

**UNITED STATES DISTRICT COURT  
DISTRICT OF MINNESOTA**

Geospan Corporation,

Plaintiff,

v.

**MEMORANDUM OPINION AND  
ORDER**

Civil No. 08-816 ADM/JSM

Pictometry International Corporation,

Defendant.

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David T. Schultz, Esq., Michael C. McCarthy, Esq., and Keiko L. Sugisaka, Esq., Maslon, Edelman, Borman & Brand, LLP, Minneapolis, MN, on behalf of Plaintiff.

Joseph P. Titterington, Esq., and D. Ward Hobson, Esq., Dunlap Coddling, PC, Oklahoma City, OK, and Rachel K. Zimmerman, Esq., Merchant & Gould, PC, Minneapolis, MN, on behalf of Defendant.

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**I. INTRODUCTION**

On May 11, 2010, a Markman hearing was held before the undersigned United States District Judge in this patent infringement action by Plaintiff Geospan Corporation (“Geospan”) against Defendant Pictometry International Corporation (“Pictometry”). Geospan alleges that Pictometry infringed claims 1, 3, 4, 7, and 16 of U.S. Patent No. 5,633,946 (“the ‘946 patent”). Pictometry denies the infringement allegations and counterclaims for a declaratory judgment of non-infringement, invalidity, and unenforceability of the ‘946 patent.

**II. BACKGROUND**

The ‘946 patent describes a method for collecting and processing video and spatial information for the purpose of forming a geographic information database. Hobson Decl. [Docket No. 140] Ex. 2 (‘946 patent) at 12. The geographic information in the database can then

be used in the field of photogrammetry, the science of obtaining accurate information about physical objects and the environment through the recording, measurement, and interpretation of photographic or visual images. Id.; Pl.’s Opening Mem. in Supp. of Claim Constr. [Docket No. 135] at 2; Def.’s Opening Mem. in Supp. of Claim Constr. [Docket No. 138] at 2. By using photogrammetry, the distance between reference points appearing in a visual image can be determined, which has useful applications in surveying and mapping land, transportation planning, and real estate sales and development. See Pl.’s Opening Mem. in Supp. of Claim Constr. at 3; Hobson Decl., Ex. 17 at 3. The high-resolution images used in photogrammetry are commonly captured using either satellites, aircraft, or ground-based vehicles. Hobson Decl., Ex. 17 at 3. Pictometry specializes in aerial photogrammetry, and Geospan’s business is devoted primarily to ground-based photogrammetry, although it has begun expanding into aerial photogrammetry. Def.’s Opening Mem. in Supp. of Claim Constr. at 9.

Traditional photogrammetry technology used “stereovision systems,” consisting of two cameras mounted on a van a known distance apart from each other and aimed in the same direction. Sugisaka Decl. [Docket No. 136], Ex. B at GEO0002653. The two cameras in stereovision systems—the primary reference of which is U.S. Patent No. 5,359,363 (“the Bossler patent”)—have overlapping fields of view on the same geometric plane, and the images from the two cameras are captured simultaneously. Id. Because the distance between the two cameras and the position of the van is known, the distance to and position of an object appearing in the overlapping fields of view can be determined through triangulation principles. Id. This information can then be related to a global coordinate system by using data from a global positioning system (“GPS”). Id.

Geospan asserts the invention in the '946 patent "freed photogrammetry from the limitations" inherent in such traditional systems. Pl.'s Opening Mem. in Supp. of Claim Constr. at 4. In contrast to the Bossler patent, which requires two simultaneous, coplanar images, Geospan's invention uses "non-coplanar video images obtained at different times (typically from different cameras)," which need not be aimed in the same direction and need not have overlapping fields of view. Sugisaka Decl., Ex. B at GEO0002654. Thus, in the preferred embodiment of the invention, "the system includes a van or other moving platform with at least four cameras, one pointing forward, one pointing rearward, one pointing to the left, and one pointing to the right," and the fields of view for those four cameras do not overlap at any single point in time. Id. By using GPS, as well as rotation and acceleration sensors, the spatial position (latitude, longitude, and elevation) and orientation (roll, pitch, and yaw) of the camera producing an image at the time when the image was captured can be determined. Id.; '946 patent, col. 8:14-15. Based on this information, the location of any reference point appearing in any two, noncoplanar images taken from the same or different cameras can be mathematically calculated. Id., col. 16:1-18.

At issue in this litigation are claims 1, 3, 4, 7, and 16 of the '946 patent. Claims 1 and 16 are independent claims, and claims 3, 4, and 7 are dependent claims. The parties submitted an Amended Joint Claim Construction Statement [Docket No. 134], identifying several disputed claim terms. At oral argument, the parties agreed that only two disputed claims terms need to be construed by the Court: "moving platform" and "video camera."

### III. DISCUSSION

#### A. Standard of Review

Claim construction is a matter of law. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). In construing claims, courts should look first to intrinsic evidence, which includes the claims, the specification, and the prosecution history. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). Claim terms are “generally given their ordinary and customary meaning,” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (quotation and citations omitted). However, a patentee can choose to be “his or her own lexicographer by clearly setting forth an explicit definition for a claim term.” Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed. Cir. 1999). Claim terms “should be construed consistently with [their] appearance in other places in the same claim or other claims of the same patent.” Rexnord Corp. v. The Laitram Corp., 274 F.3d 1336, 1342 (Fed. Cir. 2001). In addition, the specification is usually “dispositive; it is the single best guide to the meaning of a disputed term.” Vitronics, 90 F.3d at 1582. Courts are nonetheless cautioned not to import limitations from the specification into the claims. Phillips, 415 F.3d at 1323; The Laitram Corp. v. NEC Corp., 163 F.3d 1342, 1347 (Fed. Cir. 1998).

While courts can consider extrinsic evidence to educate themselves about the patent and technology at issue, it is improper to rely on extrinsic evidence in construing claims unless, after consideration of all the intrinsic evidence, ambiguity remains. Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc., 152 F.3d 1368, 1373 (Fed. Cir. 1998); Vitronics, 90 F.3d at 1584. Extrinsic

evidence is “evidence which is external to the patent and file history, such as expert testimony, inventor testimony, dictionaries, and technical treatises and articles.” Vitrionics, 90 F.3d at 1584. Dictionaries may be useful to courts in understanding the ordinary and customary meaning of words, and courts may “rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.” Phillips, 415 F.3d at 1322-23.

**B. “Moving Platform”**

“Moving platform” is found in all of the claims at issue. Pictometry acknowledges that “[w]ithout reference to the ‘946 patent itself, the plain, ordinary meaning of the term ‘moving platform’ might be considered by one of ordinary skill in the art to [be] broad enough to include satellite, an aircraft or a ground-based vehicle.” Def.’s Opening Mem. in Supp. of Claim Constr. at 18. Pictometry argues, however, that “when read in the context of the intrinsic record of the ‘946 patent as a whole, it is apparent that a ‘moving platform’ is limited to a ground-based platform” such as a van or a backpack. Id.

In support of its proposed construction, Pictometry contends there is language in the specification that describes “moving platform” and its ascribed characteristics in a manner that is consistent only with a ground-based platform such as a van. The language cited by Pictometry includes:

- “The present invention includes a collection system comprising video cameras, a GPS receiver, an inertial navigation system (INS) and a control computer. The collection system is mounted in a moving vehicle such as a van.” ‘946 patent, col. 2:21-24;

- “Generally, the collection system 10 is located on a moving platform such as a moving vehicle 11, as shown in FIG. 1.” Id., col. 3:36-38;
- “The INS 28 can also include an odometer coupled to an undriven wheel of the vehicle 11, which reduces the need to stop for re-alignment of the INS 28.” Id., col. 8:21-24;
- “If the vehicle must be stopped for an extended period of time, or if a previously recorded street must be driven again to reach a desired location, a pause command is given by the navigator to stop the recording of both video images and positional information.” Id., col. 8:44-49;
- “[T]he offset between the spatial position of the vehicle 11 and the street centerline is calculated as shown by box 132 using the images on the collected video tape 130.” Id., col. 9:31-33;
- “Generally, the vehicle 11 travels to one side of the center of the street.” Id., col. 10:29-30;
- “This process further takes into account changes in the location of the vehicle 11 relative to the street centerline as the vehicle 11 travels down the street, including those caused by traffic and obstructions.” Id., col. 11:40-43;
- “[A]n address seen in a video image can be compared to a calculated street address. If the two addresses are not the same, the visually observed address can be used to correct the model by which the address was calculated.” Id., col. 15:9-13.

The only instance in which a platform other than a van is arguably implicated, Pictometry contends, is a passage referring to another ground-based platform: “the collection system 10 can be located on or in any moving platform, including a platform capable of being carried by a single person.” Id., col. 18:23-25.

Pictometry also argues the specification’s explanations of how the invention works make sense only if “moving platform” is limited to a ground-based platform. For example: (1) ground-based vehicles often have “odometers” but aircraft do not; (2) ground-based vehicles, but not aircraft, travel “down the street” and encounter “traffic and obstructions”; and (3) cameras mounted on ground-based vehicles, but not aircraft, capture images in which an address can be seen. Furthermore, the patent’s teaching of the calculation of the street centerline offset is possible with a ground-based vehicle but not with an aircraft. The patent teaches that calculating the offset requires (1) mounting the front and rear-facing cameras so that their lenses are aligned with the vehicle’s line of travel and (2) a known vector extending perpendicularly from one of the camera lenses to the surface of the street. See ‘946 patent, cols. 10:37-11:1. Pictometry explains that barring serious weather conditions or extreme wheel-alignment problems, the nose of a van will remain directly in line with the van’s line of travel. In addition, the distance and angle of an imaginary vector extending from a camera mounted on top of the van to the surface of the street will remain constant. With an aircraft, however, cross-winds and turbulence cause the aircraft to pitch, roll, and yaw. Thus, to account for such forces, the nose of the aircraft will be pointed at any given time in a slightly different direction—perhaps several degrees—from the line of travel. Similarly, the length and the angle of the vector extending down to the surface of the street also will vary as the aircraft rises, falls, rolls, pitches, and yaws when encountering

wind forces and turbulence. Accordingly, because the front and rear camera lenses must be aligned with the line of travel and the angle and length of the vector extending from one of the cameras to the surface of the street must be known, the calculation of the street centerline offset as instructed in the patent is possible only with a ground-based moving platform.

Pictometry argues that its proposed construction is supported by the Federal Circuit's decisions in Nystrom v. Trex Co., 374 F.3d 1105 (Fed. Cir. 2004) (Nystrom I) and Nystrom v. Trex, Inc., 424 F.3d 1136 (Fed. Cir. 2005) (Nystrom II). In Nystrom I, a district court construed the claim term "board" in a patent for construction material for use in exterior flooring surfaces to mean "a 'piece of elongated construction material made from wood cut from a log.'" 424 F.3d at 1107, 1110. The district court adopted such a construction after finding that the patentee "had limited the scope of the claim term 'board' by statements in the specification that a board is cut or obtained from a log . . . and statements by [the patentee] during [the prosecution history]." Id. at 1110. On appeal, the patentee argued that (1) "board" is not limited to conventional wood boards that are cut from logs; (2) the claim language does not contain a description of the material from which the board is composed and, thus, the claim should not be limited to a particular material; and (3) the district court erred by relying on statements in the specification and the prosecution history to limit the claim because those statements did not represent a clear disavowal of claim scope. Id. at 1110-11. The Federal Circuit agreed, concluding that "the ordinary meaning of the word 'board' encompasses both a piece of cut wood or sawn timber and a similarly-shaped item made of a rigid material" and that nothing in the specification, claim language, or prosecution history revealed a disavowal or disclaimer of the full range of that ordinary and customary meaning. Id. at 1111-1113.



One year after Nystrom I was decided, the Federal Circuit issued its decision in Phillips and, shortly after, granted a petition for rehearing in Nystrom I for the limited purpose of addressing the effects of the Phillips decision. Nystrom II, 424 F.3d at 1138. On rehearing, the patentee made the same arguments it had made in Nystrom I. See id. at 1142. The Federal Circuit acknowledged that the claims did not include any language restricting the term “board” to a particular material or describing characteristics of wooden boards cut from logs. Id. at 1143. Nevertheless, the court concluded that “[a]n examination of the term ‘board’ in the context of the written description and prosecution history of the . . . patent leads to the conclusion that the term ‘board’ must be limited to wood cut from a log.” Id. The court explained that although the ordinary meaning of the word “board” encompasses both a piece of cut wood or sawn timber and a similarly-shaped item made of a rigid material, the decision in Phillips made clear that the patentee was “not entitled to a claim construction divorced from the context of the written description and prosecution history,” which consistently used the term “board” to refer to wood decking materials cut from a log. Id. at 1145. ““The problem is that if the district court starts with the broad dictionary definition in every case and fails to fully appreciate how the specification implicitly limits that definition, the error will systematically cause the construction of the claim to be unduly expansive.”” Id. (citing Phillips, 415 F.3d at 1321). Applying the principles of Nystrom I and Nystrom II here, Pictometry reasons that the language of the specification shows that “moving platform” has been limited by the inventors to mean a ground-based moving platform.

Geospan responds that Pictometry’s proposed construction restricts the claims to “the exact disclosed preferred embodiments” when “neither the plain language of the claims, nor the

specification and file history, support [such a restriction].” Pl.’s Rebuttal Mem. [Docket No. 142] at 1. In addition, Geospan claims that Pictometry’s reliance on Nystrom II is erroneous. In Nystrom II, “both parties acknowledge[d] the ordinary meaning of ‘board’ as a ‘piece of sawed lumber,’” and the court rejected the patentee’s proposed construction, which sought to “broaden the term ‘board’ to encompass relatively obscure definitions that [were] not supported by the written description or prosecution history.” Id. at 1145. Here, by contrast, both parties have acknowledged that “the plain, ordinary meaning of the term ‘moving platform’ might be considered by one of ordinary skill in the art to [be] broad enough to include satellite, an aircraft or a ground-based vehicle.” Def.’s Opening Mem. in Supp. of Claim Constr. at 18.

Pictometry’s position that the specification limits the scope of the claim term is untenable. First, Pictometry’s emphasis on the specification’s description of a specific, narrow embodiment of the invention is not a proper basis for limiting the construction of the claim to that specific embodiment. See Phillips, 415 F.3d at 1323 (“[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.”).

Second, Pictometry’s position misapprehends the import of Nystrom II and in the process, violates the very principles articulated in that case. “In [Nystrom II], both parties acknowledge[d] the ordinary meaning of [the claim term] . . . [and] [w]e refused to impose a construction broader than the term’s ordinary meaning. Here, on the contrary, we decline to impose a construction narrower than the term’s ordinary meaning.”). Acumed LLC v. Stryker Corp., 483 F.3d 800, 808-9 (Fed. Cir. 2007) (second alteration in original) (quotation and citations omitted). As in Acumed, there is no dispute that the ordinary meaning of “moving

platform” can include air-based moving platforms, and Pictometry’s proposed construction would improperly seek to narrow that plain and ordinary meaning.

Third, Pictometry’s argument that the specification fails to explain how the invention could be applied to an air-based moving platform essentially takes the position that “moving platform” should not receive a construction that would include embodiments that are not enabled in the patent. Indeed, Pictometry expressly argues that “moving platform” should not receive a construction broader than that which is both “described and *enabled*” in the specification. Def.’s Reply Mem. [Docket No. 150] at 4. But arguments regarding enablement go to validity, not claim construction. See Roche Palo Alto LLC v. Apotex, Inc., 531 F.3d 1372, 1379 n.1 (Fed. Cir. 2008); see also Phillips, 415 F.3d at 1327 (“While we have acknowledged the maxim that claims should be construed to preserve their validity, we have not applied that principle broadly, and we have certainly not endorsed a regime in which validity analysis is a regular component of claim construction.”); Motorola, Inc. v. STMicroelectronics, N.V., 2004 WL 5707527, at \*13-15 (E.D. Tex. Sept. 21, 2004) (concluding that arguments that a patent failed to teach an embodiment other than the preferred embodiment and that another embodiment could not be accomplished under the teachings of the patent were enablement arguments going to validity, not claim construction). But see Chiron Corp. v. Genetech, Inc., 363 F.3d 1247, 1263 (Fed. Cir. 2004) (Bryson, J., concurring) (“I think the proper approach . . . is to . . . constru[e] claims, where possible, as they would have been understood by one of skill in the art at the time of the invention, and not constru[e] them to reach the as-yet-undeveloped technology that the applicant *did not enable*.”) (emphasis added).

Pictometry next argues that during the prosecution of the '946 patent, the inventors and the United States Patent and Trademark Office ("PTO") examiner "consistently described the 'moving platform' as a ground-based platform." Def.'s Opening Mem. in Supp. of Claim Constr. at 31. Specifically, Pictometry cites the examiner's statement in an October 31, 1994 office action that:

GPS users in other field[s], however are already conscious about that [sic] GPS receivers can resolve the size of the moving platform carrying GPS receivers. For example, positional data from two GPS receivers on opposite aircraft wing tips are different, and such differences should be considered for aircraft landing application.

Hobson Decl., Ex. 4 at 10-11. But Pictometry's reliance on the quoted language assumes the examiner's reference to other fields and aircraft indicates that the examiner viewed the invention as applying to ground-based photogrammetry as opposed to the air-based field of photogrammetry. The more natural understanding of the quoted language is that the examiner was instead referring to fields other than photogrammetry, such as aircraft landing applications.

Pictometry cites several statements made by the inventors in responding to the PTO examiner as showing that the invention was limited to ground-based platforms:

- the inventors' statement that aspects of their invention were "particularly helpful for the application of short range terrestrial photogrammetry." *Id.*, Ex. 5 at 6;
- the inventors' statement that for data collected according to the invention "to be usable for short range terrestrial photogrammetry, which differs from traditional stereophotogrammetry . . . , it is critical that for each recorded video image the position of the camera from which [it] was obtained, at the time [it] was obtained, be precisely known." *Id.*; and

- the statement to the examiner that prior art cited in an office action “cannot resolve the length of the van, let alone determine a precise instantaneous position and orientation of each camera at the time the image is obtained.” Id., Ex. 7 at 5.

These statements during the prosecution of the ‘946 patent do not, however, evince a “clear and unmistakable disavowal of scope,” and thus, are not a basis for limiting the meaning of the claim term. Computer Docking Station Corp. v. Dell, Inc., 519 F.3d 1366, 1374 (Fed. Cir. 2008) (quotation omitted). To the extent that the statements could be viewed as having a limiting effect, they do not indicate that the inventors were both distinguishing between ground-based photogrammetry and air-based photogrammetry and disclaiming that their invention pertains to the latter. The inventors’ discussion of the prior art also is insufficient because it distinguishes traditional stereophotogrammetry; it does not distinguish air-based photogrammetry.

Based on the intrinsic evidence—the claim language, the specification, and the prosecution history—the Court concludes that no construction of “moving platform” is necessary because the term is used in the claim in accordance with its plain and ordinary meaning to one skilled in the art and is not limited to a ground-based platform. Having resolved the construction of the claim term based on intrinsic evidence, an examination of extrinsic evidence is unnecessary.

### **C. “Video Camera”**

“Video camera” is found in claims 1, 7, and 16. Geospan again argues that no construction is necessary because “video camera” is used in the claim in accordance with its plain and ordinary meaning and will be well understood by the jury. J. Claim Constr. Stmt. at 7. Pictometry proposes the following construction: “An apparatus that converts an optical image

into an electronic image that can either be displayed on a monitor or recorded onto magnetic tape to be replayed later.” Id. In layman’s terms, Pictometry’s proposed construction would limit the claim term to analog, as opposed to digital, video cameras.

Pictometry contends the claim term “video camera” would have been understood to a person of ordinary skill in the art at the time of the invention, 1994, to be an analog video camera. In addition, Pictometry claims that the specification consistently describes a “video camera” solely in terms of an analog device by its references to “video tape recorder,” “video monitor,” and “video tapes.” ‘946 patent, cols. 3:56-57, 5:58-6:2.

Geospan responds that because the plain and ordinary meaning of “video camera” includes both analog and digital video cameras, it would be improper to read the limitation “analog” into the claim term “video camera.” In support, Geospan cites SuperGuide Corp. v. DirecTV Enterprises., Inc., 358 F.3d 870 (Fed. Cir. 2004). There, the alleged infringer argued, and the district court agreed, that people skilled in the art at the time of the patent, 1985, would have understood the claim terms “regularly received television signal” and “radio frequency information” to mean analog television signals that were being broadcast in 1985. Id. at 878. Further, the alleged infringer argued that nothing in the specification or prosecution history suggested that the patentees gave a different meaning to the claim terms. Id. The Federal Circuit reversed, concluding that although the alleged infringer’s argument appeared “persuasive at first blush,” a “closer analysis of the intrinsic record” did not support the proposed instruction because the claim language did not limit the disputed terms to any particular type of technology or specify a particular type of signal format and neither the word “analog” nor “digital” appeared anywhere in the asserted claims. Id. The court held, therefore, that the district court erred by

concluding that “after-arising technologies,” namely, digital technology, could not fall within the literal scope of the claim terms. Id. The court stressed that there was “little doubt that those skilled in the art knew of the existence of digital video [technology]” at the time of the invention, 1985, and that the patentees were “at least aware” that digital signals could be broadcast in the future, even though the technology may have been in its “infancy.” Id. at 879, n.6.

The Court agrees with Geospan that this case requires the same conclusion reached in SuperGuide. If it can be said that those skilled in the art of television broadcast transmissions were aware of digital video technology in 1985, surely there can be no doubt that those skilled in the art of photogrammetry also were aware of digital video technology nine years later in 1994. Had the inventors intended to limit “video camera” to analog technology, “they could have easily done so by explicitly modifying the disputed claim language with the term ‘analog.’” Id. at 880. Nothing in the language of the claims or in the specification’s description of the invention precludes the invention from using digital, as opposed to analog, video cameras in capturing video images.

Pictometry next argues that during the prosecution history of the ‘946 patent, the inventors consistently described a “video camera” through terminology associated with an analog video camera. Specifically, the inventors stated, in attempting to distinguish prior art, that they had amended the claims to “further define the method of the present invention and now state that the video images are recorded on a video tape . . . .” Hobson Decl., Ex. 5 at 4-5.

Similarly, the inventors stated:

In order for the data collected according to the present invention to be usable for short range terrestrial photogrammetry, which differs from traditional stereophotogrammetry . . . , it is critical that for each recorded image the position of the video camera from which the

recorded video image was obtained, at the time [it] was obtained, be precisely known. . . . In particular, for each frame of the video tape on which video images are recorded, the video equipment controller provides the control computer with SMPTE time code of the frame on which the video tape recorder is recording . . . .

Id. at 6-7.

As with the prosecution statements cited by Pictometry in connection with “moving platform,” the prosecution statements cited in support of Pictometry’s construction of “video camera” fail to show a clear and unmistakable disavowal of scope. The inventors’ efforts to distinguish prior art did not seek to do so on the basis that the prior art captured video images through a digital video camera and recorded associated spatial position data in a digital format, whereas the invention in the ‘946 patent was confined to analog video cameras to capture video images and the recording of associated spatial position data in an analog format. Instead, the efforts were aimed at distinguishing the prior art on other bases, in particular the prior art’s reliance on stereovision and the detail with which the spatial position data of the cameras is recorded and associated with captured video images.

The Court concludes that an examination of the intrinsic evidence reveals that no construction of “video camera” is necessary because the term is used in the claim in accordance with its plain and ordinary meaning to one skilled in the art and is not limited to analog video cameras. Accordingly, the Court need not examine extrinsic evidence.



#### IV. CONCLUSION

Based upon the foregoing, and all of the files, records and proceedings herein, **IT IS HEREBY ORDERED** that, in interpreting the '946 patent, the contested terms be construed in accordance with this Order.

BY THE COURT:

s/Ann D. Montgomery  
ANN D. MONTGOMERY  
U.S. DISTRICT JUDGE

Dated: July 22, 2010.