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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* PHILIP E. VASEY

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Appeal 2019-001646  
Application 10/933,466  
Technology Center 2100

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Before CARL W WHITEHEAD JR, DENISE M. POTHIER, and  
JEFFREY S. SMITH, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the rejection of claims 22–32 and 46–57, which are all of the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

*Illustrative Claim*

22. An apparatus comprising:

at least one computer having a document generation program stored on non-transitory computer-readable media, the document generation program configured to process a document template that comprises:

compulsory content elements;

optional content elements;

rules governing inclusion of optional content elements based on input information; and

rules governing use of symbol elements based on evaluation of the rules governing inclusion of optional content elements, a first rule governing use of a first symbol element associated uniquely with and applied only to a first optional content element, and a second rule governing use of the first symbol element associated uniquely with and applied only to a second optional content element, wherein the first rule does not govern the second optional content element, and the second rule does not govern the first optional content element;

the document generation program comprising:

instructions that evaluate the first rule based on first inputted information to generate a partially customized document comprising the compulsory content elements, the first symbol element, the second rule, and the second symbol element; and

instructions that subsequently generate a fully customized document from the partially customized document, without

reference to the document template, by evaluating the second rule based on second inputted information.

*Prior Art*

Nunberg	US 5,111,398	May 5, 1992
Filteau	US 2002/0188896 A1	Dec. 12, 2002

Hing-Lung Lin et al., Automatic Chinese Text Generation Based on Inference Trees, Proc. Of ROCLING IV 215–236 (1991) ("Lin").

*Examiner's Rejections*

Claims 22–32 and 46–57 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 22–32 and 46–57 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Claims 22–27, 32, 46–50, and 52–56 stand rejected under 35 U.S.C. § 103 as unpatentable over Filteau and Lin.

Claims 28–31, 51, and 57 stand rejected under 35 U.S.C. § 103 as unpatentable over Filteau, Lin, and Nunberg.

ANALYSIS

*Section 101 rejection*

The Examiner rejects all of the pending claims under 35 U.S.C. § 101 as patent-ineligible because they are directed to a judicial exception without significantly more. Final Act. 8–11. Appellant<sup>1</sup> argues the claims are directed to a technical improvement in documents that are generated in multiple steps, in accordance with different punctuation rules and with different punctuation symbols. Appeal Br. 23–25.

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<sup>1</sup> We use the word “Appellant” to refer to “applicants” as defined in 37 C.F.R. § 1.42(a). The Appeal Brief identifies Thomson Reuters Global Resources Unlimited Company, as the real party in interest. Appeal Br. 2.

*A. Principles of Law*

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The U.S. Supreme Court, however, has interpreted § 101 to include an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (citation omitted).

The Court, in *Alice*, reiterated the two-part framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 75–77 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 573 U.S. at 217. The first part in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* For example, abstract ideas include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 218–20. If we conclude that the claims are not directed to a patent-ineligible concept, they are considered patent eligible under § 101 and the inquiry ends. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047 (Fed. Cir. 2016).

If the claims are directed to a patent-ineligible concept, the second part in the *Alice/Mayo* analysis is to consider the elements of the claims “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, 78). In other words, the second part is to “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.’” *Id.* at 217–18 (brackets in original) (quoting *Mayo*, 566 U.S. at 72–73). The prohibition against patenting an abstract idea “‘cannot be circumvented by attempting to limit the use of the formula to a particular technological environment’ or adding ‘insignificant postsolution activity.’” *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010) (internal citation omitted).

The U.S. Patent and Trademark Office (the “Office”) has published revised guidance on the application of 35 U.S.C. § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50–57 (Jan. 7, 2019) (“2019 Guidance”). Under the 2019 Guidance, the Office first looks to whether the claim recites: (1) any judicial exceptions, including certain groupings of abstract ideas (*i.e.*, mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and (2) additional elements that integrate the judicial exception into a practical application. *See* 2019 Guidance at 52, 54–55.

Only if a claim (1) recites a judicial exception, and (2) does not integrate that exception into a practical application, does the Office then look to whether the claim: (3) adds a specific limitation beyond the judicial exception that are not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. *See* 2019 Guidance at 56. We follow this guidance here.

*B. Application of Legal Principles*

*1. Step 2A of 2019 Guidance*

Prong 1: Do the Claims Recite an Abstract Idea

In applying the framework set out in *Alice/Mayo*, and as the first part of that analysis, the Examiner finds the claims are directed to the abstract idea of generating a document by applying punctuation rules to content elements and punctuation symbols. *See* Ans. 6–7; Final Act. 8–11.

We evaluate the Examiner’s § 101 rejection by applying the 2019 Guidance, which uses enumerated groupings of abstract ideas that are rooted in U.S. Supreme Court precedent, as well as Federal Circuit decisions interpreting that precedent. *See* 2019 Guidance at 51–52. The 2019 Guidance describes one category of abstract ideas as including “[m]athematical concepts” including mathematical relationships or mathematical formulas, “[c]ertain methods of organizing human activity” including fundamental economic principles or practices, and “[m]ental processes” including concepts performed in the human mind. *Id.* at 52.

Claims 22, 46, and 52 are independent. Claim 22 recites an apparatus, claim 46 recites a method, and claim 52 recites a computer program stored on computer readable media. We analyze claim 46 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv). The claimed steps of “evaluating the first rule based on first inputted information to generate a partially customized document comprising the compulsory content elements, the first symbol element, the second rule, and the second symbol element” and “subsequently generating a fully customized document from the partially customized document, without reference to the document template, by evaluating the second rule based on second inputted information” can be performed in the

human mind. *See* 2019 Guidance at 52. For example, a human, using pen and paper, can evaluate a punctuation rule based on a content elements and a symbol elements to generate a partially customized document. Thus, under Prong 1 of Step 2A in accordance with the 2019 Guidance, we conclude the claims recite the judicial exception of mental processes, and we, therefore, agree with the Examiner’s conclusions that the claims recite an abstract idea.

Prong 2: Do the Claims Integrate the Abstract  
Idea into a Practical Application

In accordance with Prong 2 of Step 2A of the 2019 Guidance, we evaluate the claims to determine whether they recite *additional elements beyond the abstract idea*, and, if so, we evaluate the additional elements to determine whether they integrate the abstract idea into a practical application. 2019 Guidance at 54. The 2019 Guidance at page 55 provides exemplary considerations, including whether an additional element:

- “reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field”;
- “implements a judicial exception with, or uses a judicial exception in conjunction with, a particular machine or manufacture that is integral to the claim”;
- “effects a transformation or reduction of a particular article [or thing] to a different state or thing”; or
- “applies or uses the judicial exception in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment.”

The 2019 Guidance also highlights certain examples in which courts have held that “a judicial exception has *not* been integrated into a practical



application,” such as where the claims “merely use[] a computer as a tool to perform an abstract idea” or the additional element adds “insignificant extra-solution activity” to the abstract idea. 2019 Guidance at 55 (emphasis added); *see also* October 2019 Update at 11–15.

Appellant argues that its claims are not directed to an abstract idea in view of *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). Reply Br. 27–28; App. Br. 24–25. In particular, Appellant contends that the “claims are undeniably directed to an improvement [of] enabling the customized document to be generated on a remote computer that does not have access to the document template.” Reply Br. 28. However, this “remote computer that does not have access to the document template” limitation is not recited in the claim, and we find no basis for reading this limitation into the claim.

We determine that the claims do not include an improvement to another technology or technical field or an improvement to the functioning of the computer itself; we also find the claims do not include a transformation of an article or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment. As the U.S. Supreme Court has explained, “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.” *Alice*, 573 U.S. at 223 (quoting *Mayo*, 566 U.S. at 84) (alterations in original).

Accordingly, in the first part of the *Alice/Mayo* analysis, we conclude that the claims are directed to an abstract idea that is not integrated into a practical application.

*2. Step 2B of 2019 Guidance – Do the Claims Recite Significantly More Than the Abstract Idea*

Regarding second part of the *Alice/Mayo* analysis, the Examiner finds the elements of the claims, when considered individually or as an ordered combination, do not recite *significantly more* than the abstract idea. Ans. 7–8. The Examiner finds the generically recited computer components that implement the method steps do not provide meaningful limitations beyond linking the abstract idea to a generic computing environment. *See id.* We agree with the Examiner. *See Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, 78) (“we consider the elements of each claim both individually and ‘as an ordered combination’” to determine whether the claim includes “significantly more” than the ineligible concept); *see also Bascom Global Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) (“an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.”).

Here, the claim elements beyond the abstract idea recite “with at least one computer having a document generation program stored on non-transitory computer-readable media, processing a document template that includes comprises.” These claim elements recite only generic computer functions and components that are well-understood, routine, and conventional—that is, data representing rules, content elements, and symbol elements, and generic computer having a program stored on computer-readable media; such generic computer data and components, which do not convey an inventive concept. *See Final Act.* 6–9. In particular, this limitation entails a computer having a document generation program stored on computer-readable media that processes a document template that

includes content elements, rules, and symbol elements, where processing the document template comprises evaluating data included in the template and generating results. But the steps of processing the document template, namely evaluating and generating, constitute the underlying abstract idea of mental processes. *See BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) (“It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.”); *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (“[A] claim for a *new* abstract idea is still an abstract idea.”); *SAP America, Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018) (“What is needed is an inventive concept in the non-abstract application realm.”). Appellant is reminded that “the ‘inventive concept’ [under the second part of the *Mayo/Alice* test] cannot be the abstract idea itself” and “*Berkheimer* . . . leave[s] untouched the numerous cases from this court which have held claims ineligible because the only alleged ‘inventive concept’ is the abstract idea.” *Berkheimer v. HP Inc.*, 890 F.3d 1369, 1374 (Fed. Cir. 2018) (Moore, J., concurring).

We determine that the functions recited in Appellant’s claims do not add any meaningful limitations beyond generally linking the abstract idea to the particular technological environment. Accordingly, we sustain the Examiner’s rejection of claims 22–32 and 46–57 under 35 U.S.C. § 101 as patent-ineligible.

*Section 112, first paragraph rejection*

Claims 22–32 and 46–57 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 22, 46, and 52 are independent. Claim 22 recites “subsequently generate a fully customized document from the partially customized document, without reference to the document template, by evaluating the second rule based on second inputted information.” Each of claims 46 and 52 recite a similar limitation. The Examiner finds that this limitation was not described in Appellant’s Specification as originally filed. Final Act. 11. The Examiner, citing pages 9, 10, and Figure 5 of Appellant’s Specification, finds that the Specification only discloses that the document generation program generates a partially or fully customized document from a template. Ans. 4–5.

The Specification discloses a process that can generate a partially customized document. Spec. 9:20–23. The Specification discloses that the “customized document contains not only the content elements, the inclusion of which has been determined by the various rules within the template, but also the rules which have not been evaluated.” Spec. 9:32–35. Appellant contends that this sentence contains an obvious typographical error, because a partially customized document, and not a customized document, contains rules which have not been evaluated. Reply Brief 23, n1. We agree with Appellant, and read this sentence as the “partially customized document contains . . . rules which have not been evaluated.”

Appellant contends that the Specification discloses that the partially customized document includes optional content that was selected by the evaluated rules, as well as unevaluated rules. Reply Brief 24 (citing Spec.

9:32–10:2). Appellant contends that features that are common to both the template and the partially customized document would function in the same way. *Id.* at 25. We agree with Appellant. Features such as unevaluated rules, which are common to both the template and the partially customized document, would function in the same way, and would allow the process to generate a fully customized document from the partially customized document, without referring to the template. Spec. 9:32–10:2, 13:7–10.

The Examiner also finds that “wherein the first rule does not govern the second optional content element, and the second rule does not govern the first optional content element,” as claimed, was not described in Appellant’s Specification as originally filed. Final Act. 11. The Examiner finds that the Specification discloses rules, including (a) a full stop at the end of the last clause, (b) the word “and” after the penultimate clause, and (c) that commas follow all other clauses up to but not including the penultimate clause. Ans. 6. The Examiner finds that the rules govern the use of symbols such as “full stop,” “and,” and “comma,” but do not indicate that the first rule does not govern the second optional content element, nor that the second rule does not govern the first optional content. *Id.* The Examiner finds that this limitation is a negative limitation that does not have basis in the original disclosure. *Id.* Appellant contends that this limitation is supported in the Specification at page 11, lines 32–35, and in the Summary of Claimed Subject Matter. Reply Br. 25.

Negative limitations are adequately supported when the specification describes a reason to exclude the relevant limitation. *Santarus, Inc. v. Par Pharmaceutical, Inc.*, 694 F.3d 1344, 1351 (Fed. Cir. 2012). Here, the rule for “full stop” cited by the Examiner only applies to the last clause, and does

not govern any other clause. Similarly, the rule for “and” cited by the Examiner applies to the penultimate clause, and does not govern any other clause. The rule for comma cited by the Examiner does not govern the penultimate clause, nor the last clause. The Specification provides a reason for such mutually exclusive rules, namely, that such rules provide grammatically correct punctuation to a fully or partially customized document. Spec. 5:9–15, 15:20–21.

Further, the claim itself recites “a first rule governing use of a first symbol element associated uniquely with and applied only to a first optional content element,” which means that “the first rule does not govern the second optional content element” as claimed, because the first rule is “associated uniquely with and applied only to a first optional content element.” Similarly, the claim recites “a second rule governing use of the first symbol element associated uniquely with and applied only to a second optional content element,” which means that the second rule “does not govern the first optional content element,” because the second rule is “associated uniquely with and applied only to a second optional content element.”

We do not sustain the rejection of claims 22–32 and 46–57 under 35 U.S.C. § 112, first paragraph.

*Section 103 rejections*

Claims 22–27, 32, 46–50, and 52–56 stand rejected under 35 U.S.C. § 103 as unpatentable over Filteau and Lin. Claims 22, 46, and 52 are independent. Claim 22 recites “evaluate the first rule . . . to generate a partially customized document comprising the compulsory content elements, the first symbol element, the second rule, and the second symbol element.” Each of claims 46 and 52 recites a similar limitation. Appellant contends that Filteau does not teach the “partially customized document” as claimed. App. Br. 19–20. The Examiner finds that the system of Filteau generates a partial diagnostic report having an identified study type configured to retrieve a study profile associated with diagnostic finding sets containing text and punctuations written in the text fields. Ans. 10 (citing Filteau ¶¶ 41, 44, 49, 68, 87, 91, Fig. 8A). In particular, the Examiner finds that Figure 8A of Filteau shows a sample of a partial diagnostic report. *Id.*

Appellant contends that the sections of Filteau cited by the Examiner disclose either a document template or a completed report. Reply Br. 20. In particular, Appellant contends that “there is no ‘partial diagnostic report’ described by Filteau,” because the diagnostic reports “are the ‘fully customized documents’ generated from the site template . . . using the diagnostic findings.” *Id.* Appellant contends that report instance 180, which is the medical report generated from the templates as described in Paragraph 52, does not include any unevaluated rules, so it cannot be reasonably interpreted as a partially customized document. *Id.* at 21.

We agree with Appellant. The sections of Filteau cited by the Examiner do not disclose a partially customized document. *See* Ans. 10 (citing Filteau ¶¶ 41, 44, 49, 68, 87, 91, Fig. 8A). Paragraph 41 of Filteau

discloses that a storage device contains diagnostic findings associated with a text field, and also contains templates that provide formatting rules to be applied in all diagnostic reports generated by the report generator. We agree with Appellant that the diagnostic reports discussed in Paragraph 41 are the fully customized documents generated from the template, and not partially customized documents. *See* Reply Br. 20.

Similarly, the other cited sections disclose either templates or completed reports. Paragraph 44 discloses a study template that provides study-specific report-formatting rules to be applied in diagnostic reports created by the report generator. Paragraph 49 discloses that the study template includes information identifying the source of images, the type of study, and a set of diagnostic findings that may be included in a diagnostic report of that type. Paragraph 68 discloses a reporting profile that may be associated with diagnostic finding sets. Paragraph 87 discloses that the system relies on the linguistic skills of a reporting physician to enter a valid statement with correct punctuation for a diagnostic finding. Paragraph 91 discloses that Figure 8A shows a portion of an exemplary report generated by the medical report generator.

The Examiner has not persuasively explained how the cited portions of Filteau (¶¶ 41, 44, 49, 68, 87, 91, and Fig. 8A) teach “evaluate the first rule . . . to generate a partially customized document comprising the compulsory content elements, the first symbol element, the second rule, and the second symbol element” as recited in claim 22. To the contrary, we agree with Appellant, that Filteau discloses that the rules provided by the associated templates, including the rules provided by study template 176, are used to generate the completed report. Reply Br. 21 (citing Filteau ¶ 52).



The Examiner does not find that Lin teaches “evaluate the first rule . . . to generate a partially customized document comprising the compulsory content elements, the first symbol element, the second rule, and the second symbol element” as recited in claim 22. Even if Filteau and Lin were combined, the combination as proposed on this record would not have taught “evaluate the first rule . . . to generate a partially customized document comprising the compulsory content elements, the first symbol element, the second rule, and the second symbol element” as recited in independent claim 22, nor as similarly recited in independent claims 46 and 52.

We do not sustain the rejection of claims 22–27, 32, 46–50, and 52–56 under 35 U.S.C. § 103.

Claims 28–31, 51, and 57 stand rejected under 35 U.S.C. § 103 as unpatentable over Filteau, Lin, and Nunberg. The Examiner does not find that Nurnberg teaches “evaluate the first rule . . . to generate a partially customized document comprising the compulsory content elements, the first symbol element, the second rule, and the second symbol element” as recited in independent claim 22, nor as similarly recited in independent claims 46 and 52.

We do not sustain the rejection of claims 28–31, 51, and 57 under 35 U.S.C. § 103.

DECISION

The rejection of claims 22–32 and 46–57 under 35 U.S.C. § 101 as directed to non-statutory subject matter is affirmed.

The rejection of claims 22–32 and 46–57 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement is reversed.

The rejection of claims 22–27, 32, 46–50, and 52–56 under 35 U.S.C. § 103 as unpatentable over Filteau and Lin is reversed.

The rejection of claims 28–31, 51, and 57 under 35 U.S.C. § 103 as unpatentable over Filteau, Lin, and Nunberg is reversed.

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/ Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
22–32, 46–57	101	Eligibility	22–32, 46–57	
22–32, 46–57	112	Written Description		22–32, 46–57
22–27, 32, 46–50	103	Filteau, Lin		22–27, 32, 46–50
28–31, 51, 57	103	Filteau, Lin, Nunberg		28–31, 51, 57
<b>Overall Outcome</b>			<b>22–32, 46–57</b>	

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. § 41.50(f).

AFFIRMED