UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/074,670	11/07/2013	Ari Studnitzer	4672-13014AUS	3025

12684	7590	12/26/2018

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ART UNIT	PAPER NUMBER
3692	

NOTIFICATION DATE	DELIVERY MODE
12/26/2018	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte ARI STUDNITZER, ZACHARY BONIG,
RYAN EAVY, FRANK KMIEC, BARRY GALSTER, and
PAUL CALLAWAY

_____

Appeal 2017-010097
Application 14/074,670[1]
Technology Center 3600

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Before ALLEN R. MacDONALD, ADAM J. PYONIN, and
PHILLIP A. BENNETT, *Administrative Patent Judges.*

BENNETT, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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CLAIMED SUBJECT MATTER

The claims are directed to an electronic trading system architecture which controls the distribution of financial data messages to ensure deterministic operation with respect to the timing of transmitted messages to market participants. Spec. ¶¶ 192–193. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1.   A system for managing communication of a plurality of financial data messages to a plurality of market participants via a network, each of a first subset of the plurality of financial data messages comprising data indicative of a change in state of an electronic marketplace for one or more financial products to be transmitted to all of the plurality of market participants, each of a second subset of the plurality of financial data messages comprising a response message corresponding to one of the financial data messages of the first subset to be transmitted to a particular market participant of the plurality of market participants, the system comprising:

a first logic hardware component operative to generate a response message indicative of a response by the electronic marketplace to a request for a financial transaction received via the network from a particular market participant of the plurality of market participants;

a second logic hardware component operative to, based on a change in state in the electronic marketplace caused by the received request for the financial transaction, generate a corresponding financial data message comprising content representative of the change in state and cause the generated corresponding financial data message to be transmitted to all of the plurality of market participants; and

a third logic hardware component operative to determine when the corresponding financial data message is transmitted via the network to all of the plurality of market participants and, only once it has been determined that the corresponding financial data message has been transmitted, cause the

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generated response message to be transmitted via the network
to the particular market participant.

App. Br. 26 (Claims Appendix).

REJECTION

Claims 1–20 stand rejected under 35 U.S.C. § 101 as being directed to
ineligible subject matter. Final Act. 2–5.[2]

ANALYSIS

Legal Standard for Patent Eligibility

In issues involving subject matter eligibility, our inquiry focuses on
whether the claims satisfy the two-step test set forth by the Supreme Court in
Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014). The
Supreme Court instructs us to "first determine whether the claims at issue
are directed to a patent-ineligible concept" (*id.* at 2355), and, in this case, the
inquiry centers on whether the claims are directed to an abstract idea. If the
initial threshold is met, we then move to the second step, in which we
"consider the elements of each claim both individually and 'as an ordered
combination' to determine whether the additional elements 'transform the
nature of the claim' into a patent-eligible application." *Id.* (*quoting Mayo
Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 79, 78 (2012)).
The Supreme Court describes the second step as a search for "an 'inventive
concept'—*i.e.*, an element or combination of elements that is 'sufficient to
ensure that the patent in practice amounts to significantly more than a patent

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[2] The rejections under 35 U.S.C. § 103 (*see* Final Act. 6–21) were
withdrawn by the Examiner in the Answer. *See* Ans. 2.

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upon the [ineligible concept] itself.'" *Id.* (quoting *Mayo*, 566 U.S. at 72–73).

Examiner's Findings

The Examiner rejects the claims under the two-step *Alice* framework. Under the first step, the Examiner determines the claims are directed to an abstract idea:

> The claims are directed to an abstract idea of performing financial data generation and transmission. Generating and prioritizing financial data transmission has been used in the industry in which people exchange money for goods, services, or other reasons, thus concluding a fundamental economic practice. Courts have recognized similar claims to be abstract ideas . . . such as compare new and stored data using rules to identify options (SmartGene), using categories to organize, store and transmit information or data (Cyberphone), and processing information through a clearinghouse (Dealertrack).

Final Act. 3.

Having found the claims to be directed to an abstract idea, the Examiner proceeds to the second step of the *Alice* inquiry, finding the claims do not possess a sufficient inventive concept under *Alice* step 2:

> The elements of the instant process, when taken in combination, together do not offer substantially more than the sum of the functions of the elements when each is taken alone. That is, the elements involved in the recited process undertake their roles in performance of their activities according to their generic functionalities which are well-understood, routine and conventional. The elements together execute in routinely and conventionally accepted coordinated manners and interact with their partner elements to archive an overall outcome which, similarly, is merely the combined and coordinated execution of generic computer functionalities which are well-understood, routine and conventional activities previously known to the industry.

Final Act. 4. The Examiner also explains that the recited steps do not pass

muster under *Alice* step 2 because:

> [T]he claims do not effect an improvement to another
> technology or technical field; and the claims do not amount to
> an improvement to the functioning of a computer itself; and the
> claims do not move beyond a general link of the use of an
> abstract idea to a particular technological environment.

Id.

Appellants' Contentions

Appellants present several arguments in favor of eligibility. First,

Appellants summarize the focus of the claims:

> [T]he claims are directed to a specific application of a
> communications protocol for communicating, such as via the
> use of logic components, a subset of financial data messages
> indicative of a change in the state of an electronic marketplace,
> in a manner which, by virtue of a specific rule which prevents a
> response message from being transmitted prior to transmission
> of a corresponding financial data message, attempts to ensure
> that an individual recipient does not receive an individually
> directed "response" message, and thereby gain inequitable
> access to the information contained therein, before all recipients
> receive a broadcasted "financial data" message containing
> related information.

App. Br. 5–6.

Appellants then assert that the claims are not directed to an abstract

idea because:

> The claimed invention directly addresses an issue in electronic
> transaction processing systems and electronic message
> communications systems, in particular, those which utilize
> packet switching, that separately generated and transmitted
> messages may be received by recipients at different times
> and/or in a different order then generated and/or transmitted,
> e.g. due to variations in processing or message generation, race

conditions, varying, e.g., asymmetric, transmission paths and/or
delays, etc.

App. Br. 6 (citing Spec. ¶ 74). Appellants further argue the claims are not

merely directed to "financial data generation and transmission" as alleged by

the Examiner, but instead provide:

> [A] specific and practical application which improves upon the
> ability to control the flow of electronically communicated
> information within an electronic marketplace, in particular to
> prevent the dissemination of electronic messages comprising
> trade information to a particular market participant prior to the
> corresponding electronic messages comprising market data
> being transmitted to all of the market participants.

Id. at 7.

> With respect to the second step of the Alice inquiry, Appellants argue:

> [T]he claims, even if directed to an abstract idea, e.g.
> performing financial data generation and transmission or
> generating and prioritizing financial data transmission, do not
> entirely preempt that abstract idea and are instead directed to a
> practical application of controlling transmission of messages
> and represent an improvement to the technology surrounding
> managing equitable communications of messages such as
> messages concerning changes in a state of a marketplace.

Id. at 9. Appellants further argue the claims amount to significantly more

than the abstract idea because:

> Here, the specifically disclosed and claimed generation of a
> financial data message representative of a change in a state of a
> marketplace and then gating or otherwise not transmitting that
> financial data message to a particular market participant prior to
> the transmission of the financial data message to all of the
> plurality of market participants are additional elements that
> provide "something more" than mere computer implementation
> of not communicating a financial data message. The
> combination of steps recited show that the claim is not to the
> idea of not communicating the change in the state of a

marketplace, but rather that the steps impose meaningful limits
that allow for control of the communication of the state of an
electronic marketplace to one recipient over all of the
recipients. Thus, the claim amounts to significantly more than
the judicial exception.

App. Br. 9–10.

In their Reply Brief, Appellants present additional arguments that
their claims are similar to those found eligible in recent Federal Circuit
decisions in *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299
(Fed. Cir. 2016) and *Trading Techs. Int'l, Inc. v. CQG, INC.*, 675 Fed.
App'x 1001, 1001–05 (Fed. Cir. 2017) (non-precedential). Reply Br. 4–6.

Analysis

We are persuaded the Examiner has erred in rejecting the claims
under 35 U.S.C. § 101. The Examiner characterizes the claims as being
directed to an abstract idea of "performing financial data generation and
transmission." Final Act. 3. We agree with Appellants that the Examiner
has overgeneralized the claims in this characterization. Instead, we view the
claims as being better characterized as an electronic trading architecture
which synchronizes the transmission of financial data messages among
market participants to ensure a specific ordering of message transmission—
namely that participant-specific response messages do not overtake the
transmission of market data messages sent to all market participants. *See,
e.g.*, Spec. ¶¶ 192–200 (describing "market data prioritization" system
architecture).

Enfish instructs us that the *Alice* step 1 inquiry asks "whether the
focus of the claims is on the specific asserted improvement in computer
capabilities (i.e., the self-referential table for a computer database) or,
instead, on a process that qualifies as an 'abstract idea' for which computers

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are invoked merely as a tool." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016). In *Enfish*, the improvement in computer capabilities was embodied in a self-referential database table which obviated the need for a programmer to "preconfigure a structure to which a user must adapt data entry." *Id.* at 1337.

We are persuaded that the claimed improvement in this case provides a similar benefit in that it addresses problems "with current electronic trading system architectures [having] . . . disparity along communications paths causing jitter or race conditions which results in non-deterministic operation" (Spec. ¶ 192) by identifying and segregating different message types and controlling the timing of their transmission, thereby obviating the need to closely monitor the capacity of existing infrastructure components in the system. Because the claims provide a technological solution to a technological problem, we are persuaded the Examiner has erred in determining the claims are directed to an abstract idea.[3] Accordingly, we do not sustain the rejection of claim 1, nor of independent claims 2, 11, and 20 which are rejected based on the same reasoning. For the same reasons, we also do not sustain the rejection of dependent claims 3–10 and 12–19.

DECISION

We reverse the Examiner's rejections of claims 1–20.

REVERSED

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[3] Because we find the Examiner erred with respect to *Alice* step 1, we do not reach the second step of the *Alice* inquiry.