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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* WILLIAM A. BROWN, KERRIE L. HOLLEY,  
GARRISON A. MOORE, and WILLIAM J. TEGAN

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Appeal 2018-004604  
Application 12/326,354  
Technology Center 3600

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Before, MURRIEL E. CRAWFORD, HUBERT C. LORIN, and  
CYNTHIA L. MURPHY, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

Appellant<sup>1</sup> seeks our review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 1, 4–8, and 11–14. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as International Business Machines Corporation (“IBM”) (Appeal Br. 2).

## THE INVENTION

Appellant claims a methods and systems for governing architecture of a Service Oriented Architecture (“SOA”) (Spec. 1, Title).

Claim 1 is representative of the subject matter on appeal.

1. A method of governing architecture of a Service Oriented Architecture ('SOA'), the method comprising:

identifying, by one or more modules of automated computing machinery, business requirements for the SOA;

establishing, by one or more modules of automated computing machinery, an architecture management framework;

creating, by one or more modules of automated computing machinery, an SOA reference architecture in dependence upon the architecture management framework and the identified business requirements, the SOA reference architecture comprising a definition of an enterprise-wide, high-level architecture model describing division of functionality and dataflow among components of the high-level architecture model, the definition mapped onto software and hardware components that implement the functionality and dataflow among the components of the high-level architecture model;

determining that the SOA reference architecture does not comply with predetermined architectural policies for the SOA;  
and

refining the SOA reference architecture based on the determination that the SOA reference architecture does not comply with predetermined architectural policies for the SOA, wherein refining the SOA reference architecture comprises creating again the SOA reference architecture taking into consideration non-compliant aspects of a previously created SOA reference architecture.

## THE REJECTIONS

Claims 1, 4–8, and 11–14 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

Claims 1, 4–8, and 11–14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Marks (US 2006/0235733, published Oct. 19, 2006) in view of Mohamad Afshar, “SOA Governance: Framework and Best Practices, an Oracle White Paper” (May 2007) (hereinafter “Oracle”).

## ANALYSIS

### 35 U.S.C. § 101 REJECTION

We will sustain the rejection of claims 1, 4–8, and 11–14 under 35 U.S.C. § 101.

The Supreme Court

set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, . . . determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, . . . then ask, “[w]hat else is there in the claims before us?” To answer that question, . . . 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. [The Court] described step two of this analysis 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 upon the [ineligible concept] itself.”

*Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217–218 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)) (citations omitted).

To perform this test, we must first determine whether the claims at issue are directed to a patent-ineligible concept. The Federal Circuit has explained that “the ‘directed to’ inquiry applies a stage-one filter to claims, considered in light of the [S]pecification, based on whether ‘their character

as a whole is directed to excluded subject matter.” *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). It asks whether the focus of the claims is on a specific improvement in relevant technology or on a process that itself qualifies as an “abstract idea” for which computers are invoked merely as a tool. *See id.* at 1335–36.

In so doing, we apply a “directed to” two-prong test: 1) evaluate whether the claim recites a judicial exception, and 2) if the claim recites a judicial exception, evaluate whether the judicial exception is integrated into a practical application. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, pp. 50–57 (Jan. 7, 2019) (“Revised Guidance”).

The Examiner determines that the claims are directed to comparing of information and the use of rules to determine whether the SOA reference architecture needs to be refined (Final Act. 3–4). The Examiner finds the claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or provide meaningful limitations beyond generally linking an abstract idea to a particular technological environment (a general-purpose computer). The Examiner finds that the claimed computing components are recited at a high level of generality, and they are recited as simply carrying out the abstract idea (e.g., executing computer code to perform identifying, establishing, creating, determining ,and refining) (*Id.* at 4).

The Specification discloses that the claimed method is a method for governing architecture of the Service Oriented Architecture (“SOA”). The architecture of an SOA refers to the manner in which resources of the SOA are organized and integrated. The claimed invention first identifies business

requirements for the SOA. These requirements include accessibility, functionality, interaction, and information, in other words this is data about the requirements of the particular business. After this step, an architecture management framework is established. An architecture management framework is typically represented in documents and diagrams defining how the enterprise architecture for the SOA and its important component parts will be implemented, managed and updated in response to changes to business needs and available technologies (Spec. 29). The method of the invention is depicted in Figure 10. The method steps as recited in claim 1 and disclosed in the Specification include identifying business requirements for the SOA (evaluation); establishing an architecture management framework (judgment); creating an SOA reference architecture (judgment); and determining the SOA reference architecture does not comply with predetermined architectural policies for SOA (judgment) (Spec. 28–30).

As such, we agree with the Examiner’s determination that the claims recite comparing information and using rules to determine whether the SOA reference architecture needs to be refined. This is a method that involves evaluation, judgment, and opinion and is thus a mental process. *Guidance* 52. These steps constitute “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016); *see also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (claims directed to certain arrangements involving contractual relations are directed to abstract ideas). Thus, we find that the claims recite an abstract idea of methods of a mental process.

Turning to the second prong of the “directed to test,” claim 1 requires a “one or more modules of automated computing machinery.” These recitations do not impose “a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” *Revised Guidance*, 84 Fed. Reg. at 18. We find no indication in the Specification, nor does Appellant direct us to any indication, that the operations recited in independent claim 1 invoke any inventive programming, require any specialized computer hardware or other inventive computer components, i.e., a particular machine, or that the claimed invention is implemented using other than generic computer components to perform generic computer functions. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.”).

We also find no indication in the Specification that the claimed invention effects a transformation or reduction of a particular article to a different state or thing. Nor do we find anything of record, short of attorney argument, that attributes any improvement in computer technology and/or functionality to the claimed invention or that otherwise indicates that the claimed invention integrates the abstract idea into a “practical application,” as that phrase is used in the revised Guidance. *See Revised Guidance*, 84 Fed. Reg. at 55.

In this regard, the recitation does not affect an improvement in the functioning of an automated computing machinery or computer or other technology, does not recite a particular machine or manufacture that is integral to the claims, and does not transform or reduce a particular article to

a different state or thing. *Id.* Thus, claim1 is directed to a judicial exception with no integration into a practical application i.e. an abstract idea.

Turning to the second step of the *Alice* analysis, because we find that the claims are directed to an abstract ideas, the claims must include an “inventive concept” in order to be patent-eligible, i.e., there must be an element or combination of elements that is sufficient to ensure that the claim in practice amounts to significantly more than the abstract idea itself. *See Alice*, 573 U.S. at 217–18 (alteration in original) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)).

The introduction of a computer or automated computing machinery into the claims does not alter the analysis at *Alice* step two.

[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. Nor is limiting the use of an abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implemen[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our § 101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional featur[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

*Alice*, 573 U.S. at 223 (alterations in original) (citations omitted).

Instead, “the relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea . . . on a generic computer.” *Id.* at 225. They do not.

Taking the claim elements separately, the function performed by the computer at each step of the process is purely conventional. Using a computer to retrieve, select, and apply decision criteria to data and modify the data as a result amounts to electronic data query and retrieval—one of the most basic functions of a computer. All of these computer functions are well-understood, routine, conventional activities previously known to the trading industry. *See Elec. Power Grp.*, 830 F.3d at 1354; *see also In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ . . . those functions can be achieved by any general purpose computer without special programming”). In short, each step does no more than require a generic computer to perform generic computer functions. As to the data operated upon, “even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” *SAP Am. Inc. v. InvestPic, LLC*, 890 F.3d 1016, 1022 (Fed. Cir. 2018).

Considered as an ordered combination, the computer components of Appellant’s claims add nothing that is not already present when the steps are considered separately. The sequence of data reception-analysis-access/display is equally generic and conventional or otherwise held to be abstract. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction), *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (holding that sequence of data retrieval, analysis, modification,

generation, display, and transmission was abstract), *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (holding sequence of processing, routing, controlling, and monitoring was abstract). The ordering of the steps is, therefore, ordinary and conventional.

The claims do not, for example, purport to improve the functioning of the computer itself. As we stated above, the claims do not affect an improvement in any other technology or technical field. Thus, the claims at issue amount to nothing significantly more than instructions to apply the abstract idea of information access using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 573 U.S. at 226.

We have reviewed all the arguments (Appeal Br. 6-18) Appellant has submitted concerning the patent eligibility of the claims before us that stand rejected under 35 U.S.C. § 101. We find that our analysis above substantially covers the substance of all the arguments, which have been made. But, for purposes of completeness, we will address various arguments in order to make individual rebuttals of same.

We are not persuaded of error on the part of the Examiner by Appellant's argument that the Examiner fails to provide any clear identification that can be taken as the abstract idea (Appeal Br. 8). As discussed above, the Examiner clearly identified the abstract idea to be "comparing of information and the use of rules to determine whether the SOA reference architecture needs to be refined." (Final Act. 4).

We do not agree with Appellant that there is no comparing of information or rules pointed out for the claims. (Appeal Br. 10). Claim 1, for example discloses creating a SOA reference architecture and then

determining that the SOA reference architecture does not comply with predetermined architectural policies. This step clearly involves determining (comparing) if the created SOA complies with predetermined architectural policies (rules).

We are not persuaded of error on the part of the Examiner by Appellant's argument that the claims are not abstract because the claims do not recite a fundamental building block of computer science. (Appeal Br. 15). Specifically, Appellant argues that the prevailing case law establishes that a patent claims is ineligible only when the claim directly recites a fundamental building block and preempts all or at least a broad range of implementation of the idea. (Appeal Br. 14). Appellant reasons that since courts in several cases such as *Alice* and *Mayo* determined that the claims related to a fundamental economic practice, which is a fundamental building block of business and commerce, such a determination is necessary to establish that a claim is directed to an abstract idea. However, while a fundamental economic practice is one of the categories of judicial exceptions established by the courts, the courts have also determined that mathematical concepts, certain methods of organizing human activity in addition to a fundamental economic practice (managing personal behavior such as social activity, teaching and following rules or interactions) are judicial exceptions. In addition, courts have determined that mental processes are also judicial exceptions. *See Guidance* 84 Fed. Reg. at 52. The Examiner in the present case, determines that the claims are directed to a mental process, not a fundamental economic practice or a fundamental building block of computer science.

In regard to the preemption argument, “[w]hile preemption may signal

patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362-63 (Fed. Cir. 2015), cert. denied, 136 S. Ct. 701, 193 (2015) (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”). And, “[w]here a patent's claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.” *Ariosa*, 788 F.3d at 1379.

We are not persuaded of error on the part of the Examiner by Appellant’s argument that the claims recite significantly more than any abstract idea because the claims are necessarily based in computer technology in order to overcome problems specifically arising in the realm of SOA governance. Appellant concludes that the invention improves the functionality of the underlying computer hardware (Appeal Br. 18). In making this argument, Appellant argues that the instant claims are similar to the claims in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) (Appeal Br. 17).

In *DDR Holdings*, the Court evaluated the eligibility of claims “address[ing] the problem of retaining website visitors that, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be instantly transported away from a host’s website after ‘clicking’ on an advertisement and activating a hyperlink.” *DDR*, 773 F.3d at 1257. There, the Court found that the claims were patent eligible because they transformed the manner in which a hyperlink typically functions to

resolve a problem that had no “pre-Internet analog.” *Id.* at 1258. The Court cautioned, however, “that not all claims purporting to address Internet-centric challenges are eligible for patent.” *Id.* For example, in *DDR Holdings* the Court distinguished the patent-eligible claims at issue from claims found patent-ineligible in *Ultramercial*. *See DDR*, 773 at 1258–59 (citing *Ultramercial*, 772 F.3d 709, 715–16 (Fed. Cir. 2014)). As noted there, the *Ultramercial* claims were “directed to a specific method of advertising and content distribution that was previously unknown and never employed on the Internet before.” *Id.* at 1258 (quoting *Ultramercial*, 772 F.3d at 715–16). Nevertheless, those claims were patent ineligible because they “merely recite[d] the abstract idea of ‘offering media content in exchange for viewing an advertisement,’ along with ‘routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet.’” *Id.*

Appellant’s asserted claims are analogous to claims found ineligible in *Ultramercial* and distinct from claims found eligible in *DDR Holdings*. The ineligible claims in *Ultramercial* recited “providing [a] media product for sale at an Internet website;” “restricting general public access to said media product;” “receiving from the consumer a request to view [a] sponsor message;” and “if the sponsor message is an interactive message, presenting at least one query to the consumer and allowing said consumer access to said media product after receiving a response to said at least one query.” *Ultramercial*, 772 F.3d at 712. Similarly, Appellant’s asserted claims recite receiving, analyzing, modifying, and transmitting data. This is precisely the type of Internet activity found ineligible in *Ultramercial*.

In view of the foregoing, we will sustain the Examiner's rejection of claim 1 under 35 U.S.C. § 101. We will also sustain the rejection as it is directed to the remaining claims because the Appellant has not argued the separate eligibility of these claims.

35 U.S.C. § 103(a) REJECTION

We will not sustain this rejection because we agree with Appellant that the prior art does not disclose “determining that the SOA reference architecture does not comply with predetermined architectural policies for the SOA,” and “refining the SOA reference architecture based on the determination.” (Appeal Br. 4). The Examiner relies on Oracle pages 6–7, page 18, step 3 and page 20, step 6 for disclosing this subject matter. (Final Act. 12).

We find that pages 6–7 of Oracle states that building out your SOA to enable change is best done using an architectural approach that sets up a minimal set of constraints. As part of a SOA journey, certain policies should be considered and that failure to enact policies relating to enterprise architecture will result in duplicative effort. As such, this section of Oracle discloses that policies should be established for the SOA but does not disclose a step of determining whether an SOA policy complies with the policies and refining the SOA are a result of this determination.

We find that page 18, step 3 of Oracle discloses that once you know what kinds of policies you need, you need to define the success factors and key performance indicators that will let you know you have achieved your goals and objectives. This portion of Oracle does not disclose a step of determining that the SOA does not comply with the policy and refining the SOA based on the determination.

We find that Oracle at page 20, step 6 discloses that periodically, the policies need to be re-evaluated and refined but does not disclose the step of determining that the SOA does not comply with the policy and refining the SOA based on the determination.

In view of the foregoing, we will not sustain this rejection as it is directed to claim 1. We will also not sustain the rejection as it is directed to the remaining claims because each of the remaining claims requires the subject matter we have found lacking in Oracle.

#### CONCLUSIONS OF LAW

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 4-8, 11-14	101	Eligibility	1, 4-8, 11-14	
1, 4-8, 11-14	103(a)	Marks, Oracle		1, 4-8, 11-14
<b>Overall Outcome</b>			1, 4-8, 11-14	

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

**AFFIRMED**