**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

TRADING TECHNOLOGIES   )
INTERNATIONAL, INC.,   )
)
        Plaintiff,   )
)   No. 05 C 4120
        v.   )
)   Judge Sara L. Ellis
GL CONSULTANTS, INC., et al.,   )
)
        Defendants.   )

OPINION AND ORDER

In this long-running patent dispute, Trading Technologies International, Inc. ("TT")

contends that Defendants SunGard Financial Systems (France) SAS, GL Trade Americas, Inc.,

SunGard Data Systems Inc., and SunGard Investment Ventures LLC (collectively, "GL Trade"),

as well as Defendant FuturePath Trading LLC ("FuturePath"), have developed and sold

electronic trading software products that infringe U.S. Patent No. 6,766,304 (the "'304 patent")

and U.S. Patent No. 6,772,132 (the "'132 patent") (collectively, the "patents-in-suit"). As

relevant to the present motions, TT alleges that GL Trade's GL WIN electronic trading

application with versions 5.9 and thereafter of the QuickTrade file/module infringe claims 1-3, 5-

9, 11-14, 16-18, 20-23, 25, and 27-40 of the '304 patent and claims 1-3, 7-10, 14-16, 20, 22-25,

27-30, 32-35, 37-40, 42-45, and 47-56 of the '132 patent. TT also contends that all versions of

FuturePath's PhotonTrader 2 electronic trading application with the TradeMatrix file/module

infringe claims 1-3, 5-9, 11-18, 20-23, and 26-40 of the '304 patent and claims 1-3, 7-10, 14-16,

20, 22, 24-25, 27-30, 32, 34-35, 37-40, 42, 44-45, and 47-56 of the '132 patent. Defendants have

moved for summary judgment that these accused products do not infringe the patents-in-suit

because the claims' static limitation is not met. TT has filed a cross-motion for partial summary

judgment that the accused products meet the static limitation. Because the Court finds that the

accused products do not literally infringe and TT cannot take advantage of the doctrine of

equivalents for all but a small number of the QuickTrade versions at issue, Defendants' motions

[581, 610] are granted in part and denied in part and TT's motion [786] is denied.

BACKGROUND

I. Patents-in-Suit

The patents-in-suit relate to computer software used for electronic trading in the futures

market. They disclose a static price axis and a dynamic display of bid and ask indicators. This

combination was intended to ensure that a user can track changing market prices without the

prices changing on him or her. With a static price level, the user will not enter an order at an

unintended price.

The '132 patent has three independent claims: claims 1, 8, and 14. The '304 patent has

two independent claims: claims 1 and 27. Claim 1 of each patent is the representative claim.

Claim 1 of the '132 patent states:

> 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

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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.

Claim 1 of the '304 patent states:

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

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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. Each asserted claim of the '132 patent includes limitations

containing the phrase "static display of prices." Each asserted claim of the '304 patent includes

limitations reciting a "static price axis" or a "common static price axis." The difference in

terminology in the '132 patent and '304 patent between the phrases "static display of prices" and

"static price axis" is immaterial to the present motions.

II.   Claim Construction

In 2004 and 2005, TT filed a number of cases asserting infringement of the patents-in-

suit. Those cases, including this one, were assigned to Judge Moran for all common issues

related to discovery and claim construction. *See Trading Techs. Int'l, Inc. v. eSpeed, Inc.* (*TT*

Markman I), No. 04 C 5312, 2006 WL 3147697, at *1 (N.D. Ill. Oct. 31, 2006). Judge Moran

held a three-day *Markman* hearing and thereafter entered a claim construction order. The parties

agree that Judge Moran's constructions govern the resolution of the present motions.

As relevant here, Judge Moran 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. at *4. "Static display of prices" was construed as "a display of prices comprising price levels

that do not change positions unless a manual re-centering command is received." *Id.* In

explaining his constructions, Judge Moran stated:

> If "static" ordinarily means non-moving, then we cannot see how
> we can construe it any other way. The only exception can be the
> one explicitly stated in the specifications and prosecution history—
> movement due to receipt of a manual re-centering command. If we
> were to construe the term inclusive of additional unstated
> exceptions, such as automatic re-centering, we would not know
> where to stop. Defendant eSpeed aptly asks, "Why is a price
> display which automatically recenters after every two seconds

'static,' but a price display which automatically recenters after every five seconds is not? Why is a price display that automatically recenters when the inside market exceeds three ticks from the center price is 'static,' but a price display which automatically recenters after every fifth tick is not?" . . . Because we cannot say, we must construe the term "static" in its ordinary meaning, non-moving, and allow for the only exception plainly stated in the written description: manual re-centering.

Id. (citations omitted). Noting that the patents "were designed to achieve simultaneous goals: speed and accuracy," Judge Moran found "that the purpose of the patents' invention would be frustrated by the inclusion of any movement uncontrolled by the user." *Id.* at *5.

TT asked Judge Moran to clarify or reconsider the construction of the term "static." *Trading Tech., Inc. v. eSpeed, Inc.* (*TT Markman II*), No. 04 C 5312, 2007 WL 611258, at *1 (N.D. Ill. Feb. 21, 2007). TT specifically sought clarification that the "claim element would be met 'if the accused product ever embodies the claimed element, irrespective of how long it does so or whether such a product also has the capacity to act in an uncovered manner.'" *Id.* at *2 (citation omitted). Judge Moran interpreted this part-time infringement theory to "seemingly suggest[ ] that the mere presence of a static price axis–regardless of whether it moves at some time–is still infringing." *Id.* at *3. He stated that in his view, "such an argument suggests that automatic re-centering takes an accused product or process out of the purview of plaintiff's patent protection, but only for the split second that it is moving, so that the time when the accused product's price axis is not moving, it is still infringing." *Id.* Judge Moran noted, however, that "[a]ny movement takes a product or process outside the scope of plaintiff's claim." *Id.* at *4. He clarified that, pursuant to his construction, "the price axis never changes positions unless by manual re-centering or re-positioning." *Id.* Judge Moran acknowledged that a product that sometimes, although not always, embodies a claimed method infringes. *Id.* at *5. Nonetheless, he emphasized that where "the claim limitation itself–here, a static condition–

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requires permanency, any movement (outside of manual re-centering or re-positioning) negates one of the specified claim limitations. Therefore, introduction of such movement takes an accused device out of the protection of plaintiff's patents." *Id.*

III.   Related Cases

A.   *eSpeed*

After claim construction, the related cases proceeded separately. In *eSpeed*, Judge Moran granted summary judgment of non-infringement for the eSpeed defendants on two sets of products: Dual Dynamic and eSpeedometer. Dual Dynamic included both automatic and manual re-centering options. TT admitted that, under Judge Moran's construction of "static," Dual Dynamic did not literally infringe but argued that it did under the doctrine of equivalents. *See Trading Techs. Int'l, Inc. v. eSpeed, Inc.* (*eSpeed I*), 507 F. Supp. 2d 854, 858–59 (N.D. Ill. 2007). eSpeedometer's re-centering feature was different in that "the price display automatically re-center[ed] the inside market in response to every change in the inside market by causing the inside market to gradually move back to the center of the screen," which the parties termed "drift re-centering." *Id.* at 858 n.1. TT argued that eSpeedometer infringed both literally and, alternatively, under the doctrine of equivalents. *Id.* at 859.

Judge Moran found that no eSpeed product that had automatic re-centering, including eSpeedometer, literally infringed TT's patents. *Id.* at 860. In discussing his construction of "static," Judge Moran reiterated that "a permanent state of lack of movement" is required, which eSpeedometer did not have. *Id.* Judge Moran also found that Dual Dynamic did not infringe under the doctrine of equivalents. *Id.* at 863–64. Although there was evidence that Dual Dynamic would automatically re-center only infrequently, Judge Moran concluded that "[a] finding that a change of positions (even once or twice per trading day) is equivalent to not

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changing positions unless by manual re-centering would vitiate the 'static' requirement. The

price levels either change positions . . . or do not change positions; there is no matter of degree."

Id. But he was not convinced that eSpeedometer did not infringe the static limitation under the

doctrine of equivalents since eSpeedometer included a feature that "seemingly prevent[ed] trade

commands from being entered at erroneous price levels." *Id.* at 864–65. Judge Moran also

found that TT was barred by prosecution history estoppel from arguing that eSpeedometer's drift

re-centering infringed on TT's patents under the doctrine of equivalents. *Id.* at 866–67. This

was because in amending its claims during the prosecution of the patents, TT added a

clarification to what became claim 1 of each of the patents-in-suit that the "static display of

prices does not move in response to a change in the inside market." *Id.* at 866. But both of

eSpeed's products at issue, Dual Dynamic and eSpeedometer, included a price axis that moved in

response to changes in the inside market. *Id.* Thus, TT could not argue they were equivalent.

Id.

  Judge Moran's summary judgment order did not end the *eSpeed* case, however, as TT

also claimed that eSpeed's Futures View product infringed the patents-in-suit. Futures View was

an eSpeed product sold before the patents-in-suit issued. *Trading Techs. Int'l, Inc. v. eSpeed,*

Inc. (*eSpeed II*), 595 F.3d 1340, 1348 (Fed. Cir. 2010). It allowed the user to turn off automatic

re-centering, so that, if that user setting was selected, the price axis remained static unless

manually re-centered. TT's Futures View claims were tried to a jury over the course of four

weeks. *Id.* at 1349. The jury found that Futures View infringed the patents-in-suit. *Id.* Judge

Moran upheld the jury's infringement verdict. *See Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, No.

04 C 5312, Doc. 1140 (N.D. Ill. Jan. 3, 2008).

As relevant to the present motions, TT appealed Judge Moran's claim construction and finding that Dual Dynamic and eSpeedometer did not infringe its patents.[1] The Federal Circuit construed the claims *de novo* but agreed with Judge Moran's construction of the term "static." *eSpeed II*, 595 F.3d at 1352–55. It reiterated that "the 're-centering command' must indeed occur as a result of a manual entry." *Id.* at 1353. The Federal Circuit also stated that automatic re-centering "negates a claimed requirement that the price level remains static and does not move." *Id.* at 1354. Based on this construction, the Federal Circuit affirmed Judge Moran's finding that Dual Dynamic and eSpeedometer do not literally infringe the patents-in-suit. *Id.* at 1355. As for the doctrine of equivalents, the Federal Circuit observed that Dual Dynamic's "occasional automatic re-centering is not a 'subtle difference of degree' because the claim forbids all automatic re-centering." *Id.* at 1356. The Federal Circuit found the difference between a price axis moving only in response to a trader's instruction and one moving without prompting to "lie[ ] at the heart of the advantages of the patented invention over prior art." *Id.* Because Dual Dynamic "still present[ed] the potential problem of the prior art that allowed the inside market price to move while a trader was trying to secure a deal," the automatic re-centering feature was "substantially different" from the static limitation of the patents-in-suit and Dual Dynamic did not infringe under the doctrine of equivalents. *Id.* The court also found that TT "clearly surrendered a [graphical user interface] with price levels that move in response to inside market changes," barring TT from relying on the doctrine of equivalents to prove that eSpeedometer infringed the patents-in-suit because eSpeedometer's "price level automatically drifts towards the center of the display after every change in the inside market." *Id.* at 1357.

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[1] eSpeed did not appeal the jury's verdict that Futures View infringed the patents-in-suit.

B. *RCG*

In one of the related cases that had been coordinated before Judge Moran, Rosenthal

Collins Group, Inc. ("RCG") filed a declaratory judgment action against TT in anticipation of a

patent infringement suit with respect to the patents-in-suit. *Rosenthal Collins Grp., LLC v.*

Trading Techs. Int'l, Inc. (*RCG*), No. 05-cv-4088, 2009 WL 3055381, at *1 (N.D. Ill Sept. 18,

2009). RCG's software, Onyx, included a window with a dynamic price axis that continually

adjusted the prices displayed so the last traded price was always at the center of the column. *Id.*

at *2. If the cursor was positioned within the window, however, the price axis remained

stationary. *Id.* at *3. If the cursor was inactive for 30 seconds inside the window, the price axis

would slowly readjust to bring the last traded price back to center. *Id.* Additionally, once the

cursor was removed from the window, the price axis re-centered to the last traded price. *Id.* TT

acknowledged that while the price axis was moving—when the cursor was outside the window

or after the cursor was inactive within the window for over 30 seconds—Onyx did not infringe.

Id. But it argued that while the price axis was not moving—when the cursor was positioned in

the window—Onyx infringed its patents and thus, because the software could operate in an

infringing mode, it infringed on the whole. *Id.* RCG argued that TT was trying to relitigate the

part-time infringement argument it had lost before Judge Moran in *TT Markman II*. *See TT*

Markman II, 2007 WL 611258, at *3–5. Judge Dow rejected RCG's argument, noting that TT

was not claiming that Onyx's price axis infringed because it remained stationary at some times

and moved at others but rather that Onyx operated in different modes—one that infringed and

one that did not and thus that the software as a whole infringed the patents-in-suit. *RCG*, 2009

WL 3055381, at *3. As an example of such software, Judge Dow pointed to eSpeed's Futures

View, in which "the user may opt to have the price axis remain stationary by changing a menu

setting." *Id.* Judge Dow ultimately found a question of fact as to infringement, noting that if

TT's argument that Onyx operated in three separate modes was correct, then Onyx operated like

Futures View and infringed, but that if RCG was correct that Onyx had only one mode of

operation in which there was always the possibility that the price axis would move without user

input, then Onyx did not infringe. *Id.* at *4. RCG and TT ultimately settled their claims.

Rosenthal Collins Grp., LLC v. Trading Techs. Int'l, Inc., No. 05-cv-4088, Doc. 558 (N.D. Ill.

Nov. 15, 2011).

        C.   *GL Trade Americas, Inc. v. TT* **(False Advertising Case)**

In 2011, GL Trade Americas, Inc. ("GL Trade Americas") filed suit against TT, alleging

that TT engaged in false advertising, unfair competition, and deceptive trade practices by

misrepresenting the scope of the patents-in-suit. *GL Trade Ams., Inc. v. Trading Techs. Int'l,*

Inc., No. 11 C 1558, 2012 WL 205909, at *1 (N.D. Ill. Jan. 23, 2012). Specifically, GL Trade

Americas claimed that TT had marked certain of its software with the patent numbers for the

'132 and '304 patents in a way that suggested that those patents covered products with automatic

re-centering. *Id.* at *2. The software at issue had two modes, a default that did not allow for

automatic re-centering and an option that allowed for automatic re-centering. *Id.* The patent

numbers were displayed on the screen at all times, even when automatic re-centering was

enabled. *Id.* Judge Holderman dismissed GL Trade Americas' complaint, finding that "in light

of Judge Moran's and Judge Dow's rulings in the patent disputes, it was legally plausible for TT

to believe that its products were covered by the '132 and '304 patents, and to mark them as such

regardless of the products' modes." *Id.* at *6.

D. *Open E Cry*

In a second round of litigation, TT filed twelve separate infringement actions against

various defendants alleging infringement of over ten patents related to electronic trading

software, including the patents-in-suit and other patents that have significant overlap with the

patents-in-suit. *Trading Techs. Int'l, Inc. v. BGC Partners, Inc.*, No. 10 C 715, Doc. 70 (N.D. Ill.

Feb. 3, 2011). Those cases were consolidated before Judge Kendall. *Id.* Judge Kendall entered

partial summary judgment against TT, finding that certain claims of related patents were invalid

for failure to comply with the written description requirement of 35 U.S.C. § 112 and that

prosecution history estoppel barred TT from asserting U.S. Patent No. 7,685,055 against certain

software products. *Trading Techs. Int'l, Inc. v. BCG Partners, Inc.*, 852 F. Supp. 2d 1027 (N.D.

Ill. 2012). Judge Kendall's decision was premised on the Federal Circuit's decision in *eSpeed II*.

Id. at 1044–48; *see also Trading Techs. Int'l, Inc. v. BCG Partners, Inc.*, 883 F. Supp. 2d 772,

778–79 (N.D. Ill. 2012) (denying TT's motion to reconsider and certifying partial judgment for

immediate appeal). The Federal Circuit reversed, concluding that *eSpeed II* did not control, and

remanded for further proceedings. *Trading Techs. Int'l, Inc. v. Open E Cry, LLC*, 728 F.3d

1309, 1319–23 (Fed. Cir. 2013). The consolidated cases remain pending before Judge Kendall.

IV.   Accused Products[2]

GL Trade develops and sells market data and order execution software known as GL

WIN. QuickTrade is a module that may be added to or included in GL WIN. QuickTrade

generates and displays a graphical user interface that allows traders to view and enter orders

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[2] While the universe of accused products in this case is broader than those at issue in this Opinion, for
ease of reference, the Court will refer to those products at issue in this Opinion collectively as the
"accused products."

electronically. Quick Trade versions 5.9 and after[3] include a feature that causes the price axis to re-center automatically at pre-set time intervals. When the QuickTrade module re-centers the price axis, the displayed market information is centered on the last traded price. The display can also move in response to a manual re-centering command. A change in the best bid and ask price and their respective quantities—also known as a change in the inside market—does not cause the price axis to re-center automatically.

QuickTrade's re-centering function is mandatory; it cannot be disabled by the user. But the user can adjust the frequency at which re-centering occurs. The default time for QuickTrade versions 5.9 to 5.13.5 is 10 seconds, while that for versions 7.1.1 and after is 900 seconds (or 15 minutes). The smallest value that the timer can be set for is 1 second, with the largest value ranging from version to version from 900 seconds to 99,999,999 seconds (slightly over 3 years).[4] In QuickTrade versions 10.1.1.7 and after, the user can display a countdown timer for the final 10 seconds before re-centering occurs. In these versions, the user can also disable the ability to enter an order for a period of 1 second before re-centering occurs.

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[3] The following versions of QuickTrade are at issue: 5.9.0, 5.10.0, 5.10.4, 5.10.5, 5.11, 5.11.1, 5.12.0, 5.12.1, 5.13, 5.13.2, 5.13.3, 5.13.5, 7.1.1, 7.1.2, 7.1.3.6, 7.1.4.4, 7.1.5.19, 7.1.5.29, 7.1.5.43, 8.0.2.32, 8.1.1.1, 8.1.1.8, 8.1.1.15, 8.1.2.12, 8.1.2.14, 8.1.3.6, 8.1.3.17, 8.1.3.19, 8.1.4.23, 8.1.5.7, 8.1.5.10, 8.1.6.12, 8.1.7.14, 8.1.7.18, 8.1.7.24, 8.1.9.6, 8.1.10.15, 8.1.11.87, 9.1.0.121, 9.1.1.9, 9.1.1.31, 9.1.2.17, 9.1.3.11, 9.1.4.7, 9.1.5.4, 9.1.6.6, 9.1.7.5, 9.1.8.16, 9.1.9.13, 9.1.10.3, 9.1.11.6, 9.1.12.5, 9.1.13.2, 9.1.13.3, 9.1.13.14, 9.1.20.9, 9.1.20.12, 9.1.20.17, 9.1.20.23, 9.1.20.24, 9.1.21.30, 9.1.21.35, 9.1.21.41, 9.1.21.55, 9.1.21.63, 9.1.21.71, 9.1.21.74, 9.1.21.77, 10.0.23.32, 10.0.23.66, 10.1.1.7, 10.1.1.15, 10.1.1.19, 10.1.1.23, 10.1.1.25, 10.1.1.33, 10.1.2.33, 10.1.2.46, 10.1.2.48, 10.1.2.52, 10.1.2.61, 10.1.2.70, 10.1.2.77, 10.1.2.83, 10.1.2.90, 10.1.2.95, 10.1.2.98, 10.1.2.105, 10.1.2.126, 10.1.2.162, 10.1.3.93, 10.1.3.97, 10.1.3.104, 10.1.3.114, 10.1.3.125, 10.1.3.132, 10.1.3.139, 10.1.3.146, 10.1.3.156, 10.1.3.175, and 10.1.4.107.

[4] Although some versions of QuickTrade will accept a number up to 99,999,999 seconds, those versions only accurately process a number less than or equal to $(2^{31}-1)/1000$ seconds (about 24.8 days). Inputting a greater number will either cause the program to crash or will return a negative value that will cause the price axis to re-center as quickly as possible. TT maintains that all versions can be increased to extend the time period to $(2^{32}-1)/1000$ seconds (about 49.7 days) or $(2^{31}-1)/1000$ seconds (about 24.8 days) by using a text editor to modify a settings file in the user's application data directory. There is no evidence that this has ever been done by a trader, however.

Like GL Win, FuturePath's PhotonTrader 2 is market data software that displays real

time financial market data and graphics and includes various independent modules. TradeMatrix

is one of the independent modules operated within PhotonTrader 2. TradeMatrix generates and

displays a user interface that allows traders to view and enter orders electronically. All

commercially released versions of TradeMatrix[5] include automatic re-centering of the price axis

at pre-set times. Automatic re-centering does not occur due to a change in the inside market.

The price axis can also be re-centered manually.

As with QuickTrade, automatic re-centering is mandatory; it cannot be disabled. The

default time interval for TradeMatrix versions 1.3.3.16 through 1.5.0.8 is 120 seconds, while that

for versions 1.5.0.85 and thereafter is 20 seconds. The frequency at which re-centering occurs

can be adjusted, with 1 second the smallest value for which the timer can be set and the largest

value ranging from version to version. In earlier versions, the maximum value is 2^{31}-1 seconds

(about 68 years), while in versions 1.5.0.85 and later, the maximum value is 60 seconds.[6] Unlike

QuickTrade, the time between re-centering can be extended by mouse movement, which resets

the timer. Mouse activity does not disable re-centering, however.

LEGAL STANDARD

Summary judgment obviates the need for a trial where there is no genuine issue as to any

material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56.

To determine whether a genuine issue of fact exists, the Court must pierce the pleadings and

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[5] The following versions of TradeMatrix are at issue: 1.3.3.16, 1.3.3.18, 1.3.3.26, 1.3.4.0, 1.3.4.2, 1.4.5.0, 1.4.5.3, 1.4.6.0, 1.4.7.0, 1.4.7.4, 1.4.7.6, 1.4.7.7, 1.4.7.9, 1.4.7.10, 1.4.7.11, 1.4.7.12, 1.4.7.13, 1.4.7.14, 1.4.7.15, 1.4.7.16, 1.4.8.0, 1.4.9.0, 1.4.9.2, 1.4.9.14, 1.5.0.0, 1.5.0.8, 1.5.0.25, 1.5.0.42, 1.5.0.50, 1.5.0.61, 1.5.0.62, 1.5.0.85, 1.5.1.0, 1.5.1.3, 1.5.1.14, 1.5.1.16, 1.5.1.20, 1.5.1.24, 1.5.1.26, 1.5.1.33, 1.5.1.34, 1.5.1.42, 1.6.0.1, 1.6.0.8, 1.8.0.1, 1.8.0.3, 1.8.0.23, 1.8.0.27, 1.8.0.36, 1.8.0.37, and 1.8.0.40.

[6] TT maintains that this can be increased to 2^{31}-1 seconds (about 68 years) by using a text editor to modify a settings file in the user's application data directory. There is no evidence that this has ever been done by a trader, however.

assess the proof as presented in depositions, answers to interrogatories, admissions, and affidavits that are part of the record. Fed. R. Civ. P. 56 & advisory committee's notes. The party seeking summary judgment bears the initial burden of proving that no genuine issue of material fact exists. *Celotex Corp. v. Catrett*, 477 U.S. 317, 323, 106 S. Ct. 2548, 91 L. Ed. 2d 265 (1986). In response, the non-moving party cannot rest on mere pleadings alone but must use the evidentiary tools listed above to identify specific material facts that demonstrate a genuine issue for trial. *Id.* at 324; *Insolia v. Philip Morris Inc.*, 216 F.3d 596, 598 (7th Cir. 2000). Although a bare contention that an issue of fact exists is insufficient to create a factual dispute, *Bellaver v. Quanex Corp.*, 200 F.3d 485, 492 (7th Cir. 2000), the Court must construe all facts in a light most favorable to the non-moving party and draw all reasonable inferences in that party's favor. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S. Ct. 2505, 91 L. Ed. 2d 202 (1986). The same standard applies when considering cross-motions for summary judgment. *Int'l Bhd. of Elec. Workers, Local 176 v. Balmoral Racing Club, Inc.*, 293 F.3d 402, 404 (7th Cir. 2002). Therefore, when considering Defendants' motions for summary judgment, the Court views all evidence in the light most favorable to TT; and when considering TT's motion, the Court views all evidence in the light most favorable to Defendants. *See id.*

ANALYSIS

To prove direct infringement, TT must establish by a preponderance of the evidence that the accused products infringe one or more claims of the patents-in-suit either literally or under the doctrine of equivalents. *Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 261 F.3d 1329, 1336 (Fed. Cir. 2001). Determining whether a product infringes is a two-step process, with the Court first construing the scope and meaning of the claims at issue and then comparing the construed claims to the allegedly infringing product. *Cybor Corp. v. FAS Techs.,*

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Inc., 138 F.3d 1448, 1454 (Fed. Cir. 1998). Unless every limitation of a patent claim is found in the accused product, either literally or under the doctrine of equivalents, there is no infringement. *Deering Precision Instruments, L.L.C. v. Vector Distribution Sys., Inc.*, 347 F.3d 1314, 1324 (Fed. Cir. 2003). Infringement is generally a question of fact, but it may be determined on summary judgment "when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device." *V-Formation, Inc. v. Benetton Grp. SpA*, 401 F.3d 1307, 1310 (Fed. Cir. 2005) (quoting *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1339 (Fed. Cir. 2001)).

The parties agree that Judge Moran's claim construction of the static limitation controls. Thus, the Court need only consider whether the accused products meet the static limitation literally or under the doctrine of equivalents.

I. Literal Infringement

Defendants argue that the accused products do not meet the static limitation because they include an automatic re-centering feature that cannot be disabled. Specifically, Defendants maintain that because the accused products automatically re-center at specific time intervals without user input, TT cannot establish that the price axis re-centers only "as a result of a manual entry." *eSpeed II*, 595 F.3d at 1353. They further argue that because automatic re-centering can never be disabled, the accused products never operate in an infringing mode during which the price axis remains static as required by the patents-in-suit.

TT, on the other hand, argues that the accused products have a mode in which the price levels do not move except by manual re-centering. Essentially, TT contends that the operation of the accused products can be broken into two different modes: (1) the instant when the price axis re-centers, which is pre-set to occur at specific time intervals; and (2) the time between automatic

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re-centering, when the price axis will only move in response to user input. TT argues that the first mode is immaterial, for "an accused device may be found to infringe if it is reasonably capable of satisfying the claim limitations, even though it may also be capable of non-infringing modes of operation." *Hilgraeve Corp. v. Symantec Corp.*, 265 F.3d 1336, 1343 (Fed. Cir. 2001). TT also argues that even if the accused products do not operate in separate modes, the movement of the accused products' price axes is not automatic and thus can still be considered infringing.

The Court agrees with Defendants that no reasonable jury could find that the accused products literally meet the static limitation. TT's argument that the accused products operate in separate modes is an improper attempt at an end-run around Judge Moran's and the Federal Circuit's construction of "static." Static means "non-moving," so that "*[a]ny movement* takes a product or process outside the scope of [TT]'s claim." *TT Markman II*, 2007 WL 611258, at *4 & n.5 (emphasis added). Here, the accused products include movement aside from manual re-centering. Thus, this movement takes the products outside the scope of the patents-in-suit, regardless of the fact that the price axis is static for a definable period of time. *Id.* at *3, 5 (describing and rejecting TT's part-time infringement theory).

Additionally, while the accused products are in use, there is no way for the user to operate them in solely an infringing mode. Although the user can control the period of time between automatic re-centering, automatic re-centering cannot be completely disabled and thus it is inevitable that the price axis will move without user input. Under Judge Moran's construction, however, only the ability to disable automatic re-centering would bring the accused products within the static limitation. *See TT Markman I*, 2006 WL 3147697, at *4. As Judge Moran noted in *TT Markman I*:

> If we were to construe the term ["static"] inclusive of additional
> unstated exceptions, such as automatic re-centering, we would not

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know where to stop. Defendant eSpeed aptly asks, "Why is a price
display which automatically recenters after every two seconds
'static,' but a price display which automatically recenters after
every five seconds is not? Why is a price display that
automatically recenters when the inside market exceeds three ticks
from the center price is 'static,' but a price display which
automatically recenters after every fifth tick is not?" . . . Because
we cannot say, we must construe the term "static" in its ordinary
meaning, non-moving, and allow for the only exception plainly
stated in the written description: manual re-centering.

Id. (citations omitted). TT argues that Judge Moran backed away from these statements in *TT Markman II* and that they only apply to TT's proposed construction of static, which Judge Moran did not adopt. The Court disagrees; these statements indicate that the accused products, which provide for automatic re-centering at specific time intervals, do not meet the static limitation. *See TT Markman II*, 2007 WL 611258, at *3 (rejecting TT's part-time infringement theory, which, in Judge Moran's view, "suggests that automatic re-centering takes an accused product or process out of the purview of plaintiff's patent protection, but only for the split second that it is moving, so that the time when the accused product's price axis is not moving, it is still infringing"); *id.* at *5 (rejecting TT's arguments "in support of its position that any period of a static condition falls within our construction of 'common static price axis' and 'static display of prices'").

TT's request to separate the operation of the accused products into two modes is essentially an attempted end-run around the construction of the static limitation. Taken to its extreme, every product that includes automatic re-centering would be found to infringe under this theory because there would be at least a split-second when such re-centering was not occurring. TT suggests that its theory would not lead to such a result because those products that re-center in response to an inside market change always are at risk of moving whereas with the accused products that risk can be clearly separated out, making the static periods identifiable.

TT argues that Judge Moran and the Federal Circuit construed the static limitation to require products to re-center based on changes that occur randomly or unexpectedly, such as changes to the inside market price. *See, e.g.*, Doc. 787 at 20–22. It is true that eSpeed's products re-centered based on changes to the inside market price, *eSpeed I*, 507 F. Supp. 2d at 858 n.1, 861, and that the accused products here do not. But neither Judge Moran nor the Federal Circuit built in a requirement that movement be in response to changes in the inside market or be otherwise unpredictable so as not to be considered static. *See TT Markman I*, 2006 WL 3147697, at *4–5 (construing "static" as non-moving); *TT Markman II*, 2007 WL 611258, at *4–5 ("[A]ny movement (outside of manual re-centering or re-positioning) negates one of the specified claim limitations."); *eSpeed II*, 595 F.3d at 1353–54, 1356 (agreeing with Judge Moran's construction of "static" and noting that "the claim forbids all automatic re-centering"). And while Judge Holderman described Judge Moran's ruling as being "in essence . . . that TT's patents did not cover automatic re-centering, that is, software in which the price levels automatically change positions when new data is received reflecting a change in the inside market," *GL Trade*, 2012 WL 205909, at *1, that is too narrow a reading of Judge Moran's construction. Judge Moran placed no limitation on the reason for automatic re-centering in his construction of the static limitation, stating instead that "*[a]ny* movement takes a product or process outside the scope of plaintiff's claim." *TT Markman II*, 2007 WL 611258, at *4 (emphasis added).

Taken to its logical conclusion, TT's proposed mode argument would render even products like Dual Dynamic infringing, despite TT's acknowledgment that Dual Dynamic did not literally infringe the patents-in-suit. But under the controlling construction, regardless of whether re-centering is based on a pre-set time interval (whether the program default or one of the user's choosing) or a change in the market, the movement of the price axis is out of the user's

control and thus automatic. *See id.* at *2–5 (noting that the clarification order was intended to address whether the "static" term "requires a permanent state of lack of movement" and concluding that the claim limitation indeed "requires permanency" so that "any movement (outside of manual re-centering or re-positioning) negates one of the specified claim limitations"). Although the risk of missing a trade or trading at an unwanted price may be lessened where re-centering occurs at pre-set times because it is more "predictable," TT cannot rewrite the claim construction to require automatic movement to be unpredictable to bring it outside the scope of the patents-in-suit.

Further, TT's comparison of the accused products to eSpeed's Futures View, which was found to infringe the patents-in-suit, is unavailing. While Futures View had a mode in which there was no possibility of automatic re-centering, the user had the ability to decide whether to enable or disable this mode. But here there is no setting that the user can elect to go from one mode to another; as already discussed, there is no separate mode where automatic re-centering can be turned off; the split-second during which automatic re-centering occurs cannot be separated from the remaining operation of the accused products. *See TT Markman II*, 2007 WL 611258, at *3, 5 (rejecting TT's part-time infringement theory that suggested that a product infringed for the time that the price axis did not move). TT argues that the differences between Futures View and the accused products are irrelevant to the question of whether there is a static mode, *see* Doc. 787 at 19 n.18, but its explanation undermines this contention. TT explains: "The two modes in the Futures View product were determined by a user setting, whereas in the accused products here the software switches the program from one mode to another." *Id.* Thus, even as TT must acknowledge, the accused products' re-centering is automatic—uncontrolled by the user—and thus cannot be considered a separate mode that the product enters for a split-

second so that the accused products have both an infringing and non-infringing mode. This stands in stark contrast to Futures View, where the user could choose based on a user setting whether to disable automatic re-centering.

Finally, TT argues that this Court should follow Judge Dow's opinion in *RCG*, where he denied summary judgment with respect to whether a similar product infringed the same patents-in-suit. *RCG*, 2009 WL 3055381, at *3–4. TT claims that Judge Dow found that there was evidence that RCG's product had a static mode where there was no possibility of automatic movement. Doc. 787 at 3. But Judge Dow merely found that there was an issue of fact as to whether RCG's product operated in one mode or three modes, not that it definitively had a static mode, and thus left the infringement question to the jury's determination. *RCG*, 2009 WL 3055381, at *4. As an initial matter, the Court is not bound by Judge Dow's opinion. But more importantly, the denial of summary judgment in *RCG* was fact-bound, dependent on whether RCG's product could "operate entirely in different modes—one that infringes and one that does not." *Id.* at *3–4. RCG's product, according to TT, entered into a static mode when the user positioned the cursor within the window. *Id.* at *3. But here, there is no suggestion that the user could take such action to create a separate mode in which the price axis would move only based on manual re-centering. Instead, the accused products operate in exactly the manner that Judge Dow described as non-infringing, with "a price axis that remains stationary only at certain times and moves at other times." *Id.* at *3. Because the accused products include an automatic re-centering feature that cannot be disabled and thus can never operate in a mode where only manual re-centering is possible, the accused products do not literally infringe the patents-in-suit.

II.   Doctrine of Equivalents

Although the Court has concluded that the accused products do not directly infringe the

patents-in-suit, it must still consider whether they infringe under the doctrine of equivalents. For

an accused product to infringe under the doctrine of equivalents, "any differences between the

claimed invention and the accused product must be insubstantial." *Brilliant Instruments, Inc. v.*

GuideTech, LLC, 707 F.3d 1342, 1346 (Fed. Cir. 2013). The doctrine of equivalents applies

limitation by limitation, with the Court examining whether the accused product "performs

substantially the same function in substantially the same way with substantially the same result

as each claim limitation of the patented product." *Crown Packaging Tech., Inc. v. Rexam*

Beverage Can Co., 559 F.3d 1308, 1312 (Fed. Cir. 2009). Although infringement under the

doctrine of equivalents is usually a factual question, where "the evidence is such that no

reasonable jury could determine two elements to be equivalent," summary judgment is proper.

Deere & Co. v. Bush Hog, LLC, 703 F.3d 1349, 1356 (Fed. Cir. 2012) (quoting *Warner-*

Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 39 n.8, 117 S. Ct. 1040, 137 L. Ed. 2d

146 (1997)).

A patentee may be barred by prosecution history estoppel from asserting infringement

under the doctrine of equivalents. *AquaTex Indus., Inc. v. Techniche Solutions*, 419 F.3d 1374,

1382 (Fed. Cir. 2005). Prosecution history estoppel applies "when the [patentee] makes a

narrowing amendment for purposes of patentability, or clearly and unmistakably surrenders

subject matter by arguments made to the examiner." *Salazar v. Procter & Gamble Co.*, 414 F.3d

1342, 1344 (Fed. Cir. 2005).

Defendants argue that TT cannot rely on the doctrine of equivalents to establish

infringement. Defendants primarily rely on Judge Moran's and the Federal Circuit's findings

that Dual Dynamic did not infringe under the doctrine of equivalents and that TT was barred by prosecution history estoppel from arguing that eSpeedometer infringed under the doctrine of equivalents. TT, however, maintains that those findings were specific to the products at issue and cannot be applied to the accused products, which operate in a different manner.

The Federal Circuit considered whether Dual Dynamic's occasional automatic re-centering was equivalent to "never chang[ing] positions unless by manual re-centering or re-positioning." *eSpeed II*, 595 F.3d at 1356. Dual Dynamic "automatically and instantaneously re-center[ed] 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." *Id.* at 1348. The Federal Circuit noted that Dual Dynamic's re-centering might only occur once or twice a day but found that "this occasional automatic re-centering is not a 'subtle difference of degree' because the claim forbids all automatic re-centering." *Id.* at 1356. The Court found the relevant difference not to be the frequency of the automatic re-centering but rather "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." *Id.* Dual Dynamic's re-centering was found to pose the same problem as the prior art, which "allowed the inside market price to move while a trader was trying to secure a deal." *Id.* Thus, the Federal Circuit concluded that "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." *Id.*

The Federal Circuit did not consider whether eSpeedometer infringed under the doctrine of equivalents, instead examining whether TT was barred from making that argument by prosecution history estoppel. *Id.* at 1356–57. This was because Judge Moran found

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eSpeedometer's drift re-centering did not vitiate the static limitation based on a feature that "seemingly prevent[ed] trade commands from being entered at erroneous price levels." *eSpeed I*, 507 F. Supp. 2d at 864–65. Dual Dynamic did not have this feature. *Id.* at 864.

Here, even though the accused products can be set to re-center only occasionally, as the Federal Circuit stated, the frequency of automatic re-centering is not the relevant comparison. *eSpeed II*, 595 F.3d at 1356. And while the price axis of the accused products does not automatically re-center in response to a change in the inside market, as Dual Dynamic did, this does not render the Federal Circuit's analysis inapplicable. As with Dual Dynamic, in all QuickTrade versions except versions 10.1.1.7 and thereafter,[7] users are always at risk of missing their intended price at the time that the automatic re-centering occurs. Thus, the automatic re-centering of the accused products (except QuickTrade versions 10.1.1.7 and after) presents essentially the same problem as Dual Dynamic did for TT—it defeats the claimed advantages of the patents-in-suit over the prior art—and thus TT cannot use the doctrine of equivalents to demonstrate that those versions do not infringe. *Id.*

This leaves QuickTrade versions 10.1.1.7 and after, which include an option by which the user cannot enter an order for a period of 1 second before automatic re-centering occurs. These versions appear similar to eSpeedometer as the option "seemingly prevents trade commands from being entered at erroneous price levels." *eSpeed I*, 507 F. Supp. 2d at 864. This option essentially keeps the price levels static at the time of re-centering so that the product could be found to be performing substantially the same function in substantially the same way with substantially the same result as the patented product. Defendants argue that the lock feature in QuickTrade versions 10.1.1.7 and after actually ensures that the trader's price is missed because

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[7] In QuickTrade versions 10.1.1.7 and after, the user can disable the ability to enter an order for a period of 1 second before automatic re-centering occurs.

a trader may want to enter a trade at a price but is prevented from doing so because entry is frozen for that second even though there is time to enter the order before re-centering occurs. Doc. 862 at 33 n.16. But Defendants do not address how freezing order entry for the second before automatic re-centering does not render the static limitation met under the doctrine of equivalents. The Court thus finds that there is at least a genuine dispute on the issue with respect to QuickTrade versions 10.1.1.7 and after.

TT would be precluded from arguing that these versions are infringing if prosecution history estoppel applies. Defendants argue that TT surrendered any subject matter that moves automatically during the prosecution of the patents-in-suit based on amendments it made to the claims that issued as claim 1 of each of the patents-in-suit. Both Judge Moran and the Federal Circuit examined this same argument with respect to Dual Dynamic and eSpeedometer and found that TT had "surrendered a [graphical user interface] with price levels that move in response to inside market changes." *eSpeed II*, 595 F.3d at 1357; *eSpeed I*, 507 F. Supp. 2d at 866–67 ("TT has clearly disclaimed a price axis that moves in response to a change in the inside market."). Defendants seize on language in the Federal Circuit's opinion that "during prosecution, the inventors surrendered any subject matter that moves automatically." *eSpeed II*, 595 F.3d at 1357. But the sentences before that statement demonstrate that the Federal Circuit's finding on prosecution history estoppel was more limited:

> [B]oth 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.

Id. It is undisputed that the accused products do not automatically re-center in response to changes in the inside market. Defendants have not presented the Court with a basis to extend

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prosecution history estoppel to every instance of automatic re-centering, nor is the Court able to discern such a basis. Thus, the Court finds that prosecution history estoppel does not bar TT from arguing that QuickTrade versions 10.1.1.7 and after infringe on the static limitation of the patents-in-suit under the doctrine of equivalents. TT may proceed on its infringement claims with respect to this limited subset of the accused products.

CONCLUSION

For the foregoing reasons, Defendants' motions [581, 610] are granted in part and denied in part and TT's motion [786] is denied. QuickTrade versions 5.9.0 through 10.0.23.66 and all TradeMatrix versions discussed in this Opinion and Order do not infringe the patents-in-suit.

Dated: November 18, 2014

SARA L. ELLIS
United States District Judge

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