants argue that this opinion did not absolve Nee and his attorneys of their duty to disclose the litigation because it came after the point at which they should have told the PTO examiner since the examiner issued a Notice of Allowability on May 26, 2004. The Court observes, as well, that the opinion in the New York litigation involved a request for a preliminary injunction. Thus, while the district court determined that Williams' invalidity and inequitable conduct allegations did not have a likelihood of success, this was not a dispositive ruling as to these allegations and even now, two and a half years later, there has been no dispositive ruling as to these claims. The Court, therefore, rejects Target's contention that the opinion denying a preliminary injunction somehow discharged Nee's obligation to inform the PTO of the pending litigation.

The second issue is whether the requisite intent to mislead was present. "[S]moking gun' evidence is not required ... Rather, this element of inequitable conduct, must generally be inferred from the facts and circumstances surrounding the applicant's overall conduct." *Paragon Podiatry Lab. v. KLM Lab.*, 984 F.2d 1182, 1189-1190 (Fed.Cir.1993). Defendants argue that the Court can infer intent to mislead from the following facts: (1) during the '503 patent's prosecution, Nee and his attorneys filed a petition to make special, which accelerates the application time line, by arguing that there was an infringing device for sale; (2) the lawyers representing Target in the New York litigation were the same attorneys prosecuting the '503 patent and consequently were aware of the litigation and its relevance to the '503 patent; (3) Target introduced the claims of the then-pending application for the '503 patent during a December 2003 evidentiary hearing in the New York litigation; (4) Target filed the instant lawsuit on the same day that the '503 patent issued; (5) Nee and his attorneys used evidence gathered in connection with the New York case

in the petition to make special; and (6) during the prosecution of the '503 patent, Nee and his attorneys disclosed a number of prior art references cited in the New York case by Williams without telling the PTO that Williams argued that the art rendered the related patents invalid. Defendants contend that these facts show that Target prosecuted the '503 patent as part of its litigation strategy against Williams and its customers. According to Defendants, it was important to Target that the '503 patent issued as quickly as possible and thus, Nee and his attorneys failed to disclose the New York litigation because such disclosure would have resulted in closer scrutiny by the PTO, which would have delayed the issuance of the '503 patent. The Court finds that Defendants' evidence presents a triable issue as to intent to deceive.

As to the failure to disclose the Japanese patent to the PTO, Defendants argue that this is a second ground upon which to find inequitable conduct. It is undisputed that the Japanese patent was not brought to the attention of the PTO during the prosecution of the '503 patent. It is further undisputed that Nee first came across the Japanese patent three years prior to his application for the '503 patent while searching the Japanese Patent Office website. In a notebook entry dated May 25, 1999, Nee referenced the Japanese patent and noted that it teaches a silver-copper alloy for use in "Dual Layer Optical disk's semi-transparent layer." Def. Ex. 34, Nash Patent Issues Decl. Defendants argue that Nee also mistakenly thought that the Japanese patent qualified as prior art even if the '503 patent is entitled to the priority date of the '889 because his notebook entry indicates that the Japanese patent issued on "4/11/98"-two months prior to his earliest patent application on June 22, 1998. Target responds that Nee was noting the date in the Japanese convention day/month/year such that his "4/11/98" indicated November 4, 1998 and thus, the Japanese patent was not disclosed because it was not prior art. Target's argument is appealing; however, the "published 4/11/98" is preceded by the following notation "filed 4/21/97." The Court assumes that Target would not even attempt to argue that this date did not signify April 21, 1997 since there is no month that corresponds to the number 21. Furthermore, as Defendants point out, Nee disclosed five references whose priority dates ranged from 1999 to 2003 to the PTO examiner. Thus, whether or not Nee thought the Japanese patent was prior art if the '503 patent received the filing date of the '889 patent, it was material and should have been disclosed like the five post-1998 references that were disclosed. Defendants argue that Target failed to disclose the Japanese patent because it was worried that this reference was right on point in terms of the claimed ranges of silver and copper such that disclosure of the Japanese patent would have interfered with the accelerated issuance of the '503 patent. Given that Nee apparently thought that the Japanese patent was prior art and in light of the similarity between its claims and those of the '503, the Court finds that the Japanese patent was material. Defendants argue that the requisite intent to mislead is established by the same facts discussed above in connection with Nee's failure to disclose the New York litigation to the PTO. As with the first allegation of inequitable conduct, there remains a triable issue as to whether Defendants' evidence establishes the requisite intent to mislead in Target's failure to inform the PTO of the Japanese patent. For this reason, Defendants are not entitled to judgment as a matter of law as to inequitable conduct.

G. BIFURCATION

Target moves to bifurcate the issue of inequitable conduct from the jury trial and resolve Defendants' allegations of inequitable conduct in a bench trial. Federal Rule of Civil Procedure 42(b) allows the court, in its discretion, to order a separate trial of any claim or issue "in furtherance of convenience or to avoid prejudice, or when separate trials will be conducive to expedition and economy." Fed.R.Civ.P. 42(b). To support its motion for bifurcation, Target cites numerous cases holding that there is no right to a jury trial as to the defense of inequitable conduct because it is purely equitable in nature. *See Agfa Corp. v. Creo Products Inc.*, 451 F.3d 1366, 1371-73 (Fed.Cir.2006) (upholding district court's bifurcation of validity and inequitable conduct); *Gardco Mfg. Inc. v. Herst Lighting Co.*, 820 F.2d 1209, 1212 (Fed.Cir.1987). Thus,

Target's cases establish that the district court may grant a bench trial as to inequitable conduct without running afoul of the Seventh Amendment. However, Target's authorities do not establish a requirement that inequitable conduct must be bifurcated from the jury trial as to other issues in a patent case. Target next argues that bifurcation is warranted because if inequitable conduct is not bifurcated the jury will hear additional evidence that is unfairly prejudicial. Target asserts that the unfair prejudice will result from the accusations that Nee and his attorneys withheld material information from the PTO and further contends that addressing these allegations will require Kurt Jones, Target's lead counsel to become a material witness.

In response, Defendants argue that Target has failed to meet its burden of proving that bifurcation is warranted. Defendants further argue that very little additional evidence and testimony will be required if inequitable conduct is not bifurcated. As to the failure to disclose the New York litigation, Defendants assert that evidence as to this litigation will be introduced in connection with their proof as to invalidity because prior art references were provided to Target during that litigation. As to the failure to disclose the Japanese patent, Defendants similarly argue that evidence as to the Japanese patent will be introduced in connection to Defendants' proof as to invalidity. In addition, Defendants argue that bifurcation would prevent Defendants from presenting evidence that would allow the jury to evaluate the credibility of Nee and others because the conduct before the PTO was not an isolated incident, but rather part of ongoing misconduct. Defendants dismiss Target's contention that the probability of Target's lead counsel being a material witness warrants bifurcation because Target has known of these allegations throughout the litigation and moreover, Jones will likely be a material witness in connection with the issue of standing. Thus, it appears that Jones will likely testify before the jury regardless of whether inequitable conduct is bifurcated because he is one of only two witnesses who can testify as to exactly when Nee first came up with the idea embodied in the '503 patent. Finally, Defendants argue that any potential prejudice resulting from the inequitable conduct being tried before the jury can be overcome by a jury instruction. The Court agrees. Target has failed to persuade the Court that bifurcation is required to avoid prejudice. Moreover, conducting a separate bench trial as to inequitable conduct will not further convenience and is not conducive to expedition or economy.

In their opposition, Defendants request that the Court submit the issue of inequitable conduct to the jury for an advisory verdict under Federal Rule of Civil Procedure 39(c). The Federal Circuit has recognized that there are a variety of ways in which the district court can handle issues of inequitable conduct during a jury trial: (1) reserve the entire issue, (2) submit special interrogatories to the jury on the facts of materiality and intent, or (3) instruct the jury to find and weigh materiality and intent to decide the ultimate question of inequitable conduct. *Hebert v. Lisle Corp.*, 99 F.3d 1109, 1114 (Fed.Cir.1996); *see also Duro-Last, Inc. v. Custom Seal, Inc.*, 321 F.3d 1098, 1110 (Fed.Cir.2003) (reviewing trial court's finding of inequitable conduct based on advisory jury factual findings). Defendants argue that the jury's determination of the factual issues of materiality and intent will promote judicial efficiency. Defendants assert that the jury will already be empaneled to determine the validity of the '503 patent, which necessarily involves a determination of the materiality of prior art. Defendants also argue that materiality will largely be a battle of the experts and because the determinations of expert credibility are typically issues for the jury to decide, the advice of the jury on this issue will assist the Court. The Court finds that submitting the issue of inequitable conduct to the jury for an advisory verdict will promote judicial efficiency. For this reason, the Court will likely avail itself of this option.

IV. DISPOSITION

For the reasons set forth above, the Court hereby DENIES Defendants' Motion for Summary Judgment on Standing, DENIES Plaintiff's Motion for Partial Summary Judgment on Standing, HOLDS IN ABEYANCE

Defendants' Motion for Terminating Sanctions, DENIES the Williams Defendants' Motion for Summary Judgment on Patent Issues, DENIES Cinram's Motion for Summary Judgement of Non-Irrfringement, and DENIES Plaintiff's Bifurcation Motion.

IT IS SO ORDERED.

C.D.Cal.,2007.

Target Technology Co., LLC v. Williams Advanced Materials, Inc.

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