UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/772,926	02/21/2013	Edward H. Sherrill	114826-52302	8085

118627   7590   11/15/2018
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EXAMINER
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ART UNIT	PAPER NUMBER
3623	

NOTIFICATION DATE	DELIVERY MODE
11/15/2018	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte EDWARD H. SHERRILL, DONALD LAWRENCE COOK III,
and JASON PAUL MCCRORY

Appeal 2017-008392
Application 13/772,926
Technology Center 3600

Before JOHN A. JEFFERY, JUSTIN BUSCH, and JAMES W. DEJMEK,
Administrative Patent Judges.

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Examiner's
decision to reject claims 1–5, 7–11, 13–17, 19, and 20. We have jurisdiction
under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants' invention ensures that business entities can verify that the
format of electronic documents complies with certain requirements before
the documents are used in electronic commerce transactions. *See generally*
Spec. ¶¶ 30, 47–48; Figs. 11–12. Claim 1 is illustrative:

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[1] Appellants identify the real party in interest as Wal-Mart Stores Inc. App.
Br. 3.

1.   A computer-implemented method for authorizing exchange of data between a first computing system and a second computing system, the method comprising:

receiving a vendor selection from a user of the first computing system;

selecting, at least one Electronic Document Interchange (EDI) transaction from a plurality of available EDI transactions at the first computing system, wherein the at least one EDI transaction is associated with a specified format for exchange of data between the first and second computing system;

testing the EDI transaction using EDI test data to facilitate exchange of the EDI test data between the first and second computing systems;

confirming by the second computing system that the test EDI data conforms to the specified format based on the exchange of EDI test data;

in response to confirming that the test EDI data conforms to the specified format, providing, from the second computing system to the first computing system, authorization to exchange data with the second computing system;

exchanging security certificates between the first and second computing systems;

receiving Applicability Statement 2 (AS2) information from the first computing system, the AS2 information associated with at least one EDI transaction;

verifying the AS2 information from the first computing system;

prompting the user of the first computing system to schedule a production date based on the AS2 information;

receiving scheduling information from the first computing system;

emailing approval notification to a vendor associated with the vendor selection; and

scheduling production for a plurality of orders based on the scheduling information and the vendor associated with the vendor selection.

THE REJECTIONS

The Examiner rejected claims 1–5, 7–11, 13–17, 19, and 20 under

35 U.S.C. § 101 as directed to ineligible subject matter. Final Act. 2–5.[2]

The Examiner rejected claims 1–5, 7–11, 13–17, 19, and 20 under

35 U.S.C. § 103 as unpatentable over Stone (US 2007/0203803 A1;

published Aug. 30, 2007) and Barry, III (US 2013/0222116 A1; published

Aug. 29, 2013) ("Barry"). Final Act. 5–14.

THE INELIGIBILITY REJECTION

The Examiner finds that the claimed invention is directed to an

abstract idea, namely exchanging information to generate a production

schedule,[3] which is said to be similar to concepts involving, among other

things, (1) an idea of itself; (2) human activity relating to commercial

practices; (3) organizing information; and (4) data recognition, collection,

storage, and management. *See* Final Act. 2–4; Ans. 9–11. According to the

Examiner, the claimed elements do not add significantly more to the abstract

idea to render the claimed invention patent-eligible because, among other

things, the recited elements do not improve a specific technology or the

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[2] Throughout this opinion, we refer to (1) the Final Rejection mailed
April 21, 2016 ("Final Act."); (2) the Appeal Brief filed November 7, 2016
("App. Br."); (3) the Examiner's Answer mailed March 20, 2017 ("Ans.");
and (4) the Reply Brief filed May 18, 2017 ("Reply Br.").
[3] Although the Examiner's rejection merely quotes the claim language in
connection with the identified abstract idea, the Examiner's Answer
nonetheless further generalizes the claimed invention as directed to
exchanging information to generate a production schedule. *Compare* Final
Act. 3 *with* Ans. 12–13. Accordingly, we presume that this latter
characterization corresponds to the identified abstract idea.

computer itself, but rather recite generic computer components whose functions merely implement the abstract idea on a computer. *See* Final Act. 4–5; Ans. 11–15.

Appellants argue that the claimed invention is not directed to an abstract idea, but rather is directed to a "self on-boarding process" for preventing EDI transactions from occurring between first and second computing systems until (1) the first system submits EDI test data for transmission to the second system, and (2) the second system (a) determines the EDI data's compliance for transmission, and then (b) authorizes the first system to perform an actual EDI transaction, including exchanging security certificates. App. Br. 7–10; Reply Br. 2–5. According to Appellants, the claimed invention (1) avoids problems associated with attempts to process data with an incorrect format, including system outages and requiring more memory to process that data, and (2) improves operational performance and processing efficiency. App. Br. 7–10. Therefore, the claimed invention is said to be directed to a technical solution to a "computer-centric" problem, and not an abstract idea. App. Br. 10; Reply Br. 5.

Appellants add that even if the claimed invention were directed to an abstract idea, the claimed limitations recite significantly more than the alleged abstract idea. App. Br. 10–13; Reply Br. 5–7. According to Appellants, the claimed invention recites more than merely exchanging documents in a computer environment, but rather enables disparate computing systems to communicate effectively with less likelihood of system failure, delays, and network congestion by ensuring document compliance before actual EDI transactions. App. Br. 11–13.

ISSUE

Has the Examiner erred in rejecting claim 1 by concluding that it is directed to ineligible subject matter under § 101? This issue turns on whether the claimed invention is directed to a patent-ineligible abstract idea and, if so, whether the claim's elements—considered individually and as an ordered combination—transform the nature of the claim into a patent-eligible application of that abstract idea.

ANALYSIS

To determine whether claims are patent eligible under § 101, we apply the Supreme Court's two-step test articulated in *Alice Corp. Proprietary Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014). First, we determine whether the claims are directed to a patent-ineligible concept: laws of nature, natural phenomena, and abstract ideas. *Id.* at 2354–55. If so, we then proceed to the second step and examine the claim's elements—both individually and as an ordered combination—to determine whether the claim contains an "inventive concept" sufficient to transform the claimed abstract idea into a patent-eligible application. *Id.* at 2357.

Alice Step One

Applying *Alice* step one, we disagree with the Examiner that the claimed invention is directed to an abstract idea, namely exchanging information to generate a production schedule. *See* Final Act. 2–4; Ans. 9–11. Claim 1 recites, in pertinent part, a method for authorizing data exchange between first and second computing systems, where a selected EDI transaction associated with a specified format is tested using EDI test

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data. The claim further recites that, responsive to the second computing system confirming that the EDI test data conforms to a specified format based on exchanging this data between the computing systems, authorizing exchanging data with the second computing system. Claim 1 adds, in pertinent part, (1) exchanging security certificates between the computing systems, (2) verifying AS2 information received from the first computing system, (3) emailing approval notification to a selected vendor, and (4) selecting production for orders based on the scheduling information and vendor.

Notably, the claimed invention tests data electronically to ensure that data conforms to a particular format before the data is exchanged with the second computing system. Given this preliminary electronic testing function on which further data exchange is contingent, we agree with the Appellants that the claimed invention is not directed to an abstract idea, but rather solves a technical problem by, among other things, reducing system outages and memory issues and increasing processing efficiency as Appellants indicate. *See* App. Br. 9–10. In short, the claimed invention ensures technical advantages resulting from EDI data format compliance and avoids technical problems resulting from non-compliance.

To be sure, collecting information is within the realm of abstract ideas—even when the information is limited to particular content. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). It is also well settled that analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, is essentially a mental process within the abstract idea category. *Id.* at 1354. And merely presenting the results of abstract processes of collecting and analyzing

information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis. *Id.* But unlike the claimed invention in *Electric Power*, the claimed invention here does not merely gather, manipulate, analyze, and present information of a specified content, rather electronically tests data for conformance with a particular format before data is further exchanged—a technical solution to a technical problem that, among other things, reduces system outages and memory issues and increases processing efficiency as Appellants indicate. *See* App. Br. 9–10.

In reaching this conclusion, we acknowledge the court's holding in *Easyweb Innovations, LLC v. Twitter, Inc.*, 689 F. App'x 969, 969–71 (Fed. Cir. 2017) (unpublished), where the court held ineligible a claim reciting a message publishing system that identified an *authorized* sender of a received message, where the identification *depended on the message's format*. *See id.* at 970. Notably, the claim in *Easyweb* recited that after converting at least part of the message to a different format, the converted portion was published *only if the sender was identified as authorized*. *Id.* at 970. The court held that because the claim (1) used generic computer technology to perform data collection, analysis, and publication, and (2) did not recite an improvement to a particular computer technology, the claim was directed to the abstract idea of receiving, authenticating, and publishing data. *Id.* at 971.

That is not the case where, as here, the claimed invention first tests an EDI transaction using EDI test data as a basis for authorizing further data transmissions—a test that that solves technical problems involving system outages and operational inefficiencies as noted previously.

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Nor is this a case that merely tests financial data before offering a sale at that price as was the case in *OIP Technologies v. Amazon.com, Inc.*, 785 F.3d 1359, 1361–63 (Fed. Cir. 2015). There, the court held ineligible claims reciting testing product prices by (1) sending messages over a network, (2) gathering customer-response statistics during testing, (3) selecting an appropriate sales price, and (4) sending a second set of messages including offers at the selected price over the network. *See OIP Techs.*, 785 F.3d at 1361–63. But the test data in *OIP* was not to ensure compliance with a certain format to provide the technical advantages of such compliance (and avoid the technical problems resulting from non-compliance) as noted above, but rather merely provided a proposed sales price at which to sell a product. *See id.*

The claim at issue in *Clarilogic, Inc. v. FormFree Holdings Corporation*, 681 F. App'x 950 (Fed. Cir. 2017) (unpublished) is also distinguishable from the claimed invention. There, the court held ineligible a recited method for providing certified financial data indicating an individual's financial risk, where financial account data was (1) collected, (2) *transformed into a desired format*, and (3) validated to identify exceptions indicating incorrect data or financial risk. *See id.* at 952–56. Notably, these exceptions were confirmed by collecting and analyzing additional data. *See id.* at 952. By transforming the collected account data into a desired format, the *Clarilogic* system effectively confirmed that the data conformed to a specified format.

Despite this format transformation and subsequent additional data collection to confirm exceptions (*see id.*), these functions are nevertheless not reasonably analogous to the recited EDI transaction test, and providing

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authorization to the second computing system responsive to the data conforming to the specified format, as claimed. Unlike the *Clarilogic* system, the test of the claimed invention avoids certain technical problems resulting from non-compliance with the specified format.

To be sure, the court in *Shortridge v. Foundation Construction Payroll Service, LLC*, 655 F. App'x 848 (Fed. Cir. 2016) (unpublished) held ineligible claims reciting public works construction payroll processing, where input data was *verified as compliant* with requirements of (1) a core payroll processing and calculation engine, *and* (2) a construction payroll record (CPR) report *before* producing this report. *See Shortridge*, 655 F. App'x at 850–54.

Despite this data verification and subsequent report generation (*see id.*), these functions are nevertheless not reasonably analogous to the recited EDI transaction test, and providing authorization to the second computing system responsive to the data conforming to the specified format, as claimed. Unlike the *Shortridge* system, the test of the claimed invention avoids certain technical problems resulting from non-compliance with the specified format.

We also recognize that the court in *TDE Petroleum Data Solutions, Inc. v. AKM Enterprise, Inc.*, 657 F. App'x 991 (Fed. Cir. 2016) (unpublished) held ineligible claims reciting determining the state of a well operation that automatically selected a well operation state *only after* determining validity of received mechanical and hydraulic data.

Despite this data validity determination and subsequent state selection (*see id.*), these functions are nevertheless not reasonably analogous to the recited EDI transaction test, and providing authorization to the second

computing system responsive to the data conforming to the specified format, as claimed. Unlike the *TDE* system, the test of the claimed invention avoids certain technical problems resulting from non-compliance with the specified format.

For the foregoing reasons, we agree with Appellants that claim 1 is not directed to an abstract idea. Because this issue is dispositive regarding our reversing the Examiner's ineligibility rejection, we need not address Appellants' additional arguments, including whether the additional recited elements add significantly more to the abstract idea under *Alice* step two.

Therefore, we persuaded that the Examiner erred in rejecting claims 1–5, 7–11, 13–17, 19, and 20 under § 101.

THE OBVIOUSNESS REJECTION

Regarding claim 1, the Examiner finds that Stone's method for authorizing data exchange includes, among other things, (1) testing an EDI transaction using EDI test data to facilitate exchange of the test data between first and second computing systems, (2) confirming, by the second computing system, that the test EDI data conforms to a specified format based on the exchange of EDI test data, and (3) responsive to this confirmation, providing, from the second to the first computing system, authorization to exchange data with the second computing system. Final Act. 5–9. Although the Examiner acknowledges that Stone does not (1) exchange security certificates between the computing systems, (2) receive and verify AS2 information from the first computing system, and (3) prompt the first computing system's user to schedule a production date based on the AS2 information, the Examiner cites Barry for teaching these

features in concluding that the claim would have been obvious. Final
Act. 9–11.

Appellants argue that the prior art does not teach or suggest the recited
testing, confirmation, and authorization steps. App. Br. 15–17; Reply Br. 8–
10. According to Appellants, Stone does not determine compatibility of EDI
data generated by a first computing system before the second computing
system allows the first computing system to enter into an actual EDI
transaction. App. Br. 15. Rather, Stone is said to allow for an EDI
transaction to occur based on downloaded EDI documents, and allows the
receiving party to confirm or cancel the transaction that is already in
progress. *Id.*; Reply Br. 8–9. Therefore, Appellants contend, Stone does not
prevent an EDI transaction from occurring between first and second
computing systems until after testing completes, nor does Barry cure that
deficiency. App. Br. 15–17; Reply Br. 8–9. Appellants argue other
limitations summarized below.

ISSUE

Under § 103, has the Examiner erred by finding that Stone and Barry
collectively would have taught or suggested (1) the testing, confirmation,
and authorization steps in claim 1, and (2) the structure validation rules in
claim 3?

ANALYSIS

Claims 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, and 20

As noted above, claim 1 recites a method for authorizing exchange of
data between a first and a second computing system, including (1) receiving

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a vendor selection from a user *of the first computing system*; (2) selecting at least one EDI transaction associated with a specified format *at the first computing system*; (3) testing an EDI transaction using EDI test data to facilitate exchange of the test data *between first and second computing systems*, (4) confirming, by the *second* computing system, that the test EDI data conforms to a specified format based on the exchange of EDI test data, and (5) responsive to this confirmation, providing, *from the second to the first computing system*, authorization to exchange data with the *second* computing system.

Our emphasis underscores that the first and second computing systems each have unique and significant roles in this authorization process. Despite these distinct functions of the respective computing systems, the Examiner does not clearly map the first and second computing systems to corresponding elements in Stone—an omission that makes our task all the more difficult in identifying these key elements. *See* Final Act. 5–9; Ans. 15–17. This ambiguity is compounded by the Examiner omitting the phrase "of the first computing system" in finding that Stone teaches the receiving a vendor selection from a user in claim 1's first clause. *See* Final Act. 6. Although the Examiner finds that Stone's paragraph 11 teaches receiving a vendor selection from a user, the Examiner does not say whether this user is *of the first computing system* as claimed, nor does the Examiner rely on Barry to cure that apparent deficiency. *See* Final Act. 6, 9–11. The limitation is simply omitted from the rejection.

Despite these ambiguities and omissions, we nevertheless presume that the Examiner intends to map the customer's computing system in Stone to the recited "first computing system," and the computing system that

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receives incoming purchase orders in Stone's Figure 9 as the "second computing system."

Turning to the rejection, the Examiner cites Stone's paragraph 99 for teaching the disputed testing, confirmation, and authorization steps. Final Act. 6–8. In the Answer, however, the Examiner cites Stone's paragraphs 86 and 87 and Figures 9, 10, and 12 for teaching these limitations. Ans. 16–17.

Stone's Figure 9 shows a process for automatically processing incoming purchase orders from a customer. Stone ¶ 86. After downloading all new EDI files from an EDI provider, and if a purchase order number does not exist in the system, the system determines whether incoming purchase order data matches quotation data. Stone ¶¶ 86–87; Fig. 9 (steps 904, 906, 924, 926). If there is a match, vendors are emailed advising that they have orders to confirm in step 936, and then a confirmation process begins in step 920—the details of which are shown in Figures 10a–10d. Upon confirmation in steps 1082 and 1084 of Figure 10d, the process proceeds to Figure 12 that details the process for transmitting the purchase order to a freight forwarder. *See* Stone ¶¶ 31, 88, 98–99. Notably, after confirming the purchase order's line item status on a record-by-record basis, the line item data is added to an EDI file that is then transmitted to a freight forwarder. Stone ¶ 99; Fig. 12 (steps 1206, 1210–1218).

Given this functionality, we see no error in the Examiner's reliance of Stone for at least suggesting the recited testing, confirmation, and authorization steps. Notably, EDI data is received from a customer computing system and compared with quotation data to determine a match in Stone's Figure 9 *before* purchase order data is sent in an EDI file to a freight

forwarder in Figure 12. Nothing in the claim precludes this EDI data received from a customer's computing system from being considered "test data" that is received by a "second computing system" as the Examiner suggests. *See* Final Act. 6–8; Ans. 16–17. Moreover, Stone's recipient system effectively confirms that this "test data" conforms to a specified format in step 926 of Figure 9. Notably, this format confirmation precedes the purchase order confirmation process in Figure 10 which at least suggests that, responsive to this format confirmation, authorization was provided to the customer to exchange data with the computing system that receives incoming purchase orders (i.e., the "second computing system"). *See* Stone ¶ 86 (noting that a customer can revise or confirm the purchase order in Figures 10 and 12 (steps 920 and 922)).

To be sure, this data match determination and associated confirmation in Stone's Figure 9 occurs before another EDI transaction in step 1218 of Figure 12 occurs *with a different entity*, namely the freight forwarder. Nevertheless, the fact that the customer can revise or confirm the purchase order that is involved in this latter transaction at least suggests that authorization was provided to that customer to exchange data via the customer's computing system.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, and 20 not argued separately with particularity.

Claims 3, 9, and 15

We also sustain the Examiner's obviousness rejection of claim 3. Claim 3 depends from claim 2 that recites the EDI data format confirmation

is based on verification rules comprising structure validation rules. Claim 3 adds that the structure validation rules comprise a rule ensuring that the date information within a field of at least one document is logically consistent with a date when the documents were received.

Despite Appellants' arguments to the contrary (App. Br. 18), Appellants do not squarely address—let alone persuasively rebut—the Examiner's reliance on Stone's paragraphs 15 and 86 to 88 for at least suggesting the recited rule. Accordingly, the weight of the evidence on this record favors the Examiner's position.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 3, and claims 9 and 15 not argued separately with particularity.

CONCLUSION

The Examiner erred in rejecting claims 1–5, 7–11, 13–17, 19, and 20 under § 101, but did not err in rejecting those claims under § 103.

DECISION

We affirm the Examiner's decision to reject claims 1–5, 7–11, 13–17, 19, and 20. Because the rejection of each appealed claim is affirmed on at least one of the grounds specified in the Office Action from which the appeal was taken, the Examiner's decision to reject these claims is affirmed. *See* 37 C.F.R. § 41.50(a)(1).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED