

the *RCG v. TT* case on the issue of infringement, as well as Judge Dow's opinion on infringement. I am also familiar with my expert report from the *RCG* case. I have also reviewed the summary judgment briefing and declarations from the *TT v. GL* case on the issue of infringement. I have reviewed Judge Holderman's opinion from the *GL Trade v. TT* case.

III. BACKGROUND OF THE INDUSTRY

14. The electronic trading industry is made up of various participants. These participants include the exchanges, Futures Commissions Merchants ("FCMs"), technology providers, such as Independent Software Vendors ("ISVs") whose primary business is to provide front end order entry software, trading firms and individual traders. I may describe the roles of these various participants. All of the participants identified above provide complimentary services and work together to facilitate the execution of trades. The norm in the industry is for traders to pay on a per transaction basis to execute a trade. TT is an example of an ISV. Examples of more well diversified vendors include CQG and Bloomberg. Examples of an FCM include RCG and Goldman Sachs. Examples of an exchange include the CME and Eurex.

15. Since at least the early 1990s, the industry participants identified above have been investing in creating and providing front end order entry software. The technology providers include ISVs and more well diversified vendors that provide various technology, including front end order entry software. Many FCMs (such as RCG and Goldman Sachs), and exchanges (such as DTB/Eurex in the 1990s, the CME in the 1990s through the early 2000s and the Intercontinental Exchange ("ICE") today) have provided their own front end order entry software. Furthermore, many trading firms and individual traders have invested in their own technology creating their own front end order entry software. All of the participants identified above compete against each other with respect to front end order entry software.

16. I may testify regarding the nature of the competition between the various

participants identified in Paragraph 14. For example, FCMs and exchanges that provide front end order entry software have an advantage over ISVs because they have the ability to leverage off of their core businesses. The more well diversified vendors also have an advantage over ISVs because they have the ability to leverage off of their other businesses (for example, CQG provides charting/analytics software and Bloomberg provides news and other services).

17. I may also provide background testimony regarding the history of trading and electronic trading. This may include an explanation regarding how trades were conducted prior to electronic trading (e.g., trading in the pits) and about the transition to electronic trading. I may also explain the types of tradeable objects that can be traded. For example, I may provide background regarding what is a futures contract and what is an underlying cash product. I may further testify regarding the purpose of futures markets (e.g., to provide price discovery and risk transfer). I may also testify about the various types of traders in the market and the roles they play (e.g., hedgers and speculators), as well as provide examples of hedging (e.g., fuel hedging contracts used by airlines, mortgages, etc.).

18. I may also testify about the importance of volume to the industry and about the trading volumes at the top derivative exchanges. The invention provided the added benefit to exchanges and FCMs of causing traders to trade more volume. For example, the former CTO of the Chicago Mercantile Exchange (“CME”), Scott Johnston, testified that a major contributor to the CME’s dramatic volume growth from 2000 to 2002 was MD Trader (TT’s commercial embodiment of the invention). Johnston Decl., at ¶3; Johnston Dep. Tr., at 69-71. This was also testified to by James Zellinger, the former Executive Vice President of Operations for Fuji Futures (a division of Fuji bank) and founder of Advantage Futures, LLC. (Zellinger Decl., ¶ 10) I have reviewed Mr. Grisafi’s declaration, which he also claims that MD Trader increased the

volumes of futures such as the E-Mini by magnitudes. I may also testify regarding the types of fees typically charged for trading. This includes regulatory fees, commissions charged by FCMs, and fees charged by exchanges. Additionally, I may talk about trading costs, including slippage. Slippage is the difference between the price at which the trader wants to execute a trade, versus the price at which the trade is actually executed.

IV. THE BACKGROUND OF THE PATENTS-IN-SUIT

19. Prior to the invention of the patents-in-suit, there was a well-accepted conventional wisdom regarding the design of a trading interface for order entry. For example, it was conventional to provide the ability to enter orders using order entry tickets. With order entry tickets, a trader fills out a ticket and then clicks on a send button (and/or a confirmation button) provided on the ticket to send an order to an exchange. This method was widely known as being very accurate for order entry, but also widely known as being very slow.

20. With respect to trading interfaces that permitted users to enter orders by directly interfacing with displayed prices (*e.g.*, through the use of a mouse), the vast majority of trading interfaces were dynamic screens. Such dynamic screens displayed the best bid price and best ask price at designated locations on the screen. Some of such dynamic screens permitted single action order entry that consisted of a trader pre-setting a default quantity and then clicking (*e.g.*, using a single-click or a double-click) on a dynamic screen to cause a trade order to be sent to the exchange at the pre-set quantity.

21. Figure 2 of the patents-in-suit (reproduced with annotations below) illustrates an example of one such common dynamic screen, also referred to as a market grid.

FIG. 2

	201	202	203	204	205				
	Contract	Depth	BidQty	BidPrc	AskPrc	AskQty	LastPrc	LastQty	Total
1	CDHO	•	785	7626	7627	21	7627	489	8230
2			626	7625	7629	815			
3			500	7624	7630	600			
4			500	7623	7631	2456			
5			200	7622	7632	800			

22. The dynamic screen of Figure 2 represents a screenshot for a market. In the figure, bid prices are provided in the BidPrc column 203 and ask prices are displayed in the AskPrc column 204 column adjacent to the BidPrc column. The best bid price that is currently available in the market is always displayed at the top of column 203, and other bids that are also currently available in the market are provided progressively descending the BidPrc column 203. Similarly, the best ask price that is currently available in the market is always displayed at the top of column 204, and other asks that are currently available in the market are displayed progressively descending the AskPrc column 204. The inside market is understood (and defined by the patents-in-suit) as meaning the best bid price and best ask price available in the market.

23. The screen shown in Figure 2 is dynamic with respect to the display of prices because each and every time the inside market changes, the price values within the cells of the top row in columns 203 and 204 will change. More particularly, the value in the best bid price cell changes every time an update reflecting a change to the best bid price available in the market is received, and the value in the best ask price cell changes every time an update reflecting a change to the best ask price available in the market is received. The other displayed bid and ask prices similarly change based on updates in the market. Therefore, the prices are constantly

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