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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TYLER JUNICHI PETRI,
DANIEL J. FOGARTY, DAVID HARDING JONES,
ALLISON MORAN, and KEVIN NICHOLAS KING

Appeal 2018-002861
Application 13/524,173
Technology Center 2800

Before GEORGE C. BEST, DONNA M. PRAISS, and
JENNIFER R. GUPTA, *Administrative Patent Judges*.

GUPTA, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellants² appeal under 35 U.S.C. § 134(a) from the Examiner’s final decision rejecting claims 1–3, 5–8, 10, 11, 13–18, 20–22, 24, and 25. We have jurisdiction under 35 U.S.C. § 6(b).

¹ In this Decision, we refer to the Specification filed June 15, 2012 (“Spec.”), the Final Office Action dated May 4, 2017 (“Final Act.”), the Appeal Brief filed September 15, 2017 (“Appeal Br.”), the Examiner’s Answer dated November 27, 2017 (“Ans.”), and the Reply Brief filed January 25, 2018 (“Reply Br.”).

² Appellants identify the real party in interest as The Boeing Company. Appeal Br. 1.

We AFFIRM.

The subject matter of the claims on appeal relates to a system, a method, and a computer-readable storage medium for integrating failure data for different failure analysis layouts. Spec. 2, ll. 20–22. Claim 1, reproduced below from the Claims Appendix of the Appeal Brief, is illustrative of the claims on appeal.

1. A system for integrating failure data for different failure analysis layouts, the system comprising:

a complex system including a plurality of systems, wherein the complex system is an aircraft; and

a processor and a memory storing executable instructions that, in response to execution by the processor, implement at least:

a data validator configured to receive and validate failure analysis data for the complex system including the plurality of systems, wherein the data validator is configured to receive failure data from a failing complex system equipped with one or more sensors or embedded systems configured to transmit a signal in the event it or one of its systems experiences a failure,

wherein the failure analysis data includes failure data and design data, the failure data identifying a failure of one or more of the plurality of systems that are thereby one or more failed systems, and the design data describing the aircraft and possible failures of at least some of its systems, the design data including one or more schematic diagrams describing physical relationships between the aircraft and its systems, the aircraft being dividable into a plurality of physically-distinct zones,

wherein the data validator being configured to validate the failure analysis data includes being configured to perform one or more consistency checks between the failure data and the design data to thereby

integrate the failure data for a plurality of different failure analysis layouts, and

wherein the data validator is configured to perform failure analyses including at least a rotorburst analysis, of the failure one or more of the plurality of systems within a particular zone that may have a cascading effect related to a number of systems in the same zone, to check if a number of the failed systems are physically located in the same zone; and

a layout engine coupled to the data validator and configured to selectively generate at least one of the plurality of different layouts of the failure analysis data including at least a layout according to a flight deck layout model that includes a graphical representation of a flight deck illustrated by schematic representations reflecting system controls that is displayable in a display, the layout graphically identifying one or more failed systems directly on their respective schematic representations reflecting system controls.

Appeal Br. 11–12 (Claims App.).

Independent claim 8 recites a method, independent claim 16 recites a computer-readable storage medium, and each includes limitations similar to those recited in independent claim 1. Appeal Br. 14, 16–17.

DISCUSSION

The Examiner maintains the rejection of claims 1–3, 5–8, 10, 11, 13–18, 20–22, 24, and 25 under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., an abstract idea) without significantly more. Final Act. 7; Ans. 2.

After review of the cited evidence in light of the Appellants' and the Examiner's opposing positions, we determine that Appellants have not identified reversible error in the Examiner's rejection. Accordingly, we

affirm the rejection for the reasons set forth below, in the Final Office Action, and in the Examiner's Answer.

Appellants argue the rejection of claims 1–3, 5–8, 10, 11, 13–18, 20–22, 24, and 25 as a group. Appeal Br. 5–10. We therefore limit our discussion to claim 1. Independent claims 8 and 16, as well as the claims depending from claims 1, 8, and 16 will stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv) (2013).

A two-step framework for determining whether claimed subject matter is judicially-excepted from patent eligibility under 35 U.S.C. § 101 is set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 78–79 (2012), and further explained in *Alice Corp. v. CLS Bank International*, 134 S. Ct. 2347 (2014). The first step requires determining whether the claims at issue are directed to a patent-ineligible concept, such as an abstract idea. *See Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 566 U.S. at 76–77). The second step requires examining “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.” 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 72, 79).

Appellants argue that the Examiner's finding that the claims are directed to an abstract idea is legally erroneous. Appeal Br. 7. Specifically, Appellants argue that the Examiner's finding that the claims are directed to the abstract idea of integration of failure data for different failure analysis layouts ignores the selective generation of at least one of a plurality of different layouts including the very specific flight deck layout. *Id.* Appellants also argue that the Examiner's finding that the claims are directed to the abstract idea of integration of failure data for different failure

analysis layouts ignores that the claimed invention is specific to an aircraft, and that the failure data being integrated and presented in the different layout(s) is drawn from a failing complex system (aircraft) equipped with sensor(s) or embedded system(s) that transmit a signal in the event of a failure. *Id.* at 8.

Appellants appear to be arguing that the Examiner ignores claim 1’s “layout engine coupled to the data validator and configured to *selectively generate* at least one of the plurality of different layouts of the failure analysis data including at least a layout according to a flight deck layout model” recitation. This argument is not persuasive because the Examiner has adequately explained why the recitations of the claims as a whole, including the “selective[] generat[ion]” recitation, are directed to an abstract idea that our reviewing court has previously deemed patent-ineligible. *See* Final Act. 7–8. Specifically, the Examiner determined that the claims are directed to the abstract idea of collecting information (i.e., memory executable instructions that, in response to execution by a processor, implement a data validator configured to receive and validate failure analysis data), analyzing it (i.e., the data validator is configured to perform failure analyses), and displaying certain results of the collection and analysis (i.e., a layout engine configured to selectively generate a layout of the failure analysis data including a graphical representation of a flight deck identifying one or more failed systems). Final Act. 7–8 (citing *Elec. Power Grp., LLC v. Alstom, S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016)).

Additionally, the Examiner does not ignore, but expressly references that claim 1’s complex system is limited to an aircraft. Final Act. 7–8. Moreover, even if claim 1 is specific to an aircraft, “limiting the claims to

the particular technological environment . . . is, without more, insufficient to transform them into patent-eligible applications of the abstract idea at their core.” *Elec. Power*, 830 F.3d at 1354 (citing *Alice*, 134 S. Ct. at 2358).

Appellants argue that the claims are similar to those found patent eligible in *Trading Technologies Int’l, Inc. v. CQG, Inc.*, 675 F. App’x 1001 (Fed. Cir. 2017) because the claims “solve[] a problem [of] prior graphical user interface devices.” Appeal Br. 8.

Appellants’ argument is not persuasive. In *Trading Technologies*, the court found the claims were directed to a specific improvement in the way computers operate, i.e., improvements in existing graphical user interface devices, and “require a specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface’s structure that is addressed to and resolves a specifically identified problem in the prior state of the art.” *Trading Techs.*, 675 F. App’x at 1004. On this record, Appellants have not sufficiently explained how the claimed subject matter improves computer-related technology, i.e., existing graphical user interface devices, by allowing a computer to perform a function not previously performable by a computer. Nor do Appellants’ claims require a specific, structured graphical user interface, but, instead, focus on tasks for which computers are invoked merely as a tool:

a processor and a memory storing executable instructions that, in response to execution by the processor implement at least: a data validator configured to receive and validate failure analysis data . . . from a failing complex system equipped with one or more sensors . . . configured to transmit a signal in the event it or one of its systems experiences a failure.

Further, Appellants do not dispute or direct us to sufficient factual evidence in the Specification that the “layout engine” is anything other than

a “non-specific, generic computer function of displaying the resulted data from the analysis.” *Compare* Ans. 6, with Reply Br. 2–3; *see also Alice*, 134 S. Ct. at 2357 (“[C]laims, which merely require generic computer implementation, fail to transform [an] abstract idea into a patent-eligible invention.”).

Appellants argue that the Examiner’s findings that the claims do not provide “significantly more” is legally erroneous. Appeal Br. 9. Specifically Appellants argue that the Examiner fails to provide any explanation or rationale to support the finding that the claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception. *Id.*

Appellants’ arguments are not persuasive of reversible error because they fail to meaningfully address or identify error in the Examiner’s findings. The Examiner finds that the additional claim elements, i.e., the physical elements (a complex system (aircraft), a processor and memory storing executable instructions, a data validator, and a layout engine coupled to the data validator) are generic computer components and conventional computer implementation, i.e., conventional data acquisition/output components/steps to simply acquire/output data, for the abstract idea. *See* Ans. 4–5; *see also Alice*, 134 S. Ct. at 2358 (“[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention”).

We have carefully considered Appellants’ arguments, but we are not persuaded of reversible error in the Examiner’s 35 U.S.C. § 101 analysis. Accordingly, we sustain the rejection of claims 1–3, 5–8, 10, 11, 13–18, 20–22, 24, and 25.

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DECISION

The rejection of claims 1–3, 5–8, 10, 11, 13–18, 20–22, 24, and 25 is affirmed.

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

AFFIRMED