UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF WISCONSIN

In re

MUTH MIRROR SYSTEMS, LLC, and
K.W. MUTH COMPANY, INC.

Case No. 06-25609-mdm
Case No. 06-25613-mdm
Jointly Administered

Debtors.

Chapter 11

MUTH MIRROR SYSTEMS, LLC, and
K.W. MUTH COMPANY, INC.,

Plaintiffs and Counterclaim Defendants,

v.

GENTEX CORPORATION,

Adversary No. 06-2470

Defendant and Counterclaim Plaintiff,

v.

MUTH MIRROR SYSTEMS, LLC,
K.W. MUTH COMPANY, INC.,
MUTH COMPANY, LLC, and
MUTH GLASS TECHNOLOGIES, LLC,

Third-Party Defendants.

MEMORANDUM DECISION

PROCEDURAL AND JURISDICTIONAL BACKGROUND

On October 6, 2006, plaintiffs Muth Mirror Systems, LLC, and K.W. Muth Company, Inc. ("Muth"), filed voluntary petitions for relief under chapter 11 of the Bankruptcy Code. Previously, on July 29, 2006, Gentex Corporation filed a lawsuit against one of the debtors, K.W. Muth Co., Inc., and a related entity, Muth Company, LLC, in the Eastern District of Michigan asserting claims for breach of contract and tortious interference with business relationships, as

well as for declaratory judgments that Muth's U.S. Patent No. 6,007,724 was invalid and Gentex had not infringed that patent. On July 11, 2006, Muth filed a lawsuit against Gentex in the Western District of Wisconsin asserting a claim for infringement of another of its patents, U.S. Patent No. 6,045,243.

After the debtors filed their bankruptcy petitions, the litigation in the district courts was stayed. Gentex Corporation filed two timely proofs of claim for $18,273,742 in the debtors' respective bankruptcy cases, claiming the patent and non-patent related damages asserted in its district court case. Muth filed objections to the claims and subsequently initiated this adversary proceeding on December 21, 2006, denying liability on Gentex's claims, as well as asserting claims against Gentex, including breach of contract, tortious interference with business relationships, and patent infringement. Gentex's answer included counterclaims against the debtors and non-debtors Muth Company, LLC, and Muth Glass Technologies, LLC, as well as the affirmative defense that Muth's '724 patent was unenforceable for inequitable conduct.

From a jurisdictional standpoint, this court needed to determine whether Gentex has a claim against Muth, and the size of that claim, because the claim could be substantial enough for Gentex to control sufficient votes to thwart the reorganization or to pass a competing plan. Under normal circumstances, of course, the bankruptcy court would not have jurisdiction over a patent dispute. However, since Gentex alleged that a portion of its claim was on account of infringement of a Gentex patent by Muth, this court was required to decide the issue. Estimation of a claim is specifically provided for under the bankruptcy code, and it is a core proceeding. 11 U.S.C. § 502(c); 28 U.S.C. § 157(b)(2)(B).

If Muth has a right to recover a substantial amount from Gentex, which includes an

allegation that Gentex infringed a Muth patent, it should have sufficient funds to control its own destiny, both because it can pay creditors and because it would not have to deal with Gentex's vote in negotiating or confirming a plan. Gentex's defense to Muth's infringement claim includes an allegation that the Muth patent is invalid. A counterclaim by the debtors against a claimant is also a core proceeding. 28 U.S.C. § 157(b)(2)(C).

Furthermore, the district court proceedings were anticipated to take the parties beyond the fall of 2007, an important time in negotiating sales of parts in the automotive industry. Uncertainty would have been detrimental to both sides because there would remain a question of what each side could safely manufacture and sell. This required prompt resolution of the patent issues especially. Also, the expense and time required by fragmented litigation in separate districts would probably leave the debtors with insufficient resources to ensure their ability to continue manufacturing, regardless of the outcome of the litigation.

On July 6, 2007, the court heard several motions for summary judgment. The court denied several motions, including requests for equitable estoppel, patent infringement, and breach of contract. The court did find on summary judgment that Muth's Signal mirror did not infringe upon Gentex's U.S. Patent No. 6,111,683. The court further found that Muth's cease-and-desist letters to purchasers was not sufficient evidence of tortious interference with Gentex's business relationships. The court granted summary judgment to Gentex on certain motions as well, finding that Gentex's Razor mirror did not infringe on Muth's '243 patent, Gentex did not violate the parties's Alliance Agreement by disclosure of confidential information to third parties, and Muth's claim for conversion was unfounded (*See* Court Minutes dated July 6, 2007).

July 16, 2007, through July 26, 2007, this court conducted a nine-day trial on the

following issues: (1) Muth's claim against Gentex for infringement of the '724 patent, (2) Gentex's defense that the '724 patent was invalid, (3) Gentex's defense that the '724 patent was unenforceable for inequitable conduct, (4) Muth's claim against Gentex for breach of contract; (5) Muth's claim against Gentex for tortious interference with business relationships, (6) Gentex's claim against Muth for breach of contract; and (7) Gentex's claim against Muth for tortious interference with business relationships.

On the first day of trial, the court granted Gentex's motion for summary judgment that it had not breached the implied covenant of good faith and fair dealing with respect to blind spot detection displays, as these devices and components are outside the scope of the parties' Alliance Agreement. After trial, the parties filed post-trial briefs on numerous matters of law and fact, and the court heard oral argument and issued preliminary rulings on October 19, 2007. The court reserved the right to supplement its reasoning on the decided issues by a written opinion, and those rulings are set forth below in more detail. The essence of the court's determinations is that Gentex has only a small, undisputed claim against the debtor, and Gentex breached the Alliance Agreement. The parties were then given an additional opportunity to file optional briefs regarding damages, which will be determined by the court in a separate ruling. Based on the court's preliminary findings, the debtors filed a post-trial motion for judgment, which included a request for an injunction against Gentex, as well as a motion to withdraw their previous motion to assume the Alliance Agreement. Gentex also filed a motion for judgment and requested attorney's fees based on the court's determination of the invalidity of Muth's '724 patent. Those motions will also be decided separately. This written decision constitutes the court's findings of fact and conclusions of law pursuant to Fed. R. Bankr. P. 7052.

FACTUAL BACKGROUND

Both parties to this adversary proceeding developed signal mirror technology, primarily for use in motor vehicles. All of the signal mirrors referred to in this case employ a light source within the mirror housing that allows light to pass through part of the mirrored surface while the rest of the surface acts as a reflector. The two main methods for allowing the light signal to pass through automotive mirrors employ dichroic and non-dichroic technologies. With dichroic mirrors, a multi-layer thin film acts as the reflector and also as a transmitter for certain wave lengths of light. Non-dichroic mirrors typically use a single layer of chrome-coated reflector which is then modified to act as both reflector and transmitter. The non-dichroic technology uses a laser to cut very small openings in the chrome mirror coating, a technique referred to as laser ablation, to allow the signal light to pass through the surface. Non-dichroic technology is less expensive to produce than dichroic technology. The dichroic technology is cosmetically more appealing, however, because the portion of the mirror that transmits light to the viewer is invisible to the naked eye when the internal light source is turned off.

In the 1990s, K.W. Muth developed the Signal mirror as an improvement over the standard rear view mirror. Muth Mirror Systems, LLC, was formed to further develop and commercialize the Signal mirror. The mirror shows turn and hazard signals through the glass with a red or amber chevron. The Signal mirror was designed to alert other vehicles in the blind spot on the sides of an equipped vehicle to help prevent accidents from lane changes or merging. K.W. Muth held various patents on the Signal mirror technology, covering a variety of methods for allowing light to pass through the mirrored surface. The invention at issue in this proceeding was disclosed in Muth's U.S. Patent No. 6,005,724, which was filed on October 5, 1998, and

issued on December 21, 1999 (Exh. Nos. 196 & 1005). Muth first began supplying its Signal mirrors to Ford Motor Company for the Ford Bronco in 1996 (Tr. Vol. 1, pp. 91-92). This mirror used non-dichroic technology, making it cheaper to produce than dichroic mirrors, but it was also designed to make the signal area relatively unobtrusive when not lit.

Gentex Corporation developed electrochromic (EC) auto-dimming mirrors in the 1980s and began selling interior and exterior rear view mirrors with that technology to Ford Motor Company in 1987 (Tr. Vol. VI, pp. 63-69). Electrochromic mirrors automatically dim the appearance of headlights at night so a driver does not experience glare. The dimming is accomplished by headlights of other vehicles activating an electrical cell, which then transmits electrical impulses to a layer of gel behind the front of the mirror, causing the gel to darken. Depending on the needs of the automaker, Gentex's EC mirrors also included features such as compass displays, heaters, and light sensors in an information display area within the mirror housing. To enable these features to be seen, portions of the reflective coating on the mirrors would be removed. Because reflective coating of the mirror also serves as an electrically conductive layer for darkening the EC mirror, partially removing the coating prevents the mirror from coloring uniformly. To address this problem, Gentex's engineers developed a technique in 1996 by which only a portion of the reflective coating in the signal region was removed by laser ablation. By leaving a continuous pattern of reflective/conductive lines, the signal or information display region where the light source or another device was located remained electrically conductive. This enabled the region to darken as well as to transmit light (Tr. Vol. VIII, pp. 248-49). This invention was disclosed in Gentex U.S. Patent No. 5,825,527, which was filed on April 2, 1997, and issued on October 20, 1998 (Exh. No. 1003).

As will become clear as the facts of this case are more fully explained, the automotive business is brutally competitive. The automotive manufacturers are often referred to as OEMs, original equipment manufacturers, and include such giants as General Motors, Ford, Chrysler, and Toyota. A tier-one supplier provides OEMs with assembled products for direct installation on a vehicle, in this case a complete mirror. Tier-two suppliers sell component parts or assemblies in various stages of completion to the tier-one suppliers. Some manufacturers are tier-one for some OEMs and tier-two for others, and component manufacturers may be competitors for some purposes and allies for others. Alliances between suppliers and manufacturers, such as the Muth/Gentex Alliance Agreement in this action, are formed and broken in the constant struggle for economic survival. It is not surprising that suspicion and desperate competition played a part in the disputes that arose in this case.

Magna International, a non-party to this action, is one of the largest tier-one suppliers to automotive manufacturers. This is a name that came up frequently in this litigation. Its mirror manufacturing company, Magna Donnelly, supplies outside mirrors to the OEMs globally. In fact, Muth Mirror was originally created in 1995 as a joint venture between K.W. Muth and Magna International, with the former buying out the latter's interest in 1998. After buying out Magna's interest, Muth continued to manufacture and sell Signal mirrors to Magna Donelly and other tier-one mirror producers. Muth also sells Signal mirrors directly to consumers in the aftermarket through a warehouse distributor network and the internet. Gentex supplies OEMs and tier-one suppliers with interior rearview mirrors and exterior EC mirrors.

On May 15, 1998, Mike Muth, Chairman of K.W. Muth, Inc., and Fred Bauer, Chief Executive Officer of Gentex Corporation, entered into an "Alliance Agreement," whereby the

parties agreed to work together by combining Muth's dichroic Signal mirror technology with Gentex's EC mirror technology. Gentex agreed to recommend Muth Signal mirrors to OEMs for passenger side mirrors (which usually did not have EC technology due to cost) and to take other actions to promote Muth Signal mirrors. The agreement provided in relevant part:

> 1. Muth and Gentex will work exclusively together for EC signal mirror applications and for Information Display features in interior rearview mirrors which use the dichroic principle.
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> ***
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> 4. For programs where Gentex has secured the EC signal mirror for the outside driver's side mirror (LHM), and recognizing that the automaker finally determines its component suppliers, Gentex agrees to recommend the use of the Muth signal mirror sub-assembly for the passenger side mirror (RHM).

Alliance Agreement (Exh. No. 786). As part of the agreement, Muth also gave Gentex a license to use its non-dichroic technology for 10 years, for which Gentex paid Muth a royalty.

As noted above, Gentex developed an EC turn signal mirror using a low-cost jail bar laser ablation pattern and began marketing those mirrors to existing and prospective customers. Gentex was issued a patent for this technology on October 20, 1998 (Exh. No. 1003). In 2001 Gentex was awarded a contract with General Motors to supply its turn signal mirrors for the Cadillac Deville, Buick Park Avenue, Buick LeSabre and GMT800 programs (Tr. Vol. VIII, pp. 65-67). Because GM wanted an EC signal mirror only on the driver's side, Gentex recommended that Muth supply the passenger side non-EC signal mirror (Tr. Vol. VII, pp. 68-69). Muth was awarded the new business with GM.

At some point, a supply competitor, Magna Donnelly, approached General Motors to sell EC mirror technology which competes with Gentex's EC technology. Because of the higher cost for mirrors with EC technology, most automotive manufacturers use the EC mirror on the driver's side and non-EC mirror on the passenger's side. Magna Donnelly's apparent plan for

GM was to supply the driver's side with its own EC mirror and the passenger's side with a third-party's non-EC mirror or components, with Muth being a possible supplier. According to Gentex, because Muth feared losing its sourcing for the GMT800 and GMT900 programs, it told GM and Magna Donnelly it was not required by its Alliance Agreement to work exclusively with Gentex on EC mirrors. According to Muth, while it was *talking* with Magna Donnelly, it never actually *worked* with Magna Donnelly on an EC-Signal mirror combination. Muth further claimed that Gentex failed to recommend Muth to GM in violation of the Alliance Agreement, and instead quoted its own non-EC Razor mirror for the passenger side. Ultimately, GM's potential deal with Magna Donnelly coincided with GM asking Gentex for price concessions on its mirrors. In 2005, GM rejected the deal with Magna Donnelly in favor one with Gentex at a lower price, resulting in a considerable loss of profits for Gentex.

While the GM negotiations were taking place, Gentex and Muth were discussing the continuation and/or modification of the terms of the Alliance Agreement, due to expire in 2008. Muth asserted the agreement did not require exclusivity for all EC signal mirrors, but Gentex maintained the agreement did require that the parties work exclusively together on EC signal mirrors. Exclusivity was a deal breaker for Gentex. Muth also requested that Gentex increase the royalty payment under the parties' licensing portion of the agreement.

Additionally, Muth accused Gentex of failing to recommend Muth for the passenger side non-EC mirror to Murakami, the tier-one supplier to Toyota, in 2003, and instead promoting its own non-EC mirror with signal. Gentex countered that the Toyota Avalon program ultimately used the more expensive EC mirror on both sides of the vehicle, negating any need for Muth's mirror. Muth also accused Gentex of failing to work exclusively with it on the EC signal mirror

combination by working with Schefenacker in 1999 on Mercedes vehicles. Gentex denied any wrongdoing and argued that Muth's claim was barred because it was brought more than six years after the date of the alleged breach.

DISCUSSION - PATENT ISSUES

Invalidity of Muth's '724 Patent

To be valid, a device must be new, useful, and not obvious. 35 U.S.C. § 101, *et seq.* It must be adequately described. 35 U.S.C. § 112. The patent application process is rigorous, and the applicant is required to make substantial disclosures regarding the invention and prior art in the field to the U.S. Patent and Trademark Office (PTO), and there is frequently much give and take between the applicant and the patent examiner during the patent prosecution. Nevertheless, the application for a patent and its issuance in final form is still an ex parte process. Other inventors do not have an opportunity to weigh in on whether the invention is truly original or how narrow the patentee's right should be to exclude others from practicing the invention. Accordingly, even though the PTO makes every effort to make sure only worthy inventions are awarded patents, whether the patent should ever have been issued, or whether a particular claim within a patent is valid, it may still be subject to attack in the litigation process. That is what happened here.

There are certain overarching concepts relating to whether a patent as a whole is invalid. While infringement is a claim by claim analysis in comparison with an accused device practiced by another party, the entire patent may be attacked as completely invalid. An awarded patent is presumed to be valid, and the challenger must show by clear and convincing evidence why the patent should never have been issued by the PTO. *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348,

1359 (Fed. Cir. 2007). Two grounds for invalidity were raised by Gentex to the '724 patent. The first was whether the best mode of practicing the device was disclosed in the claims. The second was whether the inventor engaged in inequitable conduct, such as withholding prior art, that would have been material to the patent examiner's decision whether to issue. Gentex has met its burden with respect to both these issues.

The purpose of requiring disclosure of the best mode is to keep inventors from patenting one device while concealing the preferred embodiment of the invention, i.e., the best way of practicing it. 35 U.S.C. § 112; *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1064 (Fed. Cir. 1998); *Dana Corp. v. IPC Ltd. P'ship*, 860 F.2d 415, 418 (Fed. Cir. 1988). Best mode is a question of fact. *Old Town Canoe Co. v. Confluence Holdings Corp.*, 448 F.3d 1309, 1321 (Fed. Cir. 2006); *see also Consolidated Aluminum Corp. v. Foseco Int'l Ltd.*, 716 F.Supp. 316, 321-23 (N.D. Ill. 1989), *aff'd*, 910 F.2d 804 (Fed. Cir. 1990). A patent will not be invalidated because of failure to disclose production details or routine matters that are not claimed and would not be obvious to one skilled in the art.

Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313 (Fed. Cir. 2002), described a situation where routine matters, obvious to one skilled in the art, and production matters, peculiar to a particular customer, are not considerations in the "best mode" requirement. This case involved a means of connecting a two part shift cable that connected the shift knob used by the driver to the automatic transmission in a vehicle. It enhanced production and repair access by allowing connection late in the production process and by a means that made the device easily accessible for repairs. The hardness and thickness of the clip was not claimed, and for this reason the patent was challenged for not disclosing the best mode. However, the evidence

showed that this undisclosed and unclaimed detail was not essential to the best mode nor to the function of the device – this was a production detail and could be widely variable and still be consistent with the claims and the intended function of the device. *Id*. at 1332-33.

The *Teleflex* analysis had two parts. The first is subjective and looks to the state of mind of the inventor. The test is whether the inventor considered one mode of practicing the invention superior to other modes and whether that mode was disclosed. The second test is objective. That is, if the inventor had a preferred mode for practicing the invention, did he intentionally conceal it? *Id*. at 1330.

In this case, Mr. Todd had a preferred way of making his mirror, and it included tilting the LED's in the light assembly so they did not shine directly at the driver but were visible to nearby vehicles. This was not disclosed or claimed, and the drawings of the LED's do not show them tilted. Also, the size of the ablated apertures in the manufactured product was different from the apertures described in the patent. In fact, Mr. Todd never made the disclosed device, Muth could not manufacture holes that small, and Mr. Todd did not know if holes that small would work.

Failure to disclose these elements in the patented device is critical to the validity of the patent. In another context early in the case, we had considerable argument concerning the definition of "collumating" light and whether that term meant making the beams parallel or whether it meant bending or focusing light. In Volume II of the trial transcript, at page 153, Mr. Todd described the tilting of the LED's as eliminating the need for expensive optical devices that directed or collumated light. At some point in another proceeding, he stated that the tilting of the LED's was not special, but he considered the way he did it was unique and important. Mr. Todd

knew about this method of tilting LED's at the time the '724 patent was prosecuted. Furthermore, the positioning of the LED's is essential to practicing the invention – it is not a routine or production matter. It makes a big difference in how the device works. If it eliminates "expensive optics" as Mr. Todd said, it is highly material to the invention. Someone trying to practice the device would simply not get it right by following the disclosures in the patent. It is not analogous to the material used to make the clip that holds two parts of the cable together in *Teleflex*, which would not affect the function of the invention.

Similarly, the size of the holes in the reflective coating affects how much light is transmitted through the mirror. This also is material to practicing the invention. Mr. Todd admitted that Muth had never made a device with holes as small as those described in the patent (Tr. Vol. II, p. 152). How can you set and measure percentages of transmittal and reflectivity of a device if you never made one? Would the correct amount of candelas be transmitted? Perhaps a physicist or engineer could determine that the ablated surface area and the wave length of emitted light would produce the same candela transmission with smaller or larger holes, but this court will not guess. Mr. Todd knew he was patenting specifications for a device that he had not made and could not be certain, except possibly mathematically and theoretically, how it might work. Much ado has been made in this case about the importance of these measurements and the ratios of primary and secondary regions; the size of the laser ablations relates directly to these factors. The best mode was not disclosed.

The next question, of course, is did Mr. Todd intend to conceal the best mode? The answer must be "yes." The size of the ablations and the position of the LED's, both important issues in practicing the device, were known and not revealed. The evidence is clear and

convincing that the best mode of practicing the invention in '724 was known, was not disclosed, and the omission by the inventor was intentional. This results in invalidation of the '724 patent.

Gentex also claims that certain other types of conduct, that patent law labels inequitable, can void a patent. Mr. Todd knew about the '527 patent, issued on October 20, 1998, and Muth engineers told him about it (Exh. No. 1012). He admitted in his deposition that the '527 patent had a lot of the content of the '724 patent. He never alerted patent counsel to the '527 patent in spite of his engineer's advice to do so (Tr. Vol. II, p. 167). Mr. Cammenga from Gentex showed Mr. Todd prototypes of the '527 device and told him about the '527 patent in November of 1998. He also told Mr. Todd that the patent covered a laser ablated mirror (Tr. Vol. IX, pp. 68-69).

Once again, the burden of proof is by clear and convincing evidence that inequitable conduct occurred, and it was sufficiently material to void the patent. *Cargill, Inc. v. Canbra Foods, Ltd.*, 476 F.3d 1359, 1363 (Fed. Cir. 2007). The first question in the inequitable conduct analysis is whether the '527 patent was material to the PTO's consideration of the '724 patent application; that is, from the point of view of a reasonable patent examiner, would the claims be a factor in determining whether the '724 patent should issue or not. Responsibility for disclosure of material prior art is on the applicant, and disclosure must be updated all through the patent application process. Any question of whether another patent is cumulative or material should be resolved in favor of disclosure, not unilaterally by the applicant in his or her own favor, which is what Mr. Todd did. Disclosure in bankruptcy schedules is similarly vital, so it is a concept well understood by this court.

There are, of course, differences in the '527 and '724 devices. However, the '527 device is an EC automotive mirror, which the '724 patent practice includes. The '527 device provides

information from behind the glass by means of laser ablations, as does the '724 device. A '527 mirror has a plurality of lines of ablated material, which would be included in the '724 patent. Both have a region that only reflects, and a region that reflects and also transmits light. This court finds that the '527 patent was material to consideration of the '724 patent, and in fact was more similar to the '724 device than some of the other disclosed prior art. Dan Todd knew about the '527 device in time to disclose it, recognized its importance, was advised by others to disclose, and he intentionally failed to do so, both to Muth's patent attorney and the PTO. Even if he believed the '527 patent was cumulative of other disclosures, his knowledge was sufficiently sophisticated that he should have known that disclosure was necessary. He was intentionally manipulating the patent process, even if in good faith he actually believed he did not have to disclose the issuance of the '527 patent. *See Cargill,* 476 F.3d at 1364. Gentex has met its burden of proof by clear and convincing evidence that Dan Todd obtained the '724 patent by means of inequitable conduct, and the patent is invalid.

Invalidity of Patent '724 Claims

Although this court has found that Muth's '724 patent is invalid and unenforceable due to failure to disclose the preferred embodiment and failure to disclose material information to the patent office, a complete record requires analysis of the individual claims in the '724 patent to determine whether each claim would be valid if the patent itself is eventually found to be valid. The term "claim" in this context refers to the numbered paragraphs in a patent that describe the details of what the patentee has invented and what the patent prevents others from practicing. Also, since Muth has asserted that the Gentex Razor mirror infringes on the '724 patent, this issue will be addressed with respect to each claim in the next section. *See Warner-Jenkinson Co.*

v. Hilton Davis Chem Co., 520 U.S. 17, 21 (1997); *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.,* 339 U.S. 605, 608-09 (1950).

Claims in an issued patent are presumed to be valid, and the challenger, Gentex in this case, must submit evidence of invalidity for each claim alleged invalid. *Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1260 (Fed. Cir. 2004). Once the challenger has presented evidence of invalidity of a claim, the burden of producing evidence shifts to the patentee to show that the claim is valid. The ultimate burden of proof on the issue of invalidity is on the challenger and is by clear and convincing evidence. *SIBIA Neurosciences, Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1355 (Fed. Cir. 2000).

During the nine days of trial, both sides presented evidence and expert testimony on the validity of the claims in Muth's '724 patent and on whether the Gentex Razor mirror infringed on each claim. The claims at issue are claims 1 through 5 and 7 through 22. Where necessary, the court had construed disputed terms at the *Markman* hearing, and reference will be made to those interpretations. (*See* Court Minutes dated February 28, 2007).

Gentex's position is that all of the disputed claims in patent '724 were either obvious or anticipated by the prior art in the field of mirror coatings or mirror construction. These concepts attack the validity of a claim or patent. The court must compare the prior art to the claim under attack; it is not necessary at this point to compare the accused device to any claims.

A patent claim is "anticipated" if the claim is either explicitly or inherently covered in a claim of prior art and would, if enforced, prevent practice of that prior art. *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377, 1381 (Fed. Cir. 2005); *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346 (Fed. Cir. 1999). Elements that would be known to a skilled artisan, in

combination with elements in the prior art, may also cause the claim to be anticipated. Each element of the challenged claim must appear in or be inherent in the prior art for it to be anticipated. *Brown v. 3M*, 265 F.3d 1349, 1351 (Fed. Cir. 2001).

Gentex's expert, Dr. H. Angus Macleod, is a physics professor emeritus and a consultant in thin optical films. He testified as to the scope of the prior art, some of which was disclosed in prosecution of the '724 patent and some of which was not. He also compared this prior art with each of the challenged claims, and he testified as to the education and level of skill that one skilled in the art should have. *See Graham v. John Deere Co. of Kansas City,* 383 U.S. 1, 17-18 (1966). Muth's expert, Mr. Robert Brinchek, is an expert in the field of automotive mirrors and mirror construction, but not in the physics of thin films. He performed certain measurements involving reflectivity, transmission, and the relative areas of the primary and secondary regions. Dr. Macleod concurred in these measurements. Mr. Brinchek also testified as to prior art.

The first independent claim of the '724 patent recites:

> 1. A mirror coating comprising:
> a primary region which reflects visibly discernible electromagnetic radiation, and a secondary region which passes a portion of the visibly discernible electromagnetic radiation while simultaneously reflecting a given percentage of the visibly discernible electromagnetic radiation, and wherein the average reflectance of the mirror coating is greater than about 50%;
> wherein the primary region is substantially continuous, and the secondary region is discontinuous, and wherein the primary and secondary regions have a given surface area, and wherein the surface area of the secondary region is about 1% to about 80% of the surface area of the primary region; and
> wherein the primary region passes less than about 1% of the visibly discernible electromagnetic radiation, and the secondary region passes about 1% to about 65% of the visibly discernible electromagnetic radiation.

(Exh. Nos. 196 & 1005, '724 patent at col. 8).

To summarize, claim 1 has the following limiting elements: (1) there is a reflective primary region; (2) there is a secondary region that both reflects and transmits light; (3) the

average reflectance of the secondary region is greater than about 50%; (4) the primary region is substantially continuous and the secondary region is discontinuous; (5) the surface area of the secondary region is about 1% to 80% of the primary region; (6) the primary region passes less than 1% light; and (7) the secondary region passes about 1% to 65% of the light behind it.

This claim deals only with the mirror coating, not the entire mirror assembly. In the *Markman* construction phase of this proceeding, the court interpreted the primary region to mean the area of the mirror coating that is nominally opaque and reflects visibly discernable electromagnetic radiation, i.e., light (*See* Court Minutes dated February 28, 2007). That is, when the application is an auto rear view mirror, the primary region reflects to show the driver what is behind the vehicle.

The secondary region reflects some light, but it also allows some light to pass through, such as from a light source inside of the mirror housing. This is where the signal comes through. In the Operation section of the patent, it was explained that this secondary area is created by removing or thinning small areas in the coating (Exh. Nos. 196 & 1005, '724 patent at col. 7); therefore, the court accepted Gentex's construction of the secondary region as "The area of the mirror coating that is defined by and includes a plurality of discrete apertures." (Court Minutes dated February 28, 2007, p. 2). Muth's interpretation would have included an unmeasured part of the area around the secondary region – sort of a blurring effect – making calculation of the size of the primary and secondary regions and ratios between these areas impermissibly vague. This is especially important in the analysis of dependant claims, but since the first part of this claim requires that the secondary region have a "given surface area," it must be capable of measurement.

Dr. Macleod testified that each of these limitations was present in the prior art, making the entire claim anticipated, or at least obvious. Most telling is the Gentex '527 patent, which was not disclosed to the PTO as prior art of the '724 patent. First, the drawings of the '527 device show an interior EC rearview mirror (EC is not a claimed limitation in the '724 patent) with ablated jailbar areas for displays behind the glass to be seen. These two regions are not described as such, but that is clearly what they are. Therefore, the first two elements of claim 1 as set out above "read on" the '527 device.

The '527 patent incorporates another Gentex patent, U.S. Patent No. 5,818,625, which uses a mirror coating having an average reflectance of greater than about 50% (Exh. No. 1233, '625 patent at col.3), as does another patent application, European Patent Application EPO 729 864 A1 (56% reflectivity disclosed in Exh. No. 1221, patent application '864 at col. 10).[1] This is limitation (3) above.

An important aspect of claim 1 is that the secondary area be "discontinuous" (element (4) above), and a substantial portion of the evidence was devoted to this feature. There are two ways to interpret the importance of whether a coating is continuous or discontinuous. One is from a physical standpoint. Islands or dots of reflective material, surrounded by an area where the coating is removed, would not be continuous because some of the reflective material is isolated; however, if the islands were of the nonreflective material (dots of removed coating) then there could be a line drawn without break between areas of reflective material on one side of the "secondary region" all the way to the other side, and there would be no area of isolated reflective

[1]The application for a patent is public record, the contents of which alleged infringers and all others are presumed to know. *Webster Loom Co. v. Higgins*, 105 U.S. 580, 594 (1881).

material surrounded by areas where it is removed. From a physical standpoint, whether or not one could draw a continuous line across the secondary region from any point in the secondary region would be insubstantial because the eye cannot discern holes or lines that small. The drawings, explanation of the invention, and the claim itself would cover either configuration, except if "discontinuous" *requires* that there be isolated islands of reflective material. The court held at the *Markman* stage of the proceedings that such an interpretation was not necessary. Whether the openings are in a "jailbar" pattern, as shown in the '527 patent, a comb pattern, maze, dots, or squares, the function is still the same, and the various configurations do it in the same way. Thus, lines could be just as discontinuous from a physical standpoint as dots surrounded by ablated areas.

Whether there is continuity of the reflective surface *is* important from a conductivity standpoint. This matters with an electrochromic (EC) mirror, which the '527 patent described, but not a non-EC mirror. The coating on an EC mirror also acts as a conductor of electricity, which causes the gel in the chamber behind the outside glass to darken. It cannot receive the electric signals if the conductive material is in isolated dots or islands. While certain patterns might have the added benefit of conductivity, the '527 patent still teaches that ablation allows the observer to see something behind the reflective surface. *Cf. IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377, 1381 (Fed. Cir. 2005). Since the court is satisfied that lines as well as dots can be discrete apertures and discontinuous, the '527 device includes limitation (4). Accordingly, the '527 patent teaches or suggests lines as a secondary region that is functionally the same as dots in a non-EC mirror, so this element is anticipated by the prior art.

The 1% to 80% ratio of the secondary region to the primary region is so broad, the only

real limitation is design preference and not function. One practicing the '527 device would necessarily run into a ratio that broad. If more than 80% of an object the size of an auto mirror, for example, was taken up by a secondary region, there would hardly be room for the reflective primary region to function at all. One skilled in the art would realize this. Thus, limitation (5) is inherent in the prior art and is anticipated.

The transmission of less than 1% of visible light in the primary region renders it substantially opaque and an effective reflector. Many patents disclose suitable coatings, including the '527 patent and the '864 and '265 patent applications (Exh. No. 1241, UK Patent Application 2,311,265), and this satisfies limitation (6) as anticipated.

Finally, limitation (7), providing for the secondary region to pass about 1% to 65% of visible light, is disclosed in various patents, including the '527 patent, the '864 patent application, and the '265 patent application, as testified to by Dr. Macleod. Thus, there was clear and convincing evidence that all elements of claim 1 would prohibit the practice of the '527 device and are anticipated.

Muth argued that the anticipation analysis presented by Dr. Macleod was insufficiently rigorous to establish anticipation of claim 1 by the '527 patent. For example, the size ratio of the reflective and display regions of the '527 device was not measured or disclosed, and the drawings are not necessarily to scale. Accordingly, his testimony that the dimensions in claim 1 would read on the '527 device cannot be accurate. The court disagrees. Certain elements of any of the mirrors examined require precise measurement, such as the reflectivity and transmission qualities of the secondary region. Others are more a design feature. Dr. Macleod could tell when precision was important and when common sense and aesthetics would allow more latitude. His

analysis of the importance of the size ratios of the primary and secondary regions is persuasive and the court adopts it.

Claims 2 through 5 are dependant on claim 1and include further limitations. These are:

> 2. A mirror coating as claimed in claim **1**, wherein the primary region is substantially continuous, and reflects less than about 80% of the visibly discernible electromagnetic radiation.
> 3. A mirror coating as claimed in claim **2**, wherein the secondary region reflects at least about 35% of the visibly discernible electromagnetic radiation.
> 4. A mirror coating as claimed in claim **3**, wherein the secondary region comprises a plurality of discrete apertures formed in a given pattern in the mirror coating.
> 5. A mirror coating as claimed in claim **4**, wherein the discrete apertures have a given cross sectional area, and wherein the cumulative cross sectional areas of the given apertures comprise less than about 60% of the surface area of the secondary region.

(Exh. Nos. 196 & 1005, '724 patent at col. 8). The mirror coating that reflects less than about 80% of incoming light (claim 2) is expressly taught in patent '625 at col. 6, which is incorporated by reference in patent '527. The array of substances used in the mirror coatings is more detailed and specific in the prior art, but if the claimed elements in claims 1 and 2 would prevent practice of those coatings, as they appear to, they are anticipated. Likewise, the remaining claims dependant on claim 1, namely claims 3 through 5 above, appear in the '527 patent and the '625 patent, in addition to others cited by Dr. Macleod. Again, with respect to claim 4, the discussion above relating to a plurality of discrete apertures being functionally the same as ablated lines applies here.

Thus, all of the elements of claims 1 through 5 are not new or innovative in the mirror world. The next question, of course, is whether the combination of known elements is itself innovative. When analyzing an invention that combines known elements, as opposed to one that is completely novel, a claim is "obvious" if one skilled in the art and familiar with the prior art would have discerned how to combine the elements of the invention, even without the

disclosures in the patent in question. *Motorola, Inc. v. Interdigital Techn. Corp.*, 121 F.3d 1461, 1471-72 (Fed. Cir. 1997). An important test for obviousness, recently interpreted by the Supreme Court, is whether there was a "teaching, suggestion, or motivation" (TSM) in the prior art that would indicate to a person skilled in the art that the elements in the device would logically be combined to solve a particular problem. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 1731-32 (2007); *see also Graham,* 383 U.S. at 17-18. Furthermore, the results of the combination are predictable, as opposed to unexpected. Thus, if there is no innovation present, no functional or economic synergy in the combination of known elements (which is needed to make the combination more valuable than the sum of its parts), no pent up demand or failure by others to solve a problem, and the state of the industry would inevitably lead persons of ordinary skill in the art to combine the elements as claimed, the claim is obvious and unpatentable.

Dr. Macleod testified that one skilled in the art, such as an engineer or equivalent with experience in optics or mirror related technology, would have figured out how to combine the various elements outlined above. The court is satisfied this is the case. Also, the above combination does not act in a synergistic or unpredictable way. Much of Muth's argument relating to non-obviousness concerned the "stealth" nature of the mirror, and how its apparatus differed from other available behind-the-glass signal mirrors. These issues also related to whether the Gentex product was stealthy, whether Gentex attempted to make it so, and whether it infringed for that reason. The court is satisfied that the combination of elements in the '724 patent, claims 1 through 5, is obvious to one skilled in the art. A review of the '527 patent suggests that ablating more and thinner lines or dots would appear to blend the two regions *(See* Exh. No. 1003, '527 patent, Fig. 3, col. 8, and claim 5 at col. 10). This would be true even if

there is an extra functionality of the coating, such as the conductivity needed for an EC mirror, which the '527 device is. A few experiments would tell a skilled person how much ablation results in the desired effect, both from a visual and conductive standpoint. The evidence was clear and convincing that claims 1 through 5 are obvious.

Turning now to disputed claims 7 through 12, a mirror coating as described above is claimed with a light emitting assembly behind the mirror in independent claim 7 as follows:

> 7. A mirror coating as claimed in claim **5**, and further comprising:
> a light emitting assembly positioned adjacent to the secondary region and which emits visible light which is passed by the secondary region, and wherein the secondary region has a luminous output of about 0.5 to about 120 candelas.

(Exh. Nos. 196 & 1005, '724 patent at col. 8).

Once again, the '527 patent has a mirror with a light emitting device behind it, as do other examples, such as the '265 patent and the '864 European patent application. As for the light output, one skilled in the art would know or be able to figure out how much light would be necessary for the observer to see the signal without being blinded. The auto manufacturers also have specifications for signal brightness, as was testified to by Mr. Brinchek. Claim 7 is obvious.

Claims dependant on claim 7 are as follows:

> 8. A mirror coating as claimed in claim **7**, wherein the light emitting assembly comprises about 1 to about 30 light emitting diodes, and wherein the light emitting diodes, when energized, emit visibly discernible electromagnetic radiation, the luminous output of light emitting diodes being about 1 to about 1000 candelas.
> 9. A mirror coating as claimed in claim **7**, wherein the light emitting assembly comprises a supporting substrate having a given light emitting surface area of about 10 to about 4000 square millimeters, and wherein about 1 to about 30 light emitting diodes are mounted on the supporting substrate, the supporting substrate and the light emitting diodes having a weight of less than about 100 grams.
> 10. A mirror coating as claimed in claim **7**, wherein the mirror coating and the light emitting assembly comprise an optical stack which has a thickness of less than about 25

millimeters.
11. A mirror coating as claimed in claim **10**, wherein the light emitting diodes emit, when energized, less than about 18 milliwatts of heat energy per square millimeter of the supporting substrate.
12. A mirror coating as claimed in claim **11**, wherein the primary region of the mirror reflects less than about 80% of the visibly discernible electromagnetic radiation and is substantially opaque.

(Exh. Nos. 196 & 1005, '724 patent at cols. 8-9).

Both the '864 and '265 applications show 1 to 30 LED's, and the output would be governed by the manufacturers' specifications. Claims 8 through 12 are obvious.

The next independent claim is claim 13, which recites:

13. A Mirror comprising:
a supporting substrate having opposite surfaces; and
a mirror coating disposed on one of the surfaces of the substrate, and wherein the mirror coating defines a primary region which reflects less than about 80% of a given band of visibly discernible electromagnetic radiation, and a secondary region through which said electromagnetic radiation passes, and wherein the secondary region reflects at least about 35% of the same given band of visibly discernible electromagnetic radiation, wherein the average reflectance of the mirror coating is greater than about 50%.

(Exh. Nos. 196 & 1005, '724 patent at col. 9).

Once again, the claim is for a mirror with a glass having two surfaces, generally a front and back. One side has a coating with primary and secondary regions. The primary region has less than about 80% reflectivity, as in claim 2, and the secondary region reflects about 35% of visible light, as in claim 3. This is not new, except now the claim is for a mirror, not just a coating. While the secondary or signal area reflects about 35% of the light striking it, presumably while the LED assembly is not lit, the coating reflects more than about 50%. It is then ablated to get to the 35% reflectivity level.

The '527 patent, as well as the '625 patent, the '864 European patent application and others testified to by Dr. Macleod, disclose common mirror coatings, such as rhodium and

chromium that meet these levels of reflectivity, i.e. between 50% to 80%. The '527 patent has a reflective (primary) region and an ablated signal (secondary) region, as do others, such as the '625 patent and Donnelly Corporation's U.S. Patent No. 5,285,060 (Exh. No. 1238). All that is left is to reach the 35% level of reflectivity in the secondary area. This is the same reflectivity limitation as claim 3. Dr. Macleod testified that a person skilled in the art and familiar with the '527 patent, which discloses a secondary area which retains 70% to 80% of the reflective material (the remainder being ablated), would know that the reflectivity of the secondary area would be about 35%. Therefore, claim 13 of the '724 patent is obvious.

The dependant claims, 14 through 21, which will not be quoted here, have the same limitations for a mirror that claims 1 through 11 disclosed for mirror coatings. As the latter are obvious, so are the former. Claim 22 is for a mirror assembly with many of the same limitations, and this would also be obvious.

Non-Infringement By Gentex Razor Mirror

As was stated above, when the patent as a whole is found to be invalid, there can be no infringement by an accused device. Similarly, when each of the claims is found to be invalid because they are anticipated or obvious, there is no infringement. However, if any of the claims is eventually found to be valid, a discussion of the accused device, the Gentex Razor mirror, is necessary for a complete record.

An accused device "infringes" on a valid claim if every element of the claim in the patent exists in the device. *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998). This would be literal infringement. If an element of the claim is missing in the accused device, the patentee must show that the device contains the equivalent of the absent claim that

differs in an insubstantial way; that is, the equivalent element in the device has the same purpose as the one that appears in the patent, it functions in the same way, and it achieves the same result. *Motionless Keyboard Co. v. Microsoft Corp.*, 486 F.3d 1376, 1382-83 (Fed. Cir. 2007). An analogy might be that a yellow bucket carries water like a green bucket, so the distinction is insubstantial. A claim of infringement under the doctrine of equivalents must be analyzed on a claim by claim basis. *AquaTex Indus., Inc. v. Techniche Solutions*, 479 F.3d 1320, 1327-28 (Fed. Cir. 2007). Meaningful structural and functional differences between the accused device and the patent claims cannot be ignored because the public has a right to know what it can manufacture and sell and what is exclusive to the patent holder. *Texas Instruments, Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1566-67 (Fed. Cir. 1996). Progress and competition are enhanced by creative inventors who "invent around" existing patents.

Muth asserts infringement of claims 1 through 5, 7, 8,13 and 14. It identifies five issues relevant to infringement: (1) whether the secondary region has a plurality of discrete apertures; (2) whether the coating in the secondary region is discontinuous; (3) whether the proportion of the surface area of the secondary region to the primary region is about 1% to 80%; (4) whether the reflectivity of the secondary region is about 35%; and (5) whether the cross sectional area of the apertures is about 60% of the area of the secondary region.

In the discussion in the previous section, the court determined that the configuration of the ablations in the Razor mirror is equivalent to that described in the '724 patent. Visually, there is no difference. In other words, connecting ablated lines with unablated material is an insubstantial difference. It may be important for conductivity, but conductivity is not relevant to the '724 patent. The patent applies to both a chrome mirror or an EC mirror. Thus, lines are

effective to interrupt the surface and thereby constitute a plurality of discrete apertures. Also, a series of lines is visually indistinguishable from dots of reflective material, so even if there is no isolated material, the configuration is the equivalent of discontinuous. The ablated surface and the coated surface can by measured, which is also a requirement. Thus, the Razor mirror has the equivalent of the first two elements above, also found in claims 1, 2, and 4 of the '724 patent.

Other elements of the accused device that Muth asserts infringes contain numerical limitations on different areas in the device or in the function of those areas. These are the proportions of the mirror that constitute the primary and secondary regions, the reflectivity of the secondary region, and the cross sectional areas of the apertures in the secondary region (elements (3) through (5) above). Muth's expert, Mr. Brincheck, measured these elements in the three embodiments of the Gentex Razor mirror at issue, the Chrysler 300, the Toyota Tundra, and the GMT900. His measurements are not in dispute, although the interpretation of their significance is.

One controversy that arose with respect to the secondary region being between about 1% to 80% of the secondary region is whether the primary region includes the area under the bezel that wraps around the front of the mirror. Dr. Macleod stated that since that part of the glass under the bezel is coated, and the claim is for a coating, it should be counted in the numerical calculation. Mr. Brincheck stated that an area under the bezel cannot reflect, coated or not, so it should not be included in the primary region. Mr. Brincheck's definition makes more sense, since the area that is covered by the bezel cannot reflect.

One of the three mirrors, the Chrysler 300 version, is within the range disclosed in the '724 patent at slightly over 1%. The other two mirrors are slightly under 1%, and Muth argues

this is close enough to be "about" 1%. Muth cites *Ortho-McNeil Pharm., Inc. v. Caraco Pharm. Labs., Ltd.*, 476 F.3d 1321 (Fed. Cir. 2007), for the principle that a numerical limitation with the term "about" extends the range, and how much it is extended depends on a number of factors. These include how the term is used in the patent and prosecution, the effect of varying the parameter, and the significance of the parameter in the field of art. This common sense approach is consistent with *KSR Int'l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 1739 (2007), as opposed to Dr. Macleod's across-the-board 5% variance, which he said was tolerated in the thin film industry. Some variance has to be allowable in a mass produced product, as *Ortho-McNeil* points out, but the importance of a variance in a pharmaceutical product is vastly different from the importance in the size of the signal portion of an automobile mirror. Tolerated flexibility depends on the context. In the automotive industry, function is what is important, and Mr. Brincheck testified that the purpose is to have a signal that will catch the attention of others near the vehicle, but that is not so large that no part of the mirror reflects what is behind the vehicle to the driver. He thought about .70% would be sufficient, and he is the automotive mirror expert, as opposed to the thin film expert. The secondary area in the Toyota Tundra is .84%, and the GMT900 is .85%. The court accepts Mr. Brincheck's assessment of the function and the importance of the range and finds that all three mirrors are within the '724 patent's range for the ratio of the size of the primary and secondary regions at about 1% to 80%.

The court is mindful of the prosecution history of the '724 patent in which the examiner amended the claim to put in the 1% to 80% limitation. After the patentee accepted this amendment, the attempt to remove the range was rejected. The reason for the added limitation is not clear. However, the court is satisfied putting in so wide a range merely means there will be

two areas that can function as intended, and a variance down to .70% is immaterial in this context.

The reflectance of the secondary region is more problematic for Muth's assertion of infringement. The '724 patent provides that the secondary region shall reflect at least about 35% of visible light (Exh. Nos. 196 & 1005, '724 patent at cols. 8-10, claims 3, 13 & 22). The accused mirrors reflect between 23.35% to 26.41%. This is too low to be "at least about 35%." In the description section, the secondary region in the '724 mirror, "while it has been rendered operable to transmit electromagnetic radiation, remains an acceptable reflector such that an image can be perceived in same while electromagnetic radiation passes therethrough." (Exh. Nos. 196 & 1005, '724 patent at col. 6, ll. 62-65). This relatively high reflectivity creates a "stealth" mirror where, although it is detectible, the signal area does not visually stand out when not lit. While there was evidence that Gentex designers were working on making the Razor mirror more stealthy, they did not make it stealthy enough to infringe, and this was visually obvious. The accused products do not literally infringe claim 3, and the doctrine of equivalents does not apply.

Finally, claim 5 provides that ablated areas in the secondary region have a given cross sectional area, and these comprise less than about 60% of the surface area of the secondary region. The specimens tested by Mr. Brincheck and agreed to by Dr. Macleod have openings that are 63.84% to 64.33%, which is not less than 60%. Once again, the controversy is whether this measurement is less than "about" 60%. Dr. Macleod testified that it is not, reasoning that a variation of 5% would be 3% (5% of 60%), so "about 60%" is 57% to 63%. However, Mr. Cammenga, an engineer for Gentex, testified that their equipment can measure the total cross sectional area of the openings, and between 55% to 65% was acceptable. Therefore, the court

accepts the more elastic definition of "about" in this instance and finds that the accused products are within the limitations of claim 5.

To summarize, the accused Gentex mirrors fall outside the limitations of reflectivity of the secondary region, but within the limits of other measurements in the '724 patent. Claim 1, the first independent claim for coating, does not state the percentage of reflectivity, although it does state that the region passes light and simultaneously reflects "a given percentage" of visible light. Claim 3 places that percentage at 35%. However, the next independent claim for a mirror, claim 13, does state the percentage of reflectivity. The coating for the Gentex Razor mirror might infringe claim 1 for the coating, if it were not so vague, but it does not infringe claim 13 for a mirror, nor independent claim 22 for a mirror assembly. In order to infringe, an accused device must contain each element of a claim, or its equivalent. Since the Razor mirror and mirror assembly do not infringe on the reflectivity element of the secondary region, they do not infringe at all.

Muth also asserts that infringement by Gentex was willful, a finding of which would result in treble damages. This must be proved by clear and convincing evidence. 35 U.S.C. § 284; *In re Seagate Tech. LLC*, 497 F.3d 1360, 1368-72 (Fed. Cir. 2007). This court is satisfied that if it is eventually found that Gentex infringed patent '724, the infringement is not willful. The testimony of various Gentex witnesses was that they were well aware of the numerical parameters of the '724 patent, and they were careful to work around those limitations. Inventing around patents is encouraged and promotes commerce and competition. This policy is evident in the specificity and narrowness of claim interpretation. The integrity of that process was obvious in Gentex's procedures and the care it took in manufacturing specifications. Treble damages

would not be appropriate.

DISCUSSION - CONTRACT ISSUES

The Alliance Agreement and the Debtors' Relationship with Magna Donnelly

The major event that led to the break in relations between the parties was Dan Todd's interpretation of paragraph 1 of the Alliance Agreement. He asserted that the exclusivity provision would still allow Muth to work with others on EC signal mirrors, including Magna Donnelly, a substantial competitor of Gentex. In its decision on the parties' various motions for summary judgment, this court held otherwise *(See* Court Minutes dated July 6, 2007). However, the court reserved for trial the issue of whether this provision in the agreement was actually breached by Muth, and after all the evidence was presented at trial, Gentex failed to prove that it was.

Despite his interpretation of the agreement, Mr. Todd testified he was only "talking" with Magna Donnelly, as opposed to working with them. He testified that Muth was approached regularly over many years to form such an alliance, and Muth was working with Magna Donnelly on a blind spot detection device, which all parties agreed was not covered by the Alliance Agreement with Gentex. At the June 29, 2005, meeting between representatives of Muth and Gentex, Mr. Todd stated he told the Gentex representatives that he believed working with Magna Donnelly on nondichroic signal mirrors was allowable, and he admitted to "talking" with Magna Donnelly about a relationship. The letter to Muth's in-house counsel, Thomas Alberti, from Brian Rees, Gentex's in-house counsel, dated August 3, 2005, uses the same terminology, and both of these attorneys were also at the meeting (Exh. No. 795). This characterization of the state of the Muth/Magna Donnelly relationship is different from the testimony of Gentex

employee Garth Duer and from Mr. Rees' own testimony at trial, but the letter is closer in time and more reliable than their memories. Notably, the letter did not state Muth had already violated the agreement, but it stated Muth should not do so in the future.

Sometimes evidence is piecemeal and cumulative, leading to an inevitable conclusion, or at least a preponderance of the evidence conclusion, as to what took place at a meeting. Sometimes there is a smoking gun, one piece of evidence that is so pivotal it compels a particular result. The August 3, 2005, letter is such a smoking gun. Mr. Todd did not admit to violating the Alliance Agreement, and the Gentex representatives did not think he did. They did, however, decide to withhold showing Mr. Todd a sample of the Razor mirror they had brought to the June 29th meeting, so it stayed sealed in the oft-referred-to blue bag (*See*, *e.g.*, Tr. Vol. VII, pp. 67-68). Later, Gentex attempted to characterize Mr. Todd's position as an anticipatory breach of the "exclusivity" provision of the Alliance Agreement.

The anticipatory breach of a contract is an act that occurs while the contract is executory that would excuse future performance by the nonbreaching party and that would allow immediate suit for the breach rather than waiting for the time for performance to pass. The nonbreaching party can elect to treat the contract as at an end, or it can treat the contract as still in force. If it takes the latter position and if the breaching party changes its mind and performs, there will be no breach. Either election has its risks. Under Wisconsin law, to constitute an anticipatory breach, refusal to perform in the future must be unequivocal. *Wisconsin Dairy Fresh, Inc. v. Steel & Tube Prods. Co.*, 20 Wis. 2d 415, 427-28, 122 N.W.2d 361, 367-68 (1963). Gentex has argued that the June 29, 2005, meeting was that anticipatory breach, which relieved Gentex from any further obligations under the Alliance Agreement, such as paying royalties or recommending

Muth for right hand mirrors under paragraph 4. Not so. Dan Todd stated at that meeting that nonexclusivity for EC signal applications was his interpretation, but he did not say the contract was at an end or that Muth had breached exclusivity at that point in time.

The August 3, 2005, letter definitely does *not* memorialize anticipatory breach at the June 29, 2005, meeting (Exh. No. 795). On the contrary, it states the parties had worked exclusively on EC applications for seven years. It stated negotiations as to other matters were still open. The tone was cooperative and conciliatory but firm in its interpretation as to exclusivity and the fact that Gentex hoped to continue the mutually beneficial relationship. Under Wisconsin law, if there has been anticipatory breach, the nonbreaching party must make an election to treat the contract as cancelled or to treat it as executory and demand performance. *Stolper Steel Prods. Corp. v. Behrens Mfg. Co.*, 10 Wis. 2d 478, 488-89, 103 N.W.2d 683, 689-90 (1960). After Dan Todd asserted that the contract was not exclusive, Gentex might have elected to treat the contract as ended, but it did not. It demanded compliance with the exclusivity provision, which means it treated the agreement as still in effect. That also means it had continuing obligations under the contract, such as the obligation to pay royalties and to recommend Muth for right hand mirror non-EC applications.

In 2006 Gentex sued Muth in Michigan alleging that Muth had worked with an unnamed third party, resulting in a loss of profits for Gentex. We all know now the unnamed party was Magna Donnelly, and the action complained of was working with Magna Donnelly to enable it to bid the GMT900 program cheaper than Gentex was supplying mirrors for that program. This allegedly resulted in General Motors demanding a reduction in price, as it was entitled to do under its supply agreement with Gentex. The burden of proof was on Gentex by a preponderance

of the evidence. It has not met its burden. True, Muth was working with Magna Donnelly on the GMX295 program, but this was for blind spot detection devices only. Muth supplied a component to Magna Donnelly for the GMX295 program that could have had signal capability, but the component was not equipped for this function because such signal devices are illegal on European cars, the market for the GMX295 program.

We have a number of business records produced by Magna Donnelly, which were admitted, and which contained a string of e-mail correspondence (*See*, *e.g.*, Exh. Nos. 1604, 1605, 1606). However, we had no Magna Donnelly witness or document to state that Muth had entered into a contractual relationship with respect to the GMT900 program. There were drafts of such an agreement, but nothing was finalized. This is consistent with Mr. Todd's statements that he was only "talking" with Magna Donnelly. There are no price quotes from Muth, which Magna Donnelly would need to undercut Gentex, if Muth were involved. True, Magna Donnelly may have bid the program at a price lower then Gentex, but if they did so without Muth being committed to supply them parts, that is not Muth's responsibility. Magna Donnelly is a major competitor of Gentex in the EC mirror field ("mortal enemy" was the term used), but that means it must have had a way of manufacturing EC mirrors without Muth. After all, Muth had worked exclusively with Gentex for many years. No confidential Gentex information shows up in the Magna Donnelly exhibits, nor is there any implication that any such information was transmitted by Muth to Magna Donnelly. The testimony of Muth salesperson Patrick Miller made clear that Muth was only working with Magna Donnelly on the Mazda 6 and GMX295 projects, which included the turn signal circuit boards, but they were not populated with LED's (Tr. Vol. IV, pp. 162-70). Gentex has failed to prove that any of its claimed $8,744,251 in lost profits was caused

by Muth or that Muth violated the exclusivity provision of the Alliance Agreement.

In 1999 Gentex sold Mercedes EC mirrors with Schefenacker's signal on the shell, which Muth claims violates the exclusivity clause. However, any loss on account of this act is beyond the statute of limitations. Under Wisconsin law, a cause of action for breach of contract arises at the time of breach, whether or not it is known. Wis. Stat. § 893.51. No action for breach of contract was filed by Muth before the end of 2005, and the bankruptcy was filed October 6, 2006; thus, both events occurred more than six years after the alleged breach. There is no need to reach the merits on this issue.

As was stated earlier, Gentex did not treat the Alliance Agreement as terminated at the June 29, 2005, meeting. Instead, it communicated to Muth that it believed exclusivity was in effect as to all EC applications, and this was a nonnegotiable issue. Mr. Rees' letter of August 3, 2005, states clearly, "You must understand that the Agreement does not allow Muth to work with Magna Donnelly or others on EC signal mirror applications." There is no repudiation of the agreement by Gentex and no indication that Gentex thought Muth did so. In closing, Mr. Rees said, "Gentex and Muth have a great history and it is still our desire for that to continue." (Exh. No. 795). Nevertheless, in August 2005, Gentex did not recommend the Muth mirror to Delbar, a tier-one supplier, for the passenger side application in the GMT800 and GMT900 series, and Mr. DeNave testified to this effect (Exh. No. 1159, Tr. Vol. VIII, pp. 189-90). Gentex is not entitled to enforce paragraph 1 of the Alliance Agreement and then to violate paragraph 4. This court finds Gentex breached its duty under the Alliance Agreement with respect to the continuing GMT800 and GMT900 programs. Consideration of damages is still under advisement and will be decided in a separate decision.

It appears that Gentex might also have breached its duty to recommend the Muth right hand mirror to Mirakami for Toyota. The series of Gentex e-mails from February 2003 show that Gentex was not only promoting its own non-EC right hand mirror, it was critical of the Muth product. (Exh. Nos. 481, 517). However, Toyota eventually went with EC on both sides, and we have no clear proof why. Since Toyota had every right to do so, which is acknowledged in paragraph 4 of the Alliance Agreement, it is impossible to assign causation to Gentex's breach. Therefore, this portion of Muth's claim fails.

DISCUSSION - TORT ISSUES

Neither Party Is Liable for Tortious Interference

Both parties allege tortious interference by the other in their respective efforts to compete in the automotive industry. Gentex focuses on the notes made by Dan Todd for his meeting with General Motors executives, which Gentex finds derogatory and inaccurate, and which caused GM to delay its GMT800 and GMT900 programs (Exh. No. 1101). Under Wisconsin law, to recover for tortious interference with a contractual relationship, the plaintiff must prove it had an actual or prospective contract with a third party, the defendant interfered with that relationship, the interference was intentional, the interference caused damage to the plaintiff, and there was no justification or privilege. *Shank v. William R. Hague, Inc.*, 192 F.3d 675, 681 (7th Cir. 1999); *Milwaukee Carpenter's Dist. Council Health Fund v. Philip Morris, Inc.*, 70 F. Supp. 2d 888, 897 (E.D. Wis. 1999). Mr. Todd acknowledged he made the notes, but he said his meeting with GM was very short, and all GM was interested in was what Muth would give up to keep the business. No one from GM testified that there was any causal connection between Mr. Todd's presentation and Gentex's loss, then later recovery, of the GMT800 & GMT900 business. There

is no documentary evidence of causation, other than the notes, and no evidence that the information in the notes was actually communicated to GM – and Mr. Todd, in essence, says it was not – or had any effect on its actions. Therefore, Gentex's cause of action for tortious interference, and its claim of damages of $5,974,914, fails.

One of Muth's claims for tortious interference involved its secondary market through MOPAR, which Muth believed could lead to future business with tier-one suppliers or OEM's. The court did not deny this cause of action at the summary judgment stage but allowed evidence at trial. However, the court is now satisfied that Muth's hoped-for relationship with manufacturers is too tenuous to rise to the level of an actual or prospective contractual relationship. The hope to impress the manufacturers in the future does not reach the level of a protected contractual or prospective contractual relationship, and Muth's cause of action for tortious interference also fails.

CONCLUSION

In summary, Muth's '724 patent is deemed invalid and Gentex's product did not infringe that patent. Gentex did, however, breach the parties' Alliance Agreement and damages will be established at a later date. Gentex will be allowed a general unsecured non-priority claim in the amount of $1,020.00, an amount acknowledge by Muth as owed. A separate order consistent with this decision will be entered by the court.

December 5, 2007



Margaret Dee McGarity
Chief Judge, U.S. Bankruptcy Court