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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* LUCIAN JOHNSTON and JEAN-MICHEL DENICHO

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Appeal 2019-002863  
Application 14/569,185  
Technology Center 3600

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Before JOSEPH L. DIXON, ROBERT E. NAPPI, and  
CATHERINE SHIANG, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject Claims 1–5 and 7–10. Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

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 (2017). Appellant identifies the real party in interest as Schlumberger Technology Corporation. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claims are directed to control of a drilling process that includes multiple workflows having interdependencies. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method comprising:
  - identifying a plurality of workflows in a multi-workflow process*, wherein the multi-workflow process is a drilling process;
  - receiving information* as acquired by one or more sensors during the drilling process;
  - identifying an interdependency between a first workflow and a second workflow* of the drilling process;
  - based at least in part on at least a portion of the information* and during the drilling process, *determining a physical severity in which the first workflow and the second workflow are impacted in response to a change in a state or value of the interdependency*;
  - quantifying the physical severity as quantified severity information*; and
  - during the drilling process, presenting the quantified severity information.

Claim 1 (emphases added).

REFERENCES

The prior art relied upon by the Examiner is:

Cox et al. (“Cox”)	US 6,720,967 B1	Apr. 13, 2004
Pastusek et al. (“Pastusek”)	US 2007/0272442 A1	Nov. 29, 2007
Minsky et al. (“Minsky”)	US 2009/0106063 A1	Apr. 23, 2009
Sabharwal	US 2014/0278733 A1	Sept. 18, 2014
Mancini	US 2015/0081221 A1	Mar. 19, 2015

## REJECTIONS

Claims 1–3 and 7–10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Minsky in view of Sabharwal in view of Mancini in view of Pastusek.

Claims 4 and 5 stand rejected under 35 U.S.C. § 103 as being unpatentable over Minsky in view of Sabharwal in view of Mancini in view of Pastusek in further view of Cox.

Claims 1–5 and 7 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (*i.e.*, a law of nature, a natural phenomenon, or an abstract idea) without significantly more.

## OPINION

### *I. 35 U.S.C. § 103*

#### *a. Claims 1–3 and 7*

Appellant argues Claims 1–3 and 7 as a group. Appeal Br. 36. We select Claim 1 to represent the group. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Regarding the combination, Appellant contends that the Examiner has interpreted Claim 1 inconsistent with Appellant’s Specification and the interpretation one with ordinary skill in the art of drilling would give to Claim 1. Appeal Br. 23. Appellant further contends that such an interpretation has permitted the Examiner to apply Minsky and Sabharwal, which Appellant contends are non-analogous art. *See* Appeal Br. 22, 23. In this light, Appellant contends that “Minsky and Sabharwal are not ‘reasonably pertinent’ to the problem to be solved as ‘drawn from the specification and the inferences that would reasonably have been drawn from the specification by a person of ordinary skill in the art.’” Appeal Br. 24. Appellant specifically contends that Minsky and Sabharwal do not

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disclose a multi-workflow drilling process or “any multi-workflow process that is a manufacturing process that produces a product.” Appeal Br. 24.

Appellant contends that Minsky does not teach “a multi-workflow technological manufacturing process” that determines “a physical severity,” but instead is directed to a “human activity” and “untethered from physical realities of a multi-workflow manufacturing process.” Appeal Br. 28.

Appellant makes a similar contention regarding Sabharwal. Appeal Br. 31. Thus, Appellant contends “[a] person having ordinary skill in the art (PHOSITA) would not have looked to the abstract, business enterprise concepts of Minsky or Sabharwal.” Appeal Br. 25. Appellant further argues that Mancini and Pastusek do not remedy the deficiencies of Minsky and Sabharwal because neither teaches or suggests a “multi-workflow drilling process” with workflows having interdependencies. Appeal Br. 26, 34.

In response, the Examiner maintains that “Appellant’s claims are related to problems that are pertinent to workflows so references directed to workflows are analogous art.” Ans. 8. The Examiner further maintains that the “original claims” did not include “drilling data,” and that is why Minsky and Sabharwal were applied to original claim 1. Ans. 8. The Examiner also maintains that “drilling data” simply adds context to the claimed process, and that the claimed process can “be used with other types of data such as for drilling processes or for other types of processes such as those related to financial processes or enterprise management.” Ans. 8. Moreover, the Examiner maintains that “[A]ppellant’s claims are very broad as they related [*sic*] to the workflow interdependency functionality, analysis and presentation” and that “[t]here is nothing in the claims that would prevent such a tool or methodology to be used for other types of data and that the drilling aspect of the claims merely provides one specific context for such a

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solution.” Ans. 9. We agree with the Examiner and further find that the amended claim 1 is rejected base on the totality of what the prior art references teach as suggested to the skilled artisan.

Furthermore, the Examiner maintains that since the term “[w]orkflow is a very broad term and can be a model” (Ans. 10), Mancini teaches “various drilling sections that have their own workflows or at least can be reasonably be considered workflows to one of ordinary skill in the art as they are processes that get modelled and integrated into risk assessment.” Ans. 8–9.

In the Reply Brief, along the same lines of the reasoning as Appellant’s arguments in the Appeal Brief, Appellant contends that “the Examiner has ‘oversimplified’ the claimed subject matter to an extent that the Examiner’s construction bears little resemblance to the specification or what would be understood by a PHOSITA” and “[t]he claimed subject matter has no parallels in ‘financial processes or enterprise management’ that are related to humans and about humans.” Reply Br. 22, 24 (emphasis omitted).

As outlined above, the thrust of Appellant’s argument is that Claim 1 is directed towards something “physical,” such as “a manufacturing process that produces a product” or a multi-workflow drilling process and that one with ordinary skill in the art would not turn to Minsky and Sabharwal because they are not directed towards producing products and/or are untethered to the physical realities of the claimed invention. *See* Appeal Br. 23, 24. We have not been persuaded by Appellant’s arguments.

While Claim 1 recites the terms “drilling process” and “physical severity” and includes the limitation “during the drilling process, presenting the quantified severity information,” the terms “drilling process” and

“physical severity” are not specifically limited to or only associated with a specific “drilling operation,” as Appellant contends. Appellant’s Specification indicates that “a drilling process can be used to drill a borehole into a formation” and that such “a typical drilling process can quite complex [*sic*] and may include a number of workflows that are implemented concurrently in the drilling process.” Spec. ¶ [6]. Appellant’s Specification also indicates “workflows for drilling processes have been developed *prior to a drilling operation.*” Spec. ¶ [7] (emphasis added). The workflows of the drilling process are described in paragraph [32] of the Specification and include, *inter alia*, “workflows for directional drilling, pore pressure, well placement, anti-collision . . . .” Additionally, Appellant’s Specification states “[t]he disclosed interdependent multi-workflow management system may occur in real-time or *during planning phases of a drilling operation.*” Spec. ¶ [33] (emphasis added). In summary, according to Appellant’s disclosure, “directional drilling” (*i.e.*, the drilling operation) corresponds to one workflow of several workflows of an entire “drilling process.” Claim 1 does not include the term “directional drilling” or “drilling operation” and nothing in Claim 1 limits “drilling process” to either “directional drilling,” “drilling operation,” or “manufacturing a borehole.”

It is well settled that, during patent examination, claims must be given their broadest reasonable interpretation consistent with the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc). The broadest reasonable interpretation standard requires the words of the claims to be given their “broadest reasonable meaning . . . in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s

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specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

However, although we interpret claims broadly but reasonably in light of the Specification, we nonetheless must not import limitations from the Specification into the claims. *See Phillips*, 415 F.3d at 1323 (citations omitted).

In this case, because nothing in “method” Claim 1 limits “drilling process” and “physical severity” to either “directional drilling” or “drilling operation,” we agree with the Examiner that Claim 1 under its broadest reasonable meaning is “related to problems that are pertinent to workflows so references directed to workflows are analogous art” and, as a result, “it is reasonable for the Minsky and Sabharwal references to be considered analogous art.” Ans. 8.

Therefore, we find Appellant’s argument to be unpersuasive of error, and we affirm the Examiner’s rejections of Claims 1–3 and 7 under 35 U.S.C. § 103.

*b. Claim 8*

Appellant argues, “[n]one of the references provide sufficient evidence of the multi-workflow drilling process of claim 1 that includes determining a physical severity in which a first workflow and a second workflow of the drilling process are impacted in response to a change in a state or value of the interdependency.” Appeal Br. 37.

In response, the Examiner maintains that Mancini teaches, in paragraph [11], the selection of “control parameters to optimize drilling performance.” Ans. 10. The Examiner further maintains:

physical severity is shown in Mancini at para [0019], [0069]-[0070] because Mancini shows risks for a failure mode of a section of wellbore where the failure can be for things like lateral vibration or that environmental conditions can be high risk. Both



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of those type of risks and failures are physical and the level of severity is shown because there are calculations being made and presented at, for instance, para [0175].

Ans. 11.

In the Reply Brief, “Appellant reiterates that none of the references show evidence of multi-workflow drilling that includes determining a physical severity that is impacted.” Reply Br. 25 (emphasis omitted).

Based on our review, we have not been persuaded by Appellant’s arguments. The Examiner finds Minsky teaches a multi-workflow process and determining a severity in which workflows are impacted in response to a change in a state or value of the interdependency between the workflows. Final Act. 7, 8. We agree with the Examiner’s findings. Our review of Mancini also finds that Mancini teaches modeling a drilling process to evaluate risk of failure during a drilling process. Mancini ¶ 1. Mancini also teaches that the drilling process includes a workflow which can be impacted by a change in a state or value. Mancini ¶ 67, 68. Mancini also teaches where the severity is a physical severity. Mancini ¶ 69.

Therefore, we find Appellant’s argument to be unpersuasive of error, and we affirm the Examiner’s rejection of Claim 8 under 35 U.S.C. § 103.

*c. Claims 9 and 10*

Appellant argues Claims 9 and 10 as a group.<sup>2</sup> Appeal Br. 36; Reply Br. 26. We select Claim 9 to represent the group. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Appellant argues Claim 9 on the same basis as Appellant’s arguments for Claims 1 and 8, but further adds “[t]he term ‘control flow’ in Minsky is not sufficient evidence of ‘a drilling process controller.’” Appeal Br. 38–40 (emphasis omitted).

In response, the Examiner maintains that both Minsky and Mancini show a controller. Ans. 11.

In the Reply Brief, Appellant reiterates “[t]he record is lacking evidence of the drilling process controller.” Reply Br. 26.

Based on our review and based on the same reasoning set forth for Claim 8 in the section above, we have not been persuaded by Appellant’s arguments. Furthermore, we agree with the Examiner that Minsky teaches a controller. Ans. 11. Also, as we discussed above and consistent with the Examiner’s findings, Mancini is directed towards a drilling process. Mancini ¶ 1.

Therefore, we find Appellant’s argument to be unpersuasive of error, and we affirm the Examiner’s rejections of Claims 9 and 10 under 35 U.S.C. § 103.

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<sup>2</sup> Appellant indicates that “claim 1 is not representative of independent claims 9 and 10,” but Appellant does not set forth a separate argument for independent claim 10. Consequently, claim 10 will fall with independent claim 9.

*d. Claims 4 and 5*

Appellant again argues, “Mancini does not disclose ‘physical severity’ as being related to workflows of a multi-workflow drilling process.” Appeal Br. 40 (emphasis omitted). Appellant further argues that Cox does not teach “‘presenting the quantified severity information in a graphical web diagram, wherein workflows relying on the interdependency are connected by arrows’ as in dependent claim 4” and “‘wherein quantifying the physical severity information comprises adjusting the thickness or line weight of the arrows based on the degree of severity’ as in dependent claim 5.” Appeal Br. 46.

In response, the Examiner maintains “[t]he cited sections of Cox explicitly shows these limitations and because Cox can be considered analogous art because Cox is directed to interaction with workflow data and thus related to the type of workflows shown in Minsky and Sabharwal.” Ans. 10. In the Final Action, the Examiner finds that Cox teaches, in Figure 6 and col. 8, line 27, through col. 9, line 34, presenting the quantified severity information in a graphical web diagram by adjusting the thickness or line weight of the arrows based on the degree of severity. Final Act. 16.

We do not find Appellant’s arguments persuasive. Appellant has not, in either the Appeal Brief or Reply Brief, persuasively identified how the Examiner’s findings with respect to Cox fail to teach or suggest the limitations of Claims 4 and 5. Because Appellant has not shown error in the Examiner’s factual findings or conclusion of obviousness, we affirm the Examiner’s rejections of Claims 4 and 5 under 35 U.S.C. § 103.

*II. 35 U.S.C. § 101*

Patent eligibility under 35 U.S.C. § 101 is a question of law that is reviewable *de novo*. See *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012).

*a. Legal Principles*

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

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Alice*, 573 U.S. at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, under Step 2A, we first determine what concept the claim is “directed to.” See *Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); see also *Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas and, thus, patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes,

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such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

If, under Step 2A, the claim is “directed to” an abstract idea, then, under Step 2B, “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

On January 7, 2019, the U.S. Patent and Trademark Office (“USPTO”) published revised patent subject matter eligibility guidance. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50, 2019 (“Revised Guidance”). Under the Revised Guidance, Step 2A of the *Alice* two-step framework is divided in two prongs. For Step 2A, Prong 1, we look to whether the claim recites any judicial exceptions falling into certain groupings of abstract ideas (*e.g.*, mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes). For Step 2A, Prong 2, if the claim recites such a judicial exception, we look to whether the claim recites any additional elements that integrate the judicial exception into a practical application (*see* Manual of Patent Examining Procedure (“MPEP”) § 2106.05(a)–(c), (e)–

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(h)).

Only if a claim recites a judicial exception and does not integrate that exception into a practical application, do we then determine, under Step 2B of the *Alice* two-step framework, whether the claim adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)) or simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

*b. Discussion – Claim 1*

*i. Examiner’s Findings and Conclusions*

In the Final Action before the Revised Guidance, the Examiner maintains that Claim 1 is directed to the abstract ideas of “being an idea itself” and “being a type of organizing human activity.” Final Act. 4, 5. The Examiner also maintains that Claim 1 does not include an inventive concept and, is therefore, ineligible for patenting. Final Act. 5. In the Answer, the Examiner maintains that the “field of drilling [of the claims] merely provides a context for the type” of information required by Claim 1. Ans. 3. The Examiner also maintains that the invention of Claim 1 uses technology to implement an activity that was previously performed by humans. Ans. 4. The Examiner further maintains that Claim 1 is not “sufficiently tethered” to an actual drilling operation, “which provides a physical tangible product.” Ans. 4. Regarding the inventive concept, the Examiner finds that Appellant’s Specification (namely, in ¶¶ [30], [31], [38], [39], and [41–45]) describes that the invention that relies on generic and well-known

components and, as a result, the additional elements included in Claim 1 do not amount to an inventive concept. Ans. 6.

*ii. Appellant's Arguments and Contentions*

In the Appeal Brief, Appellant argues that “the pending claims are directed to an improvement in a technical field, in particular the field of drilling” and, thus, not abstract. Appeal Br. 7. Specifically, Appellant contends that “[s]uch a technological process is an improvement over the historical process that involved skilled individuals making determinations individually and communicating effectively.” Appeal Br. 11 (emphasis omitted). In the Reply Brief, in view of the Revised Guidance, Appellant contends that the Examiner’s interpretation of Claim 1 is unreasonably broad. Reply Br. 2. Appellant argues, “Appellant’s claims are not directed to ‘computerizing’ human activity as it would have been performed in accordance with past practices; rather, Appellant’s claims are directed to an improvement in a technological process that is a manufacturing process.” Reply Br. 3 (emphasis omitted). Appellant further contends that “claim 1 is for drilling” and that “[t]here is no doubt that drilling is a manufacturing process that manufactures a borehole in the Earth.” Reply Br. 12 (emphasis omitted); *see also* Reply Br. 13.

*iii. Analysis*

For Step 2A, Prong 1, of the Revised Guidance, we agree with the Examiner and find that the emphasized portions of Claim 1, reproduced above, recite elements that fall within the abstract idea grouping of certain methods of organizing human activity. Final Act. 5. We also find that the emphasized portions of Claim 1 recite elements that fall within the abstract idea grouping of mental processes. The Revised Guidance requires us to evaluate whether the claim recites a judicial exception (*e.g.*, an abstract

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idea). According to the Revised Guidance, to determine whether a claim recites an abstract idea, we must identify limitations that fall within one or more of the designated subject matter groupings of abstract ideas.

According to the October 2019 Patent Eligibility Guidance Update produced by the USPTO, “a claim recites a judicial exception when the judicial exception is ‘set forth’ or ‘described’ in the claim.” *See* October 2019 Patent Eligibility Guidance Update Revised Patent Subject Matter Eligibility Guidance,

[https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.pdf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf) (“October Update”). The Revised Guidance lists “[c]ertain methods of organizing human activity” as one such grouping and characterizes certain methods of organizing human activity as including, *inter alia*, “managing personal behavior.” 84 Fed. Reg. at 52. The Revised Guidance lists mental processes as including “concepts performed in the human mind.” *Id.* We find that the elements of Claim 1 describe these judicial exceptions.

Specifically, regarding certain methods of organizing human activity, we agree with the Examiner that Claim 1 sets forth the human activity of “workflow management,” which, in our view, is a form of “managing personal behavior” of the Revised Guidance. Final Act. 5. Furthermore, regarding mental processes, we find that nothing in Claim 1 precludes the steps of Claim 1 from being performed in the human mind. For example, the emphasized steps of Claim 1 include identifying workflows, receiving information, identifying an interdependency relationship between the workflows, determining how much the workflows are physically impacted by a change in state of the interdependency relationship based on the information, and quantifying the severity of the impact. A human mind is easily capable of performing these steps and these steps relate to a form of



managing personal behavior. Thus, we find that Claim 1 recites abstract ideas.

Turning to Prong 2 of the Step 2A of the Revised Guidance, we recognize that Claim 1 includes additional elements such as specifying that the workflows pertain to a drilling process, the received information is sensor information, and the quantified severity is presented. However, as discussed above, our review of Appellant's Specification finds that the term "drilling process" includes preparation stages prior to an actual drilling operation and that Claim 1 does not specifically require performing drilling or conducting a "drilling operation" in which a drill or similar apparatus actually drills into the Earth or any other material to form a borehole. Furthermore, our review of Appellant's Specification finds that the term "sensor," which precedes the term "information," is nominal. Appellant's Specification indicates that the "[v]arious sensors, as are known in the art, may be placed on the drilling rig 10 to take measurements of the drilling equipment" (*see* Spec. ¶ [30]), but Claim 1 does not recite specific types of sensors, "drilling equipment," or that the "measurements" are taken. As a result, these additional elements are not enough to distinguish the steps of Claim 1 from describing certain methods of organizing human activity or a mental process. Thus, Claim 1 does not integrate the recited abstract ideas into a practical application.

Therefore, based on our analysis under the Revised Guidance, we agree with the Examiner and find that Claim 1 is directed to abstract ideas. As a result, we focus our attention on Step 2B of the *Alice* two-step framework.

Step 2B of the *Alice* two-step framework requires us to determine whether any element, or combination of elements, in the claim is sufficient

to ensure that the claim amounts to significantly more than the judicial exception. *Alice*, 573 U.S. at 221. As discussed above, Claim 1 includes additional elements such as specifying that the workflows pertain to a drilling process, the received information is sensor information. We agree with the Examiner’s findings that the additional elements of Claim 1, when considered individually and in an ordered combination, correspond to nothing more than generic and well-known components used to implement the abstract ideas. *See* Ans. 6. In other words, we find that the additional elements, as claimed, are well-understood, routine, and conventional and “behave exactly as expected according to their ordinary use.” *See In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). Thus, implementing the abstract idea with these generic and well-known components “fail[s] to transform that abstract idea into a patent-eligible invention.” *Alice*, 573 U.S. at 221. Therefore, we agree with the Examiner that Claim 1 does not provide significantly more than the abstract idea itself.

Therefore, because Claim 1 is directed to the abstract ideas of certain methods of organizing human activity and mental processes and does not provide significantly more than the abstract idea itself, we agree with the Examiner that Claim 1 is ineligible for patenting and affirm the Examiner’s rejection of Claim 1 under 35 U.S.C. § 101.

*c. Discussion – Claims 2–5 and 7*

For Claims 2–5 and 7, the Examiner maintains that these claims include the abstract ideas of Claim 1, but do not include an inventive concept and are ineligible for patenting. Final Act. 5.

In the Appeal Brief, Appellant contends that the Examiner has failed to provide evidence that the limitations of Claims 2–5 and 7 are abstract and do not include an inventive concept. Appeal Br. 19–21. For Claims 4 and 5,

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Appellant argues that these claims includes features of Appellant’s Figure 5, which are “improvements of the technological process of drilling.” Appeal Br. 20. For Claim 7, Appellant argues that the claim “recites machines (computing system and display) that transform sensor data of a technological process that is a manufacturing process that produces a borehole.” Appeal Br. 20–21.

We have not been persuaded by Appellant’s arguments and find that Claims 2–5 and 7 do not integrate the abstract ideas of Claim 1 into a practical application or include an inventive concept. We find that Claims 2 and 3 do not include any additional elements and find that Claims 4, 5, and 7 include additional elements pertaining to the receiving of the information and the presenting information. Appellant’s Specification describes that the presentation occurs on a user interface, which may include a graphical user interface (*see* Spec. ¶ [31]), that is part of a processing system, but Appellant’s Specification gives no indication that such components are anything but “well-understood, routine and conventional” components.

Therefore, we agree with the Examiner that Claims 2–5 and 7 are ineligible for patenting and affirm the Examiner’s rejections of Claims 2–5 and 7 under 35 U.S.C. § 101.

#### DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–3, 7–10	103	Minsky, Sabharwal, Mancini, Pastusek	1–3, 7–10	

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<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
4, 5,	103	Minsky, Sabharwal, Mancini, Pastusek, Cox	4, 5	
1-5, 7	101	Eligibility	1-5, 7	
<b>Overall Outcome</b>			1-5, 7-10	

#### FINALITY AND RESPONSE

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