UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte FRANCIS X. REDDINGTON
and NEIL SAHOTA

Appeal 2015-003837[1]
Application 13/182,769[2]
Technology Center 3600

Before MICHAEL W. KIM, SHEILA F. McSHANE, and
MATTHEW S. MEYERS, *Administrative Patent Judges*.

MEYERS, *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 1–18. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] Our decision references Appellants' Appeal Brief ("Appeal Br.," filed
October 13, 2014), Reply Brief ("Reply Br.," filed February 2, 2015), the
Examiner's Answer ("Ans.," mailed December 2, 2014), and Final Office
Action ("Final Act.," mailed May 9, 2014).
[2] Appellants identify International Business Machines Corporation as the
real party in interest (Appeal Br. 1).

CLAIMED INVENTION

Appellants' claimed invention relates generally to "data processing, or, more specifically, methods, apparatus, and products for Enterprise Intelligence ('EI') assembly analysis in an EI framework" (Spec. 1, ll. 9–11).

Claims 1, 7, and 13 are the independent claims on appeal. Claim 1, reproduced below with added bracketed notations, is illustrative of the subject matter on appeal:

> 1.   A method of Enterprise Intelligence ('EI') assembly analysis in an EI framework, the method comprising:
> [a] determining, by an EI assembly analysis engine comprising a module of automated computing machinery, the present execution state of an one or more EI assemblies;
> [b] determining, by the EI assembly analysis engine, the ideal execution state for the one or more EI assemblies, including retrieving from an EI assembly taxonomy repository, one or more taxonomy breakdowns for processes of the one or more EI assemblies, each taxonomy breakdown including information identifying an acceptable range of values for one or more input parameters and one or more execution variables utilized by each process of the one or more EI assemblies; and
> [c] identifying, by the EI assembly analysis engine, differences between the present execution state of the one or more EI assemblies and the ideal execution state for the one or more EI assemblies, including comparing actual values for the one or more input parameters and the one or more execution variables utilized by each process of the one or more EI assemblies to the acceptable range of values for the one or more input parameters and the one or more execution variables utilized by each process of the one or more EI assemblies.

App. Br. 14 (Claims Appendix).

REJECTIONS

Claims 1–18 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.[3]

Claims 1–18 are rejected under 35 U.S.C. § 103(a) as unpatentable over Van Biljon (US 2012/0110055 A1, pub. May 3, 2012) and Abrari (US 2006/0129978 A1, pub. June 15, 2006).

ANALYSIS

Non-statutory subject matter

Independent claims 1, 7, and 13, and dependent claims 2–6, 8–12, and 14–18

Appellants argue claims 1–18 as a group (*see* Reply Br. 12–16). We select independent claim 1 as representative. Claims 2–18 stand or fall with independent claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014) identifies a two-step framework for determining whether claimed subject matter is judicially-excepted from patent eligibility under § 101.

According to *Alice* step one, "[w]e must first determine whether the claims at issue are directed to a patent-ineligible concept," such as an abstract idea. *Alice*, 134 S. Ct. at 2355.

> The "directed to" inquiry []cannot simply ask whether the claims *involve* a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions *involves* a law of nature and/or natural phenomenon— after all, they take place in the physical world. *See Mayo*, 132 S. Ct. at 1293 ("For all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.") Rather, the "directed to" inquiry applies a stage-

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[3] The Examiner entered this rejection as a new ground (*see* Ans. 2–3).

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> one filter to claims, considered in light of the specification, based on whether "their character as a whole is directed to excluded subject matter." *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015); *see Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1375 (Fed. Cir. 2016) (inquiring into "the focus of the claimed advance over the prior art").

Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016). "The 'abstract idea' step of the inquiry calls upon us to look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter.'" *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016); *see also Enfish*, 822 F.3d at 1335.

In rejecting independent claims 1–18 under 35 U.S.C. § 101, the Examiner finds that the claims, considered as a whole, are directed to "a method of organizing human activities or a formula" (Ans. 2). More particularly, the Examiner finds the claims are "directed to determining an ideal execution state and a present execution date, and then determining differences between them via value comparison," which do not amount to significantly more than an abstract idea (*id.*).

In response, Appellants argue that the claims "are directed to the technical field of Enterprise Intelligence ('EI') assembly analysis in an EI framework" (Reply Br. 13), and as such,

> cannot include an abstract idea within the meaning of *Alice* because the claims of the present application are not directed to a long-prevalent and fundamental practice in comparison to the abstract ideas of risk-hedging and intermediated settlement relied upon by the *Alice* Court, which have been in widespread use for many centuries through the world.

(*Id.* at 13–14).

At the outset, we note that the Supreme Court in *Alice* did not rigidly define or otherwise restrict the universe of abstract ideas to one or more of: a building block of human ingenuity, a fundamental economic practice, and an algorithm. *See Alice*, 134 S. Ct. at 2357 ("we need not labor to delimit the precise counters of the 'abstract ideas' category"). And, here the Examiner does not find that the claims are directed to a building block of human ingenuity, a fundamental economic practice, or an algorithm. Furthermore, "[a]n abstract idea can generally be described at different levels of abstraction." *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016).

Under step one of the framework set forth in *Alice*, we agree with the Examiner that the invention is broadly "a method of organizing human activities or a formula" (Ans. 2), and more particularly, "directed to determining an ideal execution state and a present execution date, and then determining differences between them via value comparison" (*id.*). And based on our review of independent claim 1, we find that independent claim 1 involves nothing more than accessing data, i.e., determining present execution state and ideal execution state, determining/evaluating data, i.e., identifying differences between present execution state and ideal execution state by comparing acceptable values to acceptable ranges; all steps that may be performed manually. *See CyberSource*, 654 F.3d 1366, 1373 (Fed.Cir. 2011) ("[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101."). We also determine that independent claim 1 is similar to claims that our reviewing court has found patent ineligible in *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed.Cir. 2016) (collecting information and "analyzing

information by steps people go through in their minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category."), *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1333 (Fed. Cir. 2015), *cert. denied*, 136 S. Ct. 2510 (2016) (using organizational and product group hierarchies to determine a price), and *Parker v. Flook*, 437 U.S. 584 (1978) (mathematical algorithm used for adjusting an alarm limit).

Accordingly, we find that independent claim 1 involves nothing more than accessing and determining/evaluating data to identify differences between present execution state and ideal execution state, without any particular inventive technology — these activities are squarely within the realm of abstract ideas. *See, e.g., Elec. Power Grp., LLC*, 830 F.3d at 1353–54 (when "[t]he focus of the asserted claims" . . . "is on collecting information, analyzing it, and displaying certain results of the collection and analysis," the claims are directed to an abstract idea); *see also Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1344–45 (Fed. Cir. 2013) (claims reciting "generalized software components arranged to implement an abstract concept [of generating insurance-policy-related tasks based on rules to be completed upon the occurrence of an event] on a computer" not patent eligible).

Step two is "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 upon the [ineligible concept] itself.'" *Alice*, 134 S. Ct. at 2355 (alteration in original) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1294 (2012)).

And, similar to the situation in *Electric Power*, we find nothing

sufficient to remove the claims from the class of subject matter ineligible for

patenting. As the court explained in *Electric Power*, "merely selecting

information, by content or source, for collection, analysis, and display does

nothing significant to differentiate a process from ordinary mental processes,

whose implicit exclusion from § 101 undergirds the information-based

category of abstract ideas." *Elec. Power Grp.*, 830 F.3d at 1355.

Here, Appellants argue that the claims amount to significantly more

than the abstract idea because

> the claims improve upon existing enterprise intelligence
> technologies. In particular, the recited limitations gather
> information that describe the execution state of EI assemblies,
> identify an ideal execution state, and determine how closely each
> EI assembly is operating relative to its ideal execution state. In
> such a way, corrective action may be identified (e.g., claim 3)
> and ultimately taken to ensure that EI assemblies are executed as
> close as possible to their ideal execution states, thereby
> improving the operations of the EI assemblies and the EI
> framework as a whole.

(Appeal Br. 16; *see also* Reply Br. 8). However, Appellants' argument does

not establish that the argued limitations add inventiveness, which may be

"significantly more," as opposed to the application of conventional, well-

known analytical steps, which are not. *See Ultramercial, Inc. v. Hulu, LLC*,

772 F.3d 709, 716 (Fed. Cir. 2014) ("[T]he claimed sequence of steps

comprises only 'conventional steps, specified at a high level of generality,'

which is insufficient to supply an 'inventive concept.'") (Citing *Alice*, 134 S.

Ct. at 2357) (internal citations omitted). And, there is no indication in the

record that any specialized computer hardware is required or evidence that

the programming related to these "improvements" would entail anything

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atypical from conventional programming. Instead, the Specification

discloses utilizing generic computer components "includ[ing] at least one

computer processor (156) or 'CPU' as well as random access memory (168)

('RAM') which is connected through a high speed memory bus (166) and

bus adapter (158) to processor (156) and to other components of the

computer (152)" (Spec. 3, l. 26 – Spec. 4, l. 1).

Furthermore, although we agree with Appellants' that claim 1

generates, i.e., identifies, an EI correction plan, neither the claims nor the

Specification provide any type of automatic correction, specific rules, or

details of implementations specific to EI that improve any technological

process. Instead, the Specification merely discloses generally "presenting

(724) the EI assembly correction plan (726) to an EI administrator (238)" via

a user interface (Spec. 30, ll. 13–18; *see also* Fig. 7). Thus, we find the

claimed invention merely invokes computers for their generic functions of

the collection and arrangement of data. When claims like the present claims

are "directed to an abstract idea" and "merely requir[e] generic computer

implementation," they "do[] not move into section 101 eligibility territory."

buySAFE, Inc. v. Google, Inc., 765 F.3d 1350, 1354 (Fed. Cir. 2014).

> We also are not persuaded by Appellants' argument that
>
> the recited limitations effect a transformation of a particular
> article to a different state. In particular, the recited limitations
> are used to effect a transformation of an EI assembly to a state
> that is outside of acceptable operating states to a state that is as
> close to possible of an ideal operating state.

(Reply Br. 16). As discussed above, the claimed invention merely provides

a correction plan to an administrator, i.e., human, through a user interface,

and as such, does not make any change without some human intervention

(*see* Spec. 30, ll. 13–18; *see also* Fig. 7). Moreover, any alleged

"transformation" due to "effect[ing] a transformation of an EI assembly to a state that is outside of acceptable operating states to a state that is as close to possible of an ideal operating state" (*see* Reply Br. 16), is, at best, merely a manipulation of data, which is not sufficient to meet the transformation prong under 35 U.S.C. § 101. *See Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972) (a computer based algorithm that merely transforms data from one form to another is not patent-eligible).

In view of the foregoing, we sustain the Examiner's rejection under 35 U.S.C. § 101 of independent claim 1, and claims 2–18, which fall with independent claim 1.

Obviousness

Independent claims 1, 7, and 13, and dependent claims 2–6, 8–12, and 14–18

We are persuaded by Appellants' argument that the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 103(a) because the combination of Van Biljon and Abrari fails to disclose or suggest limitation [b] of independent claim 1 which recites:

> determining, by the EI assembly analysis engine, the ideal execution state for the one or more EI assemblies, including retrieving from an EI assembly taxonomy repository, one or more taxonomy breakdowns for processes of the one or more EI assemblies, each taxonomy breakdown including information identifying an acceptable range of values for one or more input parameters and one or more execution variables utilized by each process of the one or more EI assemblies.

(*See* Appeal Br. 7–10; *see also* Reply Br. 9).

In the Final Office Action, the Examiner finds Van Biljon discloses "determining the ideal execution state" (Final Act. 5 (citing Van Biljon ¶ 5)),

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but acknowledges that Van Biljon fails to disclose the remaining language of limitation [b], i.e., "identifying an acceptable range of values for one or more input parameters and one or more execution variables utilized by each process" (*see id.*). To address this deficiency, the Examiner relies on Abrari (*see id.* (citing Abrari ¶¶ 10, 63); *see also* Ans. 5 (citing Abrari ¶¶ 30, 62, 63)).

Van Biljon is directed "to a method of organizing permissions to authorize a subject to perform an action on an object in a cloud computing environment having a plurality of computing nodes" (Van Biljon ¶ 6). More particularly, Van Biljon discloses that a first set of permissions describes an action performed on an object, and a second set of permissions describes an action to be performed by one or more users (*id.*; *see also id.* at ¶ 53–58). Van Biljon further discloses

> a method of assigning a computing node to run an instance in a cloud computing environment having a plurality of computing nodes. The method comprises storing a representation of a launch plan, comparing an actual state of the instances running in the system to the ideal state as specified in the launch plan, and applying changes to the actual state of the system to make it consistent with the ideal state as specified in the launch plan.

(*Id.* ¶ 59). In this regard, Van Biljon discloses

> Placement and workload management can be achieved through "anti-entropy" where a persistent ideal, or desired, state is continually compared with the actual state of the system, and appropriate adjustments are made. In terms of such an approach, a durable representation of an ideal state of part of the system is stored (e.g. in a database), for example by storing a launch-plan requested by a user. An ongoing "anti-entropy" process compares the actual state of the system against the ideal state specified in the launch plan, and applies any changes to the actual system to make its state consistent with the ideal state, which

> may require placement of new workloads, termination of others,
> adjustment of networks, or other actions.

(*Id.* ¶ 132).

Abrari is directed to "a platform with an advantageous user interface
for the development, deployment, and maintenance of computer program
applications" (Abrari ¶ 8; *see also id.* ¶ 10). Abrari's system allows business
developers to utilize an Integrated Development Environment (IDE) which
enables "the development of declarative platform-independent rule
components called rulepacks" (*id.* ¶ 17). Abrari discloses that "[t]he IDE
includes a vocabulary **181**, which represents the business entities, their
attributes, and their associations (relationships) in the form of a tree view"
(*id.* ¶ 30). Abrari also discloses that the IDE includes a rulepack and
rulesheet which is "a spreadsheet-like construct for intuitive development of
logically correct sets of rules" (*id.*). Abrari discloses that "[a] rulesheet can
also have preconditions in a preconditions pane **734**. Preconditions are
conditions that apply to all rules. They are generally used to customize a
rulesheet to activate only in a particular situation or for a particular instance
of a business term" (*id.* ¶ 62). Abrari further discloses that a user can
provide a "value set for each condition term" in the definition of the
vocabulary which enables "the system can validate the rulesheet by applying
completeness and ambiguity checks" (*id.* ¶ 63).

We have reviewed the cited portions of Van Biljon and Abrari, and
agree with Appellants that the combination of Van Biljon and Abrari fails to
disclose or suggest the argued limitation (*see* Appeal Br. 7–10; *see also*
Reply Br. 9). Although we agree with the Examiner that Van Biljon
discloses broadly "determining [an] ideal execution state" (*see* Final Act. 5
(citing Van Biljon ¶ 5)), we cannot agree with the Examiner that the asserted

combination discloses or suggests "determining . . . the ideal execution state . . . including retrieving . . . information identifying an acceptable range of values for one or more input parameters and one or more execution variables utilized," as limitation [b] further recites. That is, neither Van Biljon nor Abrari, alone or in combination, disclose or suggest "retrieving . . . information identifying an acceptable range of values for one or more input parameters **and** one or more execution variables utilized" (emphasis added), as independent claim 1 requires.

In response to Appellants' arguments, the Examiner takes the position that "[p]aragraphs 62 and 63 of Abrari disclose a value set with a range of two or more values that can activate a rulesheet" (Ans. 5), and finds that "[t]his is equivalent to an acceptable range of any kind of value, whether it be input, execution, or otherwise" (*id.*). However, we agree with Appellants, that limitation [b] requires "an acceptable range of values for: 1) one or more input parameters utilized by each process of the one or more EI assemblies, **and** 2) one or more execution variables utilized by each process of the one or more EI assemblies" (Reply Br. 8–9).

In view of the foregoing, we do not sustain the Examiner's rejection of independent claim 1 under 35 U.S.C. § 103(a). For the same reasons, we also do not sustain the Examiner's rejection of claims 2–6, which depend therefrom.

Independent claims 7 and 13 and dependent claims 8–12 and 14–18

Independent claims 7 and 13 include a limitation substantially similar to limitation [b] of independent claim 1, as discussed above. Therefore, we do not sustain the Examiner's rejection under 35 U.S.C. § 103(a) of

independent claims 7 and 13, and claims 8–12 and 14–18 that depend therefrom, for the same reasons set forth above with respect to independent claim 1.

DECISION

The Examiner's rejection of claims 1–18 under 35 U.S.C. § 101 is affirmed.

The Examiner's rejection of claims 1–18 under 35 U.S.C. § 103(a) is reversed.

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).

<u>AFFIRMED</u>