NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

TRADING TECHNOLOGIES INTERNATIONAL, INC.,
Plaintiff-Appellee

v.

CQG, INC., CQG, LLC, FKA CQGT, LLC,
Defendants-Appellants

2016-1616

Appeal from the United States District Court for the Northern District of Illinois in No. 1:05-cv-04811, Judge Sharon Johnson Coleman.

Decided: January 18, 2017

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Before NEWMAN, O'MALLEY, and WALLACH, *Circuit Judges.*

NEWMAN, *Circuit Judge.*

The CQG companies appeal the decision of the United States District Court for the Northern District of Illinois, holding that the asserted claims of U.S. Patents No. 6,772,132 ("the '132 patent") and No. 6,766,304 ("the '304 patent") recite patent-eligible subject matter in terms of 35 U.S.C. § 101. This appeal relates only to eligibility under Section 101. We affirm the district court's decision.

DISCUSSION

Patent owner Trading Technologies International, Inc. ("TTI") charged CQG with infringement of the '132 patent and the '304 patent. CGQ moved for judgment as a matter of law, asserting that the claims of these patents are directed to patent-ineligible subject matter. The district court denied CGQ's motion, holding that the claims are not directed to an abstract idea and also that they recite an inventive concept, such that the subject matter is patent-eligible under § 101. *Trading Techs.*

Int'l, Inc. v. CQG, Inc., No. 05-cv-4811, 2015 WL 774655 (N.D. Ill. Feb. 24, 2015) ("Dist. Ct. op."). CGQ appeals this holding.

The '132 and '304 patents describe and claim a method and system for the electronic trading of stocks, bonds, futures, options and similar products. The patents explain problems that arise when a trader attempts to enter an order at a particular price, but misses the price because the market moved before the order was entered and executed. It also sometimes occurred that trades were executed at different prices than intended, due to rapid market movement. This is the problem to which these patents are directed.

The patents are for "[a] method and system for reducing the time it takes for a trader to place a trade when electronically trading on an exchange, thus increasing the likelihood that the trader will have orders filled at desirable prices and quantities." '132 patent, Abstract; '304 patent, Abstract. The patents describe a trading system in which a graphical user interface "display[s] the market depth of a commodity traded in a market,[1] including a dynamic display for a plurality of bids and for a plurality of asks in the market for the commodity and a static display of prices corresponding to the plurality of bids and asks." '132 patent col. 3, ll. 11–16; '304 patent col. 3, ll. 15–20. In the patented system bid and asked prices are displayed dynamically along the static display, and the system pairs orders with the static display of prices and prevents order entry at a changed price.

Both the '132 and the '304 patents have the same specification, and the district court treated claim 1 in each

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[1] "A commodity's market depth is the current bid and ask prices and quantities in the market." '132 patent col. 3, ll. 69–61; '304 patent col. 3, ll. 63–65.

patent as representative, as agreed by the parties. We illustrate the analysis of § 101 with respect to method Claim 1 of the '304 patent:

> 1. A method for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface, the method comprising;
>
> dynamically displaying a first indicator in one of a plurality of locations in a bid display region, each location in the bid display region corresponding to a price level along a common static price axis, the first indicator representing quantity associated with at least one order to buy the commodity at the highest bid price currently available in the market;
>
> dynamically displaying a second indicator in one of a plurality of locations in an ask display region, each location in the ask display region corresponding to a price level along the common static price axis, the second indicator representing quantity associated with at least one order to sell the commodity at the lowest ask price currently available in the market;
>
> displaying the bid and ask display regions in relation to fixed price levels positioned along the common static price axis such that when the inside market changes, the price levels along the common static price axis do not move and at least one of the first and second indicators moves in the bid or ask display regions relative to the common static price axis;
>
> displaying an order entry region comprising a plurality of locations for receiving commands to send

> trade orders, each location corresponding to a price level along the common static price axis; and
>
> in response to a selection of a particular location of the order entry region by a single action of a user input device, setting a plurality of parameters for a trade order relating to the commodity and sending the trade order to the electronic exchange.

'304 patent col. 12, l. 36–col. 13, l. 3. The '132 claims are directed to similar subject matter covering a method and system.

The Court's opinion in *Alice Corporation Pty. Ltd. v. CLS Bank International,* 134 S.Ct. 2347 (2014), provides the framework for patent-eligibility of business methods. The Court explained that a patent's

> claim falls outside § 101 where (1) it is "directed to" a patent-ineligible concept, *i.e.*, a law of nature, natural phenomenon, or abstract idea, and (2), if so, the particular elements of the claim, considered "both individually and 'as an ordered combination,'" do not add enough to "'transform the nature of the claim' into a patent-eligible application."

Id. at 2355 (citations omitted). Patent eligibility under § 101 is an issue of law, and receives *de novo* determination on appeal.[2]

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[2] The parties dispute whether the district court erred in requiring proof of ineligibility under § 101 by clear and convincing evidence. Because our review is de novo, and because under either standard the legal requirements for patentability are satisfied, we need not address this dispute.

The district court first applied Step 1 of this two-step framework. The court held that, rather than reciting "a mathematical algorithm," "a fundamental economic or longstanding commercial practice," or "a challenge in business," the challenged patents "solve problems of prior graphical user interface devices . . . in the context of computerized trading[] relating to speed, accuracy and usability." Dist. Ct. op. at *4 (citations omitted). The court found that these patents are directed to improvements in existing graphical user interface devices that have no "pre-electronic trading analog," and recite more than "'setting, displaying, and selecting' data or information that is visible on the [graphical user interface] device." *Id.*

The district court explained that the challenged patents do not simply claim displaying information on a graphical user interface. The claims require a specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface's structure that is addressed to and resolves a specifically identified problem in the prior state of the art. The district court concluded that the patented subject matter meets the eligibility standards of *Alice* Step 1. We agree with this conclusion, for all of the reasons articulated by the district court, including that the graphical user interface system of these two patents is not an idea that has long existed, the threshold criterion of an abstract idea and ineligible concept, as the court explained in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 73 (2012) (the patent must "amount to significantly more in practice than a patent upon the [ineligible concept itself]").

The district court alternatively continued the analysis under *Alice* Step 2, and determined that the challenged claims recite an "inventive concept." The court observed that Step 2 "requires something different than pre-AIA §§ 102 and 103." Dist. Ct. op. at 8. The court identified the

static price index as an inventive concept that allows traders to more efficiently and accurately place trades using this electronic trading system. The court distinguished this system from the routine or conventional use of computers or the Internet, and concluded that the specific structure and concordant functionality of the graphical user interface are removed from abstract ideas, as compared to conventional computer implementations of known procedures. Thus the court held that the criteria of *Alice* Step 2 were also met.

The district court's rulings are in accord with precedent. Precedent has recognized that specific technologic modifications to solve a problem or improve the functioning of a known system generally produce patent-eligible subject matter. In *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), the court upheld the patent eligibility of claims "necessarily rooted in computer technology" that "overcome a problem specifically arising in the realm of computer networks." *Id.* at 1257. Similarly, "claimed process[es] us[ing] a combined order of specific rules" that improved on existing technological processes were deemed patent-eligible in *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1315 (Fed. Cir. 2016). Claims that were "directed to a specific improvement to the way computers operate, embodied in [a] self-referential table," were deemed eligible in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016).

Illustrating the operation of this principle to facts that negated patent eligibility, claims "drawn to the idea itself" of "out-of-region broadcasting on a cellular telephone," without implementing programmatic structure, were deemed ineligible in *Affinity Labs of Tex. v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016). Similarly, claims directed to the "idea of generating a second menu from a first menu and sending the second menu to another location" were held patent-ineligible in *Apple, Inc. v.*

Ameranth, Inc., 842 F.3d 1229 (Fed. Cir. 2016). Claims directed to the "process of gathering and analyzing information of a specified content, then displaying the results," without "any particular assertedly inventive technology for performing those functions," were held ineligible in *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). As these cases illustrate, ineligible claims generally lack steps or limitations specific to solution of a problem, or improvement in the functioning of technology.

For some computer-implemented methods, software may be essential to conduct the contemplated improvements. *Enfish*, 822 F.3d at 1339 ("Much of the advancement made in computer technology consists of improvements to software that, by their very nature, may not be defined by particular physical features but rather by logical structures and processes."). Abstraction is avoided or overcome when a proposed new application or computer-implemented function is not simply the generalized use of a computer as a tool to conduct a known or obvious process, but instead is an improvement to the capability of the system as a whole. *Id.* at 1336.

We reiterate the Court's recognition that "at some level, all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Alice*, 134 S. Ct. at 2354, quoting *Mayo* 566 U.S. at 71. This threshold level of eligibility is often usefully explored by way of the substantive statutory criteria of patentability, for an invention that is new, useful and unobvious is more readily distinguished from the generalized knowledge that characterizes ineligible subject matter. This analysis is facilitated by the Court's guidance whereby the claims are viewed in accordance with "the general rule that patent claims 'must be considered as a whole'." *Alice*, 134 S. Ct. at 2355 n.3, *quoting Diamond v. Diehr,* 450 U.S. 175, 188 (1981).

As demonstrated in recent jurisprudence directed to eligibility, and as illustrated in the cases cited *ante*, the claim elements are considered in combination for evaluation under *Alice* Step 1, and then individually when *Alice* Step 2 is reached. *See BASCOM Global Internet Services v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). Applying an overview of this evolving jurisprudence, the public interest in innovative advance is best served when close questions of eligibility are considered along with the understanding flowing from review of the patentability criteria of novelty, unobviousness, and enablement, for when these classical criteria are evaluated, the issue of subject matter eligibility is placed in the context of the patent-based incentive to technologic progress.

CONCLUSION

It is not disputed that the TTI System improves the accuracy of trader transactions, utilizing a software-implemented programmatic met. For Section 101 purposes, precedent does not consider the substantive criteria of patentability. For Section 101 purposes, the claimed subject matter is "directed to a specific improvement to the way computers operate," *id.,* for the claimed graphical user interface method imparts a specific functionality to a trading system "directed to a specific implementation of a solution to a problem in the software arts." *Id.* at 1339.

The district court's analysis and conclusions conform to precedent. The decision that the subject matter claimed in the '132 and '304 patents is patent-eligible in terms of Section 101 is affirmed. No other statutory criteria of patentability are before us on this appeal, and we state no opinion thereon.

AFFIRMED