

# United States Court of Appeals for the Federal Circuit

2008-1392, -1393, -1422

TRADING TECHNOLOGIES INTERNATIONAL, INC.,

Plaintiff-Appellant,

v.

ESPEED, INC., ECCO LLC,  
ECCOWARE LTD., and ESPEED INTERNATIONAL, LTD.,

Defendants-Cross Appellants.

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Appealed from: United States District Court for the Northern District of Illinois

Senior Judge James B. Moran

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Appeals from the United States District Court for the Northern District of Illinois  
in case no. 04-CV-5312, Senior Judge James B. Moran.

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DECIDED: February 25, 2010

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Before LOURIE, RADER, Circuit Judges, and CLARK, District Judge.<sup>1</sup>

Opinion for the court filed by Circuit Judge RADER, in which District Judge CLARK joins. Circuit Judge LOURIE concurs in the result. Concurring opinion filed by District Judge CLARK.

RADER, Circuit Judge.

The United States District Court for the Northern District of Illinois held that eSpeed, Inc., Ecco LLC, Eccoware Ltd., and eSpeed International Ltd. (collectively, “eSpeed”) infringed the asserted claims of U.S. Patent No. 6,772,132 (“132 patent”) and U.S. Patent No. 6,766,304 (“304 patent”) with one accused service product, but not

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<sup>1</sup> Honorable Ron Clark, District Judge, United States District Court for the Eastern District of Texas, sitting by designation.

willfully. The district court further held that the two other accused products did not literally infringe and then precluded Trading Technologies International, Inc. (“TT”) from asserting infringement under the doctrine of equivalents. After giving the patents-in-suit a filing date back to the provisional application, the district court found that the on-sale bar of 35 U.S.C. § 102(b) did not apply. The district court also found no indefiniteness problem in the asserted claims. Finally the district court detected no inequitable conduct during the prosecution of the patents-in-suit. Because this record discloses no reversible error, this court affirms.

I.

TT is the owner by assignment of the ’132 and ’304 patents. Both patents share a common provisional application filed on March 2, 2000. The United States Patent and Trademark Office (“PTO”) issued the ’132 patent on August 3, 2004, based on a June 9, 2000 application. The PTO issued the ’304 patent on July 20, 2004, based on a June 27, 2001 application. The ’304 patent is a divisional of the ’132 patent. The specifications of the patents are, for all relevant purposes, identical.

The patents claim software for displaying the market for a commodity traded in an electronic exchange. ’132 patent col.3 ll.11-16. The software’s graphical user interface (“GUI”) includes “a dynamic display for a plurality of bids and for a plurality of asks in the market for the commodity and a static display of prices corresponding to the plurality of bids and asks.” Id. The claimed invention facilitates more accurate and efficient orders in this trading environment. Id. col.3 ll.21-24.

Prior art computer trading displays showed the best bid price and the best ask price (together, “the inside market”) in fixed, predetermined grids. The best bid price is

the highest price at which there is an offer to buy the contract. The best ask price is the lowest price at which there is an offer to sell the contract. The inside market is the focal point of trading activity because these offers most accurately reflect the current price of the commodity.

Returning to the prior art, these displays had grids for the inside market that never changed. As the market fluctuated, however, the prices listed in those grids changed—often times very rapidly. To buy at the inside market, a trader, for example, placed the mouse cursor on the grids for the inside market and clicked the mouse. Of course, as traders sent bids and offers to the market, the price and quantity of the traded commodity changed. These changes altered the inside market. In the prior art era with fixed grids for the inside market, traders had a problem. A trader who wished to place an order at a particular price would miss that market opportunity if the inside market moved as the trader tried to enter an order. In a fast moving market, missing an intended price could happen often and have very significant economic consequences.

The invention addressed the problem by implementing static price levels. Figures 3 and 4 of the '132 patent illustrate the invention.

**FIG. 3**

SYCOM FGBL DEC99						
E/W	10:48:44		BidQ	AskQ	Prc	LTQ
1009	L	3		104	99	
1010	R	5		24	98	
1011	720			33	97	
1012	X	10		115	96	
1013	0			32	95	
1014	10	1H		27	94	
	50	3H		63	93	
1007	S 0 W 24	1K 5H		45	92	
	S 0 W 7	CLR		28	91	
1015	X	10		20	90	10
1016	17	▼		18	89	
1008	B 0 W 15	CXL	18		88	
	B 0 W 13	+ -	97		87	
1017	NET 0		30		86	
1018	B 0 W 17	NET REAL	43		85	
1019			110		84	
1021			23		83	
			31		82	
			125		81	
			21			

**FIG. 4**

SYCOM FGBL DEC99						
E/W	10:48:44		BidQ	AskQ	Prc	LTQ
	L	3		104	99	
	R	5		24	98	
	720			33	97	
	X	10		115	96	
	0			32	95	
	10	1H		27	94	
	50	3H		63	93	
S 10 W 14	1K 5H			43	92	10
	CLR		43		91	
	X	10	125		90	
	17	▼	97		89	
B 0 W 15	CXL		18		88	
B 0 W 13	+ -		97		87	
	NET 0		30		86	
B 0 W 17	NET REAL		43		85	
			110		84	
			23		83	
			31		82	
			125		81	
			21			

'132 patent, figs.3, 4. The figures display the bids and offers for a certain commodity in an electronic exchange. Column 1005 labeled "Prc" shows the contract prices. *Id.* col.7 ll.36-38. Column 1003 labeled "BidQ" and column 1004 labeled "AskQ" respectively show the bid quantities and the ask quantities for the associated price. *Id.* col.7 ll.35-36. In Figure 3, the inside market labeled 1020 indicates the best bid price of 89 and the best ask price of 90. *Id.* col.7 ll.40-42. A trader may enter an order by clicking in the bid or ask grid corresponding to the trader's price. *Id.* col.4 ll.9-19.

Figure 4 displays the same market at a later time. The bid and ask quantities dynamically change in response to market fluctuations. *Id.* col.7 ll.48-51. In Figure 4, the inside market has shifted upward such that the best bid price is now 92 and the best ask price is 93. *Id.* col.8 ll.38-48. While the inside market has changed, the values in

the price column remained fixed. Id. col.8 ll.44-48. Over time, the inside market could shift to prices not currently displayed on the trader's screen. Id. col. 8 ll.49-51. In this case, the price column must be re-centered to keep the inside market in view. Id. col.8 ll.49-60.

The claimed invention features static price levels. These unmoving figures have numerous advantages over the prior art. First, a trader can visually follow the market movement as the inside market shifts up and down along the price column. Id. col.5 ll.58-65. Second, and perhaps most important, a trader has confidence in making an offer at the intended price. Id. col.3 ll.3-4. Because the invention has static price levels, the order entry region will remain associated with the same price. Therefore, the trader does not need to worry about "clicking on" or entering an order at the instant after a price change. Thus, the invention prevents accidental orders at an unintended price. The patents tout that these improvements ensure fast and accurate execution of trades. Id. col.3 ll.21-24.

eSpeed, Inc. provides an electronic exchange for trading commodities. It also designs and sells trading platforms for use with its electronic exchange. On August 12, 2004, TT initiated this suit against eSpeed, Inc., alleging that eSpeed, Inc.'s trading platforms infringed TT's patents. After eSpeed, Inc. acquired Ecco LLC in October 2004, TT joined Ecco LLC in the suit. In December 2005, TT amended its complaint to join the subsidiaries eSpeed International, Inc. and EccoWare Ltd. This opinion refers to all defendants collectively as "eSpeed." TT asserts the following claims against eSpeed: claims 1, 2, 7, 14, 15, 20, 23-25, 27, 28, 40, 45, 47, 48, 50, and 52 of the '132

patent; and claims 1, 11, 14, 15, and 26 of the '304 patent. Claim 1 is the representative claim for both patents.

Claim 1 of the '132 patent:

A method of placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, using a graphical user interface and a user input device, said method comprising:

- setting a preset parameter for the trade order;
- displaying market depth of the commodity, through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including at least a portion of the bid and ask quantities of the commodity, the dynamic display being aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move in response to a change in the inside market;
- displaying an order entry region aligned with the static display prices comprising a plurality of areas for receiving commands from the user input devices to send trade orders, each area corresponding to a price of the static display of prices; and
- selecting a particular area in the order entry region through single action of the user input device with a pointer of the user input device positioned over the particular area to set a plurality of additional parameters for the trade order and send the trade order to the electronic exchange.

'132 patent col.12 ll.1-27 (emphases added).

Claim 1 of the '304 patent:

A method for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface, the method comprising:

- dynamically displaying a first indicator in one of a plurality of locations in a bid display region, each location in the bid display region corresponding to a price level along a common static price axis, the first indicator representing quantity associated with at least one order to buy the commodity at the highest bid price currently available in the market;
- dynamically displaying a second indicator in one of a plurality of locations in an ask display region, each location in the ask

display region corresponding to a price level along the common static price axis, the second indicator representing quantity associated with at least one order to sell the commodity at the lowest ask price currently available in the market;

displaying the bid and ask display regions in relation to fixed price levels positioned along the common static price axis such that when the inside market changes, the price levels along the common static price axis do not move and at least one of the first and second indicators moves in the bid or ask display regions relative to the common static price axis;

displaying an order entry region comprising a plurality of locations for receiving commands to send trade orders, each location corresponding to a price level along the common static price axis; and

in response to a selection of a particular location of the order entry region by a single action of a user input device, setting a plurality of parameters for a trade order relating to the commodity and sending the trade order to the electronic exchange.

'304 patent col.12 ll.35-col.13 ll.3 (emphases added).

TT accuses the following categories of eSpeed software of infringement: (1) Futures View, Autospeed Basis, and Price Ladder (collectively, "Futures View"); (2) Dual Dynamic and Ecco Scalper ("Dual Dynamic"); and (3) eSpeedometer and Ecco eSpeedometer ("eSpeedometer"). These accused products are identical in all relevant aspects. eSpeed concedes that Futures View satisfies all claim limitations. The parties dispute whether Dual Dynamic and eSpeedometer have a "static display of prices" or "static price axis." This dispute turns on the way that the accused products re-center the price levels when the inside market moves away from the center of the display.

eSpeed sold Futures View before the patents-in-suit issued. Dual Dynamics is a redesign of Futures View. Dual Dynamic has two re-centering features. First, a trader can click a mouse to manually re-center the price levels. Second, Dual Dynamic automatically and instantaneously re-centers the price levels so as to move the inside

market back to the field of the trader's view if the inside market shifted a pre-determined number of ticks from the center of the display. Traders could not disable this automatic re-centering feature. eSpeedometer is the second redesign of Futures View. eSpeedometer has an automatic re-centering feature only. Unlike Dual Dynamic, the entire display slowly drifts towards the center of the trader's screen after each and every change in the inside market.

eSpeed manufactured and sold the accused products at different times during the suit. eSpeed began selling Futures View long before TT's patents-in-suit issued in August 2004. Just before the hearing for a preliminary injunction in this case in December 2004, eSpeed pulled Futures View off the market and replaced it with Dual Dynamic. After the district court found that Dual Dynamic likely infringed the patents-in-suit, eSpeed launched eSpeedometer.

In this case, the district court entered numerous orders on claim construction, motions for summary judgment, motions in limine, and motions for a judgment as a matter of law ("JMOL"). After holding a three-day claim construction hearing, the district court issued a claim construction order. Of particular importance to this appeal, the district court construed the word "static" in the limitation "static display of prices" in the '132 patent and in the limitation "common static price axis" in the '304 patent. Based on the claim construction, eSpeed moved for summary judgment of non-infringement for Dual Dynamic and eSpeedometer.

The district court found that neither product literally infringed. The district court also found that Dual Dynamic did not infringe under the doctrine of equivalents because finding otherwise would vitiate the claim element "static." The district court held that

prosecution history estoppel precluded application of the doctrine of equivalents as to eSpeedometer. Therefore, the district court granted summary judgment of non-infringement as to both the Dual Dynamic and eSpeedometer redesigns.

In September and October 2007, the district court held a four-week jury trial. During the trial, the district court granted TT's motion in limine to preclude eSpeed from asserting an on-sale bar defense at trial. The district court also granted-in-part TT's motion in limine to preclude expert testimony that the construction of "single action of a user input device" was indefinite. On October 10, 2007, the jury found that Futures View willfully infringed the patents-in-suit. The jury also awarded the patents-in-suit the benefit of their provisional application's filing date. Based on that finding, the jury determined that the prior art did not anticipate or render obvious the claimed invention. The jury awarded TT \$3,500,000 in damages based on a reasonable royalty.

After the jury trial, the district court held a two-day bench trial on inequitable conduct. Based on that record, the trial court ruled that eSpeed did not show that TT engaged in inequitable conduct. The district court also denied eSpeed's JMOL motions on validity, indefiniteness, priority date, and the patent misuse defense, but vacated the jury's finding of willful infringement and remitted the damages award to \$2,539,468. The district court further denied TT's motions for enhanced damages and for attorney fees.

The district court entered its final judgment on May 22, 2008. Both eSpeed and TT appealed to this court on May 27, 2008. The judgment on which TT based its appeal was not final at that time. The district court then re-entered its final judgment nunc pro tunc on June 13, 2008. Because this court ruled that appellate jurisdiction

ripened upon the entry of the judgment nunc pro tunc, it has jurisdiction under 28 U.S.C. § 1295(a).

## II.

Both TT and eSpeed raise numerous issues on appeal. TT's appeal focuses on patent infringement. First, TT appeals the claim construction of "common static price axis" and "a static display of price." Second, TT argues that Dual Dynamic and eSpeedometer infringe the patents-in-suit based on TT's proposed claim construction. Third, TT asserts that a finding that Dual Dynamic infringes under the doctrine of equivalents would not vitiate the claim element "static." Fourth, TT argues that prosecution history estoppel does not preclude showing that eSpeedometer infringes under the doctrine of equivalents. Finally, TT claims that the district court incorrectly granted eSpeed's JMOL motion on willful infringement.

eSpeed's cross-appeal focuses on patent validity. First, eSpeed argues that the patents-in-suit do not deserve priority back to March 2, 2000—the filing date of the provisional application. Second, eSpeed claims that the patents-in-suit are invalid under the on-sale bar because Harris Brumfield, one of the inventors of the patents-in-suit, entered into a sales contract with TT more than one year before March 2, 2000. Third, eSpeed argues that the term "single action of a user input device" is indefinite. Finally, eSpeed claims that TT engaged in inequitable conduct by failing to submit Brumfield's custom software embodying the patented invention to the PTO during the prosecution of the patents-in-suit.

### III.

#### A.

The district court granted summary judgment of non-infringement for the Dual Dynamic and eSpeedometer products. This court reviews a grant of summary judgment without deference. O2 Micro Int'l, Ltd. v. Monolithic Power Sys., 467 F.3d 1355, 1359 (Fed. Cir. 2006). Evaluation of summary judgment of non-infringement requires two steps—proper claim construction and comparison of those claims to the accused product. Abbott Labs. v. Sandoz, Inc., 566 F.3d 1282, 1288 (Fed. Cir. 2009). Because the parties dispute the meaning of terms in the asserted claims, this court reviews the district court's claim construction order under the requirements of Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996).

The Supreme Court in Markman held that “the construction of a patent, including terms of art within its claim, is exclusively within the province of the court.” Id. at 372. The Supreme Court recognized that claim construction “falls somewhere between a pristine legal standard and a simple historical fact.” Id. at 388 (quoting Miller v. Fenton, 474 U.S. 104, 114 (1985)). Although claim construction is not a purely legal matter, the Supreme Court found “sufficient reason to treat construction of terms of art like many other responsibilities that we cede to a judge in the normal course of trial, notwithstanding its evidentiary underpinnings.” Id. at 390.

Nevertheless, in Cybor Corp. v. FAS Technologies, Inc., 138 F.3d 1448 (Fed. Cir. 1998) (en banc), this court interpreted Markman as holding that claim construction was solely a question of law, which this court should review without deference. Id. at 1451. The question presented before the Supreme Court was “whether the interpretation of a

so-called patent claim . . . is a matter of law reserved entirely for the court, or subject to a Seventh Amendment guarantee that a jury will determine the meaning of any disputed term of an art about which expert testimony is offered.” Markman, 517 U.S. at 372. Although the Supreme Court addressed only the role of the trial court in claim construction, this court understood that “the Supreme Court was addressing under which category, fact or law, claim construction should fall.” Cybor, 138 F.3d at 1455. This court concluded that “[n]othing in the Supreme Court’s opinion supports the view that the Court endorsed a silent, third option—that claim construction may involve subsidiary or underlying questions of fact.” Id.

An examination of the Supreme Court’s ruling in Markman shows multiple references to factual components of claim construction:

- “[C]onstruing a term of art following receipt of evidence” is “a mongrel practice.” Id. at 378.
- Claim construction “falls somewhere between a pristine legal standard and a simple historical fact.” Id. at 388.
- “We accordingly think there is sufficient reason to treat construction of terms of art like many other responsibilities that we cede to a judge in the normal course of trial, notwithstanding its evidentiary underpinnings.” Id. at 390.

These references in the Supreme Court opinion leaves this court stranded between the language in the Court’s decision and the language in this court’s Cybor decision.

In order to resolve this case, this court must confront findings by the trial court about the meaning of the disputed claim term “static.” In reaching the meaning of that term, the trial court explored and made findings about the technical background of the invention—the inventive features and the timing of those features against the backdrop of the prior art. In addition, the district court determined the meaning that an artisan of

ordinary skill in this discipline would assign the term “static.” The trial court also made findings about the understanding of such an ordinary artisan about the metes and bounds of the asserted claims. In still another factual setting, the district court determined the way that the ordinary artisan would interpret the patent applicant’s statements made to the PTO examiner during the prosecution of the patents-in-suit. These factual determinations about the timing and nature of the history of the patent acquisition process also informed the trial court’s claim construction. In sum, claim construction involves many technical, scientific, and timing issues that require full examination of the evidence and factual resolution of any disputes before setting the meaning of the disputed terms.

Of course, as the Supreme Court repeatedly clarified in Markman, the trial court occupies the best vantage point and possesses the best tools to resolve those evidentiary questions:

- “[A] jury’s capabilities to evaluate demeanor to sense the mainsprings of human conduct or to reflect community standards are much less significant than a trained ability to evaluate the testimony in relation to the overall structure of the patent.” Id. at 389-90 (citations and internal quotation marks omitted).
- “The decisionmaker vested with the task of construing the patent is in the better position to ascertain whether an expert’s proposed definition fully comports with the specification and claims and so will preserve the patent’s internal coherence.” Id. at 390.

Despite the Supreme Court’s emphasis on the trial court’s central role for claim construction, including the evaluation of expert testimony, this court may not give any deference to the trial court’s factual decisions underlying its claim construction. This court’s prior en banc decision requires a review of the district court’s claim construction without the slightest iota of deference. See Cybor, 138 F.3d at 1451.

B.

To construe a claim, courts must determine the meaning of disputed terms from the perspective of one of ordinary skill in the pertinent art at the time of filing. Chamberlain Group, Inc. v. Lear Corp., 516 F.3d 1331, 1335 (Fed. Cir. 2008). The claim terms “are generally given their ordinary and customary meaning.” Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting Vitronics Corp. v. Conceptoronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms.” Id. at 1314.

But the claims “must be read in view of the specification, of which they are a part.” Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), aff’d, 517 U.S. 370 (1996). A patent’s specification “is always highly relevant to the claim construction analysis.” Phillips, 415 F.3d at 1315 (quoting Vitronics, 90 F.3d at 1582 (Fed. Cir. 1996)). When consulting the specification to clarify the meaning of claim terms, courts must not import limitations into the claims from the specification. Abbot Labs., 566 F.3d at 1288. Therefore, when the specification uses a single embodiment to enable the claims, courts should not limit the broader claim language to that embodiment “unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest execution or restriction.’” Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 905 (Fed. Cir. 2004) (quoting Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1327 (Fed. Cir. 2002)). In addition, “other claims of the patent . . . can also be valuable sources of enlightenment as to the meaning of a claim term.” Id. (citing Vitronics, 90 F.3d at 1582).

In claim construction “a court ‘should also consider the patent’s prosecution history . . . .” Phillips, 415 F.3d at 1318 (quoting Markman, 52 F.3d at 980). “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” Id. (citing Vitronics, 90 F.3d at 1582-83). For example, “a patentee may, through a clear and unmistakable disavowal in prosecution history, surrender certain claim scope to which he would otherwise have an exclusive right by virtue of the claim language.” Vita-Mix Corp. v. Basic Holding, Inc., 581 F.3d 1317, 1324 (Fed. Cir. 2009) (citations omitted). At the same time, because prosecution history represents an ongoing negotiation between the PTO and the inventor, “it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” Netcraft Corp. v. eBay, Inc., 549 F.3d 1394, (Fed. Cir. 2008).

TT disputes the construction of the word “static” in the phrase “static display of prices” in the ’132 patent and in the phrase “common static price axis” in the ’304 patent. All asserted claims of the ’132 patent include the limitation “static display of prices.” Likewise, all asserted claims of the ’304 patent include the limitation “common static price axis.” TT and eSpeed agree that the difference in terminology between “static display of prices” and “common static price axis” is immaterial.

The district court construed “static display of prices” in the ’132 patent as “a display of prices comprising price levels that do not change positions unless a manual re-centering command is received.” Trading Techs. Int’l, Inc. v. eSpeed, Inc., 2006 U.S. Dist. LEXIS 80153, at \*11 (N.D. Ill. Oct. 31, 2006) (emphasis added). The district court

similarly construed “common static price axis” as “a line comprising price levels that do not change positions unless a manual re-centering command is received and where the line of prices corresponds to at least one bid value and one ask value.” Id. (emphasis added). A “price level” is “a level on which a designated price or price representation resides.” Id. at \*15. The district court later clarified that “a static condition – requires permanency” and, thus, “the price axis never changes positions unless by manual re-centering or re-positioning.” Trading Techs. Int’l, Inc. v. eSpeed, Inc., 2007 U.S. Dist. LEXIS 12965, at \*20, 22 (N.D. Ill. Feb. 21, 2007) (emphasis added). Under the district court’s construction, the patents-in-suit only cover software with a manual re-centering feature and without automatic re-centering feature. Given that Dual Dynamic and eSpeedometer automatically re-center the price columns in response to changes in the inside market, TT argues for a broader construction of the word “static” (i.e., “static” does not mean immovable).

The inventors acted as their own lexicographers and defined the word “static:”

The values in the price column are static; that is, they do not normally change positions unless a re-centering command is received (discussed in detail later).

'132 patent col.7 ll.46-48; '304 patent col.7 ll.65-67. The district court made two important changes to this express definition in construing the word “static.” First, the district court added the word “manual” in front of the term “re-centering command.” Second, it deleted the word “normally.” The district court’s definition may seem narrower than the inventors’ express definition at first glance. However, the claims, the rest of the specification, and the prosecution history support the district court’s definition. Therefore, this court, after reconstructing this term based on its own

understanding of the claims, specification, prosecution history, and record, agrees with the district court's claim construction of the word "static."

In the first place, the "re-centering command" must indeed occur as a result of a manual entry. The specification shows that the inventors defined the term "static" in the specification. Notably, that definition expressly promises to discuss "a re-centering command . . . later" in the specification. Id. From that point forward, the specification only discusses manual re-centering commands. The specification contains no reference to automatic re-centering. Perhaps in response to the promise to discuss re-centering later, the patents describe the invention as follows:

As the market ascends or descends the price column, the inside market might go above or below the price column displayed on a trader's screen. Usually a trader will want to be able to see the inside market to assess future trades. The system of the present invention addresses this problem with a one click centering feature.

'132 patent col.8 ll.49-54; '304 patent col.9 ll.14-19 (emphasis added). This reference to "the present invention" strongly suggests that the claimed re-centering command requires a manual input, specifically, a mouse click. See Honeywell Int'l, Inc. v. ITT Indus., 452 F.3d 1312, 1318 (Fed. Cir. 2006) (concluding that the invention was limited to a fuel filter because the specification referred to the fuel filter as "this invention" and "the present invention").

This court recognizes that this interpretation relies heavily on the specification and risks reading improperly a preferred embodiment into the claim. See Saunders Group, Inc. v. Comfortrac, Inc., 492 F.3d 1326, 1332 (Fed. Cir. 2007) (holding that claim scope is not limited to the disclosed embodiments "unless the patentee has demonstrated a clear intention to [do so]"). This court takes some comfort against this

risk from the inventors' use of the term "the present invention" rather than "a preferred embodiment" or just "an embodiment." The inventors' own specification strongly suggests that the claimed re-centering feature is manual.

Because an inventor must evince a "clear intention" to limit the claim terms to a specification embodiment, this court examines other claims to detect any contrary intentions. In that respect, this court observes that all claims of the '132 patent have a "wherein" clause explaining that "the static display of prices does not move in response to a change in the inside market." '132 patent col.12 l.1–col.16 l.57. Although the "wherein" clause does not exclude automatic re-centering from the claim scope (it does not exclude software that automatically re-centers whenever the trader enters an order, for example), it expressly excludes software that automatically re-centers when the inside market changes. These clauses thus support the district court's claim construction.

TT argues that even if this court construes the "re-centering command" as manual, this court cannot limit the claims to only the enumerated elements (i.e., manual re-centering command). According to TT, because the claims use the transitional phrase "comprising," they also cover un-recited features such as automatic re-centering. To the contrary, automatic re-centering is not an additional feature, but rather negates a claimed requirement that the price level remains static and does not move. See Spectrum Int'l v. Sterilite Corp., 164 F.3d 1372, 1380 (Fed. Cir. 1998) ("'Comprising' is not a weasel word with which to abrogate claim limitations."). A price level that only moves in response to a manual re-centering command cannot also move in response to

an automatic re-centering command. Thus, this court construes the claims to require a manual re-centering command.

The claims also contain a limitation that “the price axis never changes positions unless by manual re-centering or re-positioning.” Trading Techs., 2007 U.S. Dist. LEXIS 12965, at \*22. The district court found that the ordinary and customary meaning of “static” was “motionless: not moving or changing, or fixed in position.” Trading Techs., 2006 U.S. Dist. LEXIS 80153, at \*11. TT did not present evidence or dispute that a person of ordinary skill in the art would understand the word “static” differently. Moreover, allowing the price axis to automatically change positions would defy the invention’s goal to “ensure[] fast and accurate execution of trades.” ’132 patent col.3 ll.5-6. The invention would present the same problem as the prior inventions if the price axis moved automatically even in rare instances. The “static display of prices” could automatically re-center just as the trader was getting ready to execute a trade, causing the trader to miss the intended price.

Also, the inventors jettisoned the word “normally” during prosecution. The PTO examiner initially rejected the claims because the term “‘static display’ [was] vague and indefinite.” The examiner requested the applicants “to claim ‘to what extent’, ‘to what degree’, and ‘on what basis’ the displays ‘change.’” In response, the applicants explained that “the values in the price column . . . do not change (unless a re-centering command is received).” The examiner allowed the claims at least partly based on the understanding that the price column did not re-center itself automatically. The manual re-centering feature also avoided the possibility of mistakes when the price column moved automatically at the same time a trader wished to make a purchase. Of course,

traders might make mistakes despite precautions built into the software. Nonetheless, to “provide the trader with improved efficiency and versatility in placing,” ’132 patent col.3 ll.21-24, the price column cannot shift unexpectedly.

This court also addresses claim 55 of the ’132 patent, a dependent claim from claim 1:

The method of claim 1 wherein the market depth is based on an exchange order book and the static display of prices never moves in response to a price change in the exchange order book relating to a price which is displayed.

Id. col.16 ll.52-55 (emphasis added). TT argues that construing “static” to mean the price axis never moves would render dependent claim 55 superfluous. To the contrary, claim 55 adds another limitation to claim 1, namely, that the market depth is based on “an exchange order book.” Moreover, problems with any overlapping claim scope “will be overcome by a contrary construction dictated by the written description or prosecution history.” Regents v. Dakocytomation, 517 F.3d 1367, 1375 (Fed. Cir. 2008). The invention’s contribution to the prior art, its specification, and its prosecution history show that the static display of prices cannot move without a manual re-centering command from the trader. Accordingly, the district court correctly construed the disputed word “static.”

Because Dual Dynamic and eSpeedometer systems have mandatory re-centering features, these products do not infringe the patents-in-suit based on the district court’s construction of the word “static.” With that feature, these products lack “price levels that do not change positions unless a manual re-centering command is received.” This court affirms the district court’s finding that Dual Dynamic and eSpeedometer do not literally infringe the patents-in-suit.

#### IV.

The district court prevented TT from relying on the doctrine of equivalents. The trial court reasoned that claim vitiation barred assertion of infringement by equivalents against the Dual Dynamic system. The trial court reasoned that prosecution history estoppel barred TT from asserting equivalents against the eSpeedometer system. The Supreme Court discussed these “legal limitations on the application of the doctrine of equivalents” in Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17, 39 n.8 (1997). Under the “all-elements rule,” a patentee may not assert “a theory of equivalen[ce] [that] would entirely vitiate a particular claim element.” Id. Under prosecution history estoppel, a patentee may not seek to recapture as an equivalent subject matter surrendered during prosecution. Id. This court reviews both legal limitations without deference. Lockheed Martin Corp. v. Space Sys./Loral, Inc., 324 F.3d 1308, 1318 (Fed. Cir. 2003).

The all-elements rule requires this court to consider “the totality of circumstances of each case and determine whether the alleged equivalent can be fairly characterized as an insubstantial change from the claimed subject matter without rendering the pertinent limitation meaningless.” Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1359 (Fed. Cir. 2005). In other words, this rule empowers a court to perform again the standard “insubstantial variation” test for equivalency, but this time as a question of law. Claim vitiation applies when there is a “clear, substantial difference or a difference in kind” between the claim limitation and the accused product. Id. at 1360. It does not apply when there is a “subtle difference in degree.” Id.

In this case, the trial court considered whether an occasional automatic re-centering of the price axis in Dual Dynamic is equivalent to “never chang[ing] positions unless by manual re-centering or re-positioning.” The court determined that the automatic re-centering would render the claim limitation “static”—synonymous with only manual re-centering—meaningless. The trial court’s construction of the claim limitation “static” specifically excludes any automatic re-centering. See SciMed Life Sys. v. Advanced Cardiovascular Sys., 242 F.3d 1337, 1347 (Fed. Cir. 2001) (“[I]f a patent states that the claimed device must be ‘non-metallic,’ the patentee cannot assert the patent against a metallic device on the ground that a metallic device is equivalent to a non-metallic device.”).

On appeal, this court observes that the Dual Dynamic system may only automatically re-center its price axis once or twice per trading day. Still this occasional automatic re-centering is not a “subtle difference of degree” because the claim forbids all automatic re-centering. This court concludes that the occasional automatic re-centering is not merely an insubstantial variation. The relevant standard for measuring the difference in this instance is not the frequency of automatic re-centering. Instead this court must detect the difference between a price axis that moves only in response to the trader’s instruction and a price axis that adjusts itself without prompting. This difference is not subtle. Rather, as discussed above, this difference lies at the heart of the advantages of the patented invention over prior art. Specifically the invention “ensures fast and accurate execution of trades.” ’132 patent col.3 ll.5-6. Dual Dynamic’s automatic re-centering feature still presents the potential problem of the prior art that allowed the inside market price to move while a trader was trying to secure a

deal. Thus Dual Dynamic's automatic re-centering feature is substantially different from the claimed invention and cannot fall within the scope of the claims under the doctrine of equivalents without doing violence to the "static" claim element. Accordingly, this court affirms the trial court's judgment that TT cannot rely on the doctrine of equivalents to show that Dual Dynamic infringes.

This court further agrees with the district court that prosecution history estoppel precludes TT from relying on the doctrine of equivalents to prove the eSpeedometer system infringes. After the USPTO issued a notice of allowance, TT submitted for the first time a prior art reference that described a static price display and petitioned to have the application withdrawn from issuance. TT then amended claim 22 of the '132 patent, which ultimately issued as claim 1, as follows (deletions marked in brackets, additions underlined):

displaying [the] market depth of [a] the commodity [traded in a market], through a dynamic display of a plurality of bids and a plurality of asks in the market for the commodity, including at least a portion of the bid and ask quantities of the commodity, the dynamic display being aligned with a static display of prices corresponding thereto, wherein the static display of prices does not move in response to a change in the inside market;

Similarly, TT amended claim 41 of the '304 patent, which ultimately issued as claim 1, as follows:

displaying the bid and ask display regions in relation to fixed price levels positioned along the common static price axis such that when the inside market changes, the price levels along the common static price axis do not move and at least one of the first and second indicators [can] move in the bid [and] or ask display regions relative to the common static price axis [when the inside market changes];

The PTO examiner then allowed the claims. The amendments clarified that the claimed price levels "do not move" when the inside market changes. Therefore, the applicants

clearly surrendered a GUI with price levels that move in response to inside market changes.

TT argues that amending the claims to require that the price levels “do not move” did not narrow the claim scope, because the claims already included the term “static,” which the district court has construed to mean that the price levels “do not move.” This contention, however, is circular. Placed in the proper context of the timing for claim construction and prosecution history estoppel, the district court properly prevented the recapture of surrendered subject matter. The trial court construed the claims as amended and properly limited the claims to manual re-centering. Prosecution history estoppel applies at the time of infringement to determine whether the applicant surrendered claim scope during prosecution. See Warner-Jenkinson, 520 U.S. at 39 n.8. TT’s argument assumes that the trial court and this court would have construed “static” the same without the full prosecution history. This court need not engage in this conjecture because the inventors narrowed the claim scope during prosecution. Thus, both claim construction and prosecution history estoppel operate in this case with similar limited results. The first limits the claims to manual re-centering. The latter prevents TT from asserting that eSpeedometer is an equivalent, because its price level automatically drifts towards the center of the display after every change in the inside market. Thus, during prosecution, the inventors surrendered any subject matter that moves automatically. Accordingly, this court affirms as a matter of law the district court’s finding that Dual Dynamic and eSpeedometer do not infringe the patents-in-suit under the doctrine of equivalents.

V.

The district court granted eSpeed's motion for JMOL that it did not willfully infringe the patents-in-suit. This court reviews a district court's grant of a motion for JMOL under the law of the regional circuit, in this case the United States Court of Appeals for the Seventh Circuit. Harris Corp. v. Ericsson Inc., 417 F.3d 1241, 1248 (Fed. Cir. 2005). The Seventh Circuit reviews a district court's grant of a JMOL motion without deference, while viewing all the evidence in the light most favorable to the nonmoving party. Harper v. Albert, 400 F.3d 1052, 1061 (7th Cir. 2005). JMOL is proper when "a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue." Fed. R. Civ. P. 50(a).

In In re Seagate Technology, LLC, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc), this court held that "proof of willful infringement permitting enhanced damages requires at least a showing of objective recklessness." "[A] patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent." Id. The patentee must also show that the infringer knew or should have known of this objectively high likelihood. Id.

TT's argument focuses on eSpeed's post-issuance activities from August to December 2004, during which eSpeed's customers continued to use Futures View to trade on its electronic exchange. The parties do not dispute that eSpeed began redesigning Futures View immediately after this suit commenced and replaced Futures View with the redesigned Dual Dynamic by the end of December 2004. Prompt

redesign efforts and complete removal of infringing products in a span of a few months suggest that eSpeed was not objectively reckless.

Also, TT offered no evidence that eSpeed sold Futures View to new customers during the contested time period. Nor did TT offer any evidence that eSpeed could have disabled the infringing feature or removed Futures View that was already installed on the customers' computers. eSpeed replaced Futures View with Dual Dynamic via a mandatory software update in December 2004; however, this does not prove that eSpeed could have updated its software before this date. The record shows that some customers paid monthly license fees on Futures View after August 2004. Nonetheless, eSpeed was merely receiving monthly installments on licenses that it had previously sold. Moreover, eSpeed could not have terminated these licenses without providing three months advance notice.

Because the record shows no objective recklessness during the contested period of time, no reasonable jury could have found that eSpeed willfully infringed the patents-in-suit. Therefore, this court affirms the district court's grant of JMOL motion on willful infringement.

## VI.

The parties dispute whether the limitation "single action of a user input device" is indefinite as construed. A patent specification must "conclude with one or more claims particularly pointing out and distinctively claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2. "The statutory requirement of particularity and distinctness in claims is met only when [the claims] clearly distinguish what is claimed from what went before in the art and clearly circumscribe what is

foreclosed from future enterprise.” United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 236 (1942). However, absolute clarity is not required. Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed. Cir. 2005). Only claims “not amenable to construction” or “insolubly ambiguous” are indefinite. Id. (citation omitted). This court reviews definiteness without deference. AllVoice Computing v. Nuance Commc’ns, 504 F.3d 1236, 1240 (Fed. Cir. 2007).

This court agrees with the district court that the claim term as construed is sufficiently definite. The district court construed “single action of a user input device” to mean “an action by a user within a short period of time that may comprise one or more clicks of a mouse button or other input device.” Trading Techs., 2006 U.S. Dist. LEXIS 80153, at \*11. In this context, the word “an action” means one user action. An action may include multiple sub-elements as long as the user views all sub-elements as one user action (e.g., double-click comprising of two single-clicks is “an action”). The invention is different from prior art inventions that required a trader to click on multiple locations before submitting the order. The district court’s construction correctly sets objective boundaries by distinguishing the invention from multiple-action systems found in the prior art.

Moreover, one of ordinary skill in the art would distinguish user actions as singular or multiple. The claim construction provides an example of a singular action—one or more clicks of a mouse button. Importantly, the district court’s construction requires that the “action” must be done in a “short period of time.” Although a “short period of time” may vary slightly from one circumstance to the next, an artisan of ordinary skill would not find the term insolubly ambiguous. In fact, eSpeed’s expert

agreed that the following actions are all single actions: a single mouse click, double mouse clicks, a single key press, and a modal shift on the keyboard (such as combination of the Control key or the Alt key with another key). eSpeed's expert also agreed that other actions, such as a right click followed by a left click, and pressing two keys in sequential order, constituted multiple actions. Given the record and the trial court's definition of the term "single action," this court agrees that the claim terms set forth the boundaries of the claim scope.

## VII.

The jury found that the patents-in-suit claimed priority to their provisional application, which was filed on March 2, 2000. Every claim of the patents-in-suit recites use of a "single action of a user input device." In contrast, the provisional application never refers to a "single action of a user input device," but instead refers solely to "a single click of a computer mouse."

Claims enjoy the earlier filing date only if the provisional application provided adequate written description under 35 U.S.C. § 112, ¶ 1. New Railhead Mfg. v. Vermeer Mfg., 298 F.3d 1290, 1294 (Fed. Cir. 2002). The "prior application itself must describe an invention . . . in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the filing date sought." Lockwood v. Am. Airlines, 107 F.3d 1565, 1572 (Fed. Cir. 1997). Therefore, the provisional application must describe the invention in such a way that one of ordinary skill in the art "would understand that the genus that is being claimed has been invented, not just the species of a genus." Carnegie Mellon Univ. v. Hoffman-La Roche, Inc., 541 F.3d 1115, 1124 (Fed. Cir. 2008).

eSpeed alleges that the district court erred in finding that one of ordinary skill in the art would understand the provisional application to mean that traders could enter orders through a “single action of a user input device.” Specifically, eSpeed disputes the district court’s summary judgment ruling, jury instruction, decision to admit expert testimony, and JMOL ruling on priority date.

First, eSpeed argues that the district court incorrectly denied its motion for summary judgment on the ground that there was a triable issue as to whether the provisional application’s disclosure was adequate. This court reviews a denial of a motion for summary judgment for an abuse of discretion. Cross Med. Prods. v. Medtronic Sofamor Danek, Inc., 424 F.3d 1293, 1302 (Fed. Cir. 2005). On summary judgment, the parties’ experts disagreed that the provisional application showed possession of forms of order entry other than “a single click of a computer mouse.” Harris Brumfield, one of the inventors of the patents-in-suit, suggested that “one click of a mouse” is merely one way of entering orders on the exchange. Therefore, the parties created a dispute of material fact about whether the disclosure of a species, i.e., “one click of a mouse,” was sufficient to show that the inventors possessed the genus, i.e., “single action of a user input device.” The district court did not abuse its discretion by determining that the parties’ irreconcilable testimony created a dispute of material fact, precluding a grant of summary judgment on this issue.

Second, eSpeed also argues that the court incorrectly instructed the jury on the law of written description. This court reviews “the legal sufficiency of jury instructions on an issue of patent law without deference to the district court.” Amgen Inc. v. F. Hoffmann-La Roche, Ltd., 580 F.3d 1340, 1368 (Fed. Cir. 2009) (citation omitted). In its

brief, eSpeed quotes one sentence from the jury instruction. The district court's jury instruction was much longer and included the following sentence:

To provide adequate support you must find that the Provisional Application shows that one reasonably skilled in the art, reading the Provisional Application that explicitly calls for "single-click" user entry, would have known that patentee had possession of a broader "single action of a user input device."

This jury instruction comports with this court's law on written description. Moreover this instruction gave the jury adequate information to make a decision based on the possession standard of this court. This court finds that the jury instruction was not legally erroneous.

eSpeed argues as well that the testimony of TT's expert, Larry Nixon, was improper. This court reviews a district court's decision to admit expert testimony under regional circuit law. Micro Chem., Inc. v. Lextron, Inc., 317 F.3d 1387, 1391 (Fed. Cir. 2003). The Seventh Circuit reviews such evidentiary rulings for abuse of discretion. Liquid Dynamics Corp. v. Vaughan Co., Inc., 449 F.3d 1209, 1218 (Fed. Cir. 2006). Larry Nixon testified generally about the written description requirement and did not offer legal conclusions as to the adequacy of the provisional application's disclosure. While offering general opinions on patent practices, he did not usurp the district court's role of instructing the jury on the law. Therefore, the district court did not abuse its discretion by permitting his testimony.

Finally, eSpeed contests the district court's denial of its Rule 50(b) motion for JMOL. This court reverses a denial of a JMOL motion "only if the jury's factual determinations are not supported by substantial evidence or the legal conclusions

implied from the verdict cannot be supported in law by those findings.” Tronzo v. Biomet, Inc., 156 F.3d 1154, 1157 (Fed. Cir. 1998).

eSpeed did not submit its Rule 50(a) JMOL motion at the close of evidence. This case, however, is not an instance where the district court entertained a Rule 50(b) JMOL motion that was not preserved before the jury verdict. Instead, the district court explicitly permitted each party to preserve JMOL motions by offering “placeholders” with “the details to be filled in later.” Albeit in abbreviated form, the district court found that eSpeed had presented and preserved its Rule 50(a) JMOL motion. This court is “not disposed to override” a district court’s determination of non-waiver. Gaus v. Conair Corp., 363 F.3d 1284, 1287 (Fed. Cir. 2004).

Turning to the merits, the record shows substantial evidence to support the jury’s verdict that the provisional application’s written description was adequate. TT’s expert, Craig Pirrong explained that the provisional application distinguished between order entries performed in a single action and multiple-step actions. He did not distinguish a single-click from other types of single actions. Therefore, one of ordinary skill in the art could read the provisional application to encompass any single actions.

Moreover, the parties’ experts did not dispute that one of ordinary skill in the art would have known about other forms of “single action” such as a double-click or pressing a key. Considering the undisputed knowledge of those skilled in the art, disclosure of a species in this case provides sufficient written description support for a later filed claim directed to a very similar and understandable genus. Accordingly, the patents-in-suit are entitled to claim priority to the provisional application.

## VIII.

eSpeed also appeals the district court's grant of motion in limine precluding it from alleging the on-sale bar defense. The facts relevant to the on-sale bar defense are fairly simple. In September 1998, Harris Brumfield, one of the inventors of the patents-in-suit and an avid trader on electronic exchanges, conceived an idea that formed the basis of the invention. Brumfield hired TT to build trading software based on his idea. On September 29, 1998, TT and Brumfield entered into Individual Consulting Agreement #2 ("ICA2"), which provided that "TT will build a new trading window according to specifications provided to TT by Harris Brumfield." In mid-February 1999, TT delivered a "market depth trader workstation" to Brumfield. On March 2, 1999, Brumfield agreed to pay TT for the custom software.

An on-sale bar under 35 U.S.C. § 102(b) applies when the invention was both the subject of a commercial sale and ready for patenting before the critical date. Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 67 (1998). The transaction at issue must be a "sale" in a commercial law sense. Allen Eng'g Corp. v. Bartell Indus., Inc., 299 F.3d 1336, 1352 (Fed. Cir. 2002). "[A] sale is a contract between parties to give and to pass rights of property for consideration which the buyer pays or promises to pay the seller for the thing bought or sold." In re Caveney, 761 F.2d 671, 676 (Fed. Cir. 1985). The invention is ready for patenting, inter alia, if there is "proof of reduction to practice before the critical date." Plumtree Software, Inc. v. Datamize, LLC, 473 F.3d 1152, 1161 (Fed. Cir. 2006). The district court granted TT's motion in limine to preclude eSpeed from arguing a prior sale of the invention. TT characterizes this as a de facto summary judgment dismissing eSpeed's on-sale bar defense under 35 U.S.C. § 102(b).

This court affirms the district court's de facto summary judgment that ICA2 was not a sales transaction for a product embodying the patented invention. Under ICA2, TT promised to develop trading software for Brumfield because he lacked the technical expertise to do so. ICA2 was a contract for providing hourly programming services to Brumfield—not a computer software license. Brumfield did not sell or offer for sale anything embodying the invention. Therefore, the trial court properly determined that the invention had not been offered for a commercial sale.

eSpeed's reliance on Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp., 182 F.3d 888 (Fed. Cir. 1999), to characterize ICA2 as a commercial software license is misplaced. In Brasseler, the buyer and the seller of the contract each employed some inventors of the patented invention. Id. at 890. This court found a commercial sale because the seller manufactured over 3,000 products embodying the invention and sold it solely to the buyer. Id. at 890. Thus, the transaction in this 1999 Federal Circuit case is far more than occurred here. No product was ever sold to Brumfield. Also, this court in Brasseler in dicta suggested that the outcome would be different in “a case in which an individual inventor takes a design to a fabricator and pays the fabricator for its services in fabricating a few sample products.” Id. at 891. Inventors can request another entity's services in developing products embodying the invention without triggering the on-sale bar. Brumfield's request to TT to make software for his own secret, personal use could not constitute a sale under 35 U.S.C. § 102(b).

#### IX.

A patent may be rendered unenforceable for inequitable conduct if an applicant, with intent to mislead or deceive the examiner, fails to disclose material information or

submits materially false information to the PTO during prosecution. Digital Control Inc. v. Charles Mach. Works, 437 F.3d 1309, 1313 (Fed. Cir. 2006) (citation omitted). Where a judgment regarding inequitable conduct follows a bench trial, as it did here, this court reviews the district court's findings of materiality and intent for clear error and its ultimate conclusion for an abuse of discretion. ACCO Brands, Inc. v. ABA Locks Mfg. Co., 501 F.3d 1307, 1314 (Fed. Cir. 2007). The district court held that TT did not engage in inequitable conduct by not disclosing Brumfield's custom software to the PTO because the software was not material to the question of patentability. This court agrees.

The first issue this court addresses is whether the use of Brumfield's software between March 2 and June 9, 1999 was material. The district court found that TT relied on the March 2, 1999 priority date in good faith, and that TT did not need to disclose Brumfield's use of software past this priority date. The record also suggests that the examiner never questioned the March 2, 1999 priority date. In submitting a brochure for MD\_Trader, one of TT's commercial embodiments of the patents-in-suit, TT stated to the examiner that the brochure was disclosed to the public no earlier than March 2, 1999. This disclosure would have triggered a request for further information if the examiner had detected a priority date issue. Instead, the examiner did not perceive any issue and allowed the claims. The district court did not clearly err by finding that Brumfield's software was immaterial given that his use of the software after the priority date would not have changed the examiner's analysis of the patent. See Reactive Metals & Alloys Corp. v. Esm, Inc., 769 F.2d 1578, 1583 (Fed. Cir. 1985) ("[T]here is no point in bringing sales activities to the examiner's attention which, for example, did not

occur before the one-year grace period simply to have the examiner ‘decide’ that the sales were not early enough to trigger the time bar.”)

The second issue is whether TT should have disclosed any pre-March 2, 1999 activities to the PTO. eSpeed argues that TT should have disclosed TT’s “sale” of the custom software to Brumfield. However, as discussed above, ICA2 was not a commercial transaction; a reasonable examiner would not have regarded ICA2 as material to the issue of patentability. eSpeed also argues that TT should have disclosed Brumfield’s testing of the custom software before March 2, 1999. Experimental uses of the patented invention may in some instances give rise to an issue of patentability. See Manville Sales Corp. v. Paramount Sys, Inc., 917 F.2d 544, 552 (Fed. Cir. 1990). In this case, however, the record shows that Brumfield tested the software for his own confidential, personal purposes. See Elizabeth v. Am. Nicholson Pavement Co., 97 U.S. 126, 134-35 (1878). The district court did not clearly err by finding that a reasonable examiner similarly would not have regarded such experimental use as material. Brumfield kept the software secret until TT and Brumfield decided to file a provisional application. Accordingly, the district court did not abuse its discretion in finding that the TT did not engage in inequitable conduct.

X.

For the above-stated reasons, this court affirms on all issues presented on appeal.

AFFIRMED.

LOURIE, CIRCUIT JUDGE, concurs in the result.

# United States Court of Appeals for the Federal Circuit

2008-1392, -1393, -1422

TRADING TECHNOLOGIES INTERNATIONAL, INC.,

Plaintiff-Appellant,

v.

ESPEED, INC.,  
ECCO LLC, ECCOWARE LTD., and ESPEED INTERNATIONAL, LTD.,

Defendants-Cross Appellants.

Appeals from the United States District Court for the Northern District of Illinois  
in Case No. 04-CV-5312, Senior Judge James B. Moran.

CLARK, District Judge, concurring.

Believing that the judgment is correct and that the opinion correctly analyzes the issues in this case in light of current law, I concur. I write separately to respectfully suggest that the current de novo standard of review for claim construction may result in the unintended consequences of discouraging settlement, encouraging appeals, and, in some cases, multiplying the proceedings.

Determination of the meaning that would have been attributed to a claim term by one of ordinary skill in a sophisticated field of art on the date of filing often requires examination of extrinsic evidence—a determination of crucial facts underlying the dispute, as outlined by Judge Rader in the majority opinion. On some occasions, a determination will be made based, in part, on the weight to be given to conflicting extrinsic evidence or even to an evaluation of an expert's credibility.

The standard of review that will be applied by a higher court sets one of the important benchmarks against which competent counsel evaluates decisions regarding

settlement and appeal. The importance is highlighted by the fact that every brief must state the standard of review. See Fed. R. App. P. 28(a)(9)(B), (b)(5); Fed. Cir. R. 28(a)(10),(b).

The de novo review standard has at least two practical results, neither of which furthers the goal of the “just, speedy, and inexpensive determination of every action and proceeding.” Fed. R. Civ. P. 1. First, rejection of settlement is encouraged, and a decision to appeal is almost compelled, where counsel believes the client’s position is valid, even if debatable, depending on the view taken of extrinsic evidence. It is a natural reaction upon receiving an unfavorable claim construction from a trial court to conclude that one’s own view of complicated facts will be better understood by the judges of the Federal Circuit, who generally have more experience with patent cases, and who, by their own authoritative rule, review the claim construction without regard to any determination the lower court has made.

A patentee has the opportunity to write clearly enough so that the meaning of the claims can be determined from the specification. What public policy is advanced by a rule requiring the determination of underlying facts by more than one court, especially when the likely result is that another group of citizens will be required to “volunteer” for lengthy jury duty on remand?

A second, although less common, consequence of the de novo review standard is the opportunity it offers to the party that presents a case with an eye toward appeal rather than the verdict. Skilled counsel who believes a client may not be well received by a jury is tempted to build error into the record by asking for construction of additional terms, and/or presenting only a skeleton argument at the claim construction stage.

This is risky, but it would be unusual for this Court to consider a point waived if a particular claim construction had been requested of the trial court and some argument made, but the clearest explanation was presented on appeal. An appellate court normally does not consider an unpreserved point of error, but a more sharply focused argument regarding points presented on appeal, from among those that are technically preserved, is actually the goal of the appellate specialist. This tactic would be less inviting if claim construction was officially accorded some measure of deference, even if it was applied only in those cases in which resort to extrinsic evidence was necessary.