

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

IBG LLC and INTERACTIVE BROKERS LLC,
Petitioners

v.

TRADING TECHNOLOGIES INTERNATIONAL, INC.,
Patent Owner

Case CBM2016-00009
Patent No. 7,685,055

**DECLARATION OF DAVID RHO IN SUPPORT OF
PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE**

IBG 1035
IBG v. TT

I, David Rho, declare as follows:

1. I have been engaged by Sterne, Kessler, Goldstein & Fox P.L.L.C. on behalf of IBG LLC and Interactive Brokers LLC (“Petitioners”) for the above-captioned Covered Business Method Review proceeding. I understand that this proceeding involves United States Patent 7,685,055, entitled “System and Method for Automatic Repositioning of Market Information in a Graphical User Interface,” by Harris Brumfield, et al., filed May 3, 2006, and issued March 23, 2010 (the “’055 patent”). I understand that the ’055 Patent is currently assigned to Trading Technologies International, Inc. (“TT”).

2. I have reviewed the following documents in making this declaration:

- The ’055 patent (Exhibit 1001).
- My previous declaration in this proceeding (Exhibit 1004).
- A certified translation of “Futures/Option Purchasing System Trading Terminal Operation Guide” (“TSE”) (Exhibit 1008).
- The Board’s April 28, 2016 Institution Decision (“Decision”) (Paper 20).
- The transcript of my July 14, 2016 deposition (Exhibit 2331).

- TT's July 21, 2016 Patent Owner Response ("POR") (Paper 32).

I. MY UNDERSTANDING OF CLAIM CONSTRUCTION

3. I understand that, during a Covered Business Method Review, claims are to be given their broadest reasonable construction in light of the specification as would be read by a person of ordinary skill in the relevant art.

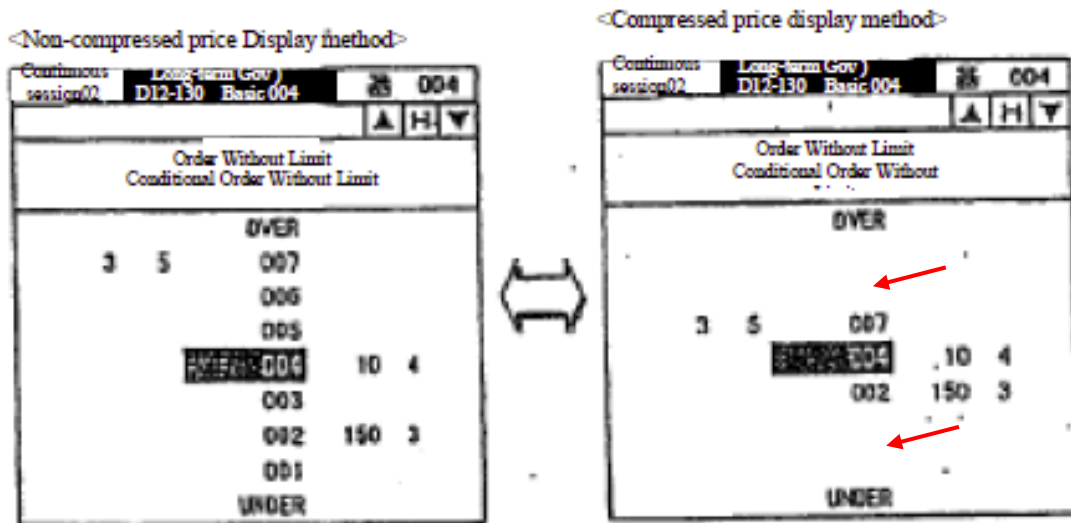
II. LEVEL OF ORDINARY SKILL IN THE ART

4. One of ordinary skill in the art at the time of the alleged invention, would have had the equivalent of a Bachelor's degree or higher in computer science or computer engineering and at least 2 years working experience designing and/or programming graphical user interfaces, and direct or indirect experience with trading or related systems. Experience could take the place of some formal training, as domain knowledge and user interface design skills may be learned on the job. This description is approximate, and a higher level of education or skill might make up for less experience and vice versa.

III. "PRICE LEVELS"

5. Claims 1 and 17 of the '055 patent recite the term "price levels." For example, claim 1 recites "displaying a first plurality of price levels along a static price axis" ('055 patent, 34:24-25.) I understand that TT argues that "a price level is a location/area provided on the screen within which a price may be (but is

not required to be) displayed.” (POR, p. 41.) I also understand that TT argues that blank (unpopulated) locations along the price axis in TSE’s compressed mode are “price levels.” (*Id.* at 60-64.) For example, below I reproduced the figure on page 0068 of TSE, which illustrates TSE’s compressed mode on the right-hand side. (TSE, p. 0068.) TT argues that the blank location above the price 007 and the blank location below the price 002 are “price levels.” (POR, p. 41.) Below, I included a red arrows to illustrate these locations.



6. I disagree with TT’s interpretation of the term “price levels.” A person of ordinary skill in the art (“POSITA”) at the time of the ’055 patent would have understood a price *level* to correspond to a definite price, regardless of whether the price is displayed. A POSITA would have understood a blank location on the screen within TSE’s price axis as merely white space with no corresponding price, and thus not a price level.

7. The '055 specification supports my position. It emphasizes the importance of a trader observing the market at different price levels:

Traders gain an advantage by seeing the market depth because they can see trends in the orders in the market. The market depth display shows the trader the interest the market has in a given commodity at **different price levels**.

('055 patent, 7:16-19 (emphasis added).)

In a fast moving market, where varying **price levels** are trading (i.e. bids and offers entering the market are being matched at different prices), it is beneficial that the trader be able to quickly enter orders and quickly see and analyze market information.

(*Id.* at 7:35-39 (emphasis added).)

8. The trader's observations would have little value if the price levels did not correspond to definite prices. Said another way, the trader could not gain the advantage described in the '055 specification of "seeing the market depth at different price levels" by viewing blank locations on the TSE compressed price display screen. These blank locations refer to unknown prices where a new and unknown price could potentially be displayed at some point in the future.

9. The '055 specification also uses the terms price and price level interchangeably, which further informs my opinion that a POSITA would have understood a price *level* to correspond to a definite price. For example, the '055 specification states:

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