IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND

CHARGEPOINT, INC.	*	
Plaintiff	*	
vs.	*	CIVIL ACTION NO. MJG-17-3717
SEMACONNECT, INC.	*	
Defendant	*	

* * * * * * * * *

MEMORANDUM AND ORDER: MOTION TO DISMISS

The Court has before it Defendant's Motion to Dismiss for Failure to State a Claim [ECF No. 41] and the materials submitted related thereto. The Court has held a hearing and has had the benefit of the arguments of counsel.

I. INTRODUCTION

Plaintiff ChargePoint, Inc. ("ChargePoint"), founded in 2007, is a Delaware corporation with its principal place of business in Campbell, California. Compl. ¶ 21, ECF No. 1. ChargePoint claims itself to be the "pioneer in the electric vehicle charging infrastructure industry," boasting "tens of thousands of stations that have been used more than 16 million times" worldwide. Id. ¶ 5. ChargePoint owns United States Patent Nos. 7,956,570 (the "'570 Patent"); 8,138,715 (the "'715 Patent"); 8,432,131 (the "'131 Patent"); and 8,450,967 (the "'967 Patent") (collectively, the "Asserted Patents"). Id. ¶ 8.

The Asserted Patents generally relate to various methods, systems, and apparatuses for networked electric vehicle ("EV") charging stations.

Defendant SemaConnect, Inc. ("SemaConnect"), a Maryland corporation based in Bowie, Maryland, manufactures EV charging equipment. Id. ¶ 22.

ChargePoint's Complaint [ECF No. 1] accuses SemaConnect of offering to sell, selling, and using EV charging devices that infringe on the Asserted Patents. Id. ¶ 30-33.

On December 28, 2017, by the Memorandum & Order Re: Temporary Injunction [ECF No. 39], the Court denied ChargePoint's attempt to obtain a Temporary Injunction. SemaConnect subsequently filed the present motion and has submitted its Identification of Non-infringement Defenses [ECF No. 42], which includes the defense that the Asserted Patents are invalid under 35 U.S.C. § 101.

By the instant motion, Defendant SemaConnect contends that United States Patent Nos. 7,956,570; 8,138,715; 8,432,131; and 8,450,967 are invalid because they are not directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101. The Asserted patents were all issued prior to the Supreme Court's decision in Alice Corp. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014).

II. BACKGROUND

A. The Alleged Invention

The four Asserted Patents share a specification and claim priority to United States Provisional Application No. 61/019,474 filed on January 7, 2008.

The specification describes a system of EV charging stations that are connected to a remote server via a network (i.e., the Internet). '570 Patent 3:35-45. The remote server stores a variety of information including customer profiles, load data from the electric grid (updated in real time), and electricity consumption data. Id. The EV charging station and server can be remotely accessed and controlled by a user via a cell phone or other electronic device. Id. at 3:48-53.

The system may also contain features such as an electric meter to measure consumption of electricity through each charging station, a payment station (separate from the individual charging station), or a device to detect whether a parking spot is occupied. Id. at 3:54-65.

The specification essentially states that the system provides two main improvements over previously-available technology: (1) a customized and convenient user experience and (2) management of electric flow based on electric grid load data. Id. at 3:64-5:3. The specification purports to achieve these alleged improvements by filling the need for an "efficient

communication network" between charging stations, customers, and electric utility companies. Id. at 1:30-35, 2:19-23.

The customized user experience allows the user to monitor, control, and pay for charging a vehicle from a remote device such as a cell phone. Id. at 4:16. It allows a user to "enabl[e] charge transfer" and monitor electric consumption by communicating a request to the server. Id. at 4:16-43. The server then sends a command to enable (or disable) electric flow between the vehicle and charging station, and the charging station reports consumption data back to the server which is relayed to the customer's cell phone. Id.

A customer may pay for a charging session by using payment information stored in a user profile on the server. Id. The user profile may also include custom payment rates for each user based on a user's subscription status and the location of the charging station (e.g., a resident of a community may be charged a lower rate when using a charging station in that community). Id. at 3:64-5:3. A user profile may also contain charging preferences such as only charging during periods of lower power rates, not charging during periods of peak power grid load, or selling power from the vehicle back to the power grid. Id. at 4:56-60. These features provide greater control and convenience for a customer over existing technology because a customer may remotely manage the vehicle charging process (which takes

several hours to complete) rather than having to be present physically at the site of the vehicle and charging station. Id.

Furthermore, management of electric grid load data through a communication network may include the ability to "manage peak load leveling" using "Demand Response" and "vehicle-to-grid (V2G)." Id. at 2:1-8, 4:44-57. Demand Response is a "preplanned load prioritization scheme" provided by the utility company that is used to "reduc[e] consumption of electricity during periods of high demand." Id. at 1:37-54. When the electric grid is strained due to increased demand, the utility company may transmit a command (over a network) to the server, "requiring a reduction in load." Id. at 10:50-60. The server then sends a signal (over a network) to individual charging stations, commanding certain charging stations to turn off. Id. at 4:44-57, 10:50-60. The server may rely on a customer's user profile (e.g., a customer may only want their vehicle to be charged during periods of low power rates) or "the requirements of the [utility company's] Demand Response system" when deciding which charging stations to turn off. Id. The specification also states that the Demand Response system and customer profile information may allow for vehicle-to-grid ("V2G") in which electricity stored in the vehicle is transferred back to the electric grid during times of peak demand. Id. at 1:55-67, 9:58-60.

The specification states that the need for electric grid load management of EV charging stations is made possible through the communication network as claimed in the Asserted Patents. Id. at 2:1-8.

B. Factual Background

In August 2016, Volkswagen settled the lawsuit brought by the United States government for its well-known vehicle emissions scandal (commonly known as "Dieselgate"). The settlement totaled $15 billion, of which $2 billion was appropriated to fund an EV infrastructure in the United States. ChargePoint formally objected to that settlement during the preliminary court-approval process stating that the $2 billion investment would "flood a competitive market" and "threaten[] the survival of the current participants in the market, and thus the market itself."[1] Nonetheless, the settlement was approved, and a company called Electrify America, LLC ("Electrify America") was formed to manage the implementation of the plan.

A major part of Electrify America's plan includes funding the cost of equipment and installation for electric vehicle charging stations, which will be installed at workplaces,

[1] See In re VOLKWAGON "CLEAN DIESEL" MARKETING SALES PRACTICES, AND PRODUCTS LIABILITY LITIGATION, 3:15-md-02672--, Dkt. No. 1784 at 9-10 (Amicus Curiae Brief of ChargePoint).

garages, retail centers, and residential locations in chosen major metropolitan areas.

Electrify America considered bids for contracts to manufacture and install EV charging stations during Phase I of Electrify America's infrastructure plan. Electrify America narrowed the list of bidders to four companies, including SemaConnect, ChargePoint, and two others. Ultimately, Electrify America awarded contracts to SemaConnect and two other companies but not ChargePoint.

ChargePoint has since filed the Complaint [ECF No. 1], asserting that SemaConnect's EV charging station model infringes claims in the Asserted Patents. ChargePoint specifically points to network control features in SemaConnect's advertised models that allegedly infringe on the claims. Compl. ¶¶ 34-77. By the instant motion, Defendant SemaConnect contends that United States Patent Nos. 7,956,570; 8,138,715; 8,432,131; and 8,450,967 are invalid because they are not directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

C. Claims at Issue

The Asserted Patents present apparatus claims (involving charging station hardware), system claims (involving a server, charging station, and other components which interact with one

another), and method claims (involving a process in a server for deciding to enable charge through a network).

In this case, ChargePoint asserts eight claims ("the Asserted Claims") that are addressed in regard to the instant motion:

'570 Patent: Claims 31 and 32 (system claims);

'715 Patent: Claims 1 and 2 (apparatus claims);

'131 Patent: Claims 1 and 8 (apparatus claims); and

'967 Patent: Claims 1 and 2 (method claims).

The Court would not be required to evaluate each claim separately if it were clear that they do not "differ in any manner that is material to the patent-eligibility inquiry." Mortg. Grader, Inc. v. First Choice Loan Servs., Inc., 811 F.3d 1314, 1324 n.6 (Fed. Cir. 2016). However, considering that ChargePoint is the non-moving party and has demonstrated to some degree that the claims are different, the Court will analyze each claim separately for patent eligibility.

II. LEGAL STANDARD

A. In General

Federal courts must dismiss a complaint that fails to state a claim upon which relief can be granted. Fed. R. Civ. P. 12(b)(6).

Patent eligibility under 35 U.S.C. § 101 is a question of law and a threshold issue that can be suitable for resolution on a motion to dismiss. Intellectual Ventures I LLC v. Erie Indemnity Co., 850 F.3d 1315, 1319 (Fed. Cir. 2017)(citing OIP Techs., Inc. v. Amazon.com, Inc., 788 F.3d 1359, 1362 (Fed. Cir. 2015)).

When reviewing a motion to dismiss pursuant to Fed. R. Civ. P. 12(b)(6), a plaintiff's well-pleaded allegations are accepted as true, and the complaint is viewed in the light most favorable to the plaintiff. Bell Atl. Corp. v. Twombly, 550 U.S. 544, 555 (2007)(citations omitted). To survive a motion to dismiss, a plaintiff's complaint must contain sufficient facts that, if assumed to be true, state a claim to relief that is plausible on its face. Id. at 570.

B. Clear and Convincing Standard

While patent eligibility under § 101 is a question of law, the issues may include underlying questions of fact. Mortg. Grader, 811 F.3d at 1325. In regard to a patent that has been issued, "any fact... that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence." Berkheimer v. HP Inc., -- F.3d --, No. 2017-1437, 2018 WL 774096, at *5 (Fed. Cir. Feb. 8, 2018)(citing Microsoft Corp. v. i4i Ltd. P'ship, 564 U.S. 91, 95 (2011)). "Whether a claim

element or combination of elements is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination." Id. When the invention's improvements, as alleged in the specification, create a factual dispute regarding whether they describe well-understood, routine, and conventional activities, a court "must analyze the asserted claims and determine whether they actually capture these improvements." Id. at *6.

C. Available Evidence

The Court's review of a Rule 12(b)(6) motion is generally limited to the contents of the complaint. Zak v. Chelsea Therapeutics Int'l, Ltd., 780 F.3d 597, 606 (4th Cir. 2015)(motion to dismiss considers the sufficiency of allegations set forth in the complaint and "documents attached or incorporated into the complaint")(citations omitted). Consideration of other documents at this stage could convert the motion into one for summary judgment, which would be premature because the parties have not yet conducted any discovery. Id. at 606; see also Theune v. U.S. Bank, N.A., No. MJG-13-1015, 2013 WL 5934114, at *4, n.12 (D. Md. 2013). An exception to this rule is that courts may consider documents that are "integral to and [are] explicitly relied on in the judgment complaint," without converting the motion to one for summary judgment. Zak,

780 F.3d at 606-7 (quoting Phillips v. LCI Int'l Inc., 190 F.3d 609, 618 (4th Cir. 1999)).

ChargePoint has incorporated several expert declarations into its Memorandum in Opposition to Defendant's Motion to Dismiss [ECF No. 43] in order to establish the convention of the field and the subsequent inventiveness of the claims at the time of the filing date of the Asserted Patents. See ECF No. 43-1; 43-2; 43-3. The declarations were not relied on in the Complaint; thus, the exception does not apply. The Court notes the existence of the declarations but will not herein consider the contents (or the incorporated arguments as they apply to the eligibility analysis) as they are not appropriate at the Rule 12(b)(6) stage.

D. Claim Construction

There is no hard-and-fast rule that claim construction is required before a court performs a § 101 analysis. Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.), 687 F.3d 1266, 1273-74 (Fed. Cir. 2012). In some cases, claim construction may be unnecessary. Content Extraction & Transmission LLC v. Wells Fargo Bank, Ass'n, 776 F.3d 1343, 1349 (Fed. Cir. 2014)(concluding that even adopting the plaintiff's proposed construction at the Rule 12(b)(6) stage may not alter the abstract nature of the claims).

In this case, SemaConnect alleges that the claims are directed to ineligible subject matter even when accepting ChargePoint's asserted plain and ordinary meaning of all claim terms. Def.'s Mem. 17-18, ECF No. 41-1. Thus, no terms require judicial construction in order for the Court to resolve the instant motion.

III. DISCUSSION

SemaConnect contends that the Complaint fails to state a claim upon which relief can be granted because the Asserted Claims are directed to patent-ineligible subject matter pursuant to 35 U.S.C. § 101. SemaConnect contends that each claim is directed to the abstract idea of "turning a switch on and off" and that the abstract idea does not amount to an inventive concept because the claims recite generic processes and equipment. Def.'s Mem. 20, ECF No. 41-1.

ChargePoint contends that the claims are not directed to an abstract idea but are, instead, directed to a technological improvement in EV charging station systems. Pl.'s Resp. 9-13, ECF No. 43. ChargePoint also contends that even if the claims are directed to an abstract idea, the abstract idea amounts to an inventive concept because the claims recite non-conventional and non-generic arrangements of EV charging stations. Id. at 25.

The Court shall examine herein each Asserted Claim to determine if they are eligible for patent protection by virtue of 35 U.S.C. § 101.

A. § 101 Subject Matter Eligibility

Section 101 of the Patent Act defines subject matter that is eligible for patent protection. It provides:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 101. In interpreting the meaning of Section 101, the Supreme Court has held that "[l]aws of nature, natural phenomena, and abstract ideas are not patentable." Alice, 134 S. Ct. at 2355 (citations omitted). The Supreme Court reasoned that these exceptions are "the basic tools of scientific and technological work" and that monopolization of those tools would "pre-empt use of this approach in all fields" and "impede innovation more than it would tend to promote it, thereby thwarting the primary object of the patent laws." Id. (citing Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 569 U.S. 576, 589-90 (2013); Mayo Collaborative Servs. v. Prometheus Lab., Inc., 566 U.S. 66, 70-84 (2012)).

However, the Supreme Court warned that courts must "tread carefully in construing this exclusionary principle" because "[a]t some level, all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." Id. (citing Mayo, 566 U.S. at 71).

The Supreme Court set forth a two-step test to determine whether an invention is patent-eligible subject matter. A court must determine:

> (1) whether the claim is directed to a patent ineligible concept, i.e., a law of nature, a natural phenomenon, or an abstract idea; and if so
>
> (2) whether the elements of the claim, considered both individually and as an ordered combination, add enough to transform the nature of the claim into a patent-eligible application.

Intellectual Ventures I LLC v. Erie Indem. Co., 850 F.3d 1315, 1325 (Fed. Cir. 2017)(citing Alice, 132 S. Ct. at 2355). The Federal Circuit typically refers to step one as the "abstract idea step" and step two as the "inventive idea step" when applying the test to claims challenging an abstract idea exception. Id. If the claims are found to be directed to a patent-eligible concept (not abstract) during step one, the claims will satisfy § 101, and the inquiry ends. Visual Memory LLC v. NVIDIA Corp., 867 F.3d 1253, 1262 (Fed. Cir. 2017).

B. Step One: Abstract Idea Test

1. Legal Standard

Under step one of the Alice test, the court must determine whether the claims are directed to a patent-ineligible concept such as an abstract idea. Alice, 134 S. Ct. at 2355. In determining whether a claim is abstract, "claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter." Internet Patents Corp. v. Active Network, Inc., 790 F.3d 1343, 1346 (Fed. Cir. 2015); see also Finjan, Inc. v. Blue Coat Sys., Inc., 879 F.3d 1299, 1303 (Fed. Cir. 2018)(quoting Affinity Labs of Tex., LLC v. DIRECTV, LLC, 838 F.3d 1253, 1257 (Fed. Cir. 2016)(finding that a court must examine the "patent's 'claimed advance' to determine whether the claims are directed to an abstract idea")). The Federal Circuit has cautioned against assessing a claim's "character as a whole" and "describing the claims at such a high level of abstraction and untethered from the language of the claims [such that it] all but ensures that the exceptions to § 101 swallow the rule." Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335-37 (Fed. Cir. 2016). Nonetheless, first, a court must identify the claimed concept's character as a whole. Id.

Next, a court must compare the claimed concept's character as a whole to claims that have been held to be abstract. Enfish,

822 F.3d at 1334 (finding that although the Supreme Court "has not established a definitive rule to determine what constitutes an abstract idea," the Federal Circuit and Supreme Court have outlined factors to consider and have "found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases.").

The Federal Circuit has held that in determining whether a claim encompasses an abstract idea, "it is often useful to determine the breadth of the claims in order to determine whether the claims extend to cover a fundamental . . . practice long prevalent in our system . . . ." In re TLI Commc'ns LLC Patent Litigation, 823 F.3d 607, 611 (Fed. Cir. 2016)(citing Intellectual Ventures I LLC v. Capital One Bank (USA), 792 F.3d 1363, 1369 (Fed. Cir. 2015)). The Federal Circuit has also stated that in order to prevent the risk of preemption of an approach to an entire field, courts must:

> look to whether the claims in the patent focus on a specific means or method, or are instead directed to a result or effect that itself is the abstract idea and merely invokes generic processes and machinery. Claims directed to generalized steps to be performed on a computer using conventional computer activity are not patent eligible.

Two-Way Media Ltd. v. Comcast Cable Communications, LLC, 874 F.3d 1329, 1337 (2017)(citing McRO, Inc. v Bandai Namco Games America Inc., 837 F.3d 1299, 1314 (2016)); Internet Patents, 790

F.3d at 1348-49). Even if the claims recite tangible components, the physical components of the claims cannot "merely be conduits" for the abstract idea. In re TLI, 823 F.3d at 612; see also Alice, 134 S. Ct. at 2360 (noting that not every claim that recites concrete tangible components escapes the reach of the abstract-idea inquiry). The claims must focus on how a result is achieved instead of reciting "result-based functional language." Two-Way Media, 874 F.3d at 1337-8; see also Electric Power Grp. LLC v. Alstom S.A., 830 F.3d 1350, 1354 (Fed. Cir. 2016)(finding that "there is a critical difference between patenting a particular concrete solution to a problem and attempting to patent the abstract idea of a solution to the problem in general").

Furthermore, the Federal Circuit has consistently held that gathering, analyzing, transmitting, receiving, filtering, organizing, or displaying data, and combinations thereof, is an abstract idea without something more. Electric Power, 830 F.3d at 1353-54 (the collection, manipulation, and display of electric power grid data, without changing the character of the information, is abstract); Open Parking, LLC v. ParkMe, Inc., No. 2:15-CV-976, 2016 WL 3547957, at *8 (W.D. Pa. June 30, 2016), aff'd, 683 Fed. App'x 932 (Mem)(Fed. Cir. 2017)(moving data from one place to another, such as transmitting the availability of a parking space to a driver's cell phone, is

abstract); Content Extraction and Transmission LLC v. Wells Fargo Bank Nat'l Ass'n, 776 F.3d 1343, 1347 (Fed. Cir. 2014)(collecting data, recognizing certain data, and storing that data is abstract); Intellectual Ventures I LLC v. Capital One Fin. Corp., 850 F.3d 1332, 1340(Fed. Cir. 2017)(collecting, displaying, and manipulating data is abstract).

Claims directed to fundamental financial practices, particularly validating a payment source over a network and determining a custom price for a customer based on predetermined rules, have also been construed to be abstract. Smart Sys. Innovations, LLC v. Chicago Transit Auth., 873 F.3d 1364, 1371 (Fed. Cir. 2017)(validating a payment source with stored account information on a server in order to open a turnstile in a mass transit system is abstract and non-inventive); Versata Dev. Group v. SAP Am., Inc., 793 F.3d 1306, 1312-13 (Fed. Cir. 2015)(determining the customized price of a product for a customer using organizational and product group hierarchies is abstract); buySAFE, Inc. v. Google, Inc., 765 F.3d 1354-5 (Fed. Cir. 2014)(computer applications for guaranteeing a party's performance of its online transaction are abstract and ineligible subject matter).

On the other hand, claims that are directed to a specific improvement to the functioning of computers or any other technology or technical field may not be abstract. Enfish, 822

F.3d at 1335-6 (claims for a specific database structure involved, but were not directed to, the abstract idea of organizing information using tabular formats and instead were directed to improving the way a computer stores and retrieves data); McRO, 837 F.3d at 1315 (the incorporation of specific rules for producing accurate and realistic lip synchronization and facial expressions in animated characters was not abstract because it improved on the pre-existing process and because the patent claimed specific rules for achieving the improvement); Amdocs (Israel) Ltd. v. Openet Telecom, Inc., 841 F.3d 1288, 1300 (Fed. Cir. 2016)(a distributed network architecture wherein data is collected and combined from several sources improved upon the technical field because it reduced network congestion while generating massive amounts of accounting data); Thales Visionix Inc. v. United States, 850 F.3d 1343, 1345 (Fed. Cir. 2017)(claims reciting a unique configuration of inertial sensors and the use of a mathematical equation for calculating the location and orientation of an object relative to a moving platform were directed to a technological improvement, not an abstract idea); Visual Memory, 867 F.3d at 1262 (a computer memory system connectable to a processor and having programmable operational characteristics allowed interoperability with different processors and was not directed to the abstract idea of categorical data storage).

While the search for an improvement to technology does overlap with the Alice step two analysis, courts have found it sufficient to conclude that claims are directed to an improvement in technology functioning, as opposed to an abstract idea, in step one. Enfish, 822 F.3d at 1335-36.

In contrast, the Federal Circuit has provided examples of claims that are not, in fact, directed to an improvement in the functioning of technology. For example, a court must look to the specification to determine whether it discloses the manner in which the alleged improvement is achieved. Affinity Labs of Tex. v. DirecTV, LLC, 838 F.3d 1253, 1263-4 (Fed. Cir. 2016)(finding that the claimed methods of delivering broadcast content to cellphones ineligible because the specific process by which the improvement is achieved was not disclosed, and claims were written with high generality). Mere automation of a manual process is also an abstract idea and not directed to an improvement in technology. Credit Acceptance Corp. v. Westlake Services, 859 F.3d 1044, 1055 (Fed. Cir. 2017)(using generic technology to process a car loan that could otherwise be done manually is abstract). Analyzing information in a way that can be performed mentally is also abstract. Digitech Image Techs., LLC v. Elecs. for Imaging, Inc., 758 F.3d 1344, 1351 (Fed. Cir. 2014). Moreover, claims are not directed to an improvement in technology if the purported improvements arise solely from the

capabilities of generic technology and computer parts. FairWarning IP, LLC v. Iatric Sys., 839 F.3d 1089, 1095 (Fed. Cir. 2016)("While the claimed system and method certainly purport to accelerate the process of analyzing audit log data, the speed increase comes from the capabilities of a general-purpose computer, rather than the patented method itself."). As previously discussed, a claim must include more than conventional implementation of generic components to qualify as an improvement to technology. Affinity Labs, 838 F.3d at 1264-65, (Fed. Cir. 2016); In re TLI, 823 F.3d at 612-13.

Lastly, "limiting the invention to a technological environment does 'not make an abstract concept any less abstract under step one.'" Berkheimer, 2018 WL 774096, at *6 (citing Intellectual Ventures I LLC v. Capital One Fin. Corp., 850 F.3d 1332, 1340 (Fed. Cir. 2017)).

If, after completing the Alice step one inquiry, the claims are found to be directed to an abstract idea, the Court must proceed to step two.

2. The Asserted Claims Are Directed to Abstract Ideas

a. The '715 Patent (Claims 1 and 2)

Claims 1 and 2 of the '715 Patent are:

1. An apparatus, comprising:

> a control device to turn electric supply on and off to enable and disable charge transfer for electric vehicles;
>
> a transceiver to communicate requests for charge transfer with a remote server and receive communications from the remote server via a data control unit that is connected to the remote server through a wide area network; and
>
> a controller, coupled with the control device and the transceiver, to cause the control device to turn the electric supply on based on communication from the remote server.
>
> 2. The apparatus of claim 1, further comprising an electrical coupler to make a connection with an electric vehicle, wherein the control device is to turn electric supply on and off by switching the electric coupler on and off.

'715 Patent 12:7-22.

Claim 1 of the '715 Patent discloses an apparatus (charging station) that contains a "control device" (to switch electric power on and off), a "transceiver" (which communicates with a "remote server" over a "wide area network" via a "data control unit"), and a "controller" (which "causes" the control device to switch power on or off based on a communication from the server). Id. Claim 2 adds to the Claim 1 limitations an "electrical coupler" which connects the charging station to the electric vehicle to enable charge transfer. Id.

i. Claim 1

Viewing the claim in its entirety to ascertain the character as a whole, Claim 1 is directed to sending a request, receiving a command, and executing the command over a network to operate an EV charging station in an expected way. This is an abstract idea.

The Court first looks to the specification to determine what the patent purports to solve. The specification states that "[t]here is a need for a communication network which facilitates finding the recharging facility, controlling the facility, and paying for electricity consumed." '715 Patent 1:35-8. "There is [also] a need for an efficient communication network for managing peak load leveling using Demand Response and V2G." Id. at 2:8-10. Lastly, "[t]here is [also] a need to effectively integrate these wide area networks, local area networks, and short range communication devices into systems used for recharging electric vehicles." Id. at 3:30-34. The specification states that "a system for network-controlled charging of electric vehicles and the network-controlled electrical outlets used in this system are described herein." Id. at 3:47-48. The Complaint further alleges that "the Asserted Patents describe a paradigm-shifting concept of how to charge electric vehicles in a dynamic, networked environment." Compl. ¶ 9, ECF No. 1. Thus, the invention seeks to create user-related convenience features

and solve the problem of electric grid stabilization by connecting individual charging stations to a network so that they can send and receive communications to achieve these improvements.

The Court next looks to the language of what is actually claimed. Claim 1 recites a control device, a transceiver (communicating with a remote server through a data control unit over a wide area network), and a controller. '715 Patent 12:6-18. The control device "turns[s] electric supply on and off." Id. at 12:8. The transceiver "communicate[s] requests for charge transfer with a remote server and receive[s] communications from the remote server via a data control unit that is connected to the remote server through a wide area network." Id. 12:11-14 (emphasis added). The controller "causes the control device to turn the electric supply on based on a communication from the remote server." Id. at 12:15-19(emphasis added). Thus, the claim is directed to the process of sending a request to a server (over a network), receiving back a command from the server, and executing the command (to turn electric supply on and off). This characterization of the claim is consistent with the specification's portrayal of the invention as a communications network.

The Court must now determine whether the character of the claim is directed to an abstract idea. Is sending a request

(over a network), receiving back a command, and executing the command (to turn electric supply on and off) an abstract idea? The Court concludes that it is.

Claim 1 amounts to nothing more than the recitation of generic computer and networking equipment to achieve the result of operating an EV charging station as it otherwise would be operated without network connectivity. The claim recites tangible aspects such as a transceiver, server, data control unit, wide area network, controller, and control device. However, these tangible components serve as nothing more than conduits for the abstract idea of sending requests, receiving commands, and executing commands on a device over a network.

The transceiver, data control unit, and wide area network are nothing more than generic networking equipment used to connect devices to a server (to enable sending and receiving communications over a network). A controller and control device are merely broad recitations of generic computing components that can “cause” something to occur. In this particular field of use, the only thing that can be “caused” is to turn on/off or modify electric charge.

When attempting to distinguish one of the system claims with Claim 1 of the ‘715 Patent, Counsel for ChargePoint admitted that:

> [t]he '715 patent simply covers a data controller connected to an electric vehicle charging station, connecting to a control device that allows a third party to remotely and wirelessly control the on/off functionality of that device....

Hr'g on Motion to Dismiss 41:16-20, ECF No. 48. Counsel for ChargePoint was pressed by the Court again in the following exchange:

> The Court: So the essence of your invention is a system where these things can be controlled remotely and not by somebody just physically at the charging station?
>
> Mr. Bloch: That is fair, yes. The essence of the system is charging stations that can be controlled remotely and can be accessed remotely by all of the shareholders . . . .

Id. at 43:10-16. In other words, Claim 1 of the '715 Patent introduces network connectivity to remotely send and receive commands to perform an existing device's normal function, turning on and off. Thus, the claims, although reciting tangible components, are directed to the ability to send and receive communications to control an existing device. Reciting tangible components will not save a claim from being abstract. Alice, 134 S. Ct. at 2360 (noting that not every claim that recites concrete tangible components escapes the reach of the abstract-idea inquiry).

Furthermore, Claim 1 encompasses a "practice long prevalent in our system." In re TLI, 823 F.3d at 611. Sending a request,

receiving back a command, and executing the command in an expected way is a process that has been performed long before the arrival of servers and networking equipment. For example, SemaConnect explains that the exact process in Claim 1 has been performed in a different field of use (at a gas station) for many years. Def.'s Mem., 28-9, ECF No. 41-1. A customer sends a request to a station attendant to pump gas, the attendant sends back a command to begin pumping gas (after performing some kind of verification step), and the command to pump gas is executed (by the customer, attendant, or computer) by activating the gas pump nozzle in an expected way. Counsel even admitted during the hearing that the essence of the invention is controlling the EV charging process remotely, as opposed to someone physically performing it at the charging station. Hr'g on Motion to Dismiss 43:10-16.

The Court also takes preemption concerns into consideration. As it stands, Claim 1 would preempt any other person or company from sending a request, receiving a command, and executing a command (to turn electric supply on and off) over a network (through generic networking equipment such as a transceiver, data control unit, wide area network, and server). Enforcing such a claim would preempt competitors from developing other, more specific, methods for managing the power grid over a network or creating customized user experiences. An example

presented by SemaConnect, for which it is being accused of infringement, is incorporating solar and wind energy into the charger's operation at certain times which would require communicating with the charger over a network. Def.'s Mem. 26-27, ECF No. 41-1. This approach would wholly be preempted by Claim 1 and was certainly not disclosed in the specification as contemplated by the inventors. Claim 1 may also preempt competitors from applying a credit card system to EV charging stations, as that would require communicating with a remote server (credit card company) to verify the credit card and pin number.

SemaConnect convincingly indicates how the claims merely limit the abstract idea to a field of use. A single word, "vehicle," can be replaced by any other electronic device without changing the character of the claim:

> An apparatus, comprising a control device to turn electric supply on and off to enable and disable charge transfer for electric [coffee-maker / dishwasher / dryer / hot water heater / vehicle]; a transceiver to communicate requests for charge transfer with a remote server and receive communications from the remote server via a data control unit that is connected to the remote server through a wide area network; and a controller, coupled with the control device and the transceiver, to cause the control device to turn the electric supply on based on communication from the remote server.

Def.'s Reply 10, ECF No. 45 (emphasis added). In effect, the patent claim attempts to monopolize the idea of sending requests and executing commands over a network to operate an electronic device (in this case, an EV charging station). This is an abstract idea.

Lastly, the Court looks to whether the claim is clearly directed to an improvement in technology as opposed to the abstract idea of sending a request, receiving a command, and executing the command over a network to operate a device. The specification states that the patent purports to solve the problem of electric grid stabilization and to provide customizable features to the end-user.

The specification states that a utility company may send requests to the server to reduce load by turning off charging stations. '715 Patent 10:50-60. The specification also states that connecting charging stations to a server allows the user to "find[] the recharging station, control[] the facility, and pay[] for the electricity consumed" and to be charged customized prices depending on their subscription status and location of the charging station. Id. at 1:35-38. However, specific solutions to these problems are completely absent from the claims. Moreover, finding an open parking/charging space, controlling the facility (by sending communications over a network), verifying a payment source over a network, and

charging a custom price based on preset rules have all been held to be categorically abstract (and patent-ineligible). Open Parking, 2016 WL 3547957, at *8; In re TLI, 823 F.3d at 612; Smart Sys., 873 F.3d at 1371; Versata, 793 F.3d at 1312-13. Therefore, the only possible improvements to technology that may be found in the claimed invention are those related to the functioning of the electric grid, not to user-related convenience features.

Claim 1 is inapposite to the holdings in Enfish, McRo, Amdocs, Visual Memory, and Thales where the Federal Circuit held that the claims were directed to an improvement in technology instead of an abstract idea. Enfish involved a specific database structure which improved the way a computer stores and retrieves data. 822 F.3d at 1335-6. McRO involved the incorporation of specific rules for producing accurate and realistic lip synchronization and facial expressions in animated characters. 837 F.3d at 1315. Amdocs involved a specific distributed network architecture which reduced network congestion when collecting massive amounts of data. 841 F.3d 1288, 1300. Thales involved a specific configuration of inertial sensors and the use of a mathematical equation for calculating the location and orientation of an object. 850 F.3d 1343, 1345. Lastly, Visual Memory involved a specific, improved data memory system that configured a programmable operational characteristic of a cache

memory based on the type of processor connected to the memory system. 867 F.3d at 1262.

Here, ChargePoint contends that the problem is solved merely by connecting charging stations to a network via a server, giving a user the ability to control an individual charging station. The Federal Circuit has consistently held that sending, receiving, or transmitting data over a network, without something more, is an abstract idea. Elec. Power, 830 F.3d at 1353-4; Open Parking, 683 Fed App'x 932 (Mem); Content Extraction, 776 F.3d at 1347. Nothing more is described in this claim. The claim merely recites sending a request/command from one point to another and "causing" that command to be executed in a normal and expected way (turning on or off). It achieves this through the conduit of generic networking equipment. In this context "something more" might be present if there were specific rules for deciding how the request was processed and transformed into a command to execute it or how the server decides to manage demand response requests. This claim contains no such limitation and is not directed to an improvement in the functioning of the electric grid.

This Court rejects ChargePoint's reliance upon the district court decisions in Chamberlain Group v. Linear, 114 F. Supp. 3d 614 (N.D. Ill. 2015) and Canrig Drilling Tech. Ltd. v. Trinidad Drilling L.P., Civ. Action No. H-15-0656, 2015 WL 5458576 (S.D.

Tex. Sept 17, 2015). Neither decision is binding precedent. Moreover, the Canrig court determined that the subject claims were directed to overcoming challenges with directional oil drilling through a specific apparatus and process for controlling the rotation of the drill, as opposed to the abstract idea of "computer-assisted rotation." 2015 WL 5458576 at *4. The claims in the instant case do not describe a specific process for overcoming a technological problem in the EV charging process, but merely recite a categorically abstract idea of sending and receiving communications to a device over a network through generic equipment conduits.

This Court rejects the Chamberlain unappealed district court decision. The Chamberlain court held that claims involving controlling a garage door opener over a network "have a clear concrete and tangible form in that they are directed to monitoring and opening and closing a movable barrier—a particular tangible form, e.g., a garage door, gate, door, or window." 114 F. Supp. 3d at 626. The Chamberlain court also held that the claims were directed to a technological improvement because "the garage door opener can do new things like provide for remote monitoring and control of the garage door opener." Id. at 627. This Court finds that the reasoning is not convincing and was written without the benefit of many of the Federal Circuit opinions cited herein. The alleged

technological improvement in Chamberlain amounts to nothing more than operating an existing device from a remote location over a network. In other words, the Chamberlain court held that any device connected to a network inherently possesses a technological improvement by virtue of being connected to a network because it can send and receive communications and can be operated remotely. This Court does not accept that position and finds that it contravenes the purpose of the § 101 eligibility standard and well-established Federal Circuit and Supreme Court case law.

Claim 1 of the '715 Patent is simply too broad to be directed to an improvement in an EV charging system. Rather, it encompasses the abstract idea of sending a request, receiving back a command, and executing a command to operate a device in a known and expected way. Limiting a claim to a particular field of use (EV charging) will not save an abstract claim from being abstract. Berkheimer, 2018 WL 774096, at *6.

ii. Claim 2

Claim 2 of the '715 Patent adds to the limitations of Claim 1 "an electrical coupler to make a connection with an electric vehicle, wherein the control device is to turn electric supply on and off by switching the coupler on and off." '715 Patent 12:19-22. The Court finds that the added limitation in Claim 2

does not change the character of the claim as a whole. It is still directed to the abstract idea of sending a request, receiving a command, and executing the command in an expected way (over a network) to turn electric supply on and off. The electrical coupler is nothing more than a conductor that connects the vehicle to the charging station. The existence of the electrical coupler does not improve on the functioning of technology in any way. In fact, it is merely a known and necessary component of an EV charging station. The station cannot charge a vehicle if it is not connected. The addition of the electrical coupler helps to clarify how the executed command reaches the desired destination (the vehicle) in this particular field of use (EV charging), but the character of the claim still is directed to the communication aspect as described in the Claim 1 analysis. Thus, Claim 2, like Claim 1, is directed to the abstract idea of sending a request, receiving a command, and executing the command over a network.

b. The ‘131 Patent (Claims 1 and 8)

Claims 1 and 8 are:

> 1. An apparatus, comprising:
>
> a control device to control application of charge transfer for an electric vehicle;
>
> a transceiver to communicate with a remote server via a data control unit that is

> connected to the remote server through a wide area network and receive communications from the remote server, wherein the received communications include communications as part of a demand response system; and
>
> a controller, coupled with the control device and the transceiver, to cause the control device to modify the application of charge transfer based on the communications received as part of the demand response system.
>
> * * *
>
> 8. The apparatus of claim 1, wherein the communications received as part of the demand response system include power grid load data, and wherein the controller is further to manage charge transfer based on the received power grid load data.

‘131 Patent 12:7-19, 50-53.

Claim 1 of the ‘131 Patent discloses an apparatus (charging station) with substantially the same core components as those described in the ‘715 Patent. One notable difference is that instead of switching electric supply on and off, the ‘131 Patent “control device” is more broadly said to “control[] application of charge transfer.” Id. Furthermore, instead of receiving any communications from the remote server, the ‘131 Patent “transceiver” specifically receives communications related to a “demand response system.” Id. Lastly, the ‘131 Patent “controller” causes the “control device” to “modify application of charge transfer . . . based on the demand response system” rather than merely switching the “control device” on or off. Id.

Claim 8 depends on claim 1 and limits the communications from the demand response system to "power grid load data." Id. at 12:53.

i. Claim 1

Viewed in its entirety to ascertain the character as a whole, Claim 1 of the '131 Patent is directed to receiving a command and executing the command to operate a device over a network to modify electric supply in an expected way. The Court finds that this is an abstract idea.

Looking to the claim's language, Claim 1 recites a control device, a transceiver, and a controller, much as in the '715 Patent. The control device "controls application of charge transfer." '131 Patent 12:8-9. The transceiver "communicate[s] with a remote server via a data control unit that is connected to the remote server through a wide area network and receive[s] communications from the remote server, wherein the received communications include communications as part of a demand response system." Id. at 10-15 (emphasis added). The controller "cause[s] the control device to modify the application of charge transfer based on the communications received as part of a demand response system." Id. at 16-19 (emphasis added). Thus, the claim is directed to receiving a command and executing the

command in an expected way, over a network, to modify application of charge as part of a demand response system.

As distinct from the '715 Patent, Claim 1 of the '131 Patent does even not require sending a request, it merely requires receiving a command and executing it. The command is limited to communications as part of a "demand response system." The control device in this claim appears to be the same control device as in the '715 Patent, which also permits modifying application of charge as opposed to simply switching it on and off.

Upon inspection of the specification, it appears that the "demand response system" originates with the utility company. '131 Patent 4:45-58 ("the utility company's Demand Response"); see also 10:50-60 ("load management data from the utility company"). The "demand response system" may include requests from the utility company to "limit the ability to recharge," "[limit] the recharge rate," or even send electricity back from a vehicle to the power grid (i.e., V2G). Id. at 1:39-67; 10:50-60. First, the utility company "send[s] a message" to the server, "requiring a reduction in load." Id. at 10:50-60. A command is sent from the server to individual charging stations to "turn off charging of some vehicles... depend[ing] on subscriber profiles and the requirements of the Demand Response system." Id. Subscriber profile information may include customer

preferences such as whether to charge during high demand, to only charge during low power rates, or to sell back to the power grid. Id. at 4:45-58. Thus, the communication sent to the charging device from the server is a command to either turn on/off or increase/decrease charge. The decision as to which command is sent occurs at the server level and may be based on a demand response system of the utility company.

While the specification purports that the ‘131 Patent improves the technological function of the electric power grid, these improvements are not embodied in Claim 1. The improvements, as alleged in the specification, occur when the demand response request is sent to the server. The server then decides which stations to turn on/off or to what extent charge should be increased/decreased. This decision is then sent to individual charging stations which execute the command through generic controller and control device components. In other words, the charging station receives a command (albeit a command that originated as part of a demand response system before being processed through the server) and executes the normal and expected function of the charging station, turning on/off or modifying charge sent to a vehicle. The decision-making as to which (and the extent to which) chargers are affected in response to a utility company’s demand response system, i.e., how the alleged improvement is achieved, occurs in the server.

These processes are not embodied in Claim 1. Claim 1 merely refers to relaying whatever decision is made by the server to the charging station. As discussed above in the '715 Patent discussion, receiving a communication over a network and executing the command in an expected way using generic computing and networking components as conduits for that purpose is an abstract idea. In re TLI, 823 F.3d at 612; Two-Way Media, 874 F.3d at 1337. The '131 Patent does not describe a specific solution to a technological function. The improvement may be enabled by what is claimed in Claim 1 (by virtue of being connected to the Internet), but the specification reveals that the improvement itself arises when the server makes a decision when it receives a demand response request from the utility company.

Consideration of the breadth of the claim and preemption concerns also reveal the abstract nature of the claim. Claim 1 effectively preempts any person or competitor from developing a specific method for managing electric grid stabilization. Certainly, charging stations (or any other electronic devices) would need to communicate with the electric grid for this to occur. As discussed above in regard to the '715 Patent, SemaConnect's product sheets propose its own way of managing the demands of the electric grid by incorporating solar and wind energy sources into its charging stations at certain times.

Another approach might be a decision by the server to reduce charging at residential facilities during the day while most people (and their vehicles) are at work. This approach would wholly be preempted if ChargePoint were to obtain a monopoly on sending any command (as part of a demand response system) to a charging station and executing that command (by turning on/off or reducing/increasing electric flow). This constitutes an abstract idea because it "purport[s] to monopolize every potential solution to the problem" which "impede[s] innovation more than it would tend to promote it, thereby thwarting the primary object of the patent laws." Elec. Power, 830 F.3d at 1356; Alice, 134 S. Ct. at 2355 (citations omitted).

ChargePoint alleges that the '131 Patent invention has enabled the improvements related to electric power grid stabilization merely by connecting charging stations to a network via a server so that they can send and receive communications, even when the specification reveals something different. Sending and receiving communications over a server and executing the command in an expected way is an abstract idea.

ii. Claim 8

For the same reasons discussed above for Claim 1 of the ‘131 Patent, Claim 8 is also directed to the abstract idea of receiving a command and executing the command in an expected way over a network to modify electric supply. Claim 8 merely includes every limitation of Claim 1 but limits the “communications received [from a server] as part of a demand response system” to “power grid load data.” ‘131 Patent 12:50-53. The Court does not view this limitation as having an effective difference on the character of the claim as compared to Claim 1. In light of the specification, demand response information or power grid load data (if there is even a difference) is sent to the server, after which a decision is made to turn on/off or limit charge to individual charging stations. This decision (command) is then communicated to charging stations over a network. Whether the decision in the server arose from a “demand response system” or “power grid load data” is of no concern because that decision occurs in the server and is not embodied in Claim 1 (or 8). What is included in the claim is the communication of that decision to the charging station and executing the command according to the expected and normal functioning of the charging station, which is determined to be abstract.

c. The ‘570 Patent

Claims 31 and 32 of the ‘570 Patent are:

> 31. A network-controlled charge transfer system for electric vehicles comprising:
>
> a server;
>
> a data control unit connected to a wide area network for access to said server; and
>
> a charge transfer device, remote from said server and said data control unit, comprising:
>
> an electrical receptacle configured to receive an electrical connector for recharging an electric vehicle;
>
> an electric power line connecting said receptacle to a local power grid;
>
> a control device on said electric power line, for switching said receptacle on and off;
>
> a current measuring device on said electric power line, for measuring current flowing through said receptacle;
>
> a controller configured to operate said control device and to monitor the output from said current measuring device;
>
> a local area network transceiver connected to said controller, said local area network transceiver being configured to connect said controller to said data control unit; and
>
> a communication device connected to said controller, said communication device being configured to connect said controller to a mobile wireless communication device, for communication between the operator of said electric vehicle and said controller.
>
> * * *

> 32. A system as in claim 31, wherein said wide area network is the Internet.

'570 Patent 14:22-52. Claim 31 of the '570 Patent discloses a system comprised of three main components: a server, a data control unit (to connect a charging station to the server via a wide area network), and a charge transfer device (charging station). Id. The charge transfer device comprises several of the same core components as the '715 and '131 Patents including a "control device" (to switch power on and off), a "controller" (to control the control device), and a "transceiver" (to connect the charging station to the data control unit which is connected to the server via a wide area network). Id. The charging station also includes other features such as a "communication device" (used to connect a user's cell phone to the charging station via a wide area network), a "current measuring device" (an electric meter), and an "electrical receptacle" (to connect the charging station to an "electric power line").

i. Claim 31

Viewed in its entirety to ascertain the character, Claim 31 is directed to sending a request, receiving a command, and executing the command over a network, to turn electric supply on and off, and subsequently monitoring the results of the executed demand. The Court finds that this is an abstract idea for many

of the reasons discussed above in regard to the ’715 and ‘131 Patents.

Looking to the language of the claim, Claim 31 recites a “network-controlled charge transfer device” including a server, a data control unit, and a charge transfer device. ‘570 Patent 14:24-28. The charge transfer device contains a transceiver, a controller, a control device, a communication device, a current measuring device, an electrical receptacle, and an electric power line. Id. at 27-50. The transceiver merely connects the charge transfer device to the server via the data control unit. Id. at 42-45. The control device in this claim merely switches on and off like in the ‘715 Patent. Id. at 34-35. The controller “operates” the control device. Id. at 39-41. The communication device connects a user’s cellphone to the charge transfer device, thus describing the origin of the request for charge. Id. at 46-50. The electrical receptacle connects the vehicle to the charge transfer device. Id. at 29-31. The electric power line connects the charging device to the power grid. Id. at 32-33. Finally, the current measuring device, “measure[s] current flowing through said electrical receptacle.” Id. at 36-38.

Considering the claim as a whole, the Court finds that it is directed to a system for sending a request (originating from a cellphone), receiving back a command (from a server), executing the command (to turn on/off in an expected way), and

monitoring the results of the command (by measuring the electric output). As discussed above in regard to the '715 Patent analysis, Counsel for ChargePoint admitted that "[t]he essence of the system is charging stations that can be controlled remotely and can be accessed remotely by all of the shareholders." Hr'g on Motion to Dismiss 43:10-16, ECF No. 48.

As discussed above, sending and receiving communications over a network and executing a command in an expected way is an abstract idea. Merely monitoring the output of the command is also abstract. Elec. Power, 830 F.3d at 1353-54. The data collected from the monitoring device is not used in conjunction with the other claim components for any particular purpose to improve the system. Rather, according to the specification, it is displayed to the customer and used to calculate the cost of the transaction and perhaps used for tax reports. '570 Patent at 2:11-20; 4:37-43. Monitoring the amount of a commodity sold and determining a price is a long prevalent practice. The specification does not make clear how the data collected from the monitoring device integrates into the system, merely stating that it is ultimately reported back to the customer on an invoice. Id. at 4:38-44.

Furthermore, the additional claim limitations unrelated to the communication system (electrical receptacle and electric power line) merely limit the abstract idea to a field of use (EV

charging) and are peripheral elements to a standard EV charging station. The true character of the claim (a communication system to send/receive/execute a command and monitor results) is consistent with the specification in that the invention purports to fill the need for a "communication network." '715 Patent 1:35-8; 2:8-10. Applying a communication network to send/receive/execute commands is an abstract idea, and an improvement to the technological function of EV charging stations, systems, or the electric grid is not clear in the limitations of the claims.

ii. Claim 32

Claim 32 includes every element of Claim 31 but limits the wide area network (used by both the data control unit and communication device) to the Internet. The Court finds that this does not alter the abstract character of the claim. Limiting an abstract idea to the Internet does not save the claim from abstraction. Using the Internet, as opposed to some other type of wide area network, does not alter the abstract character of the claim. The device is simply being used as a conduit to implement the abstract idea of sending and receiving communications over a network to operate a device in an expected way.

d. The ‘967 Patent

Claims 1 and 2 of the ‘967 Patent are:

> 1. A method in a server of a network-controlled charging system for electric vehicles, the method comprising:
>
> receiving a request for charge transfer for an electric vehicle at a network-controlled charge transfer device;
>
> determining whether to enable charge transfer;
>
> responsive to determining to enable charge transfer, transmitting a communication for the network-controlled charge transfer device that indicates to the network-controlled charge transfer device to enable charge transfer; and
>
> transmitting a communication for the network-controlled charge transfer device to modify application of charge transfer as part of a demand response system.
>
> * * *
>
> 2. The method of claim 1, wherein determining whether to enable charge transfer includes validating a payment source for the charge transfer.

‘967 Patent, 12:6-21. Claim 1 of the ‘967 Patent discloses a method (performed in a server) comprised of four steps: (1) receiving a request to enable charge transfer from a charging station; (2) determining whether to enable charge transfer, (3) transmitting a command to the charging station to enable charge

transfer, and (4) transmitting a command to "modify application of charge as part of a demand response system." Id.

i. Claim 1

Viewed in its entirety to ascertain the character as a whole, Claim 1 of the '967 Patent is directed to receiving a request, processing the request, and sending a command over a network (to turn electric supply on and off and/or modify electric charge as part of a demand respond system). The Court finds that this is inherently an abstract idea.

Claim 1 recites a "method in a server" comprising receiving a request (for charge transfer from a charging station, determining whether to enable charge transfer (i.e., processing the request), transmitting a communication to a charger to enable charge transfer (i.e., sending a command), and transmitting a communication to modify electric charge based on a demand response system. '967 Patent 12:6-18. Receiving, determining, and transmitting data/communications, without something more, has repeatedly been found to be an abstract idea. In re TLI, 823 F.3d at 612-3; Elec. Power, 830 F.3d at 1353-4. Content Extraction, 776 F.3d at 1347. These claims are not directed to an improvement in the functioning of technology because they do not provide any meaningful limitations. Rather, they describe generic processes performed by a server: receiving

data, processing data, and transmitting data. The claims limit the type of data to a field of use (charge requests for EV charging and demand response information) but fail to describe how the "determining" step is performed or how the server decides to implement a demand response request from a utility company.

The asserted inventive step, as described in the specification, arises in the method of "determining charge transfer parameters" in the server. '967 Patent 4:47-60. The specification provides only two possibilities for how the server might determine whether to turn on/off or increase/decrease charge: (1) based on user profile settings or (2) based on "the requirements of the Demand Response system" with no further specification as to what this might be other than that it is received by the utility company. '976 Patent 10:50-60.

The Court recognizes that the specification recites possibilities for using profile settings as part of a demand response system such as not charging during high demand, only charging during low power rates, and selling electricity back to the grid. Id. at 4:45-58. However, these limitations simply are not recited in the claim. While the specification can help to explain the purpose and meaning of the claims, limitations cannot be read into the claims. Furthermore, determining whether to alter charge "based on the requirements of the Demand

Response system [from the utility company],” instead of using user profile information, amounts to nothing more than relaying a communication (from the utility company) over a network to a charging device through a server.

Mere recitation of generic server processes, without claiming any kind of specific process whatsoever, constitutes an abstract idea and would foreseeably preempt anyone from using a server to transmit commands related to powering on a device or implementing a plan to improve electric grid load functionality. This type of claim is abstract and is the very kind that Alice sought to prevent from being monopolized.

ii. Claim 2

Claim 2 incorporates every limitation of Claim 1 but adds a limitation that the “determining” step includes validating a payment source. Validating a payment source over a network has been determined to be abstract (and non-inventive) time and time again. Smart Sys., 873 F.3d at 1371; buySAFE, 765 F.3d at 1350. CyberSource Corp. v. Retail Decisions, Inc., 654 F.3d 1366, 1370 (Fed. Cir. 2011). The claim is abstract.

C. Step Two: Inventive Concept Test

Because each of the eight Asserted Claims are found to be directed to an abstract idea, the Court must proceed to step two

to determine if the abstract idea rises to the level of a patent-eligible inventive concept.

1. Legal Standard

The court must consider the elements of the claim, both individually and as an ordered combination, to assess whether the additional elements transform the nature of the claim into a patent-eligible application of the abstract idea. Two-Way Media, 874 F.3d. 1329, 1338 (Fed. Cir. 2017); see also Bascom Global Internet Servs. v. AT&T Mobility LLC, 827 F.3d 1341, 1350 (Fed. Cir. 2016) (an inventive concept may be found in the non-conventional and non-generic arrangement of components that are individually well-known and conventional).

The Federal Circuit and Supreme Court have identified several matters that may tend to show an inventive concept. For example, as discussed in the step one analysis, claims reciting a specific application of an abstract idea that improves upon the functioning of a computer or other technology or technical field may embody an inventive concept. Enfish, 822 F.3d at 1335-6; McRO, 837 F.3d at 1315; Amdocs, 841 F.3d at 1300. Furthermore, claims that include elements (or combinations of elements) that go beyond well-understood, routine, and conventional activities in the field may also embody an inventive concept. Bascom, 827 F.3d at 1350 (the distribution of

functionality within a network, by installing internet filtering tools in servers remote from the end-user, was inventive because that specific network arrangement overcame problems in the prior art such as susceptibility to hacking, dependence on local hardware/software, and one-size-fits-all schemes); DDR Holdings, LLC v. Hotels.com, L.P., 773 F.3d 1245, 1248 (Fed. Cir. 2014)(modifying conventional hyperlink protocol to create a hybrid webpage that combines visual elements of a host site and a third-party site was inventive because it overcame the problem of host sites losing website views and sales to the third-party).

Whether the claim elements (or combination of elements) are well-understood, routine, and conventional in the field can present a question of fact. Aatrix Software, Inc. v. Green Shades Software, Inc., No. 2017-1452, 2018 WL 843288, at *5 (Fed. Cir. Feb. 14, 2018). A court may look to the specification and complaint on a motion to dismiss to determine if there are factual disputes regarding the convention of the field at the time of the invention. Id. While the specification may identify improvements to functionality of technology, which may create factual disputes regarding the convention of the field, a court "must analyze the asserted claims and determine whether they [actually] capture these improvements." Berkheimer, 2018 WL 774096, at *6; RecogniCorp, LLC v. Nintendo Co., 855 F.3d 1322,

1327 (Fed. Cir. 2017) cert. denied, 138 S. Ct. 672 (2018) ("To save a patent at step two, an inventive concept must be evident in the claims."); Automated Tracking Solutions, LLC v. Coca-Cola Co., No. 2017-1494, 2018 WL 935455, at *5 (Fed. Cir. Feb. 16, 2018)(claims for an RFID system were broad and did not embody any unconventional, inventive activity as alleged in the specification and complaint). If the claims are written with such a high level of generality that the alleged unconventional improvements are not captured by the claims, or if admissions are made regarding the convention in the field, a court may conclude that the abstract concept cited in the claims, as a matter of law, is non-inventive (and thus patent-ineligible). Id. at *6-7. Furthermore, a determination of whether a particular technology is well-understood, routine, and conventional goes beyond a disclosed piece of prior art that predates the effective filing date of the invention. Id. at *6.

The Federal Circuit and Supreme Court have held that a mere recitation of concrete or tangible components, such as generic computer or networking components, or adding the words "apply it with a computer" will not convert an abstract idea into a patent-eligible invention. Alice, 134 S. Ct. at 2360, 2368; Intellectual Ventures I LLC v. Capital One Bank (USA), 792 F.3d 1363, 1368 (Fed. Cir. 2015) (a "database" and a "communication medium" "are all generic computer elements"); buySAFE, 765 F.3d

at 1355 (“That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive.”); In re TLI, 823 F.3d at 613 (“[T]he components must involve more than performance of well-understood, routine, conventional activit[ies] previously known to the industry”); Elec. Power, 830 F.3d at 1355 (The “[i]nquiry therefore must turn to any requirements for how the desired result is achieved.”).

Lastly, confining the use of the abstract idea to a particular technological environment fails to add an inventive concept to the claims. Affinity Labs, 838 F.3d at 1259.

2. The Abstract Ideas in the Asserted Claims are not Patent-eligible

a. The ‘715 Patent

i. Claim 1

The Court held in the step one discussion, that Claim 1 is directed to sending a request, receiving a command, and executing the command over a network to operate an EV charging station. The Court finds nothing in Claim 1 that amounts to a patent-eligible inventive concept.

First, the Court looks at the individual components of the claims: a control device, a controller, a transceiver, a server, a data control unit, and a wide area network. Each of these

components amounts to generic computing and networking equipment that were well-known, routine, and conventional at the time of the invention. The specification does not purport that any of these components was anything different. Nothing in the specification indicates that the control device, which turns electric supply on and off, performs anything other than its normal and ordinary function of turning on and off (i.e., a switch). Nothing in the specification indicates that the controller is anything more than a generic device (i.e., a processor) that controls things, something that exists in all computers. See '715 Patent 7:44 ("[the control device] is controlled by the controller."). In describing different communication devices in the "Background of the Invention" section, ChargePoint admits that transceivers already existed and tells the reader what they are. Id. at 2:30, 35, 54, 64. ("A wireless local area network transceiver is used for radio frequency communication over tens of meters or more between devices."). The specification recites a well-understood, routine, and conventional server with no alleged improvements. Id. at 9:4-14 ("The server comprises a computer, report generator, and database."). The data control unit is nothing more than "a bridge between the LAN and WAN, and enables communications between the [charging station] and the server. Id. at 6:23-25. The specification does not state that the patent

claims a new device for bridging a LAN and WAN. This clearly is a well-understood, routine, and conventional device. Lastly, a wide area network assuredly has not been invented in this patent. Id. at 2:64-3:6.

Next, the Court must determine whether ordered combinations of these components give rise to a patent-eligible inventive concept. In doing so, the only logical grouping of these components is to separate them by networking equipment and EV charging equipment. The transceiver, server, data control unit, and wide area network combine to create a system which introduces generic networking capabilities to a device. The specification appears to assert the invention of the concept of using a transceiver to connect to a data control unit through a local area network that connects to a server through a wide area network. Id. at 3:32-35. This, in fact, would be the creation of the wide area network itself. In describing wide area networks in the "Background of the Invention," the specification states that "[t]he Internet is a worldwide, publicly accessible plurality of interconnected computer networks . . . . Many local area networks are part of the Internet." Id. at 3:22-26. Thus, connecting a device (a computer/charging station) to a local area network device (some kind of data control unit) which communicates with a larger wide area network (the Internet)

clearly existed and was well-understood, routine, and conventional at the time of the alleged invention.

Lastly, the networking unit must be combined with the charging station unit (the controller and control device) to search for an inventive concept. The Court does not find one here.

ChargePoint alleges to have invented the concept of introducing networking capabilities to a charging station. The specification states that "[t]here is a need to effectively integrate these wide area networks, local area networks, and short range communications devices into systems used for recharging electric vehicles." Id. at 3:30-33. In other words, there was a need to apply networking capabilities to charging stations. This is non-inventive and patent-ineligible as a matter of law. Recitation of generic computing and networking equipment, and adding the words "apply it" to an existing process or device in a particular field (a charging station) so that the device may send and receive communications is a non-inventive abstract idea. Alice, 134 S. Ct. at 2360. Introducing networking capabilities to operate an existing device merely serves as a conduit to performing the abstract idea of sending requests, receiving commands, and executing commands over a network. As noted above in the step one discussion, none of the improvements to the EV charging system or electric grid that are

effectuated by connecting the charging station to a network are presented in this claim. Based on the lack of an improvement in the claims, there is no factual dispute. Therefore, the abstract nature of the claim (sending a request, receiving a command, and executing the command in an expected way over a network) does not give rise to an inventive concept. Thus, Claim 1 is not eligible for patent protection.

ChargePoint seeks to rely upon the decision in Bascom to support its argument that the abstract idea gives rise to a patent-eligible inventive concept. In Bascom, the patent claims described a system that moved an Internet content-filtering process from local servers and computers and placed them on the ISP's remote server. 827 F.3d at 1344-45. The specification described that this improved the functionality of existing filtering programs because the claimed process was less susceptible to hacking by end-users and gave users the ability to customize filtering for users within their individual network. Id. The Court held that the claims were directed to the abstract idea of filtering content over the Internet, but that that abstract idea passed the step two test because the claims overcame specific problems with existing systems. Id. at 1350.

ChargePoint contends that by virtue of using a server to connect its charging stations to a network, which allows for the possibility of creating user accounts, that its claims are

similar to the claims in Bascom and are thus inventive. Pl.'s Resp. 28-32, ECF no. 43. However, ChargePoint fails to appreciate the underlying reason for the inventive concept finding in Bascom. The Bascom court stated that the claims were inventive because moving the filtering scheme from a local server to a remote server reduced susceptibility to hacking and allowed administrators to create personalized settings for users related to the Internet filtering process. Bascom, 827 F.3d at 1350. The Court went on to say that:

> The claims do not merely recite the abstract idea of filtering content along with the requirement to perform it on the Internet, or to perform it on a set of generic computer components. Such claims would not contain an inventive concept . . . Nor do the claims preempt all ways of filtering content on the Internet; rather, they recite a specific, discrete implementation of the abstract idea.

Id. The claims in the '715 patent do not purport to have overcome a functional issue in EV charging systems by moving a software algorithm from a local device to a remote server. Moreover, the user profiles herein involve customer preferences related to business transactions (validating a payment source, receiving custom payment rates, choosing to charge when electricity costs are low), not the core functioning of the system itself such as the internet filtering process in Bascom. The claims do not even refer to a user profile or any process

for using user profile information to make a decision to effectuate charge transfer. Instead, Claim 1 merely recites the process of sending a request to a server and receiving back a command which is executed in a known way. Using a server as a medium to send and receive communications to a device, without something more, is not inventive.

ii. Claim 2

Claim 2 is not eligible for patent protection for the same reason as Claim 1. Claim 2 merely adds the electrical coupler component to the other components of the claims. The electrical coupler alone was well-understood, routine, and conventional. The specification actually makes no mention of an “electrical coupler” but does refer to an “electrical connector,” which connects the charging station to the electric vehicle. ‘715 Patent at 7:40-41. The patent does not purport to have invented an electrical coupler (i.e., a wire). Combining the electrical coupler to the other components of Claim 1 also does not give rise to an inventive concept. An electrical coupler is merely a standard component of a charging station and narrows the claim to the field of use. It describes how the abstract idea of sending a request, receiving a command, and executing the command in an expected way (turning the charging station on/off) would ultimately reach the electric vehicle. Thus, the Court

cannot find an inventive concept, and Claim 2 is ineligible for patent protection.

b. The ‘131 Patent

i. Claim 1

The Court holds that the abstract nature of Claim 1 of the ‘131 Patent does not give rise to an inventive concept and is thus ineligible for patent protection. The Court has determined that the only difference from the ‘715 Patent is that the control device in Claim 1 of the ‘131 Patent may modify charge as opposed to simply turning on or off. The communications received from the server are also limited to those related to a demand response system.

The specification does not purport to have invented a control device which is capable of modifying charge. Thus, this limitation alone was well-known, routine, and conventional. As the Court discussed in the step one analysis, the communications received as part of a demand response system are merely commands to either turn on/off or increase/decrease charge. The demand response communication from the utility company ends at the server and is transformed into a command which is communicated to a particular charging station. Thus, the Court must next look to whether the ordered combination of the networking components and the controller/control device amount to an inventive concept

when receiving commands that originated as part of a demand response system. For many of the reasons discussed above in the '715 Patent discussion, the Court finds that it does not. The communications received as part of the demand response system are nothing more than commands to turn on/off or increase/decrease charge. These commands are then executed by the controller/control unit.

ChargePoint alleges that the ability to modify charge in response to a demand response system is the inventive concept. However, the specification tells a different story. In the "Background of the Invention" section, the specification states that:

> Demand Response is a mechanism for reducing consumption of electricity during periods of high demand. For example, consumer services such as air conditioning and lighting may be reduced during periods of high demands according to a preplanned load prioritization scheme.

'131 Patent at 1:45-49.

Thus, the specification itself provides that the concept of responding to demand response requests already existed as applied to air conditioning and lighting. The specification also states that the concept of vehicle-to-grid (V2G) already existed but was "principally being used in small pilot schemes." Id. at 2:2. The specification further states that "[t]here is a need for more widely available Demand Response and V2G to assist with

peak load leveling." Id. at 2:3-4(emphasis added). In essence the concept of fluctuating charge based on demand response already existed, but there was a need for more of it in the EV charging field. In other words, the specification stated that the combination of connecting generic networking equipment to a charging device to carry out a demand response plan already existed and was well-understood, routine, and conventional. The need was for more of it and for "an efficient communication network" to help implement it. Id. at 2:10-12. The alleged invention filled the need by making networked stations more widely available and by connecting its charging station to a network with generic networking equipment (as established in the '715 analysis). This does not amount to an inventive concept. Narrowing the known concept of responding to a demand response system to a particular field, in this case EV charging, does not make the claims any more inventive. Affinity Labs, 838 F.3d at 1259.

ii. Claim 8

Claim 8 is not eligible for patent protection for the same reason as Claim 1. The only added limitation is that the communications received as part of the demand response system are limited to power grid load data. As we have repeatedly established, there is no functional difference. The commands

that ultimately are sent to the charging station are commands to turn on/off or increase/decrease charge. Whether or not they originated as a demand response or as power grid load data (if there is even a difference) bears no distinction. This information is sent to the server which decides what to do with the information and sends out a command to the charging station. The same analysis for Claim 1 applies to Claim 8. The Claims are not eligible for patent protection.

c. The ‘570 Patent

i. Claim 31

The Court stated above in the step one analysis that Claim 31 is directed to sending a request, receiving a command, and executing the command over a network to operate an EV charging station and subsequently monitoring the results. The Court finds nothing in Claim 31 that amounts to a patent-eligible inventive concept.

Individually, none of the limitations amounts to an inventive concept. Each of the components were clearly well-understood, routine, and conventional. As established in the ‘715 analysis, a server, data control unit, control device, controller, and transceiver were all well-understood, routine, and conventional. The additional “communication device” for connecting a cellphone to the charging station is nothing more

than another transceiver. The specification does not purport to have invented a current measuring device, an electrical receptacle, or an electric power line.

As an ordered combination, the components can be separated into networking components and standard charging station components. As previously established, the networking components were clearly well-understood, routine, and conventional. The combination of the networking equipment with the charging station equipment also does not amount to an inventive concept. For the same reasons as in the ‘715 Patent analysis, the ordered combination merely serves as a conduit for carrying out the abstract idea of sending requests, receiving commands, executing the commands in a known way, and monitoring the results. The claims are not drawn to any of the alleged technological improvements in the specification. Introducing the communication device (transceiver), which connects to a cellphone, merely describes the source of the request to charge. The only alleged improvement that might be captured by Claim 31 is “the need for finding the recharging facility, controlling the facility, and paying for the facility,” all of which are categorically abstract and non-inventive concepts. Open Parking, 683 Fed. App’x 932 (Mem); In re TLI, 823 F.3d at 612; Smart Sys., 873 F.3d at 1371. The added current measuring device for monitoring electric power consumption also does not amount to an inventive

concept. Monitoring data (electric consumption) and reporting it back to a user with no further specification is not inventive. Elec. Power, 830 F.3d at 1353-4.

Because Claim 31 does not capture any of the alleged improvements, there is no factual dispute blocking dismissal. Claim 31 merely serves as a conduit for carrying out the abstract idea and is not eligible for patent protection.

ii. Claim 32

Claim 32 limits the wide area network used to connect the data control unit to the server (and the cellphone to the charging station) to the Internet. Certainly, the Internet was well-known, routine, and conventional at the time of the invention, and limiting the wide area network in Claim 31 to the Internet does not change the analysis. '570 Patent at 3:17-27. Claim 32 is also not eligible for patent protection.

d. The '967 Patent

i. Claim 1

The Court concluded above that Claim 1 of the '967 Patent is directed to receiving a request, processing the request, and sending a command over a network (to turn electric supply on and off and/or modify electric charge as part of a demand respond

system). The Court finds that this abstract idea does not rise to the level of patentability.

Individually, each of the claim limitations were inherently well-understood, routine, and conventional. The specification of the patent does assert the invention of the step of receiving a request within a server. The specification does not purport to have invented transmitting a command over a network through a server. The specification does not purport to have invented a "determining" or "processing" step within a server.

The specification does purport to have invented the combined method within a server of receiving a request, determining whether to grant the request, and transmitting a command (to enable charge transfer or to modify electric charge). This is categorically non-inventive. "That a computer receives and sends [] information over a network—with no further specification—is not even arguably inventive." buySAFE, 765 F.3d at 1355. The "further specification" would be how the server determines whether to grant the request to charge. The determining step lies at the heart of the inventive concept as alleged in the specification. The determining step is the "something more" that was missing from many of the patent-ineligible claims in cases that were directed to sending and receiving communications over a network. The determining step decides whether to convert the request for charge into a command

to turn on or modify charge. How this occurs is the inventive concept which effectuates all of the improvements alleged in the specification. When the server receives a demand response request, the server determines which charging stations to turn off, modify charge, allow for V2G, etc. '967 Patent at 10:50-60. This decision-making process is what improves on the functioning of the electric grid and EV charging systems, as opposed to merely introducing the capability of sending and receiving communications over a network.

However, not a single improvement or decision-making process is recited in Claim 1. The claim perceivably would allow for any possible determining step to take place without imposing any meaningful limitations. In effect, the claim essentially recites generic processing steps within a server: receiving a communication, processing the communication (without any further specification), and sending out a command. This is not even arguably inventive. Thus, the claim does not give rise to a factual dispute, is not an inventive concept, and is not eligible for patent protection.

ii. Claim 2

Claim 2 limits the determining step to validating a payment source. This has repeatedly been held to be a non-inventive abstract idea that is not eligible for patent protection. Smart

Sys., 873 F.3d at 1371; Open Parking, 683 Fed. App'x 932 (Mem). Claim 2 is not eligible for patent protection.

IV. SUMMARY

The Court holds that each of the eight Asserted Claims in the Asserted Patents is directed to an abstract idea. The Court further finds that none of the abstract ideas, as recited in the Asserted Claims, amount to a patent-eligible inventive concept. Connecting the Internet to a device to send and receive communications to operate that device in an expected way, without describing a specific process for how the communications provide a technological improvement (other than by virtue of being able to send and receive communications), is an abstract idea that is not eligible for patent protection under § 101. Therefore, the Asserted Claims are not eligible for patent protection. Because the Asserted Claims are invalid, the motion to dismiss shall be granted, and the Complaint shall be dismissed.

V. CONCLUSION

For the foregoing reasons:

1. Defendant's Motion to Dismiss for Failure to State a Claim [ECF No. 41] is GRANTED.
2. The following claims are found invalid under 35 U.S.C. § 101:
    a. United States Patent No. 7,956,570 Claims 31 and 32;
    b. United States Patent No. 8,138,715 Claims 1 and 2;
    c. United States Patent No. 8,432,131 Claims 1 and 8; and
    d. United States Patent No. 8,450,967 Claims 1 and 2.
3. Judgment shall be entered by separate Order.

SO ORDERED, on Friday, March 23, 2018.

/s/
Marvin J. Garbis
United States District Judge