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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* YOSHIHIRO KOUNO, KIMIHIRO SATOU,  
SUMIO HORI, and KOHTA OHISHI

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Appeal 2019-000702  
Application 13/578,901  
Technology Center 2800

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Before JEAN R. HOMERE, CARL W. WHITEHEAD JR., and  
MICHAEL J. STRAUSS, *Administrative Patent Judges*.

STRAUSS, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>2</sup> appeals from the Examiner's decision to reject claims 1–6. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

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<sup>1</sup> We refer to the Specification, filed August 14, 2012; Final Office Action, mailed January 11, 2018 (“Final Act.”); Appeal Brief, filed July 5, 2018 (“Appeal Br.”); and Examiner’s Answer, August 28, 2018 (“Ans.”); and the Reply Brief, filed October 26, 2018. Oral argument was held on March 24, 2020. A copy of the transcript will be added to the record in due course.

<sup>2</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Yazaki Corporation. Appeal Br. 2.

We AFFIRM.

### CLAIMED SUBJECT MATTER

The claims are directed to a wire harness continuity inspection method and program. Spec., Title. Claim 1, reproduced below with claim element labels added in brackets and additional elements beyond the judicial exceptions emphasized in *italics*, is illustrative of the claimed subject matter:

1. A wire harness continuity inspection method comprising:

[(i)] retrieving *from a memory by a processor* a first specification allocated to a first partitioned area partitioning a vehicle space, a second specification allocated to a second partitioned area partitioning the vehicle space and a third specification allocated to a third partitioned area partitioning the vehicle space, wherein the first, the second and the third specifications respectively indicate different systems of the vehicle, the different systems of the vehicle including at least one of a head lamp system, an airbag system, an air-conditioning system, an engine control system, or an antilock brake system and;

[(ii)] comparing *by the processor* the first specification with the second specification and determining a presence or absence of a shared specification, wherein the determination of the presence of a shared specification indicates that there is at least one electric wire that connects electrical components disposed in the first partitioned area partitioning the vehicle space and the second partitioned area partitioning the vehicle space;

[(iii)] comparing *by the processor* the second specification with the third specification and determining a presence or absence of a shared specification, wherein the determination of the presence of a shared specification indicates that there is at least one electric wire that connects electrical components disposed in the second partitioned area partitioning the vehicle space and the third partitioned area partitioning the vehicle space;

[(iv)] determining *by the processor* the presence of one or more shared specifications between a first wire harness from one of the different system of the vehicle arrangeable in the first partitioned area partitioning the vehicle space and a second wire harness from one of the different systems of the vehicle arrangeable in the second partitioned area partitioning the vehicle space, wherein the determination of the presence of one or more shared specifications between the first wire harness and the second wire harness indicates that there is at least one electric wire that connects electrical components disposed in the first partitioned area partitioning the vehicle space and electrical components disposed in the second partitioned area partitioning the vehicle space, and creating a first region-based connector-wiring information for only the one or more shared specifications between the first wire harness and the second wire harness;

[(v)] determining *by the processor* the presence of one or more shared specifications between a second wire harness from one of the different system of the vehicle arrangeable in the second partitioned area partitioning the vehicle space and a third wire harness from one of the different system of the vehicle arrangeable in the third partitioned area partitioning the vehicle space, wherein the determination of the presence of one or more shared specifications between the second wire harness and the third wire harness indicates that there is at least one electric wire that connects electrical components disposed in the second partitioned area partitioning the vehicle space and electrical components disposed in the third partitioned area partitioning the vehicle space, and creating a second region-based connector-wiring information for only the one or more shared specifications between the second wire harness and the third wire harness,

[(vi)] *automatically* determining *by the processor* the presence or absence of an error in a connection of electric wires in only the created first region-based connector-wiring information, which only includes the one or more shared specifications of the different systems of the vehicle identified as having a shared specification between the first partitioned area partitioning the vehicle space and the second partitioned area partitioning the vehicle space and the created second region-based connector-wiring information, which only includes the one

or more shared specifications of the different systems of the vehicle identified as having a shared specification between the second partitioned area partitioning the vehicle space and the third partitioned area partitioning the vehicle space,

[(vii)] in response to determining that an error is present in the connection of electric wires in only the created first region-based connector-wiring information and only the created second region-based connector-wiring information, indicating that a starting point and a terminating point of a circuit line connecting electrical components in only the created first region-based connector-wiring information and only the created second region-based connector-wiring information are not in correspondence;

[(viii)] in response to determining that an error is absent in the connection of electric wires in only the created first region-based connector-wiring information and only the created second region-based connector-wiring information, generating a wiring diagram.

#### REJECTIONS

Claim 5 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Final Act. 8.

Claims 1–4 and 6 stand are rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. *Id.* at 8–16.

#### WRITTEN DESCRIPTION REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claim 5, added by the Amendment filed June 26, 2017, reads as follows:

5. The wire harness continuity inspection method according to claim 1, wherein the method further comprises manufacturing a tangible wire harness arrangeable in the vehicle based on the generated wiring diagram.

The Examiner finds the Specification as originally filed, including portions specifically referenced by Appellant in response to the rejection,<sup>3</sup> fails to describe a manufacturing step commensurate in scope with the claim. Final Act. 8. In particular, the Examiner finds “[t]he claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.” *Id.*

Appellant contends “while the present application does not explicitly use the word ‘manufacturing’ [as recited by claim 5], Applicant respectfully submits that a person of ordinary skill in the art would readily appreciate that the ‘manufacturing of a tangible wire harness’ was contemplated.” Appeal Br. 15. Appellant argues

the specification as filed explicitly discloses that the “the wire harness continuity inspection method” is for the design of a wire harness arrangeable in a vehicle, [such that] one of ordinary skill in the relevant art would readily understand that the claim 5 feature of “manufacturing [the] tangible wire harness” is necessarily inherently disclosed in the specification.

*Id.* (citing Spec. ¶¶ 1, 2) (first bracketed text added, second bracketing in original).

The Examiner responds, finding “[t]he specification and claims are directed to a method and program to inspect the continuity of a wire harness and generating an output (diagram) based on the analyzed data” without any disclosure of manufacturing a tangible wire harness. Ans. 18.

Appellant’s argument is unpersuasive of reversible Examiner error. Compliance with the written description requirement is a question of fact

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<sup>3</sup> Spec. ¶¶ 1, 2 (Appeal Br. 14–15).

that is context-sensitive. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (“[T]he level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.”). To fulfill the written description requirement, the application as filed “must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479 (Fed. Cir. 1998) (internal citation and quotation omitted). A description that merely renders the invention obvious does not satisfy the written description requirement. *Ariad*, 598 F.3d at 1352. When an applicant amends a claim “in such a way as to justify an assertion that it is directed to a *different invention* than was the original claim, it is proper to inquire whether the newly claimed subject matter was described in the patent application when filed as the invention of the applicant.” *In re Wright*, 866 F.2d 422, 424 (Fed. Cir. 1989).

Appellant’s Specification is silent with respect to manufacturing a tangible wire harness, neither mentioning manufacturing nor providing any details about how such a wire harness would be fabricated. Although describing design of a wire harness, design activities discussed in the Specification are distinct from actually manufacturing the designed product and vice versa. Spec. ¶¶ 2–3. In particular, Appellant fails to provide persuasive evidence that designing a wire harness expressly, implicitly, or inherently involves the manufacturing of the wire harness. Mere attorney argument and conclusory statements, which are unsupported by factual evidence, and are entitled to little probative value. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir.

Appeal 2019-000702  
Application 13/578,901

1984). Attorney argument is not evidence. *In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974). Nor can such argument take the place of evidence lacking in the record.

Although design and manufacturing activities are related to the extent that both are directed to producing the same ultimate product, the mere relationship is insufficient to show, with the requisite clarity, the inventors were in possession of the method of manufacturing recited by claim 5. *Gentry Gallery*, 134 F.3d at 1479. Accordingly, we sustain the written description rejection of claim 5.

PATENT-INELIGIBLE SUBJECT MATTER  
REJECTION UNDER 35 U.S.C. § 101

*Principles of Law*

To constitute patent-eligible subject matter, an invention must be a “new and useful process, machine, manufacture, or composition of matter, or [a] new and useful improvement thereof.” 35 U.S.C. § 101. There are implicit exceptions to the categories of patentable subject matter identified in 35 U.S.C. § 101, including: (1) laws of nature; (2) natural phenomena; and (3) abstract ideas. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). The U.S. Supreme Court has set forth a framework for distinguishing patents with claims directed to these implicit exceptions “from those that claim patent-eligible applications of those concepts.” *Id.* at 217 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)). The evaluation follows a two-part analysis: (1) determine whether the claim is *directed to* a patent-ineligible concept, e.g., an abstract idea; and (2) if so, then determine whether any element, or combination of

elements, in the claim is sufficient to ensure that the claim amounts to *significantly more* than the patent-ineligible concept itself. *See id.* at 217–18.

“[A]ll inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. We “‘must be careful to avoid oversimplifying the claims’ by looking at them generally and failing to account for the specific requirements of the claims.” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) (quoting *In re TLI Commc’ns LLC Patent Litigation*, 823 F.3d 607, 611 (Fed. Cir. 2016)).

Last year the U.S. Patent and Trademark Office (“USPTO”) published guidance on the application of the two-part analysis. USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (January 7, 2019) (“2019 Revised Guidance”); *see also* USPTO, *October 2019 Update: Subject Matter Eligibility*, available at [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) (Oct. 17, 2019). Under that guidance, we first look 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) (*see id.* at 54 (Step 2A, prong one)); and

(2) additional elements that integrate the judicial exception into a practical application (*see id.* at 54–55 (Step 2A, prong two); MPEP §§ 2106.05(a)–(c), (e)–(h)).

*See* 2019 Revised Guidance, 84 Fed. Reg. 52–55.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is 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 Revised Guidance, 84 Fed. Reg. 56.

*Step 2A, prong 1*

In rejecting claim 1 as being directed to patent-ineligible subject matter, the Examiner determines that the claim is “directed to the abstract idea of using a mathematical function, idea of itself<sup>4</sup>, and data

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<sup>4</sup> Although the previously recognized category of “an idea of itself” is not one of the currently recognized categories, it is sufficient for the purposes of the present appeal that the claimed concepts reasonably can be characterized as falling within the still-recognized category of mental processes. *See, e.g.*, MPEP § 2106.04(a)(2)(III):

The courts have used the phrase “an idea ‘of itself’” to describe an idea standing alone such as an uninstantiated concept, plan or scheme, as well as a mental process (thinking) that “can be performed in the human mind, or by a human using a pen and paper.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011).

Characterizing the abstract idea as a mental process instead of an idea of itself does not constitute a change to the thrust in the Examiner’s rejection.

manipulation, similar to identified abstract ideas of the *May 2017 Update*.”<sup>5</sup>  
Final Act. 9.

Claim element (i) recites, in part, retrieving first, second, and third specifications allocated to corresponding partitioned areas of a vehicle space, each specification indicating different systems of the vehicle. Appellant does not direct attention to and we do not find a definition for the recited specification. In the absence of such a definition, we interpret the specification to include region-based connector/wiring information. *See, e.g.,* Spec. ¶ 1. Obtaining such information reasonably is characterized as an observation considered to be a concept performed in the human mind, i.e., a mental process.<sup>6</sup> The 2019 Revised Guidance recognizes mental observations as constituting abstract ideas. 2019 Revised Guidance, 84 Fed. Reg. at 52. As such, limitation (i) recites a mental process that the 2019 Revised Guidance recognizes as an abstract idea.

Claim element (ii) recites, in part, comparing the first and second specifications to determine a shared specification indicating an electric wire connecting electrical components is disposed in both corresponding partitioned areas of the vehicle space. Comparing information reasonably is characterized as an observation or evaluation considered to be a concept

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<sup>5</sup> Although it is unclear if the Examiner is referring to the *May 2016 Subject Matter Update*” (May 4, 2016 Memorandum) at <https://www.uspto.gov/patent/laws-and-regulations/examination-policy/subject-matter-eligibility>, we note this and similar earlier guidance has been superseded. “Eligibility-related guidance issued prior to the Ninth Edition, R-08.2017, of the MPEP (published Jan. 2018) should not be relied upon.” 2019 Revised Guidance, 84 Fed. Reg. at 51.

<sup>6</sup> Additionally, as further discussed below under Prong 2 of our analysis, retrieving information from memory constitutes insignificant extra-solution activity to the judicial exception.

performed in the human mind and, as such, a mental process recognized as an abstract idea.

Claim element (iii) recites comparing the second and third specifications but is otherwise similar to claims element (ii) and is characterized as a mental process recognized as an abstract idea for the same reasons.

Claim element (iv) recites, in part, determining the presence of shared specifications between first and second wire harnesses and, as a result, creating first region-based connector-wiring information for only one of the wiring harnesses. The step of determining reasonably is characterized as an observation or evaluation performed in the human mind and, accordingly, a mental process. The step of creating second region-based connector-wiring information is the selection of information based on the step of determining and is likewise an observation or evaluation performed in the human mind and, accordingly, a mental process.

Claim element (v) recites, in part, determining the presence of shared specifications between second and third wire harnesses and, as a result, creating second region-based connector-wiring information for only one of the wiring harnesses. This element is considered to recite a mental process for the reasons discussed in connection with claim element (iv) above.

Claim element (vi) recites, in part, determining the presence or absence of an error in a connection of electric wires in only the created first and second region-based connector-wiring information. Appellant directs attention to paragraphs 44–54 of the Specification and Figures 2–4 of the drawings. The cited portion of the Specification describes comparing information to identify errors. The comparison of information reasonably is

characterized as an observation and/or evaluation performed in the human mind and, therefore, is reasonably characterized as a mental process.

Claim element (vii) recites, in response to determining that an error is present in the connection of electric wires in only the created first region-based connector-wiring information and only the created second region-based connector-wiring information, indicating that a starting point and a terminating point of a circuit line connecting electrical components in only the created first region-based connector-wiring information and only the created second region-based connector-wiring information are not in correspondence. Indicating a result of the prior determining steps can be performed in the human mind and/or with pen and paper. Accordingly, claim element (vii) recites a mental process.<sup>7</sup>

Claim element (viii) recites, in the absence of an error, generating a wiring diagram. Wiring diagrams can be created using the human mind and/or using pen and paper. Accordingly, claim element (vii) recites a mental process.

Our determination the claims recite mental processes is consistent with Appellant's characterization of the claims, as follows:

[Applicant notes that the] claims are directed toward, inter alia, . . . inspecting the presence/absence of shared specification (*i.e.*, a common electrical connection) between different electrical systems of a vehicle, generating connector-wiring information regarding these shared specification, determining the presence/absence of an error in the connector-wiring information, and provide for a tangible and practical application

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<sup>7</sup> See also Prong 2 analysis below characterizing claim element (vii) as the provision of information considered to be an insignificant extra-solution activity.

of (1) indicating that an error is present when an error is detected, and (2) generating a wiring diagram when an error is not present.

Appeal Br. 7–8, *cf.* Supplemental Appeal Br. 2. These steps are similar to other concepts the courts have identified as abstract mental processes. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138 (Fed. Cir. 2016) (methods of logic circuit design, comprising converting a functional description of a level sensitive latch into a hardware component description of the latch); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014) (organizing information through mathematical correlations). In *Electric Power Group*, our reviewing court explained that concepts of collecting and analyzing information, when broadly claimed, fall within the “realm of abstract ideas”:

Information as such is an intangible. *See Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 451 n.12 (2007); *Bayer AG v. Housey Pharm., Inc.*, 340 F.3d 1367, 1372 (Fed. Cir. 2003).

Accordingly, we have treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas. *See, e.g., Internet Patents*, 790 F.3d at 1349; *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011). In a similar vein, we have treated 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. *See, e.g., TLI Commc’ns*, 823 F.3d at 613; *Digitech*, 758 F.3d at 1351; *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. App’x 950, 955 (Fed. Cir. 2014); *v. Servs., L.L.C. v. Sun Life Assurance Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012); *CyberSource Corp. v. Retail*

*Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011); *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010); *see also Mayo*, 132 S. Ct. at 1301; *Parker v. Flook*, 437 U.S. 584, 589–90 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972). And we have recognized that merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis. *See, e.g., Content Extraction*, 776 F.3d at 1347; *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014).

*Electric Power Group, LLC v. Alstom, S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016).

In the absence of evidence to the contrary, the actions ascribed to the invention as described by Appellant are directed to mental processes that can be performed in the human mind and/or using pen and paper. The 2019 Revised Guidance recognizes concepts performed in the human mind (i.e., mental processes) as constituting abstract ideas. 2019 Revised Guidance, 84 Fed. Reg. at 52.

For these reasons, we determine all eight elements of claim 1 recite a judicial exception to patent-eligible subject matter under Step 2A, Prong 1, of the 2019 Revised Guidance.

#### *Step 2A, Prong 2*

Under Step 2A, Prong 2, of the 2019 Revised Guidance, we determine whether any of the additional elements beyond the abstract idea integrate the abstract ideas into a practical application. 2019 Revised Guidance, 84 Fed. Reg. at 54. The 2019 Revised Guidance provides exemplary considerations that are indicative of an additional element or combination of elements integrating the judicial exception into a practical application, such as an additional element reflecting an improvement in the functioning of a

computer or an improvement to other technology or technical field. *Id.* at 55; MPEP § 2106.05(a).

In addition to the actions required by claim elements (i) through (viii) which we determine recite mental processes identified by the 2019 Revised Guidance as abstract ideas, one or more elements of claim 1 also constitute insignificant extra-solution activity to the judicial exception. In particular, claim element (i) recites “retrieving from a memory by a processor [first, second, and third] specification[s].” This limitation reasonably can be characterized as merely constituting the insignificant pre-solution activity of data gathering.

An example of pre-solution activity is a step of gathering data for use in a claimed process, *e.g.*, a step of obtaining information about credit card transactions, which is recited as part of a claimed process of analyzing and manipulating the gathered information by a series of steps in order to detect whether the transactions were fraudulent.

MPEP § 2106.05(g).

Element (vii) recites:

[(vii)] in response to determining that an error is present in the connection of electric wires . . . , indicating [an error condition exists];

Claim element (vii) does not add any meaningful limitations to the noted abstract ideas because it reasonably may be characterized as merely being directed to the insignificant post-solution activity of transmitting data. *E.g., Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241–42 (Fed. Cir. 2016) (holding that printing or downloading generated menus constituted insignificant extra-solution activity).

Thus, limitations (i) and (vii) recite the type of extra-solution activity (i.e., in addition to the judicial exception) the courts have determined

insufficient to transform judicially excepted subject matter into a patent-eligible application. *See* MPEP § 2106.05(g); 2019 Revised Guidance, 84 Fed. Reg. at 55 n.31; *Bancorp Servs, L.L.C. v. Sun Life Assur. Co. of Can.*, 771 F. Supp. 2d 1054, 1066 (E.D. Mo. 2011) *aff'd*, 687 F.3d at 1266 (Fed. Cir. 2012) (explaining that “storing, retrieving, and providing data . . . are inconsequential data gathering and insignificant post solution activity”); *Bilski v. Kappos*, 561 U.S. 593, 612 (2010) (holding the use of well-known techniques to establish inputs to the abstract idea as extra-solution activity that fails to make the underlying concept patent eligible); *Elec. Power Grp.*, 830 F.3d at 1355 (explaining that “selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes”).

In addition to the claim elements identified under Prong 1 of our analysis as constituting mental processes, claim 1 requires the recited steps be performed by a processor.<sup>8</sup> The Examiner finds the processor and steps performed by the processor

are recited at a high level of generality in order to facilitate the application of the abstract idea, allow the claim as a whole to substantially monopolize the abstract idea itself, rather than being a particular narrow application of the abstract idea, and are recited as performing generic computer functions routinely used in computer applications. Well understood, routine, conventional activities previously engaged in by those in the relevant art [are] not seen as significantly more than the abstract idea. Generic computer components recited as performing generic computer functions that are well-understood, routine and conventional activities amount to no more than implementing the

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<sup>8</sup> Claim element (vi) additionally recites the step is performed *automatically* by the processor. The addition of automatic performance by an automated system (i.e., a processor) does not affect our analysis.

abstract idea with a computerized system. Looking at the limitations as an ordered combination adds nothing that is not already present when looking at the elements taken individually, There is no indication that the combination of elements improves the functioning of a computer or improves any other technology, Their collective functions merely provide conventional computer implementation.

Final Act. 11–12.

Appellant discloses an embodiment wherein “the wire harness continuity inspection device of the present invention is configured by a general-purpose [personal computer (PC)].” Spec. ¶ 65. Furthermore, the Specification only discloses the recited functionality at a high level of generality without providing implementation details. Accordingly, we agree the recited steps involve only conventional computer functionalities.

Consistent with the 2019 Revised Guidance, these additional elements are not practical applications of a judicial exception as they are included among an additional element that merely recites “apply it” or similar language, or that merely includes instructions to implement an abstract idea on a computer, or that merely uses a computer as a tool to perform an abstract idea. 2019 Revised Guidance, 84 Fed. Reg. at 54. *See also Alice*, 573 U.S. at 221 (“[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.”); MPEP § 2106.05(f)(2) (“Use of a computer or other machinery in its ordinary capacity for economic or other tasks (*e.g.*, to receive, store, or transmit data) or simply adding a general purpose computer or computer components after the fact to an abstract idea (*e.g.*, a fundamental economic practice or mathematical equation) does not provide significantly more.”).

Appellant contends “the claims are patent eligible at least because they recite features, that when considered as an ordered combination demonstrate a technologically rooted solution to the problem of reducing the time for error inspection in a wire harness diagram.” Appeal Br. 8. According to Appellant “as the number of candidates for the wire harness arrangeable in the partitioned area increases, the number of patterns to be created in the region-based connector/wiring information also increases” so that significant time is required to identify errors for large wire harnesses using traditional error inspection methods. *Id.* Appellant argues “mathematical models that improve computer-related technology by allowing computer performance of a function not previously performable by a computer are directed to patent eligible subject matter.” *Id.* at 9.

Appellant’s argument is unpersuasive of reversible Examiner error. Appellant has not shown the claim includes additional elements that improve the underlying computer, or other technology. *See Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (“[M]erely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea.”); *cf. Trading Techs. Int’l, Inc. v. IBG LLC*, No. 2017-2257, 2019 WL 1716242, at \*3 (Fed. Cir. 2019) (“This invention makes the *trader* faster and more efficient, not the computer. This is not a technical solution to a technical problem.”).

Rather than provide an improvement to the functioning of a computer, the claim merely uses the ordinary capabilities of a computer to automate an error inspection process that “considers errors in only a relatively small number of wiring information[s], which is different than considering all of

the possible patterns per traditional methods.” *See* Reply Br. 8. Thus, any improvement is to the underlying method of identifying errors in a wiring harness design, not to the operation of the computer, functioning of a wire harness, or to some other technology. This is not enough to integrate the underlying abstract idea into a practical application under the 2019 Revised Guidance, as “relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.” *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015); *see also ChargePoint*, 920 F.3d at 771 (“[T]he fact that the electricity flow is modified *based on demand response principles* does nothing to make this claim directed to something other than the abstract idea.”). Thus, the recited “additional element[s] merely recite[] the words ‘apply it’ (or an equivalent) with the judicial exception, or merely includes instructions to implement an abstract idea on a computer, or merely uses a computer as a tool to perform an abstract idea.” 2019 Revised Guidance, 84 Fed. Reg. at 55. Appellant’s purportedly improved abstract concept is still an abstract concept under the 2019 Revised Guidance. *See Synopsys*, 839 F.3d at 1151 (“[A] claim for a new abstract idea is still an abstract idea.”) (emphasis omitted).

We also are not persuaded that the claims are patent-eligible based on any similarity with the subject matter determined to be patent-eligible in *Thales*,<sup>9</sup> *Core Wireless*,<sup>10</sup> *Finjan*,<sup>11</sup> or *McRO* as argued. *See* Appeal Br. 17–18. As found by the Examiner (Ans. 9), *Thales* “utilize[d] mathematical equations to determine the orientation of [an] object relative to the moving

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<sup>9</sup> *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017).

<sup>10</sup> *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356 (Fed. Cir. 2018).

<sup>11</sup> *Finjan Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299 (Fed. Cir. 2018).

reference frame,” including “claims [that sought] to protect only the application of physics to the unconventional configuration of sensors.” *Thales*, 850 F.3d 1348–49 (emphasis added). We find no corresponding technical improvement provided by Appellant’s claims other than to the underlying abstract concept of processing information to detect errors in the design of a wire harness.

We are also unpersuaded by Appellant’s argument analogizing the claims to those found patent eligible in *Core Wireless*, contending that its claim is similarly “directed to a computer-implemented method in which the improvement in the ‘functioning of the computer’ is the ability of a computer configured for wire harness continuity inspection to better inspect and to better identify errors.” Appeal Br. 10. As explained by the Examiner (Ans. 10), the claim in *Core Wireless* was directed to “an improved user interface for electronic devices, particularly those with small screens” where the improvement was in “the efficiency of using the electronic device by bringing together ‘a limited list of common functions and commonly accessed stored data,’ which can be accessed directly from the main menu.” *Core Wireless*, 880 F.3d at 1363. The Specification in that case confirmed these improvements were over “the prior art interfaces [that] had many deficits relating to the efficient functioning of the computer, requiring a user ‘to scroll around and switch views many times to find the right data/functionality.’” *Id.* The court found that the disclosure in the Specification regarding the improved speed of a user’s navigation through various views and windows “clearly indicates that the claims are directed to an improvement in the functioning of computers, particularly those with small screens.” *Id.* In contrast, Appellant does not demonstrate the claimed

method of providing an improved ability to inspect wire harness continuity to better identify errors is related to an identified improvement in the functioning of computers.

In *Finjan*, the court found the claimed behavior-based virus scan constituted an improvement in computer functionality over the “traditional, ‘code-matching’ virus scans.” *Finjan*, 879 F.3d at 1304. The court determined that the *Finjan* claimed method employed a new kind of file that allowed access to be tailored for different users, and allowed the system to accumulate and use newly available, behavior-based information regarding potential threats. *Id.* at 1305. The court ultimately held that the *Finjan* claims were “directed to a non-abstract improvement in computer functionality, rather than the abstract idea of computer security,” and “recite[d] specific steps-- generating a security profile that identifies suspicious code and linking it to a downloadable--that accomplish the desired result.” *Id.* The court specifically distinguished claims found to be patent ineligible when “there was nothing in the claim ‘directed to *how* to implement [the idea]’” nor to “‘a particular way of programming or designing the software.’” *Id.* The rejected claims are deficient for the same reason because the steps in rejected claim 1 are recited generically as a series of desired results without reciting any particular programming or implementation to achieve those results.

We also agree with the Examiner that the reasons claim 1 in *McRO* was found patent-eligible do not apply to Appellant’s claims. Ans. 10–11. “The claimed improvement [in *McRO*] was to how the physical display operated (to produce better quality images), unlike (what is present here) a claimed improvement in [an associating] technique with no improved

display mechanism.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018). In other words, in *McRO*, data was used to improve the technology, i.e., the display mechanism. Here, although claim 1 recites, e.g., “retrieving”, “comparing”, “determining”, and “indicating”, it merely recites the functional results to be achieved. For example, claim 1 does not recite technical implementation details of *how* the claimed method determines the presence of a shared specification indicating that there is at least one electric wire that connects electrical components disposed in the first and second partitioned areas of the vehicle space. “Indeed, the claim language here provides only a result-oriented solution, with insufficient detail for how a computer accomplishes it. Our law demands more.” *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1342 (Fed. Cir. 2017).

We are also unpersuaded by Appellant’s argument that the claims pose no risk of preempting all rules for a wire harness continuity inspection. Appeal Br. 12. As explained by the Examiner, preemption is not a stand-alone test for eligibility. Ans. 9. Although preemption “‘might tend to impede innovation more than it would tend to promote it,’ thereby thwarting the primary object of the patent laws” (*Alice*, 573 U.S. at 216 (quoting *Mayo*, 566 U.S. at 71)), “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.*, 788 F.3d at 1362–63 (“[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.”)).

For the reasons discussed, we agree with the Examiner that the claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements do not effect an improvement to another technology, technical field, or to the functioning of a computer itself. *See* MPEP § 2106.05(a). We further determine claim 1 does not recite:

- (i) an application of the abstract idea with, or by use of, a particular machine;
- (ii) a transformation or reduction of a particular article to a different state or thing; or
- (iii) other meaningful limitations beyond generally linking the use of the abstract idea to a particular technological environment.

*See id.* § 2106.05(b), (c), (e)–(h). Instead, the record reasonably indicates that any claimed improvement is to the underlying abstract idea of verifying the design of a wire harness. Thus, claim 1 does not integrate the judicial exception into a practical application.

Appellant further argues claim 6 recites additional features providing a technical advantage. Appeal Br. 13. According to Appellant, “claim 6 clarifies that the ‘creating . . . region-based connector-wiring information’ steps are implemented ‘**so as to not create unnecessary region-based connector-wiring information**’. Since unnecessary region-based connector-wiring information is not created or analyzed, ‘the time required for the success/failure determination step’ is reduced.” Appeal Br. 13.

Appellant’s argument directed to claim 6 is unpersuasive because, as explained in connection with claim 1, any improvement attributable to the

argued features of claim 6 is to the underlying abstract concept of processing information to detect errors in the design of a wire harness. There is insufficient evidence to demonstrate, and we do not find, the additional elements recited by claim 6 effect an improvement to another technology, technical field, or to the functioning of a computer itself.

*Step 2B*

As noted above, the only claim element beyond the recited abstract idea is a processor performing each of the steps of claim 1. The Examiner finds “[g]eneric computer components recited as performing generic computer functions that are well-understood, routine and conventional activities amount to no more than implementing the abstract idea with a computerized system.” Final Act. 12.

Appellant contends “the Examiner does not cite to any specific teaching as to why certain elements are well-understood.” Reply Br. 10 (citing April 19, 2018 Memo on Subject Matter Eligibility<sup>12</sup>; *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)).

Appellant’s contention is unpersuasive of reversible Examiner error. The Examiner determines “[c]laim 1 is directed to the abstract idea of using a mathematical function, idea of itself, and data manipulation, similar to identified abstract ideas of the *May 2017 Update: Interim Eligibility Guidance*.” Final Act. 9. As explained above, an idea of itself corresponds to a mental process. Note 4, *supra*. The Examiner explains the additional computer elements (i.e., processor and requisite processor/computer

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<sup>12</sup> Memorandum on Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) (Apr. 19, 2018) available at: <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF>

functionalities) “are recited at a high level of generality in order to facilitate the application of the abstract idea . . . and are recited as performing generic computer functions routinely used in computer applications.” Final Act. 11–12. The Examiner determines these “[w]ell understood, routine, conventional activities . . . [are] not seen as significantly more than the abstract idea [itself].” *Id.* at 12.

We agree with the Examiner that all claim elements, with the exception of the recited processor, correspond to concepts determined to be abstract ideas for the reasons discussed above in connection with Prongs 1 and 2 of our analysis. These abstract concepts need not be shown to be well-understood, routine, and convention. In particular, *Berkheimer* does not require the Examiner to make a factual finding that all claim elements are well-understood, routine and conventional. Rather, a *Berkheimer* factual finding is required for *additional* elements or a combination of additional elements *outside* of the identified abstract idea. *See Berkheimer* Memo, 7 p. 2 (“the *Berkheimer* decision . . . does provide clarification as to the inquiry into whether an additional element (or combination of *additional* elements) represents well-understood, routine, conventional activity” (emphasis added)).

In contrast, other than naked allegations, Appellant provides insufficient evidence that the computer components and functions required to execute the claimed steps are anything other than well-understood, routine, and conventional. Instead, Appellant’s disclosure of using a general-purpose PC and the lack of details describing implementation of the recited functions (such as might have been evidences by inclusion of a flow chart depicting computer operations for performing each of the claimed

steps), persuades us that the omitted details are well-understood, routine, and conventional.

Consistent with the *Berkheimer* Memorandum, the claims merely recite generic computer components (e.g., a processor) performing generic computing functions that are well-understood, routine, and conventional (e.g., retrieving and comparing information, determining specified relationships between data exist, identifying and indicating the existence of an error condition error, and providing a diagram based on the information (e.g., transmitting data in a particular form)). *See Alice*, 573 U.S. at 225 (the “use of a computer to obtain data, adjust account balances, and issue automated instructions; all of these computer functions are ‘well-understood, routine, conventional activit[ies]’ previously known to the industry”) (quoting *Mayo* 566 U.S. 66, 71–73 (2012)); *see also Gottschalk v. Benson*, 409 U.S. 63, 65 (1972) (noting that a “computer operates then upon both new and previously stored data. The general-purpose computer is designed to perform operations under many different programs.”); *Fair Warning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) (noting that using generic computing components like a microprocessor or user interface do not transform an otherwise abstract idea into eligible subject matter); *Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (indicating components such as an “interface” are generic computer components that do not satisfy the inventive concept requirement); MPEP § 2106.05(d)(II) (citing *Alice* and *Mayo*). *Accord Berkheimer* Memo. 3–4.

For these reasons, we determine that claim 1 does not recite additional elements that, either individually or as an ordered combination, amount to

significantly more than the judicial exception within the meaning of the 2019 Guidance. 84 Fed. Reg. at 52–55; MPEP § 2106.05(d).

*Conclusion*

Appellant has not adequately demonstrated that the Examiner erred in determining that claims 1 and 6 recite one or more abstract ideas, that the claims fail to integrate the abstract idea into a practical application, or that the additional claim elements add significantly more to the abstract idea. Accordingly, Appellant does not persuade us of that the Examiner erred in concluding that claims 1 and 6 are directed to patent-ineligible subject matter.

Accordingly, we sustain the § 101 rejection of independent claims 1 and 6. We also affirm this rejection of claims 2–4, which Appellant does not argue separately.

DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
5	112, first paragraph	Written Description	5	
1–4, 6	101	Eligibility	1–4, 6	
<b>Overall Outcome</b>			1–6	

TIME PERIOD FOR 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)(1). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED