

No. 2018-1302

**United States Court of Appeals
for the Federal Circuit**

TRADING TECHNOLOGIES INTERNATIONAL, INC.,

Appellant,

v.

IBG LLC, INTERACTIVE BROKERS LLC,

Appellees,

UNITED STATES,

Intervenor.

Appeal from the Patent Trial and Appeal Board of the United States Patent and Trademark Office in case no. CBM2016-00054, Administrative Patent Judges Sally C. Medley, Meredith C. Petravick, and Jeremy M. Plenzler

**COMBINED PETITION FOR PANEL REHEARING AND REHEARING
EN BANC OF APPELLANT
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FORM 9. Certificate of Interest

Form 9
Rev. 10/17

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Trading Technologies International, Inc. v. IBG LLC et al.

Case No. 18-1302

CERTIFICATE OF INTEREST

Counsel for the:

☐ (petitioner) ☒ (appellant) ☐ (respondent) ☐ (appellee) ☐ (amicus) ☒ (name of party)

Appellant Trading Technologies International, Inc.

certifies the following (use "None" if applicable; use extra sheets if necessary):

1. Full Name of Party Represented by me	2. Name of Real Party in interest (Please only include any real party in interest NOT identified in Question 3) represented by me is:	3. Parent corporations and publicly held companies that own 10% or more of stock in the party
Trading Technologies International, Inc.	Trading Technologies International, Inc.	None.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court **(and who have not or will not enter an appearance in this case)** are:

LEE SULLIVAN SHEA & SMITH LLP: Cole B. Richter (formerly of McDonnell, Boehnen, Hulbert & Berghoff, LLP);

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP: Erika H. Arner, Cory C. Bell, Rachel L. Emsley, Joshua L. Goldberg, Kevin Rodkey.

FORM 9. Certificate of Interest

Form 9
Rev. 10/17

5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. *See* Fed. Cir. R. 47. 4(a)(5) and 47.5(b). (The parties should attach continuation pages as necessary).

Please see attached.

2/19/2018

Date

/s/ Leif R. Sigmond, Jr.

Signature of counsel

Leif R. Sigmond, Jr.

Printed name of counsel

Please Note: All questions must be answered

cc: Counsel of Record via ECF

Reset Fields

FORM 9. Certificate of Interest, Continued

5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. See Fed. Cir. R. 47, 4(a)(5) and 47.5(b). (The parties should attach continuation pages as necessary).

**Trading Techs. Int'l, Inc. v. BGC Partners, Inc.*, No. 1:10-cv-00715 (N.D. Ill. Feb. 3, 2010) (Kendall, J.);

*Appeal No. 2017-2565 from a final written decision in CBM2016-00031, *TradeStation Grp., Inc. v. Trading Techs. Int'l, Inc.* (filed Feb. 9, 2016) involving an additional TT patent, U.S. Patent No. 7,813,996;

* Appeal Nos. 2017-1732, -1766, -1769 from a final written decision in CBM2015-00161, *TradeStation Grp., Inc. v. Trading Techs. Int'l, Inc.* (filed July 20, 2015) involving an additional TT patent, U.S. Patent No. 6,766,304;

* Appeal Nos. 2017-2052, -2053 from a final written decision in CBM2015-00182, *IBG LLC v. Trading Techs. Int'l, Inc.* (filed Sept. 11, 2015) involving an additional TT patent, U.S. Patent No. 6,772,132;

* Appeal No. 2017-2054 from a final written decision in CBM2015-00181, *IBG LLC v. Trading Techs. Int'l, Inc.* (filed Sept. 11, 2015) involving an additional TT patent, U.S. Patent No. 7,676,411;

* Appeal No. 2017-2257 from a final written decision in CBM2015-00179, *IBG LLC v. Trading Techs. Int'l, Inc.* (filed Sept. 2, 2015) involving an additional TT patent, U.S. Patent No. 7,533,056;

* Appeal No. 2017-2323 from a final written decision in CBM2015-00172, *TradeStation Grp., Inc. v. Trading Techs. Int'l, Inc.* (filed Aug. 12, 2015) involving an additional TT patent, U.S. Patent No. 7,783,556;

* Appeal No. 2017-2621 from a final written decision in CBM2016-00051, *TradeStation Grp., Inc. v. Trading Techs. Int'l, Inc.* (filed Mar. 29, 2016) involving an additional TT Patent, U.S. Patent No. 7,904,374;

* Appeal No. 2018-1063 from a final written decision in CBM2016-00032, *IBG LLC v. Trading Techs. Int'l, Inc.* (filed Feb. 9, 2016) involving an additional TT Patent, U.S. Patent No. 7,212,999;

* Appeal No. 2018-1105 from a final written decision in CBM2016-00009, *IBG LLC v. Trading Techs. Int'l, Inc.* (filed Oct. 23, 2015) involving an additional TT Patent, U.S. Patent No. 7,685,055;

* Appeal No. 2018-1438 from a final written decision in CBM2016-00087, *IBG LLC v. Trading Techs. Int'l, Inc.* (filed June 3, 2016) involving an additional TT Patent, U.S. Patent No. 7,412,416;

* Appeal No. 2018-1443 from a final written decision in CBM2016-00086, *TradeStation Techs., Inc. v. Trading Techs. Int'l, Inc.* (filed June 7, 2016) involving an additional TT Patent, U.S. Patent No. 7,818,247;

* Appeal No. 2018-1489 from a final written decision in CBM2016-00090, *IBG LLC v. Trading Techs. Int'l, Inc.* (filed June 13, 2016) involving an additional TT Patent, U.S. Patent No. 7,725,382;

* CBM2016-00040, *IBG LLC v. Trading Techs. Int'l, Inc.* (filed Feb. 25, 2016) (joined with the CBM2015-00172 proceeding); and

* CBM2016-00035, *IBG LLC v. Trading Techs. Int'l, Inc.* (filed Feb. 17, 2016) (joined with the CBM2015-00161 proceeding).

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RULE 35(b) STATEMENT OF COUNSEL

Based on my professional judgment, I believe the panel decision is contrary to at least the following decisions of the Supreme Court of the United States or the precedents of this court: *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208 (2014); *Bilski v. Kappos*, 561 U.S. 593 (2010); *Diamond v. Chakrabarty*, 447 U.S. 303 (1980); *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356 (Fed. Cir. 2018); *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999 (Fed. Cir. 2018).

Based on my professional judgment, I believe this appeal requires an answer to one or more precedent-setting questions of exceptional importance:

Did the panel contradict its own and Supreme Court precedent by holding that TT's claims directed to the technological (under any reasonable meaning of the term) Ladder Tool — different from a mechanical tool only in that it is constructed from graphical user interface (GUI) elements rather than being constructed from physical and mechanical elements — are (a) subject to CBM jurisdiction and (b) directed to an “abstract idea” and therefore patent ineligible?

Date: July 31, 2019

By: /s/ Michael D. Gannon
Michael D. Gannon

**ATTORNEY OF RECORD FOR
TRADING TECHNOLOGIES
INTERNATIONAL, INC.**

I. TT’S CLAIMED LADDER TOOL INVENTION SOLVED TECHNOLOGICAL PROBLEMS AND IS INDISTINGUISHABLE FROM A MECHANICAL TOOL

A. The Claimed Ladder Tool Solves Specific Technological Problems

The patents’ Fig. 2 depicts a prior art conventional order-entry screen.

		201	202	203	204	205				
	Contract	Depth	BidQty	BidPrc	AskPrc	AskQty	LastPrc	LastQty	Total	
1	AAPL	•	1200	104.87	104.88	2000	104.90	489	9697	
2			626	104.85	104.91	815				
3			500	104.82	104.92	600				
4			500	104.81	104.94	2456				
5			200	104.79	104.97	800				

Appx94; Appx9167. This was the overwhelming conventional electronic order-entry screen style before the invention. Appx8342-8344. It was considered optimal by both Persons of Ordinary Skill in the Art (POSAs) and experts because it was perceived as meeting all technical design criteria for order-entry screens. *Id.*

These criteria are: (1) conserving precious screen real estate (traders use many space-consuming interfaces, such as charts, news-feeds and more); and (2) displaying the most important information (the best bid/ask prices and quantities, representing the current market state) at designated locations. Appx8344-8345.

This was important so users could quickly find mission-critical information, like indicators representing the horizon for an airplane pilot or life-critical aspects of a

patient. The conventional screens were considered accurate and fast (using single action order-entry) at the inside market. Appx8342-8344.

Engineers made incremental improvements, but the overall concept remained the same until the Ladder Tool invention — which was widely copied. BB 84-90.¹ Almost 20 years after its release, use of the invention is growing.

The lead inventor (Harris Brumfield) was a visionary, and one of the world's largest traders — at times processing over 20% of Bund futures contracts traded on the Eurex exchange. Appx8362-8363. Conventional screens presented him a technical accuracy problem when using single action order-entry, which other traders either did not appreciate or necessarily accepted. *See* Appx8369-8370. That is, the price levels associated with order-entry locations could unpredictably change out from under a user's cursor at the moment of a market change — causing an order message to be sent with an incorrect price parameter. Appx8360-8363. While for most this was a nuisance outweighed by the conventional screens' benefits, Mr. Brumfield considered the inaccuracy unacceptable.

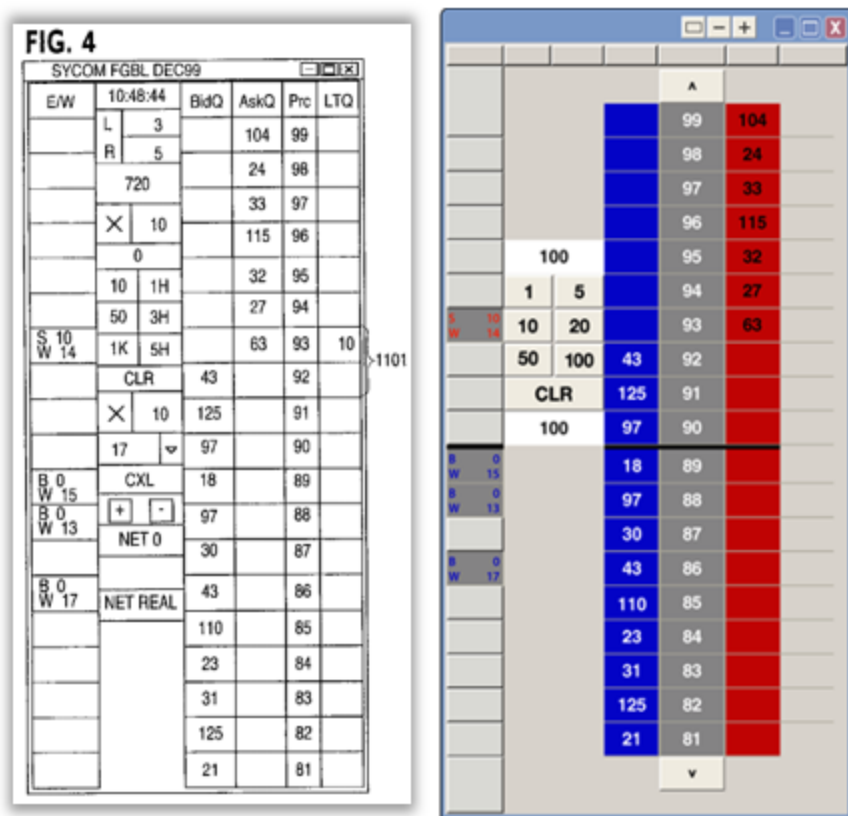
Not only did he uniquely perceive this technical-accuracy problem, Mr. Brumfield pushed himself to create an innovative solution. Appx8365-8373. He had the means to retain TT to confidentially construct a prototype. *Id.* After much

¹ Citations to “BB” are to Dkt. 33.

work and testing, the invention turned out to address the speed/accuracy problem, and more. *Id.* Mr. Brumfield assigned the invention to TT with the requirement that TT seek patent protection and turn it into a product (MD Trader) — a revolutionary order-entry tool that saved TT (that was losing money before). *Id.* The invention not only provided great benefits to users, it caused huge increases in volume — benefiting exchanges and everyone by improving market performance. Appx8569-8576. The CIO of the CME testified that the invention “was a significant factor contributing to the electronic volume growth at the CME.” Appx9250.

**B. The Ladder Tool Is A Specific Structured Technological Tool
Providing A Solution To Technological Problems**

The figures below illustrate the invention: a figure from the patent on the left and a depiction of the MD Trader product on the right:



Each Ladder Tool patent has claims of slightly different scopes to capture inventive aspects of the tool. At a high level, the invention is the combination of the structural elements of a GUI tool that a user interacts with (substantively no different than mechanical structural elements). Due to the state of technology, the commercial version (and preferred embodiment) was a GUI tool constructed of GUI structural elements. Unlike many controversial software patents, the patents-at-issue do not merely claim a result or performing on a computer a process that was previously done manually. The claimed tool did *not exist* before the invention — *in either mechanical or GUI form*. BB 21-23.

The invention improves accuracy without a sacrifice in speed (& vice versa):

The figures below illustrate a technical speed/accuracy problem caused by the design of conventional screens exposed by the invention. Appx8360-8366. With single action order-entry, the price value associated with an order-entry location would unpredictably change at the moment a user clicks — causing an order message to be sent with an incorrect price parameter. *Id.*

As illustrated below, at T1, the user starts to click on what the screen says is price level 175, but between T1 and the time the click is completed (T2), the value unpredictably changed to 180. This is the unrecognized problem mentioned above put up with by most professional traders before the invention.

T1

Contract	Depth	BidQty	BidPrc	AskPrc	AskQty	LastPrc	LastQty	Total
		80	111170	111175	345			
		1120	111165	111180	167			
		578	111160	111185	265			
		349	111155	111190	52			
		58	111150	111195	144			

T2

Contract	Depth	BidQty	BidPrc	AskPrc	AskQty	LastPrc	LastQty	Total
		478	111175	111180	67			
		466	111170	111185	245			
		85	111165	111190	743			
		337	111160	111195	1044			
		164	111155	111200	73			

This one tick inaccuracy caused a \$1,562.50 mistake. *Id.* The Ladder Tool invention reduces the chance of this problem occurring. *Id.* The invention is not merely an arrangement of data on a screen. Perhaps that could be argued of certain

conventional screens, but not the Ladder Tool invention because the full combination is a tool, no different (for § 101 purposes) than an improved hammer, screw driver, or surgical tool (made of known materials) — for which it would be frivolous to argue lack of eligibility.

The invention surprisingly improved visualization of market changes:

Along with improved accuracy/speed, the claimed combination provided a surprising benefit of better visualization. Appx8366-8367; Appx8467-8468. The invention's construction causes the movement of inside market indicators to indicate market changes. *Id.* This went against conventional wisdom, and was viewed by all as anathema, resulting in mission critical indicators moving around and possibly out of view. Appx8351-8352; Appx8481-8482; Appx8502-8503.

C. Overwhelming Evidence Shows The Ladder Tool Was Revolutionary

The objective evidence showing the revolutionary nature and technical benefits of the anything-but-abstract inventive tool is overwhelming. BB 67-91. This includes undisputed evidence that the revolutionary tool addresses classic technical problems of speed, accuracy, efficiency, and usability, and met with significant initial skepticism. Appx8466-8469; Appx8234-8236; Appx8245; Appx8582; Appx8588-8589; Appx8596-8603; BB 74-76. Also, unrebutted evidence shows the invention was not obvious to experts even with hindsight. BB 69-71. The significance and volume of objective evidence was noted by the Court

and admitted by IB in the following exchange during oral argument in *IBG LLC v. Trading Techs. Int'l, Inc. (IBG I)*, 757 F. App'x 1004 (Fed. Cir. 2019), relating to issues of CBM jurisdiction and § 101 for the '132/'304/'411/'996 patents:

The Court: They [TT] had a lot of objective evidence, or indicia, a lot. It's not actually the most I've ever seen . . . but, nonetheless, they had a lot. It was a lot. This is, it's really up there, it's, it's among the cases with the most, the largest amount of objective indicia of non-obviousness that I've ever seen. It's a lot.

IB Counsel: It is a lot.

Recording of Oral Argument at 21:13, *Trading Techs. Int'l, Inc. v. Interactive Brokers LLC*, No. 2017-2054 (argued Feb. 7, 2019), available at <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2017-2054.mp3>. This evidence included testimony from many third-party witnesses praising and describing the revolutionary nature and concrete benefits of the anything but abstract claimed invention. Appx9221-9291; BB 77-78. As just one example, Mr. Zellinger (a well-known executive with over 40 years experience in the field) testified under oath that “MD Trader was the first application designed to be used as a true trading *tool* [Once users saw it and its advantages, the invention] spread like wildfire.” Appx9289-9291 (emphasis added). Importantly, like others, Mr. Zellinger signed this declaration in 2004, years before the current creative § 101 arguments were even a glimmer in the thoughts of defense attorneys. As such,

they are significant objective evidence of the truth, entitled to special weight based on common sense. The following are just several examples of testimony praising the anything but abstract invention: it was “ingenious,” an “invaluable *tool*,” a “significant departure,” and created a “paradigm change.” BB 77-78 (emphasis added) (internal quotations omitted).

D. The Ladder Tool Patents Were Rigorously Examined

Whatever may be said of software related patents in general, TT’s core Ladder Tool patents underwent extremely thorough and tough examinations at the PTO. For example, while being prosecuted from 2000-04, the parent ’132/’304 patent applications were examined in the toughest, by far, art unit in the PTO — the often-criticized business method art unit Class 705. *E.g.*, U.S. Patent No. 6,772,132, at [52]. Not all applications examined there actually claimed a “business method” — it was a catchall for some inventions (*e.g.*, those with downstream applications in the financial industry).

The art unit’s allowance rate was no more than 11% when the ’132/’304 patents were examined — amongst the lowest at the PTO. Dennis Crouch, *Updated Business Method Patent Statistics*, Patently-O (May 4, 2005), https://patentlyo.com/patent/2005/05/updated_busines.html (showing 11% allowance rate in class 705 for 2004). Many of the patent applications in the “business method” unit, including the applications leading to the ’132/’304 patents,

were subject to a special Quality Review Program (“second set of eyes”). *Id.*; *see also, e.g.*, U.S. Application No. 09/590,692, 07-24-2006 Petition Entered, at TT0099569 (discussing quality control review); *id.* 08-12-2002 Applicant Arguments/Remarks Made in an Amendment at 3 (same). Rarely, if ever, is it reported that “business method” applications endured more rigorous examinations than other applications.

The revolutionary Ladder Tool patents made it through the rigorous process of the PTO’s strictest art unit, along with the EPO (where the law bans “business method patents” and requires technical inventions) and the scrutiny of many courts. In allowing comparable claims, the EPO stated,

[T]he ED is of the opinion that the subject-matter of claim 1 solves a technical problem which is to improve the operability of the system . . . increasing the accuracy for placing orders. In fact, this problem is independent from the business aspects of the claims. . . .The solution is to use metadata to create a field of static values (prices). The other measures (bids and asks) are moved relative to the static field. This assures both speed and accuracy. . . . [T]he ED considers that this solution is new and inventive.

EP Application No. 1319211, 08-27-2004 Annex to the Communication, at 5-6.

Importantly, an invention should not need to be revolutionary to merely be eligible for patenting consideration.

E. The Claimed Ladder Tool (While Preferably Constructed Of GUI Elements), Is Substantively No Different Than A Mechanical Tool

TT's first issued U.S. parent patents directed to the Ladder Tool invention (U.S. Patents Nos. 6,766,304 and 6,772,132) are related and share the same specification. Appx86, at [63]. These patents, along with some related patents (e.g., U.S. Patent Nos. 7,693,768 and 7,725,382) also sharing the same specification, are TT's core Ladder Tool patents. The '768 patent is the subject of this rehearing request. The claimed invention is the structure, makeup and construction of the tool discussed above that provides classic technical benefits. The validity and eligibility of the '132/'304 patents have been repeatedly upheld, including being found § 101 eligible by this Court. *IBG I*, 757 F. App'x at 1008; *Trading Techs. Int'l, Inc. v. CQG, INC.*, 675 F. App'x 1001, 1006 (Fed. Cir. 2017). Importantly, this Court found that the '132/'304 claims "require a specific, structured [GUI] paired with a prescribed functionality directly related to the [GUI]'s structure that is addressed to and resolves a specifically identified problem in the prior state of the art." *CQG*, 675 F. App'x at 1004. In other words, the claims are indistinguishable from claims to a mechanical device, which by definition are § 101 eligible. This Court correctly found the patents "are directed to improvements in existing [GUI] *devices* that have no 'pre-electronic trading analog,' and recite more than "“setting, displaying, and selecting” data” and

“solve problems of prior [GUI] *devices* in the context of . . . speed, accuracy and usability.” *Id.* (emphasis added) (internal quotations and alterations omitted).

This Court later adopted *CQG*’s reasoning in *Data Engine*, a precedential decision that held GUI claims patent eligible and explained that the claims comported with those in *CQG*. 906 F.3d at 1009. Earlier this year, this Court found the ’132/’304/’411/’996 patent claims are directed to a technological invention under “any reasonable meaning of that term” and thus not subject to CBM jurisdiction. *IBG I*, 757 F. App’x at 1008. Although the claims of the ’132/’304/’411/’996 patents differ from one another, the differences are not relevant to § 101 or CBM issues, and the Court correctly treated them the same.

Yet, different panels of this Court recently found the ’768 /’382 patents are CBM patents and ineligible under § 101, ***even though the ’768 /’382 claims are indistinguishable from the ’132/’304/’411/’996 claims for CBM/§ 101 purposes.*** *Trading Techs. Int’l, Inc. v. IBG LLC (IBG IV)*, 767 F. App’x 1006, 1007 (Fed. Cir. 2019); *Trading Techs. Int’l, Inc. v. IBG LLC (IBG V)*, 771 F. App’x 493 (Fed. Cir. 2019). Below is a comparison of claim 1 of the ’768 and the indistinguishable for 101/CBM purposes ’411 claim 1:

Claim 1	Fig. 3 (Time 1)	Fig. 4 (Time 2)
<p>1. A method of placing a trade order for a commodity on an electronic exchange using a graphical user interface and a user input device, the method comprising:</p> <p>receiving data relating to the commodity from the electronic exchange, the data comprising an inside market with a highest bid price and a lowest ask price currently available for the commodity;</p> <p>dynamically displaying via a computing device a first indicator in one of a plurality of areas in a bid display region, each area in the bid display region corresponding to a price level along a price axis, the first indicator representing a quantity associated with at least one order to buy the commodity at the highest bid price;</p> <p>dynamically displaying via the computing device a second indicator in one of a plurality of areas in an ask display region, each area in the ask display region corresponding to a price level along the price axis, the second indicator representing a quantity associated with at least one order to sell the commodity at the lowest ask price;</p> <p>displaying an order entry region comprising a plurality of locations for receiving single action commands to send trade orders, the plurality of locations including:</p> <p>(a) at least one first fixed location corresponding to a first price level along the price axis associated with the highest bid price currently available in the market, wherein upon receipt of new data representing an updated highest bid price currently available for the commodity, the at least one first fixed location continues to correspond to the first price level even if the first price level is no longer associated with the highest bid price currently available in the market; and</p> <p>(b) at least one second fixed location corresponding to a second price level along the price axis associated with the lowest ask price currently available in the market, wherein upon receipt of new data representing an updated lowest ask price currently available for the commodity, the at least one second fixed location continues to correspond to the second price level even if the second price level is no longer associated with the lowest ask price currently available in the market;</p> <p>updating the display of the first indicator such that the first indicator is moved relative to the price axis to a different area in the bid display region corresponding with a different price level along the price axis in response to receipt of new data representing an updated highest bid price currently available for the commodity;</p> <p>updating the display of the second indicator such that the second indicator is moved relative to the price axis to a different area in the ask display region corresponding with a different price level along the price axis in response to receipt of new data representing an updated lowest ask price currently available for the commodity; and</p> <p>setting a plurality of parameters for a trade order relating to the commodity and sending the trade order to the electronic exchange in response to a selection of a particular location of the order entry region by a single action of a user input device.</p>	<p>FIG. 3</p>	<p>FIG. 4</p>

768 Patent [Panel Held Ineligible and Not Technological]

Claim 1	Fig. 3 (Time 1)	Fig. 4 (Time 2)
<p>1. A method of displaying market information relating to and facilitating trading of a commodity being traded on an electronic exchange, the method comprising:</p> <p>receiving, by a computing device, market information for a commodity from an electronic exchange, the market information comprising an inside market with a current highest bid price and a current lowest ask price;</p> <p>displaying, via the computing device, a bid display region comprising a plurality of graphical locations, each graphical location in the bid display region corresponding to a different price level of a plurality of price levels along a price axis;</p> <p>displaying, via the computing device, an ask display region comprising a plurality of graphical locations, each graphical location in the ask display region corresponding to a different price level of the plurality of price levels along the price axis;</p> <p>dynamically displaying, via the computing device, a first indicator representing quantity associated with at least one trade order to buy the commodity at the current highest bid price in a first graphical location of the plurality of graphical locations in the bid display region, the first graphical location in the bid display region corresponding to a price level associated with the current highest bid price;</p> <p>upon receipt of market information comprising a new highest bid price, moving the first indicator relative to the price axis to a second graphical location of the plurality of graphical locations in the bid display region, the second graphical location corresponding to a price level of the plurality of price levels associated with the new highest bid price, wherein the second graphical location is different from the first graphical location in the bid display region;</p> <p>dynamically displaying, via the computing device, a second indicator representing quantity associated with at least one trade order to sell the commodity at the current lowest ask price in a first graphical location of the plurality of graphical locations in the ask display region, the first graphical location in the ask display region corresponding to a price level associated with the current lowest ask price;</p> <p>upon receipt of market information comprising a new lowest ask price, moving the second indicator relative to the price axis to a second graphical location of the plurality of graphical locations in the ask display region, the second graphical location corresponding to a price level of the plurality of price levels associated with the new lowest ask price, wherein the second graphical location is different from the first graphical location in the ask display region;</p> <p>displaying, via the computing device, an order entry region comprising a plurality of graphical areas for receiving single action commands to set trade order prices and send trade orders, each graphical area corresponding to a different price level along the price axis; and</p> <p>selecting a particular graphical area in the order entry region through a single action of the user input device to both set a price for the trade order and send the trade order having a default quantity to the electronic exchange;</p>	<p>FIG. 3</p>	<p>FIG. 4</p>

411 Patent [IBG I Found Technological]

IBG IV and *V* are irreconcilable with *IBG I*, *CQG*, and precedent of this Court and the Supreme Court.² The literal scope of each core Ladder Tool patent's independent claims differs slightly — but they are all directed to the structure, makeup and construction of the Ladder Tool that addresses classic technical problems. Importantly, the '768 patent is indistinguishable from a mechanical tool. The consequences of such an invention not even being eligible for patent consideration are terrible and far-reaching. Logically, this would result in mechanical tools such as surgical devices not being eligible for patent protection.

Not all GUI or computer related inventions are the same for 101 purposes. There is a spectrum with some GUI related inventions that merely display known information in conventional ways on one end. Various cases have found such claims § 101 ineligible. Then there are GUI claims that say more — like the

² *Trading Techs. Int'l, Inc. v. IBG LLC (IBG II)*, 921 F.3d 1084 (Fed. Cir. 2019), is not relevant here. The two Friesen patents-at-issue there are unrelated to the '768 patent, and the Court viewed them as just displaying information in a routine way. *Id.* at 1092. Even though the '374 patent-at-issue therein, is from the same family as the '768 patent, the Court viewed it as too broad. *Id.* at 1091 (finding the claim “provide[s] no indication to a user of market information . . . and the graphical locations simply could be “black boxes” with . . . *no information provided to the user.*” (alterations in original)). By contrast, the '768 claims do not fail to provide enough structural detail about the tool. *Trading Techs. Int'l, Inc. v. IBG LLC (IBG III)*, 921 F.3d 1378 (Fed. Cir. 2019), is likewise not relevant because it dealt with another unrelated patent viewed by this Court as merely calculating/displaying P/L information in a routine and conventional way. *Id.* at 1383. To narrow issues, TT is not seeking review of *IBG II /III* herein.

claims-at-issue in *Data Engine* and *Core Wireless*. But, to be clear, the Ladder Tool claims fall on the clearly eligible side of the spectrum because they are indistinguishable from claims to mechanical tools. It is inconceivable that a claim directed to the construction of a mechanical tool (*e.g.*, a screw driver) can be found ineligible. There can be no dispute that neither a mechanical compass or artificial horizon instrument on an airplane is abstract. The same is true for a mechanical surgical instrument. *See, e.g.*, Appx8315-8316; Appx8586-8587.

At a high level, the claimed invention is the combination of structural GUI elements that make up the construction of a tool that provides a user with, *inter alia*, (i) a more efficient and accurate mechanism/tool for placing and cancelling orders on an electronic exchange, and (ii) a better and more efficient/useable view of market changes (analogous to an instrument in an airplane cockpit that provides a pilot an improved visualization of the horizon or a surgical device that provides a surgeon with a more accurate view of important aspects of a patient, Appx8331-8332). The claims require a tool that combines together all of these elements. That the preferred embodiment of the tool happens to be constructed from structural elements of a GUI is a red herring to the § 101 issues. An analogous tool could be constructed with mechanical components. Computer implemented inventions (even inventive GUIs) often create confusion. Accordingly, to stay accurate and avoid confusion, the claimed invention is referred to herein as a tool.

Again at a high level, the individual claimed structural elements of the invention that construct the tool are: (a) a scale of prices (the price axis); (b) best bid/ask indicators that move along the scale of prices in response to market changes; and (c) order-entry regions (like buttons) corresponding to different price levels along the scale of prices constructed to receive single action commands of a user input device that causes an order message (like an object) at the associated price level to be sent to the electronic exchange with pre-set parameters.

Some claims further require indicators representing working orders pending at the exchange to be provided along the price scale. Other claims further require that such working order indicators be constructed such that they can be selected to send an order cancellation message to cancel the order represented by that indicator. The '382 patent, provides the structure of single action cancellation in the independent claims and adds the structure of single action order-entry in dependent claims. '382 patent, at 12:21-16:6.

II. THE PANEL DECISION'S CONCLUSION THAT THE '768 PATENT MERELY FOCUSES ON "IMPROVING THE TRADER" HIGHLIGHTS THE CONFUSION REGARDING CBM AND PATENT ELIGIBILITY

IBG IV found that the '768 patent is a CBM patent and is ineligible because the 768 patent "focus[es] on improving the trader, not the functioning of the

computer.” 767 F. App’x at 1007 (internal quotations omitted).³ This conclusion is wrong, is in direct conflict with precedent and will unwittingly cause serious harm to the patent system. For instance, any creative lawyer argument that a mechanical or GUI tool used by brain or heart surgeons to save a patient’s life is “abstract” because it “improves the surgeon” is utterly baseless, and merely seeks to confuse matters. That lawyer should try making such an argument to the patient’s family or tell doctors to not use such “abstract” tools on him or family members in the unfortunate event that they are needed. Put simply, such an argument has no merit, and yet the Panel decision was based on this faulty premise.

In any event, ignoring the utter irrelevance of whether an invention improves the user, the Ladder Tool inventions are not only “improving the user.” The invention is not about improving the user as a person — that is silly. Rather, the invention is a GUI tool that improves the computer, so that it functions better — providing indisputable classic technical benefits to a user. Appx8466-8469; Appx8234-8236; Appx8245; Appx8582; Appx8588-8589; Appx8596-8603. One need not invent a new chip or piece of hardware to improve a computer.

³ This flawed focus on improving the trader was incorrectly lifted from *IBG II/III*.

The Ladder Tool is created by software that transforms the computer into a tool that did not previously exist. This new tool provides real technical benefits to users. These include improved speed of order-entry without sacrificing accuracy (and vice versa). Appx8352-8353. This alone shows that the invention is concrete, technological and not a CBM. The Court got this issue right in *CQG* and *IBG I*, but completely wrong in *IBG IV*. As an aside, to the extent any court is thinking about establishing a rule that dismisses inventions that “improve” or provide a benefit to a user, that would be misguided and against years of precedent. *See supra* Rule 35(b) Statement of Counsel.

Any invention worth anything provides a benefit somehow/someway (directly or downstream) to a user. In fact, if anything, it makes sense to require that claimed inventions provide a benefit to a user.

In sum, the “improve the user” argument, which was the basis of the Panel’s finding that the ’768 patent is a CBM patent and is abstract, is clearly inapposite and a red herring. Panel rehearing and/or rehearing *en banc* is required to clear up the confusion surrounding the precedential setting issues discussed herein for which the law is in conflict and are of exceptional importance, which has now reached indisputably technological inventions that are indistinguishable (for § 101/CBM purposes) from mechanical (and technological) inventions whose patent eligibility has always been clear-cut.

III. UNDER THE CORRECT LEGAL STANDARD, TT’S LADDER TOOL INVENTION IS PLAINLY PATENT ELIGIBLE

TT’s Ladder Tool and inventions like it are not abstract ideas, and *Alice* never said that they are. Rather, the Ladder Tool is like any other tool — patent eligible under centuries-old Supreme Court law — simply transported in the modern world of computers. *See, e.g., Rubber-Tip Pencil Co. v. Howard*, 87 U.S. 498, 507 (1874) (“An idea of itself is not patentable, but a new device by which it may be made practically useful is.”). A new device is a new device, regardless of whether it exists on a wooden desktop or a computer desktop.

The Supreme Court’s decision in *Chakrabarty* supports the eligibility of the Ladder Tool. There, the Court confronted the new reality brought by biotechnology: inventions all built on the platform of recombinant DNA technology and the like. The Court made a simple ruling: biotechnological creations are patent eligible when they are “not nature’s handiwork,” but rather the inventor’s own — new organisms “with markedly different characteristics from any found in nature and [] having the potential for significant utility.” *Chakrabarty*, 447 U.S. at 310. Biotechnological innovations are often times applications of laws of nature implemented using conventional technology — *e.g.*, utilizing a particular sequence of DNA or recombinant protein. But that does not make such manmade inventions ineligible. The Ladder Tool is a manmade

interactive tool that is different-in-kind from a computer-implemented business method. *Alice* is inapposite.

GUI tools like TT's Ladder Tool are a new generation of human creation. One hundred years ago, a tool craftsman sketched out a new design for a claw hammer and had it forged by a blacksmith — using conventional metal-working and materials. That claw hammer is anything but abstract. It is a patentable tool. So too are GUIs like TT's Ladder Tool — designed in the human mind and constructed in the forge of the 21st century — using structural GUI elements created on computers.

CONCLUSION AND RELIEF SOUGHT

Because the panel failed to follow the Supreme Court and Circuit precedent discussed above, TT respectfully requests that the panel decision be reversed.

Respectfully submitted,

Date: July 31, 2019

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ADDENDUM

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

**TRADING TECHNOLOGIES INTERNATIONAL,
INC.,**
Appellant

v.

IBG LLC, INTERACTIVE BROKERS LLC,
Appellees

UNITED STATES,
Intervenor

2018-1105

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. CBM2016-
00009.

**TRADING TECHNOLOGIES INTERNATIONAL,
INC.,**
Appellant

v.

IBG LLC, INTERACTIVE BROKERS LLC,
Appellees

UNITED STATES,
Intervenor

2018-1302

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. CBM2016-
00054.

TRADING TECHNOLOGIES INTERNATIONAL,
INC.,
Appellant

v.

IBG LLC, INTERACTIVE BROKERS LLC,
Appellees

UNITED STATES,
Intervenor

2018-1438

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. CBM2016-
00087.

TRADING TECHNOLOGIES INTERNATIONAL,
INC.,

TRADING TECHNOLOGIES INT'L v. IBG LLC

3

Appellant

v.

**UNITED STATES, ANDREI IANCU, UNDER
SECRETARY OF COMMERCE FOR
INTELLECTUAL PROPERTY AND DIRECTOR OF
THE UNITED STATES PATENT AND TRADEMARK
OFFICE,**
Intervenors

2018-1443

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. CBM2016-
00086.

Decided: May 21, 2019

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Before HUGHES, MAYER, and LINN, *Circuit Judges*.

HUGHES, *Circuit Judge*.

Trading Technologies International, Inc., appeals four Covered Business Method Review decisions of the Patent Trial and Appeal Board finding Trading Technologies' patents ineligible under 35 U.S.C. § 101. Recently, this Court issued two precedential opinions affirming Board decisions finding several of Trading Technologies related patents unpatentable under § 101. *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084 (Fed. Cir. 2019) (*IBG I*); *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1378 (Fed. Cir. 2019) (*IBG II*). The parties submitted supplemental briefing on whether *IBG I* dictated the outcome of the present appeals. The parties also discussed the effect of *IBG I* and *IBG II* at oral argument.

We are not persuaded by Trading Technologies' arguments that the patents at issue here, U.S. Patent Nos. 7,412,416 B2; 7,818,247 B2; 7,685,055 B2; and 7,693,768 B2, are distinguishable from the patents invalidated in *IBG I* and *IBG II*. Like *IBG I* and *IBG II*, the challenged patents "focus[] on improving the trader, not the functioning of the computer." *IBG II*, 921 F.3d at 1383; *see also IBG I*, 921 F.3d at 1091. Although these patents may provide different information than the patents in *IBG I* and

IBG II, information is “intangible” and its “particular content . . . does not change its character as information.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). We therefore hold that *IBG I* and *IBG II* control and affirm the Board’s decisions.

We also find Trading Technologies waived its constitutional arguments. *See IBG II*, 921 F.3d at 1385.

AFFIRMED

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

CERTIFICATE OF SERVICE

I certify that I served a copy on counsel of record on July 31, 2019

by:

- ☐ U.S. Mail
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- ☐ Hand
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UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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