

IN THE UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

_____)	
HYSITRON INCORPORATED,)	Civil Action No. 07 CV 1533 ADM/AJB
a Minnesota corporation,)	
)	
Plaintiff,)	
)	
v.)	
)	
MTS SYSTEMS CORPORATION,)	
a Minnesota corporation,)	
)	
Defendant.)	
_____)	

**MEMORANDUM IN OPPOSITION TO DEFENDANT’S MOTION
IN LIMINE TO EXCLUDE PLAINTIFF’S EXPERT
WITNESS FROM *MARKMAN* PROCEEDING**

Defendant MTS Systems Corporation (“MTS”) seeks to preclude important and helpful testimony Hysitron Incorporated (“Hysitron”) intends to offer in the *Markman* hearing, wrongly contending that Hysitron violated the Pretrial Scheduling Order. Hysitron’s disclosure of its intention to offer expert testimony was in accordance with the Pretrial Scheduling Order. There is no wrong to remedy. Furthermore, if there was merit to MTS’ contention, the sanction of exclusion of evidence is not warranted because MTS has not suffered harm by virtue of Hysitron’s identification of Dr. Colton as a testifying expert. Hysitron respectfully submits that the Court should deny the MTS motion.

FACTUAL BACKGROUND

I. HYSITRON INVENTED THE FIRST SCANNED PROBE MICROSCOPE APPARATUS WITH *IN SITU* IMAGING CAPABILITIES.

Hysitron filed this action as a result of MTS' infringement of two of its patents. These patents are directed to indentation testing devices with *in situ* imaging capabilities. Indentation testing devices are machines that analyze mechanical properties of materials by applying a force to the surface of a material and analyzing the impact that force had on the material. These machines must be very sensitive, as indentations are analyzed down to the micro and nano scales.

Hysitron was the first company to develop an indentation testing device that offers *in situ* imaging capabilities, meaning that the indentation testing device can also be used to produce an image representing the surface topography of the test sample. These devices are also known as "scanned probe microscope apparatuses."

Prior to Hysitron's invention, there were no indentation testing devices available on the market that could perform *in situ* imaging of the surfaces of test specimens. As a result, people had to perform indentation tests using one device, followed by surface analysis using a separate microscope device. (*See* Declaration of Todd S. Werner ("Werner Decl.") Ex. A (U.S. Patent No. 6,026,677) at col. 2, l. 65 – col. 3, l. 3.) This process was time consuming, expensive, and inaccurate. For instance, locating the indent on the material for analysis with a microscope device was not a trivial task:

This involves significant work in sample preparation, especially for samples that are electrical insulators and need to be gold or carbon coated before imaging on the scanning electron microscope. Also, just finding the tiny indent or scratch is not trivial. For the smallest indents and scratches,

the atomic level resolution of the scanning tunneling microscope or atomic force microscope may be required to accurately resolve the scratch widths and areas of delamination. Researchers have reported spending up to eight hours locating an indent on the atomic force microscope after producing it on a separate microindenter.

(*Id.* at col. 3, ll. 9 - 20.)

The lengthy period of time between measurements led to additional problems:

Another source of uncertainty is plastic flow or relaxation that may take place with certain samples. If this occurs over time periods of an hour or less, an indent produced by a separate indenter may disappear before it can be inspected on a microscope. Indents made in the 50 Angstrom range, have sometimes indicated plastic deformations that could not be seen with the scanning electron microscope or atomic force microscope imaging. Possible explanations include mechanical hysteresis in the indenter causing it to indicate plastic deformation that was not actually present. It is also possible that there actually was an indent present that the researcher was not able to locate. A third possibility is that the sample exhibited a relaxation effect where the indent was actually present, but disappeared by some plastic flow phenomena before the sample could be observed in the microscope.

(*Id.* at col. 3, ll. 21-36.). By providing a device that could perform both of these operations, Hysitron's invention eliminated these problems. (*Id.* at col. 3, ll. 37-42.)

MTS, which initially voiced skepticism about the effectiveness of such a device, followed Hysitron's lead and began selling its own indentation testing devices with *in situ* imaging. These devices infringe Hysitron's patents.

II. HYSITRON COMPLIED WITH THE PROVISIONS OF THE SCHEDULING ORDER.

One of the initial steps to the resolution of any patent infringement action is claim construction, the process of legally defining the scope of the invention. In order to guide

the claim construction process the District of Minnesota developed Form 4, a default pretrial scheduling order for patent cases. Form 4 was expressly designed to “focus issues for claim construction by the Court.” (2005 Advisory Committee Notes to LR 16.2 and Form 4 and 5.)

The first step calls upon the parties to identify claim terms requiring construction. The second step is the parties’ preparation of “Preliminary Claim Construction Statements” that “provide[] a *preliminary* identification of extrinsic evidence, including without limitation, dictionary definitions, citations to learned treatises and prior art, and testimony of percipient and expert witnesses that they contend support their respective claim constructions.” These Preliminary Claim Construction Statements are simultaneously exchanged between the parties. Dist. of Minn. Form 4. With these preliminary disclosures in hand, Form 4 calls upon the parties’ to prepare a Joint Claim Construction Statement stating, *inter alia*, “[w]hether any party proposes to call one or more witnesses, including experts at the Claim Construction hearing” *Id.* This Joint Claim Statement contains a significant amount and depth of analysis, based on the Preliminary Claim Construction Statements. Form 4 does not expressly provide either party an opportunity to designate rebuttal expert testimony. The Pretrial Scheduling Order issued in this case follows Form 4.

On September 4, 2007, the parties exchanged lists of claim terms they believed required construction by the Court. On September 17, 2007, the parties exchanged Preliminary Claim Construction Statements. In MTS’ Preliminary Claim Construction Statement it disclosed, for the first time, proposed constructions of the claim terms at

issue and maintained a number of contentions relating to invalidity. (Werner Decl. Ex. B.) Specifically with respect to invalidity, MTS asserted that a number of means-plus-function claim elements fail to comply with 35 U.S.C. § 112, ¶ 6. Pursuant to that statute, claims written in this format are interpreted as covering all structures disclosed in the patent specification that perform the claimed function. *Id.* MTS' Preliminary Claim Construction Statement asserted that the specification failed to disclose structure corresponding to a number of claim elements, including such means-plus-function limitations. (*Id.*)

As contemplated in the Preliminary Claim Construction Statement, MTS also provided its proposed claim constructions for the disputed claim terms for the first time. Before receiving MTS' Preliminary Claim Construction Statement, Hysitron could only guess at how MTS construed the disputed claim terms. As Hysitron will demonstrate in the *Markman* briefing, the constructions proposed by MTS are not found in the intrinsic evidence; rather, MTS crafted its own proposed constructions.

Because Preliminary Claim Construction Statements are exchanged simultaneously, the need and usefulness of expert testimony was unknown to Hysitron when it prepared its Preliminary Claim Construction Statement. However, the Preliminary Claim Construction Statement of MTS made it apparent that expert testimony concerning the operation and function of the invention would be necessary to provide the Court with the understanding that one of ordinary skill would have upon reading the specification. It is necessary for the Court to have that understanding because the Court's assessment of MTS' means-plus-function contentions must be undertaken

through the “viewing glass” of a person of ordinary skill in the art. *See Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1380 (Fed. Cir. 2001) (reversing district court’s claim construction of a means-plus-function claim element where the court did not consider the level of skill in the art in ruling that the specification failed to disclose any structure corresponding to the claimed function).

In addition, the indentation testing devices with *in situ* imaging capabilities invented by Hysitron and claimed in the patents-in-suit involve highly technical subject matter. The competing Preliminary Claim Constructions Statements of the parties made it evident that the claim elements the Court will be required to construe require a working understanding of complex scientific principles, including the function and operation of three-plate capacitive sensors, scanning heads, and scanned probe microscope apparatuses in general. (*See* Docket Entry No. 44.) MTS’ proposed claim constructions, as first identified in its Preliminary Claim Construction Statement, make expert testimony concerning the background technology highly relevant and useful to the Court.

As required by the Pretrial Scheduling Order, Hysitron disclosed its intention to offer expert testimony from Dr. Richard Colton when the parties prepared and filed their Joint Claim Construction Statement on October 15, 2007. Dr. Colton is the Director of the Institute for Nanoscience at the Naval Research Laboratory in Washington D.C. (Werner Decl. Ex. C.) He invented a scanning-tunneling microscope in the 1980’s and has extensive experience in the nanosciences industry. (*Id.*)

In the Joint Claim Construction Statement, Hysitron informed MTS that it intended to offer Dr. Colton’s testimony to provide the Court with:

background information and context related to the invention at issue in order to provide the Court with an understanding of the technical aspects of the claimed invention, including: the (a) function and operation of a 3-plate capacitor in comparison to a 2-plate capacitor, (b) the function and operation of a STM-type controller, (c) the function and operation of a scanned probe microscope, namely, how scanned probe microscope apparatuses assess the surface topography of samples in three dimensions, and (d) the measurement of force, namely that those of skill in the art understand that a force sensor indicates force by assessing force, weight or position . . .

(Docket Entry No. 44 at 2-3.)

This testimony will assist the Court in acquiring an understanding of the technology and science behind the invention so that the Court can apply that understanding to determine the corresponding structure for the means-plus-function claim elements. Dr. Colton's testimony will also provide the Court with background context helpful to the construction of other disputed claim terms, since the construction of those terms will also require an understanding of the operation of the invention. The Federal Circuit has made it clear that courts are free to consider expert testimony in order to gain this technical background. *See, e.g., Serio-US Indus., Inc. v. Plastic Recovery Techs. Corp.*, 459 F.3d 1311, 1319 (Fed. Cir. 2006) (condoning court's consideration of expert testimony offered to provide background on the technology at issue); *Conoco, Inc. v. Energy & Env'tl. Int'l, L.C.*, 460 F.3d 1349, 1362 (Fed. Cir. 2006).

This is all in accord with the Pretrial Scheduling Order and the process instituted by Form 4. First, the parties identified all claim terms requiring construction. Then, the parties simultaneously disclosed their proposed construction of those terms and the bases for those constructions in their Preliminary Claim Construction Statements. These

preliminary disclosures framed the parties' arguments. Thereafter, the parties' positions were more fully developed and disclosed in the Joint Claim Construction Statement, including proposed expert testimony. Hysitron's intention to offer expert testimony was disclosed in accordance with the Pretrial Scheduling Order.

III. MTS HAS NOT SUFFERED HARM.

MTS tries to prevent the Court from gaining this necessary understanding of the technology at issue by contending Hysitron violated the Pretrial Scheduling Order and arguing this supposed violation warrants the extreme sanction of the preclusion of Dr. Colton's testimony. As detailed above, Hysitron complied with the Pretrial Scheduling Order. MTS misconstrues the Order's requirements and ignores the purpose of the relevant provisions of the Pretrial Scheduling Order: to frame claim construction issues so that the *Markman* process can proceed efficiently. Furthermore, MTS' claims of prejudice are hallow.

MTS makes a vague argument that it is precluded from offering a rebuttal expert. Not once before filing this motion did MTS seek an agreement from Hysitron to supplement the Joint Claim Construction Statement to identify a rebuttal expert. Indeed, after it knew that Hysitron intended to offer expert testimony, MTS gave no indication in the Joint Claim Construction Statement of an intention to reserve the right to call a rebuttal expert.¹ MTS' failure to request such relief before filing this motion

¹ Hysitron remains willing to address rebuttal expert testimony from MTS when the parties negotiate a *Markman* schedule for this case.

demonstrates that MTS is trying to gain a windfall rather than ameliorate any alleged prejudice.

ARGUMENT

I. HYSITRON DID NOT VIOLATE THE PRETRIAL SCHEDULING ORDER.

MTS asks the Court to exclude all expert testimony from the *Markman* process on what it perceives to be a violation of the Pretrial Scheduling Order. MTS is misguided. Hysitron complied with the Pretrial Scheduling Order. As specifically stated in the Pretrial Scheduling Order itself, the Preliminary Claim Construction Statement was “preliminary.” Each party was obliged to identify all extrinsic evidence in its possession that supported its claim construction position. Only after Hysitron learned of the claim constructions proposed by MTS in its Preliminary Claim Construction Statement was it apparent that expert testimony would be useful to the Court. Thereafter, Hysitron timely identified Dr. Colton in the parties’ Joint Claim Construction Statement.

MTS premises its motion upon the proposition that expert witnesses cannot be offered unless they were identified in that party’s Preliminary Claim Construction Statement. Nothing in the Pretrial Scheduling Order expressly supports that premise, and the argument is self-defeating. Because the Preliminary Claim Construction Statements are simultaneously exchanged, MTS could not have known if Hysitron intended to call expert witnesses at the time of that simultaneous exchange. Even if Hysitron had known of the need for expert testimony at that stage and disclosed Dr. Colton, MTS’ own interpretation of the Pretrial Scheduling Order would foreclose it from a later

identification of “rebuttal” expert testimony; because MTS did not disclose expert testimony in its Preliminary Claim Construction Statement it is foreclosed by operation of its own argument from identifying expert testimony in the Joint Claim Construction Statement. MTS’ misguided interpretation of the Pretrial Scheduling Order is unavailing.

The Pretrial Scheduling Order provides both parties the opportunity to present the evidence they believe supports their respective positions. It does not contemplate an additional layering of rebuttal evidence. No plausible reading of the requirements of the Pretrial Scheduling Order supports MTS’ position.

The Pretrial Scheduling Order calls for an iterative process involving a series of pre-*Markman* filings in order to frame the issues so that the parties may provide the Court with meaningful *Markman* briefs. This goal was admirably served by Hysitron’s pre-*Markman* filings. Hysitron complied with the Pretrial Scheduling Order and the Court should deny MTS motion outright.

II. THE COURT CANNOT PRECLUDE DR. COLTON’S TESTIMONY UNDER RULE 37 BECAUSE MTS HAS NOT BEEN HARMED.

Not only does MTS’ motion fail because Hysitron complied with the Pretrial Scheduling Order, MTS’ motion fails because it has not suffered any harm. Had the Pretrial Scheduling Order been violated, the applicable rule would be Rule 37, which MTS ignores. MTS also fails to cite a single case in which the issue was whether to exclude evidence. MTS entirely disregards the showing necessary to support the exclusion of evidence.

Evidence should not be excluded on the basis of a party's failure to comply with a scheduling order when the failure to meet a deadline was either harmless or substantially justified. *C.H. Robinson Co. v. Zurich Am. Ins. Co.*, No. 02-4794, 2004 U.S. Dist. LEXIS 15202, at *6 (D. Minn. Aug. 5, 2004). These requirements serve to prevent "unduly harsh penalties" that could otherwise result from the overly inflexible application of Rule 37. *Transclean Corp. v. Bridgewood Servs., Inc.*, 77 F. Supp. 2d 1045, 1063-64 (D. Minn. 1999) (refusing to exclude expert report served after the deadline because extension of discovery period eliminated any potential prejudice to the other party).

A. MTS Has Not Been Prejudiced.

Hysitron's identification of Dr. Colton in the Joint Claim Construction Statement did not prejudice MTS. Prior to this motion, MTS never once mentioned a desire to retain an expert to rebut the testimony of Dr. Colton. Instead, MTS filed this motion to try to exclude Dr. Colton's testimony. The Court should not condone such tactics.²

B. MTS's Reference to Claim Construction Contentions in the Companion Case is Misplaced.

As an additional attempt to suggest that it has been prejudiced,³ MTS suggests that this testimony is not important based upon a letter Hysitron filed in another matter. In making this argument, MTS fails to acknowledge the different purposes for which the parties seek to offer expert testimony in the two cases.

² As previously stated, Hysitron is willing to address rebuttal expert testimony from MTS when the parties negotiate a *Markman* schedule for this case.

³ MTS also contends that exclusion of Dr. Colton's testimony will streamline the *Markman* process. This has nothing to do with Hysitron's alleged violation of the Pretrial Scheduling Order but with whether or not the Court should consider expert testimony generally. Thus, this contention does not represent prejudice that MTS could have suffered as a result of any alleged violation of the Pretrial Scheduling Order by Hysitron.

In the companion case, MTS seeks to offer expert testimony concerning the meaning of disputed claim terms in support of a proposed claim construction that is incompatible with the unambiguous intrinsic evidence. Testimony of that kind is improper and should not be relied upon. *Bell & Howell*, 132 F.3d at 706.

Hysitron does not seek to offer Dr. Colton's testimony for this improper purpose; rather, Hysitron seeks to offer his testimony to provide the court with an understanding of the function and operation of the invention. The Federal Circuit has made it clear that expert testimony concerning the background of the technology at issue, to explain how an invention works, [and] to ensure the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art," is useful and admissible so long as it does not contradict the intrinsic evidence. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005); *Serio-US Indus.*, 459 F.3d at 1319. That is the very purpose for which Hysitron seeks to offer Dr. Colton's testimony. With the aid offered by Dr. Colton's testimony, the Court will be in a much better position to understand how the claimed inventions operate and how the structures disclosed in the specification perform the functions required by the claims.

Thus, any alleged violation of the Pretrial Scheduling Order by Hysitron failed to result in any harm to MTS, and Dr. Colton's testimony will help the Court resolve the claim construction issues before it in a manner condoned by the Federal Circuit. Consequently, the Court cannot exclude the testimony of Dr. Colton under Rule 37.

III. ALL FOUR FACTORS COURTS CONSIDER IN DECIDING WHETHER TO GRANT THE DRACONIAN SANCTION OF EXCLUSION FAVOR THE ADMISSION OF DR. COLTON’S TESTIMONY.

Even had MTS suffered prejudice as a result of an actual violation of the Pretrial Scheduling Order, consideration of the four factors applicable to the issue also requires the Court to refuse exclusion of Dr. Colton’s testimony under Rule 37. These factors are (1) the importance of the evidence, (2) the explanation for the failure to comply with the order, (3) the potential prejudice from allowing the material to be used at trial, and (4) the availability of a continuance to cure such prejudice. *C.H. Robinson*, 2004 U.S. Dist. LEXIS 15202 at *6-*7 (refusing to exclude expert testimony where report was filed about one month past the deadline because exclusion of the testimony would have been “more draconian tha[n] the situation call[ed] for”).

A. Dr. Colton’s Testimony Will Provide the Court with the Context It Needs to Understand the Operation of the Invention and Properly Construe the Claims.

As previously discussed, Hysitron seeks to offer Dr. Colton’s testimony in order to educate the Court about the operation of the claimed inventions. Having gained this understanding, the Court will be better equipped to resolve the highly technical issues disputed by the parties. MTS contends that numerous claims are invalid because the patents-in-suit do not disclose structure sufficient to perform various functions required by the claims. The Court will need to view the teachings of the specification through the “viewing glass” of a person of ordinary skill in the art in order to properly assess MTS’ contentions. *Budde*, 250 F.3d at 1380. Thus, the proffered evidence is important and this factor favors denial of MTS’ motion.

B. Hysitron Could Not Predict MTS' Proposed Claim Constructions and the Identification of Dr. Colton was Timely.

Hysitron was not aware of the circumstances making it necessary for it to offer Dr. Colton's testimony at the time it filed its Preliminary Claim Construction Statement. Only after Hysitron gained a greater understanding of MTS' claim construction contentions through study of MTS' Preliminary Claim Construction Statement did the need and usefulness of expert testimony appear. With the issues framed through the exchange of the parties' Preliminary Claim Construction Statements, Hysitron recognized the importance that explaining the operation of the invention would have for the Court. Hysitron's disclosure of Dr. Colton in the Joint Claim Construction Statement was in compliance with the Pretrial Scheduling Order.

Contrary to MTS' baseless allegations, Hysitron never attempted to "play games." The entire purpose of these preliminary claim construction filings is to frame and develop the issues for briefing. (*See* Docket Entry No. 40 at 2 (explaining that the purpose of the Preliminary Claim Construction Statements is to "facilitat[e] the ultimate preparation of a joint claim construction statement".)) The Pretrial Scheduling Order recognizes that issues are further defined and clarified as the process progresses. This is reflected by the multiple preliminary filings the parties are ordered to provide before the briefing begins. The filings admirably served their intended purpose, and Hysitron's identification of Dr. Colton in the Joint Claim Construction Statement was reasonable and proper.

C. MTS Will Not Suffer Any Prejudice if the Court Admits the Evidence.

Not only was Hysitron's identification of Dr. Colton proper, it will not result in any prejudice to MTS. The Court has not yet set a briefing schedule for the *Markman* hearing in this case. As the parties did in the companion case, Hysitron expects that the parties will work together to develop a proposed *Markman* schedule that addresses expert discovery and briefing. (*See* Werner Decl. Exs. D, E.) The parties can easily accommodate any desire MTS might have to use a rebuttal expert when they develop this schedule. The harmless nature of any alleged violation precludes the exclusion of Dr. Colton's testimony.

D. A Continuance Is Not Necessary Because MTS Did Not Suffer Any Prejudice.

As MTS has not suffered harm from the alleged violation, there is no need for a continuance. This factor also favors the denial of MTS' motion.

Thus, all four factors favor the admission of Dr. Colton's testimony and the denial of this motion.

CONCLUSION

Ignoring the legal requirements necessary for the Court to exercise its discretion to exclude relevant and important evidence, MTS filed this motion seeking a tactical advantage wrongfully alleging a violation of the Pretrial Scheduling Order. In fact, Hysitron complied with the Order and MTS has not suffered any harm. As this brief makes clear, it is not Hysitron that is engaging in gamesmanship, but MTS. Hysitron respectfully requests that the Court deny this wasteful motion.

Dated: November 7, 2007

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