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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VYACHESLAV BEREZIN and NORMAN J. WEIGERT

Appeal 2017-005614
Application 13/889,911
Technology Center 3600

Before LYNNE H. BROWNE, FRANCES L. IPPOLITO, and LISA M. GUIJT, *Administrative Patent Judges*.

GUIJT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Examiner's rejection[2] of claims 1–4, 6–9, 11, 12, and 14–23. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] Appellants identify the real party in interest as GM Global Technology Operations LLC. Appeal Br. 1.

[2] Appeal is taken from the Final Office Action dated April 29, 2016.

STATEMENT OF THE CASE

Claims 1, 9, and 17 are the independent claims on appeal. Claim 1, reproduced below, is exemplary of the subject matter on appeal.

> 1. A method for transmitting information pertaining to a charging event, by a plug-in electric vehicle (PEV), which includes a telematics unit, to an electrical power utility (EPU) server via a telematics service provider (TSP), the method comprising:
>
> receiving, by the telematics unit of the PEV from an electric vehicle supply equipment (EVSE), the information pertaining to the charging event and instructions, wherein the instructions include instructions directing the telematics unit to transmit the information pertaining to the charging event to the TSP;
>
> transmitting, by the telematics unit to the TSP, the information pertaining to the charging event; and
>
> transmitting, by the telematics unit to the TSP, instructions directing the TSP to forward the information pertaining to the charging event to the EPU server;
>
> wherein the information pertaining to the charging event comprises a unique identifier of the EVSE.

THE REJECTIONS

I. Claims 1–4, 6–9, 11, 12, and 14–23 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter.

II. Claims 1, 6–9, 14, 15, 17, and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Shelton (US 8,983,875 B2; issued Mar. 17, 2015) and Link, II (US 2010/0228404 A1; published Sept. 9, 2010).[3]

[3] The listing of claims 21–23 in the Examiner's statement of this rejection is a typographical error, in view of the Examiner's omission of any findings or

III. Claims 2, 18, and 21–23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Shelton, Link, II, and Solomon (US 2013/0090936 A1; published Apr. 11, 2013).

IV. Claims 3, 11, and 19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Shelton, Link, II, Solomon, and Kunhappan (US 2008/0175246 A1; published July 24, 2008).

V. Claims 4 and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Shelton, Link, II, and Beyer (US 2014/0003255 A1; published Jan. 2, 2014).

ANALYSIS

Rejection I

The Supreme Court has set forth "a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)). Under that framework, we first "determine whether the claims at issue are directed to one of those patent-ineligible concepts"—i.e., a law of nature, a natural phenomenon, or an abstract idea. *Id.* If so, we secondly "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 566 U.S. at 79, 78). The Supreme Court has described the second part of the analysis as "a

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reasoning directed to claims 21–23 in Rejection II, but inclusion of such findings and reasoning in Rejection III.

search for an 'inventive concept'—*i.e.*, an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Id.* (alteration in original) (quoting *Mayo*, 566 U.S. at 73).

The Examiner determines that although the pending claims recite a statutory category of patentable inventions (i.e., a method or a system), the claims are directed to a judicial exception (i.e., an abstract idea), and therefore, are not eligible for patentability under 35 U.S.C. § 101. Final Act. 2–6 (citations omitted). In particular, the Examiner determines that the claims are directed to the "concept of informing a utility regarding a charging event" through the receipt and transmission of data.[4] Final Act. 3; Ans. 4. The Examiner also determines that the elements of the claims do not add significantly more than the abstract idea itself. In support, the Examiner finds that "a telematics unit (a cellular chip and a wireless modem) for receiving and transmitting information" is a "generic" and "known and conventional" computing component, and that receiving and transmitting data does not "require *a particular machine*." Final Act. 4; *see also* Ans. 5 ("The claims do not include additional elements beyond the abstract idea of gathering and combining data, and, as such, do not amount to more than the abstract idea."). The Examiner further determines that "the recited steps do not improve the functioning [of] computers [themselves]." Final Act. 4.

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[4] The Examiner relies on *Bilski v. Kappos*, 561 U.S. 593 (2010) as an example of a case holding that "concepts involving human activity relating to commercial practices" are abstract ideas, and on *Gottschalk v. Benson*, 409 U.S. 63 (1972) as an example of a case holding that "manipulating information using mathematical relationships" is an abstract idea. Final Act. 3–4; Ans. 4.

Appellants argue that the pending claims amount to significantly more than an abstract idea itself, because the claims recite additional elements that "specify a particular way of carrying out the general idea of forwarding electric vehicle recharging service information originating from an electric vehicle supply equipment (EVSE) to an Electrical Power Utility (EPU)." Appeal Br. 5. In particular, Appellants submit that "[t]he additional elements recite forwarding *specific* information originating from the EVSE to the EPU *via specific communications links in a communications path that passes through both: a telematics unit and telematics service provider*." *Id.*

We are not persuaded by Appellants' argument that the claim elements contain an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application because the claims specify a particular type of information (i.e., information including instructions and/or a unique identifier). Rather, our reviewing court reminds us that "[i]nformation as such is an intangible" and that "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." *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (internal citations and quotations omitted).

We are also not persuaded by Appellants' argument that because the claims specify *communication links*, the claim elements contain an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application. Rather, a preponderance of the evidence supports the Examiner's determination that the claimed telematics unit of a plug-in electric vehicle ("PEV") is a generic communication and/or computing

component, or put another way, conventional. Figure 1 of the Specification is reproduced below.

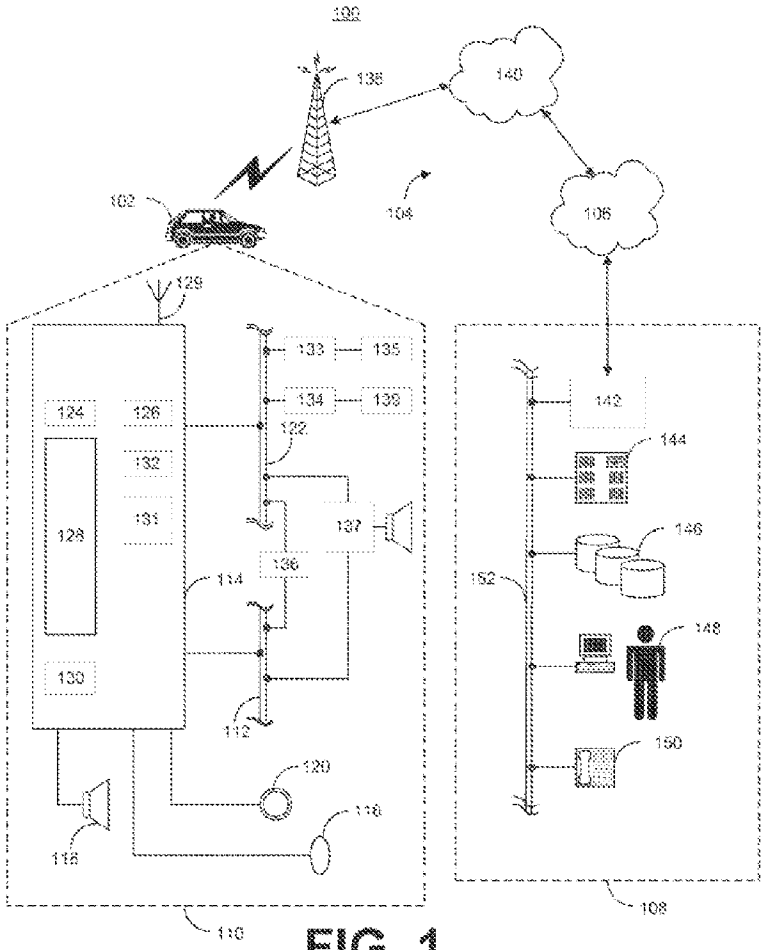

FIG. 1

Figure 1 is "a schematic diagram of an operating environment for a mobile vehicle communication system" (Spec. ¶ 9), wherein "[i]t should be appreciated that the overall architecture, setup and operation, as well *as the individual components of a system such as that shown in FIG. 1 are generally known in the art*" (*id.* ¶ 14 (emphasis added). With reference to Figure 1, the Specification discloses that (i) "vehicle 102 is . . . driven by an electric motor that periodically requires recharging" and "vehicle hardware 110 . . . includes: a telematics unit 114" (*id.* ¶ 15); (ii) "telematics unit 114 . . . includes . . . a cellular chipset/component 124 [and] a wireless modem

126," which together "may be called the network access device (NAD) of the telematics unit 114," wherein "[t]he NAD 114 further includes a short-range wireless unit 131" that "may communicate with an electric vehicle supply equipment (EVSE)" (*id.* ¶ 16); and (iii) "[i]nfotainment-related services are provided by the [telematics service provider or] TSP," wherein "content is downloaded to an infotainment center 136 operatively connected to the telematics unit 114 via a vehicle bus 122" (*id.* ¶ 19). It is further conventional to communicate (or aggregate) charging information using links between a plug-in electric vehicle (PEV), electrical vehicle supply equipment (EVSE), and an electrical power utility (EPU). *See, e.g.*, Shelton 12:56 to 13:22 (disclosing that it is known to use a PEV's telemetry to tag charging events with a unique identifier associated with an EVSE (or grid connection point) and to send the event information to an EPU, which provides a billing service). Thus, the components of the claimed methods and system, when considered individually and as an ordered combination, are conventional, as disclosed by the Specification, and therefore, insufficient to ensure that the patent in practice amounts to significantly more than a patent upon the abstract idea itself.

Moreover, the claim elements involve selecting information from information sources (i.e., links) known to be available in a power grid involving PEVs. As the court determined in *Electric Power Group*,

> a large portion of the lengthy claims is devoted to enumerating types of information and information sources available within the power-grid environment. But merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion form § 101 undergirds the information-based category of abstract ideas.

Electric Power Group, 830 F.3d at 1355.

Appellants further argue that the claims "define a particular sequence of operations carried out on a network and a particular configuration of set of network nodes that, taken as a whole, recite substantially more than merely sending charge information relating to a PEV to an electrical utility server." Appeal Br. 7. However, we fail to see how the particular sequence of first receiving and then transmitting information, via a known telematics unit and TSP, when considered individually and as an ordered combination, transforms the claims into patentable subject matter.

Appellants also argue that because the claimed invention is "sufficiently focused to address particularized needs arising from a recharging electrically powered vehicles at electric power service stations," the claimed invention does not "preclud[e] a vast variety of alternative ways to communicate electrical power service usage from an EVSE to an EPU." Appeal Br. 5. To the extent Appellants are arguing that the claims do not preempt other practical applications of informing a utility regarding a charging event through the receipt and transmission of data from a telematics unit of an electrical vehicle, we do not find Appellants' argument persuasive. Although the Supreme Court has described "the concern that drives [the exclusion of abstract ideas from patent eligible subject matter] as one of pre-emption," *Alice Corp.*, 134 S. Ct. at 2354, characterizing pre-emption as a driving concern for patent eligibility is not the same as characterizing preemption as the sole test for patent eligibility. "The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability" and "[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis." *Ariosa*

Diagnostics, Inc. v. Sequenom, Inc., 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice Corp.*, 134 S. Ct. at 2354). "[P]reemption may signal patent ineligible subject matter, [but] the absence of complete preemption does not demonstrate patent eligibility." *Id.*

Appellants also argue that the claimed "combination of elements is non-obvious over the prior art" and therefore, "not merely a computerization of conventional/known ideas." Appeal Br. 6. To the extent Appellants argue that the claims necessarily contain an "inventive concept" based on their alleged non-obviousness over the prior art, this argument is unpersuasive. Although the second step in the *Alice/Mayo* framework is termed a search for an "inventive concept," the analysis is not an evaluation of novelty or non-obviousness, but rather, a search for "an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Alice*, 134 S. Ct. at 2355. A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90. Moreover, we are not apprised of error in the Examiner's determination that receiving and transmitting electric power usage information within the communication system of electrical consumers (such as an electric vehicle and charging systems) and an electrical power utility, is unconventional.

Appellants submit that "two pertinent recent decisions" support Appellants' argument that the independent claims do not fall within the judicial exception of an abstract idea. Appeal Br. 9. First, with reference to *Bascom Global Internet Services v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016), Appellants submit that the Federal Circuit recognizes that

"an inventive concept can be found in a non-conventional and non-generic arrangement of known, conventional pieces" and that in finding that the claims represented patent-eligible subject-matter, the Federal Circuit further states, "[n]or do the claims preempt all ways of filtering content on the Internet; rather, they recite a specific, discrete implementation of the abstract idea of filtering content." *Id.* at 1350 (citations omitted).

Appellants, however, fail to provide persuasive argument or evidence that the pending claims represent a non-conventional and non-generic arrangement of known, conventional pieces. Rather, the claims are similar to those determined to be patent ineligible in *Electric Power Group*, wherein the Federal Circuit determined that the claims were directed to an abstract idea, because "[t]he advance [the claims] purport to make is a process of gathering and analyzing information of a specified content, . . . and not any particular assertedly inventive technology for performing those functions." *Electric Power Group*, 830 F.3d at 1354. Noting that "a large portion of the lengthy claims is devoted to enumerating types of information and information sources available within the power-grid environment," the court determined that "merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas." *Id.* at 1355.

Second, with reference to *Ex parte Barous*,[5] Appellants submit that the Examiner fails to provide "meaningful evidence . . . supporting a bald

[5] 2016 WL 4128678 (PTAB 2016).

assertion that the additional claim elements did not amount to significantly more." Appeal Br. 10 (citing *Ex parte Barous* 9). We disagree. The Examiner has provided support for the analysis of both steps one and two of the *Alice/Mayo* framework, as set forth *supra*.

Accordingly, we sustain the Examiner's rejection of independent claims 1, 9, and 17. Appellants rely on the same arguments presented for the rejection of independent claims 1, 9, and 17 for the patentability of 2–4, 6–8, 11, 12, 14–16, and 18–23. Appeal Br. 5–12; Reply Br. 4–7. Therefore, for the same reasons stated *supra*, we also sustain the Examiner's rejection of claims 2–4, 6–8, 11, 12, 14–16, and 18–23.

Rejection II

Regarding independent claim 1, the Examiner finds that Shelton teaches receiving, by the telematics unit of a plug-in electric vehicle (PEV) from an electric vehicle supply equipment (EVSE), information pertaining to a charging event and instructions directing the telematics unit to transmit the information to an electrical power utility (EPU) server, wherein the information comprises a unique EVSE identifier, as claimed. Final Act. 7 (citing Shelton 9:54–10:5, 12:56–65, 13:4–45, 13:65–14:6, Figs. 1, 3). The Examiner determines that although "Shelton teaches that the telemetry unit is installed by a service provider . . . , Shelton does not explicitly teach that said service provider is a telematics service provider (TSP), and transmitting, by the telematics unit to the service provider, instructions directing the service provider to transmit the information pertaining to the charging event to the EPU." *Id.* at 7–8 (citing Shelton 13:4–17). The Examiner relies on Link, II for disclosing

> a method and system for providing services by a telematics service provider (TSP) to subscribers – vehicle owners, wherein the TSP assists the subscribers with charging electric vehicles and payment processing related to said charging . . . , and discloses that the telematics provider may forward the user inputted information from the interface to another service provider after it verifies user log in credentials, wherein said information comprises a unique identifier of the EVSE, thereby suggesting said "forwarding" feature.

Final Act. 8 (citing Link, II ¶¶ 55–58). The Examiner reasons that it would have been obvious "to modify Shelton to include the recited limitations, as disclosed and suggested in Link, II, because it would advantageously . . . provide the subscriber with a listing of all public charging stations in accordance with the subscriber's preferences, as specifically disclosed in Link, II." *Id.* (citing Link, II ¶¶ 57–58).

Appellants argue that "neither reference describes Appellants' claimed method, recited in claim 1, wherein a TSP operates as an intermediate recipient of charging event information (including 'a unique identifier of the EVSE') that was received by a telematics." Appeal Br. 15. However, as set forth *supra*, the Examiner does not rely on either reference *alone* for such a disclosure, but rather on Shelton for disclosing that a telematics unit of an PEV receives information about a charging event (including the EVSE's unique identifier) and on Link, II for disclosing that a TSP may be an intermediary regarding public charging station information, such that the combination of Shelton and Link, II renders the claimed subject matter obvious. Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981).

Appellants also argue that

> none of the references demonstrates any awareness of a particularized problem that would provide a reason to modify Shelton (in view of Link) in a way that resulted in Appellants' claimed distinguishing elements that includes: (1) a particularized transmission path, including the PEV and TSP, between the EVSE and the EPU; and (2) a "particular information pertaining to the charging event" passed to the EPU – notably the "unique identifier for the EVSE."

Appeal Br. 15.

To the extent Appellants are arguing that the prior art references must provide a rationale for the Examiner's proposed modification, such an argument appears to be holding the Examiner to the old TSM (teaching, suggestion, or motivation) standard, which is no longer required. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 415 (2007). Notwithstanding, the Examiner provides a rationale from Link, II, namely, that because Link, II discloses using a TSP to provide information to a telematics unit regarding public charging stations, Link, II suggests that a TSP is useful as an intermediary for information relating to vehicle charging. *See* Final Act. 8 ("Link, II . . . teaches . . . providing services by a telematics service provider (TSP) to subscribers" and that it is advantageous "to provide the subscriber with a listing of all public charging stations."). The Examiner relies on Shelton for disclosing the receipt and transmission of information by the telematics unit of a PEV to an EPU server regarding a charging event, and proposes modifying Shelton to include a TSP, as claimed, based on the teachings of Link, II. *See id.* at 7–8 ("Shelton . . . teaches a method for transmitting information pertaining to a charging event, by a plug-in electric vehicle (PEV), which includes a telematics unit, to an electric power utility (EPU) server" and "transmitting, by the telematics unit"). Appellants'

argument does not apprise us of error in the Examiner's findings or reasoning.

According, we sustain the Examiner's rejection of independent claim 1 under 35 U.S.C. § 103(a) as unpatentable over Shelton and Link, II. Appellants rely on the same arguments presented for the rejection of claim 1 for the patentability of independent claims 9 and 17, and depending claims 6–8, 14, 15, and 20. Appeal Br. 13–16; Reply Br. 7–8. Therefore, for the same reasons stated *supra*, we also sustain the Examiner's rejection of claims 6–9, 14, 15, 17, and 20.

Rejections III–V

Appellants rely on the same arguments presented for the rejection of independent claims 1, 9, and 17 for the patentability of claims 2–4, 11, 12, 18, 19, and 21–23. Appeal Br. 16–17; Reply Br. 8. Therefore, for the same reasons stated *supra*, we also sustain the Examiner's rejection of claims 2–4, 11, 12, 18, 19, and 21–23.

DECISION

The Examiner's rejection of claims 1–4, 6–9, 11, 12, and 14–23 under 35 U.S.C. § 101 is AFFIRMED.

The Examiner's rejection of claims 1–4, 6–9, 11, 12, and 14–23 under 35 U.S.C. § 103(a) 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)(1)(iv).

AFFIRMED