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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JIMMY KAPADIA and KENNETH JAMES MILLER

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Appeal 2019-002687  
Application 14/932,224  
Technology Center 2800

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Before JEFFREY B. ROBERTSON, JAMES C. HOUSEL, and  
BRIAN D. RANGE, *Administrative Patent Judges*.

RANGE, *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 1–22. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM IN PART.

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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. Appellant identifies the real party in interest as Ford Global Technologies, Inc. Appeal Br. 1.

## CLAIMED SUBJECT MATTER<sup>2</sup>

Appellant describes the invention as relating to controlling charging of an electric vehicle's battery pack over a plurality of charging stations by scheduling charging based on cost to charge at each location and amount of charging time available at each station. Spec. ¶ 3. Claim 1 is illustrative:

1. A method to control charging of a battery pack of an electrified vehicle over a plurality of charging locations of a drive route, comprising:

scheduling charging of the vehicle, via a vehicle control system, at each of the plurality of charging locations based at least on a cost to charge at each of the plurality of charging locations and an amount of charging time available at each of the plurality of charging locations, wherein scheduling charging includes estimating a confidence value that represents an amount of time that the vehicle control system is confident that the vehicle will be on charge at each of the plurality of charging locations.

## REJECTION

On appeal, the Examiner maintains (Ans. 3) the rejection of claims 1–22 under 35 U.S.C. § 101 as directed to an abstract idea. Final Act. 2–3.

## OPINION

Claims 1, 16, and 21 are the three independent claims on appeal. Appellant addresses claims 1, 2, 7, 8, 12, 14, 16, 18, 19, and 21 separately. Appeal Br. 5. Below, we specifically address each of claims 1, 2, 12, 14, 16,

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<sup>2</sup> In this Decision, we refer to the Final Office Action dated December 27, 2017 (“Final Act.”), the Appeal Brief filed July 30, 2018 (“Appeal Br.”), the Examiner’s Answer dated December 14, 2018 (“Ans.”), and the Reply Brief filed February 14, 2018 (“Reply Br.”).

18, 19, and 21 separately. All other claims on appeal stand or fall together with the claim they depend from. 37 C.F.R. § 41.37(c)(1)(iv) (2013).

*A. Principles of Law*

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted 35 U.S.C. § 101 to include 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*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See id.* 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, 67–68 (1972)). Concepts determined to be patent eligible include physical and chemical processes, 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 183 n.7 (quoting *Corning v. Burden*, 56 U.S. (15 How.) 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *see also id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “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. “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.* (alterations in original) (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.*

The PTO has published revised guidance on the application of § 101. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (USPTO Jan. 7, 2019) (“Guidance”). According to the 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); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018)).

If a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, the Guidance looks 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* Guidance, 84 Fed. Reg. at 56; *see also, e.g., Ex parte Kimizuka*, Appeal No. 2018-001081 (PTAB July 1, 2019) (informative).

*B. The Examiner's Rejection*

The Examiner determines that each claim on appeal is directed to an abstract idea. Final Act. 2–4. In particular, the Examiner determines that each claim is directed to the “abstract idea of data manipulation, organizing information through mathematical correlations (*Digitech*).” *Id.* at 2–4 (emphasis omitted). The Examiner also determines that the claims do not include any additional elements, taken individually or as a combination, that amount to significantly more than the abstract idea itself. *Id.*

*C. Guidance Step 1: Do independent claims 1, 16, and 21 fall within a statutory category?*

Pursuant to 35 U.S.C. § 101 and consistent with Step 1 of the Guidance, we first consider whether the claimed subject matter falls within the four statutory categories explicitly set forth in § 101: “[p]rocess, machine, manufacture, or composition of matter.” Guidance, 84 Fed. Reg. at 53–54; *see* 35 U.S.C. § 101. Claim 1 recites a method including “scheduling charging of the vehicle” and, thus, falls within the “method” category. Claim 16 recites “a battery pack” and other elements of “[a] vehicle system” and therefore falls within the “machine” category. Claim 21 recites a method including “controlling charging of a battery pack” and therefore falls within the “method” category. Thus, each claim on appeal falls within a statutory category.

*D. Guidance Step 2A Prong 1: Do independent claims 1, 16, and 21 recite a judicial exception?*

Pursuant to the U.S. Supreme Court’s *Mayo* and *Alice* framework and consistent with the next step of the Guidance, we consider whether the claim recites a judicial exception. Guidance, 84 Fed. Reg. at 51. The Guidance

synthesizes the key concepts identified by the courts as abstract ideas into three primary subject-matter groupings: mathematical concepts, certain methods of organizing human activity (e.g., a fundamental economic practice), and mental processes. *Id.* at 52. For the reasons discussed below, independent claims 1, 16, and 21 (and, thus, all claims on appeal) recite a mental process.

Claim 1 recites, among other things, the following:

scheduling charging of the vehicle, via a vehicle control system, at each of the plurality of charging locations based at least on a cost to charge at each of the plurality of charging locations and an amount of charging time available at each of the plurality of charging locations, wherein scheduling charging includes estimating a confidence value that represents an amount of time that the vehicle control system is confident that the vehicle will be on charge at each of the plurality of charging locations.

Appeal Br. 11 (Claims App.). The claim requires scheduling vehicle charging based upon the cost to charge at various locations and time available to charge at each location. For example, the control system might avoid charging a battery at a location where the charging is particularly expensive (*see* Spec. ¶ 37 (“vehicle system 56 prioritizes charging at more cost effective charging locations”)), but if future stops along the route will likely be for a short enough of time such that charging time is not adequate, the more expensive location might be used (*see, e.g., id.* ¶ 57 (describing charging for additional time at a more expensive station if necessary to obtain enough charge to reach the next station)).

The recited process of determining when to buy vehicle fuel (in particular, battery charge) based on cost of the fuel and based on when there will be enough time for fueling is a mental process that can be performed in

the human mind. *Mayo*, 566 U.S. at 71 (“[M]ental processes[] and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work”) (internal quotes and citation omitted); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (holding that process claim directed to binary conversion is unpatentable because “[t]he conversion of BCD numerals to pure binary numerals can be done mentally”); *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1139 (Fed. Cir. 2016) (holding that claims to process of “translating a functional description of a logic circuit into a hardware component description” are directed to an abstract idea because the claims “read on an individual performing the claimed steps mentally or with pencil and paper”). A human mind is capable of mentally determining that a source of fuel (i.e., the battery charge) is too expensive and the amount of time required to fuel up.

Claim 1 also requires estimating “a confidence value.” The confidence value is an estimation of an amount of time that the vehicle will be on charge at future locations. Spec. ¶ 50. This also is a mental process that can be performed in the human mind. For example, if a human vehicle driver thinks they may not have much time to charge the vehicle later (i.e., the “confidence value” is low), the driver may be willing to buy more expensive charging. Because claim 1 recites a mental process, the claim recites a concept that falls within the Guidance and thus recites an abstract idea. Guidance, 84 Fed. Reg. at 52 n.15.

Independent claim 16 recites, among other things, the following:  
a control system with instructions for creating a charging schedule that prioritizes charging of the battery pack at a first charging station along a drive route over charging at a second charging station of the drive route, wherein the charging

schedule includes a confidence value estimation of an amount of time that the control system is confident that the vehicle will be on charge at each of the first and second charging stations.

For the reasons explained above with regard to claim 1, this recitation reads on a mental process. Recitation of a computer or “control system” to perform the recited mental process does not change the eligibility analysis. *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) (“[W]ith the exception of generic computer implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper”). Claim 16, therefore, also recites an abstract idea.

Independent claim 21 recites, among other things, the following: “wherein controlling the charging includes estimating a confidence value that represents an amount of time that the vehicle control system is confident that the vehicle will be on charge at each of the plurality of charging locations.” A human mind is capable of estimating how much time will be available for charging at future locations. Thus, this recitation also reads on a mental process, and claim 21 recites an abstract idea.

*A. Guidance Step 2A Prong 2: Is the claim “directed to” the recited judicial exception?*

Because each independent claim (and thus all claims on appeal) recites an abstract idea, we now determine, pursuant to the precedent of the U.S. Supreme Court and our reviewing court and consistent with the Guidance, whether the recited judicial exception is integrated into a practical application. Guidance, 84 Fed. Reg. at 51. According to the Guidance, when a claim recites a judicial exception and fails to integrate the exception into a practical application, the claim is “directed to” the judicial exception. *Id.*

The claim may integrate the judicial exception when, for example, it reflects an improvement to technology or a technical field. *Id.* at 55.

Here, Appellant argues that the claims at issue are “directed to specific improvements to the way in which charging of an electrified vehicle battery pack is scheduled/controlled at each of a plurality of charging stations along a driver route.” Appeal Br. 4 (footnote omitted). Appellant further contends that the claims are “replete with language signifying that the charging of the vehicle is being controlled” and addresses claims 1, 2, 7, 8, 12, 14, 16, 18, 19, and 21 in this regard. *Id.* at 5. The Examiner, on the other hand, contends that each of the claims on appeal are directed to an abstract idea and “remain silent towards the controlling of charging of an electrified vehicle.” Ans. 4. The Examiner maintains, for example, that the claims “fail to mention the steps involved in the controlling of charging of the electrified vehicle.” *Id.* at 5.

Resolution of the Appellant and Examiner’s contrary claim interpretations requires careful consideration of the actual words of each claim Appellant argues. As we explain below for individual claims, some of the claims on appeal require charging and some do not. This difference in claim construction impacts our analysis of whether the claim integrates the recited judicial exception into a practical application. *See ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 770 (Fed. Cir. 2019) (“[t]he § 101 inquiry must focus on the language of the Asserted Claims themselves”) (citation omitted).

Claim 1. Claim 1 recites, in its preamble, “[A] method to control charging of a battery pack of an electrified vehicle,” but it positively recites only one step in its method. That one step is “scheduling charging of the

vehicle.” Claim 1 does not recite that any actual charging must occur—only the scheduling part of the “method to control charging” is required. Claim 1 performs the “scheduling” mental step but does not use the output of the “scheduling” to improve any device. *Cf. Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (“Contrary to Digitech’s argument, nothing in the claim language expressly ties the method to an image processor.”). Appellant’s arguments to the contrary that the claims improve electrified vehicle charging technology (*see, e.g.*, Reply Br. 4) are conclusory and, thus, unpersuasive.

Because claim 1 does not improve battery charging or otherwise improve technology, claim 1 is distinguishable from technology-based integrations previously addressed by our reviewing court. *See, e.g., Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016) (holding that patent-eligible claim was directed to self-referential table to improve computer databases); *McRO, Inc. v. Bandai Namco Games Am.*, 837 F.3d 1299 (Fed. Cir. 2016) (explaining that patent-eligible claim focused on specific asserted improvement in computer animation); *Thales Visionix, Inc. v. United States*, 850 F.3d 1343, 1348–49 (Fed. Cir. 2017) (holding that claim related to a tracking system was patent-eligible where claims were directed to use of inertial sensors in a non-conventional manner to reduce errors). Claim 1, instead, is more akin to claims our reviewing court has held are not patent-eligible. *See, e.g., Digitech Image Techs., LLC*, 758 F.3d at 1350 (holding that claims to a “process of organizing information through mathematical correlations” are ineligible even though the patentee argued that use of calculated profile would be useful for capturing, transforming, or rendering a digital image); *see also ChargePoint*, 920 F.3d at 773 (holding

that claims “directed to the abstract idea of communicating over a network for device interaction” were patent ineligible).

We thus determine that claim 1 does not integrate the recited abstract idea (as explained above, a mental process) into a practical application.

Claim 2. Appellant argues that “[c]laims 2, 7, and 8 specifically recite ‘controlling the charging.’” Appeal Br. 5. Claim 2 recites that “controlling the charging includes determining a drive route expected to be traveled by the electrified vehicle.” Claim 2’s reference to “controlling the charging” is merely a reference back to the preamble of claim 1. Claim 2, read together with claim 1, does not require that any charge be added to or removed from the battery pack. Rather, claim 2 merely adds a mental “determining” step to the “scheduling” step of claim 1. Like claim 1, claim 2 does not affect the vehicle’s charging and, therefore, does not integrate the recited abstract idea into a practical application.

Claim 7. Claim 7 recites, in part, “wherein controlling the charging includes prioritizing charging at the first charging location.” As with claim 2, the claim further refines the claim’s recited mental processes, but the claim does not require that charge be added to or removed from a battery pack. Our analysis is, therefore, the same as with claim 2.

Claim 8. Claim 8 recites, in part, “wherein controlling the charging includes executing a charge optimization sequence for determining an amount of charging that is to occur.” Our analysis is the same as for claims 2 and 7.

Claim 12. Claim 12 recites “charging the battery pack to a target SOC [state of charge (*see* Spec. ¶ 41)] that is sufficient to travel the distance to a next cheapest charging location.” The Examiner states that this claim

“includes scheduling of the charging of [the] battery pack of the electrified vehicle.” Ans. 5. While the Examiner’s statement is strictly correct because claim 12 depends from claim 1 (and claim 1 recites a “scheduling” step), the Examiner does not address why claim 12 does not require charging of a battery pack. *See* Ans. 5. Based on the plain language of claim 12 and context provided by the Specification, we construe claim 12 as requiring charging the battery pack.

Appellant argues that “at least some of the claimed subject matter in this case” is similar to that of *Diamond v. Diehr*. Appeal Br. 8–9. We agree that claim 12, properly construed, is analogous to the patent eligible claim of *Diamond v. Diehr*. In *Diamond v. Diehr*, the claim at issue used a mathematical equation for several steps of the recited process. *Diehr*, 450 U.S. 185. The claim also included, however, steps of “installing rubber in a press, closing the mold, . . . and automatically opening the press at the proper time.” *Id.* at 187. Similarly, claim 12 at issue here requires the step of charging the battery pack based on the claim’s recited criteria. Claim 12 physically transforms a less charged battery pack into a more charged battery pack. Claim 12, therefore, incorporates the abstract concepts of, for example, claim 1 into a practical application.

Claim 12 is also distinguishable from the claims our reviewing court found patent ineligible in *Chargepoint*. *Chargepoint*, 920 F.3d at 766. The patent-ineligible *Chargepoint* claims recited, for example, a control device to enable and disable charge transfer, a transceiver to communicate requests for charge transfer with a remote server, and a controller coupled to the transceiver that causes the control device to turn charging on and off. *Id.* The court determined that the claims were patent-ineligible because the claim

language was so broad that the invention of the patent was “nothing more than the abstract idea of communication over a network for interacting with a device, applied to the context of electric vehicle charging stations.” *Id.* at 769. Here, claim 12 is more narrow; claim 12 requires, for example, the scheduling recited by claim 1 and determinations recited by claims 8–11. Claim 12, unlike the claims of *ChargePoint*, does not “cover any mechanism for implementing network communication on a charging station” or otherwise preempt an entire industry’s ability to use a broad concept.

Because claim 12 incorporates recited abstract concepts into a practical application, the process as a whole satisfies § 101 subject matter eligibility.

Claim 14. Claim 14 recites “charging the battery pack to a target SOC that is sufficient to travel the distance to a next cheapest charging location.” Like claim 12, this claim requires charging the battery pack and requires physically transforming a less charged battery pack into a more charged battery pack. Claim 14, like claim 12, integrates any recited abstract concepts into a practical application and, therefore, satisfies § 101 subject matter eligibility.

Claim 16. Claim 16 recites a vehicle system with three recited elements: “a battery pack,” “a charging system configured to selectively charge the battery pack,” and “a control system configured with instructions for creating a charging schedule that prioritizes charging of the battery pack. . . .” While, as Appellant argues (Appeal Br. 5), claim 16 recites a charging system for charging, the claim does not link the recited charging system to the recited control system. Claim 16 requires that the control system have instructions for creating charging schedule, but claim 16 does

not require that the charging system charge based on the charging schedule. Indeed, claim 16 does require that anything make use of the charging schedule that claim 16 recites. *Cf. Digitech Image Techs., LLC*, 758 F.3d at 1350 (“nothing in the claim language expressly ties the method to an image processor.”).

Appellant argues that claim 16 is more than a mental process because it includes physical features such as the battery pack, charging system, and control system. Appeal Br. 9. This argument does not persuade us that claim 16 transforms claim 16’s abstract idea recitations into a practical application. Rather, the elements Appellant relies on are similar to those in the *ChargePoint* claims that were not sufficient to make the claim patent-eligible under § 101. *See Chargepoint*, 920 F.3d at 766 (holding claim ineligible despite it reciting, among other things, “a control device to turn electric supply on and off,” “a transceiver,” and “a controller”).

Unlike, for example, claim 12 that we address above, claim 16 does not make use of the recited “creating a charging schedule” to improve technology. Claim 16 is more similar to claim 1, also addressed above, in this regard. As expressed in the Guidance, claim 16 does not “use[] a judicial exception in conjunction with, a particular machine or manufacture that is integral to the claim.” Guidance, 84 Fed. Reg. at 55. We, thus, determine that claim 16 does not integrate the recited judicial exception into a practical application.

Claim 18. Claim 18 recites the system of claim 16 “wherein the control system includes at least one control module configured to execute a charge optimization sequence for charging the battery pack along the drive route.” The recited “charge optimization sequence” serves to, as its name

suggests, optimize the quantity of charge at various locations and determines times to begin and end charging at each location. Spec. ¶ 54. The “charge optimization sequence” may include the scheduling recited by claim 16. Spec. ¶ 12. The recited “charge optimization sequence for charging the battery pack along the drive route” is an abstract mental process because a human mind is capable of, for example, assessing time available for charging at locations along a route and making use of the charge time accordingly.

Importantly, unlike claim 16, claim 18 requires an apparatus configured to actually charge the battery pack according to the recited charge optimization sequence (i.e., “a charging system configured to selectively charge the battery pack” coupled with “at least one control module configured to execute a charge optimization sequence for charging the battery pack”). Claim 18, therefore, recites apparatus that (according to Appellant’s Specification (*see, e.g.*, Spec. ¶¶ 12, 54)) improves how the recited battery pack is charged. Claim 18’s apparatus also is capable of transforming a less charged battery pack into a more charged battery pack according to the “charge optimization sequence.” We, thus, determine that claim 18 integrates a recited judicial exception (the “charge optimization sequence”) into a practical application,<sup>3</sup> and, therefore, satisfies § 101 subject matter eligibility.

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<sup>3</sup> We note that claim 18, like claim 16, does not necessarily make use of the “charging schedule” or integrate that particular abstract idea into a practical application. The Guidelines and applicable law, however, do not require that a claim integrate *every* abstract idea the claim recites into a practical application.

Claim 19. Claim 19 recites “[t]he vehicle system as recited in claim 16, wherein the charging system includes a switch selectively actuated to shut-off charging of the battery pack.” Although the recited switch can control charging, the recitation does not connect any abstract ideas to any practical application. We, thus, determine that claim 19, much like claim 16, does not integrate the recited judicial exception into a practical application.

Claim 21. Claim 21 recites, for example, “controlling charging of a battery pack of an electrified vehicle . . . wherein controlling the charging includes estimating a confidence value.” The Examiner states that “[t]he only positive[ly] recited step is ‘estimation’ which itself is directed to an abstract idea.” Ans. 6–7. We disagree. Claim 21 explicitly requires “controlling charging of a battery pack” and the controlling “includes” the “estimating.” *See also* Appeal Br. 5 (arguing that claim 21 requires controlling charging of the vehicle). Claim 21 makes use of its recited “estimation” to improve charging of the battery pack and to physically transform a less charged battery pack into a more charged battery pack. Claim 21, therefore, is similar to claim 12 (discussed above) and the patent-eligible claims of *Diamond v. Diehr*. Claim 21, thus, integrates the recited judicial exception into a practical application and satisfies § 101 subject matter eligibility.

*B. Guidance Step 2B: Do the claims provide an inventive concept?*<sup>4</sup>

Pursuant to the second step of the *Mayo/Alice* test and consistent with the Guidance, we next determine whether a claim nonetheless provides an

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<sup>4</sup> Above, we determine that claims 12, 14, 18, and 21 (and claims depending from those claims) are patent eligible. We, therefore, do not further address those claims pursuant to Guidance Step 2B.

inventive concept. In assessing this step, we consider whether additional claim elements (claim recitations beyond the identified patent ineligible subject matter), considered both individually and in combination with the claim as a whole, (1) add a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field or (2) simply append well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. Guidance, 84 Fed. Reg. at 56. Also, we reevaluate our conclusions about the additional elements discussed in the previous step. *Id.*

Here, the Examiner finds that the any additional elements are “recited at a highly generic level without any specificity and significantly more.” Final Act. 2–3. Appellant does not argue that any specific recited elements beyond the abstract recitations addressed above are not well-understood, routine, or conventional. Appeal Br. 7. Rather, Appellant argues that the claims are directed to specific improvements to the way charging occurs. Appeal Br. 4, 7–8. This argument relates to whether or not the claims are directed to an abstract idea rather than whether the claims include significantly more, and, as explained above, this argument is unpersuasive as to claims 1, 2, 7, 8, 16, and 19. Moreover, Appellant admits that, for example, electric vehicles with battery packs that may be connected to power sources are known in the art. Spec. ¶¶ 2–3. Appellant’s arguments, therefore, do not identify error in the Examiner’s analysis pursuant to the second step of the *Mayo/Alice* test.

Except where otherwise explained above, Appellant’s arguments do not identify harmful error, and we, thus, sustain the Examiner’s rejection for all claims except claims 12, 14, 15, 18, 21, and 22.

CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1-22	101	Eligibility	1-11, 13, 16, 17, 19, 20	12, 14, 15, 18, 21, 22

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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED IN PART