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Patent Eligibility Used as the Federal Circuit's Shuttlecock in Weekly Badminton Match

By Chad J. Hammerlind

In the months following the release by the U.S. Patent and Trademark Office (USPTO) of The 2019 Revised Patent Subject Matter Eligibility Guidance (2019 Revised Guidance), anecdotal evidence shows a noticeable uptick in the number of patent ineligibility rejections that have been withdrawn by Examiners at the USPTO, which is promising for applicants and inventors filing patents in technology areas that have been gridlocked since the U.S. Supreme Court decision in *Alice Corp. v. CLS Bank International*.¹ While the trend at the USPTO appears to be improving in favor of applicants, a division continues to exist in the U.S. Court of Appeals for the Federal Circuit (CAFC). Recently, two different panels of the CAFC made apparently contradictory decisions on patent eligibility within a week of each other. Sample claims from each case are reproduced below:

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Sample Claims

Case #1:

1. A computer-automated method of hierarchical event monitoring and analysis within an enterprise network comprising:

deploying a plurality of network monitors in the enterprise network;

detecting, by the network monitors, suspicious network activity based on analysis of network traffic data selected from one or more of the following categories: {network packet data transfer commands, network packet data transfer errors, network packet data volume, network connection requests, network connection denials, error codes included in a network packet, network connection acknowledgements, and network packets indicative of well-known network-service protocols};

generating, by the monitors, reports of said suspicious activity; and

automatically receiving and integrating the reports of suspicious activity, by one or more hierarchical monitors.

Case #2:

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.

At first glance, one might expect both of these claims to result in similar patent eligibility outcomes under 35 USC § 101. The claims for Case #1 are directed to using network traffic data to identify and report suspicious activity on a network, while the claims for Case #2 are directed to using network communications to enable and disable charge transfer at a charge station for electric vehicles. However, the claims in one of the cases were found to be patent eligible, while the claims in the other case were found to be patent ineligible. Without being given any information other than the recited subject matter, the claims of Case #2 would appear to be the most logical choice for patent eligibility due to their recitation of the multiple physical components and the use of communications from a server in order to provide improvements to a charge station for electric vehicles, while the claim of Case #1 appears more abstract due to their recitation of the analyzing of network traffic data and generating and compiling reports of suspicious activity. However, the above analysis would be wrong, as the CAFC ruled that the claims in Case #1 were patent eligible in *SRI International, Inc., v.*

Cisco Systems, Inc.,² while the claims in Case #2 were patent ineligible in *ChargePoint, Inc., v. SemaConnect, Inc.*³ As a result, patent practitioners and applicants may feel like they are throwing darts when trying to determine whether claims are patent eligible, as the CAFC judges appear to be so split on the issue of patent eligibility that determining how claims will be interpreted by the CAFC has become virtually unpredictable, particularly in view of *ChargePoint v. SemaConnect*, as discussed below.

SRI v. Cisco

In *SRI v. Cisco*, the CAFC affirmed a district court's decision to deny a motion by Cisco, Inc. (Cisco) for summary judgment of patent ineligibility under § 101. At the time of the invention at issue in this appeal, hacker attacks on computer networks were detectable when the number of login attempts to a computer in the computer network exceeded a threshold. However, hackers had discovered that the network could be attacked by attempting to log in to multiple computers in the network, while limiting the number of login attempts per computer below the threshold, which made the attack difficult to detect by administrators looking at a single computer within the network. SRI International, Inc. (SRI) developed a computer-automated method of hierarchical event monitoring and analysis within an enterprise network to solve this issue, and claimed that method in U.S. Patent Nos. 6,585,203 (the '203 patent) and 6,711,615 (the '615 patent), which describe a plurality of network monitors that detect suspicious network activity based on analysis of network traffic data, and generate reports of the suspicious activity that are then integrated with other reports of other network monitors by a hierarchical monitor.

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SRI sued Cisco for infringement of the '615 and '203 patents. Cisco then moved for summary

judgment, arguing that the claims were both patent ineligible and anticipated. The district court denied Cisco's motions, and the jury found that the claims were valid and willfully infringed by several of Cisco's products. On appeal, Cisco argued that it was improper for the district court to deny Cisco's motion for summary judgment of patent ineligibility because the claims were directed to an abstract idea. Specifically, Cisco argued that the claims were analogous to those in *Electric Power Group, LLC v. Alstom S.A.*⁴ by being directed to generic steps required to collect and analyze data while not providing an improvement to any computer functionality. Judge O'Malley and Judge Stoll disagreed and distinguished the claims of the '615 and '203 patents from those in *Electric Power*, stating:

The *Electric Power* claims were drawn to using computers as tools to solve a power grid problem, rather than improving the functionality of computers and computer networks themselves. *Id.* at 1354. We conclude that the claims are more like the patent-eligible claims in *DDR Holding*. In *DDR*, we emphasized that the claims were direct to more than an abstract idea that merely required a 'computer network operating in its normal, expected manner,' 773 F.3d at 1258. Here, the claims actually prevent the normal, expected operation of a conventional computer network. Like the claims in *DDR*, the claimed technology 'overrides the routine and non-conventional sequence of events' by detecting suspicious network activity, generating reports of suspicious activity, and receiving and integrating the reports using one or more hierarchical monitors.⁵

The majority also analogize the claims in the '615 and '203 patents to those in *Enfish, LLC v. Microsoft Corp.*,⁶ stating that the claims were not directed to abstract ideas that use computers as tools for automating a conventional idea, but rather providing improvements to the technical functioning of a computer network by reciting a specific method for improving computer network security. Like in *Enfish*, the majority used teachings from the specification to support their argument that the claims were directed to an improvement in computer networks: "The specification bolsters our

conclusion that the claims are directed to a technological solution to a technological problem.... The specification explains that the claimed invention is directed to solving these weaknesses in conventional networks and provides 'a framework for the recognition of more global threats to interdomain connectivity, including coordinated attempts to infiltrate or destroy connectivity across an entire network enterprise.' [the '615 patent] at col. 3 ll. 44-48."⁷ Thus, the majority agreed with the district court, and found that the claims were not directed to a patent ineligible concept under step one of the *Alice* analysis.

Thus, the majority agreed with the district court, and found that the claims were not directed to a patent ineligible concept under step one of the *Alice* analysis.

Judge Lourie dissented and stated that the claims were "hardly distinguishable from *Electric Power Group*."⁸ He argued that "[t]he detecting of the suspicious activity is based on 'analysis' of traffic data, but the claims add nothing concerning specific means for doing so. The claims only recite the moving of information. The computer is used as a tool, and no improvement in computer technology is shown or claimed. There is no specific technique described for improving computer network security."⁹ He goes on to criticize the majority's use of the specification, stating that "the majority opinion quotes from and paraphrases language from the specification that only recites results, not means for accomplishing them."¹⁰ The claims as written, however, do not recite a *specific way* of enabling a computer to monitor network activity. As we noted in *Electric Power Group*, result-focused, functional claims that effectively cover any solution to an identified problem, like those at issue here, frequently run afoul of *Alice*. 830 F.3d at 1356."¹¹

The decision in *SRI v. Cisco* was another win for patent applicants, and seemed to be consistent with the 2019 Revised Guidance, aligning and harmonizing the CAFC and the USPTO in a manner that offered predictability as to what subject matter is patent eligible. That all changed a week later with the decision in *ChargePoint v. SemaConnect*.

ChargePoint v. SemaConnect

In *ChargePoint v. SemaConnect*, the CAFC affirmed a district court's decision of patent ineligibility under 35 U.S.C. § 101. At the time of the invention at issue in this appeal, charging systems for electric vehicles (EVs) were installed for personal use at homes, as well as for use by customers at businesses such as restaurants, apartments, and shopping centers, raising various concerns for regulating the use of the charging stations. For example, utility companies often have supply and demand issues associated with low demand during certain times of the day and high demand at other times of the day, and often regulate electricity delivered to customers based on a preplanned load prioritization scheme. Furthermore, while EVs draw electricity from the electric grid, EVs can also supply electricity to the electric grid via energy stored in their batteries during peak demand hours, referred to as V2G. However, prior to the inventions in this case, there was no way for businesses and utility companies to remotely control the flow of electricity at individual charging stations, and ChargePoint, Inc.'s (ChargePoint) inventors created "improved" charging stations that could operate on a network and be managed from a central location. ChargePoint claimed an apparatus that provided the functionality discussed above in U.S. Patent No. 8,138,715 (the '715 patent). Three other patents that shared the same specification as the '715 patent were also at issue including U.S. Patent Nos. 8,432,131 (the '131 patent), 8,450,967 (the '967 patent), and 7,956,570 (the '570 patent), all of which generally describe electric vehicle charging stations that connect to a network, local power grids, and electric vehicles.

ChargePoint sued SemaConnect, Inc. (SemaConnect) for patent infringement and filed a motion for emergency injunctive relief. The district court denied injunctive relief and ordered expedited briefing on SemaConnect's Rule 12(b)(6) motion based on 35 U.S.C. § 101, which the district court granted with prejudice, holding each asserted claim ineligible for patenting under § 101. On appeal at the CAFC, and during their analysis of the '715 patent at step one of the *Mayo/Alice* inquiry that determines whether the claims are directed to excluded subject matter, the CAFC discussed that there were various tools that the court could use to determine whether the claim is directed to ineligible subject matter. Specifically, the court stated,

"we have found the specification helpful in illuminating what a claim is 'directed to....' [and] as part of our 'directed to' analysis, we also consider whether a claim is truly focused on an abstract idea (or other ineligible matter), whose use the patent law does not authorize anyone to preempt."¹² The court identified that claim 1 of the '715 patent "*involves* an abstract idea—namely, the abstract idea of communicating requests to a remote server and receiving communications from that server, i.e., communication over a network."¹³ However, the court correctly reasoned that identifying an abstract idea was not sufficient to determine whether the claim as a whole is directed to the abstract idea.

With these tools in mind, the court turned to the specification of the '715 patent to understand the problem facing the inventors, as well as what the specification describes as the invention. The court found that the problem identified by the specification was that

'[t]here is a need for a communication network which facilitates finding the recharging facility, controlling the facility, and paying for the electricity consumed.' '715 patent col. 1 ll.35–38. The specification went on to discuss that '[t]here is a need for an efficient communication network for managing peak load leveling using Demand Response and V2G.' *Id.* col. 2 ll. 8–10. Looking to future needs, the specification anticipated that 'there will be a need for a system for collection of taxes and consumption information.' *Id.* col. 2 ll. 18–20.¹⁴

Thus, the court determined "that the problem perceived by the patentee was a lack of a communication network for these charging stations, which limited the ability to efficiently operate them from a business perspective."¹⁵ Moreover, the court noted that "the specification never suggests that the charging station itself is improved from a technical perspective, or that it would operate differently than it otherwise could."¹⁶

However, the court did not find the claims to be directed to an abstract idea based on the specification alone, and rather also analyzed the claim language to determine whether that claim language would preempt the building blocks of science and technology and found that the claim language would "preempt

the use of any networked charging stations.”¹⁷ The court discussed cases such as *O’Reilly v. Morse*¹⁸ and *Wyeth v. Stone*¹⁹ and concluded, with limited analysis of the claim language, that “the broad claim language would cover any mechanism for implementing network communication on a charging station, thus preempting the entire industry’s ability to use networked charging stations.”²⁰ Thus, because the specification indicated that the focus of the claims was directed to the abstract idea of network communication for device interaction, and because the claims preempted networked charging stations, the court found the claims of the ‘715 patent were “directed to the abstract idea of communication over a network to interact with a device, applied in the context of charging stations.”²¹

With respect to the claims of the ‘131 patent, ‘967 patent, and the ‘570 patent, the court found those claims directed to the same abstract idea for similar reasons. Some of those claims described the control device modifying the application of charge transfer based on communications received as part of a demand response system, and in looking at the specification, the court determined that the demand response system was merely an abstract concept of a familiar business choice, and thus the specification merely recited improvements to a business practice rather than a technical improvement.

Briefly turning to the second step of the *Mayo/Alice* analysis, the court concluded that the only possible inventive concept in the eight asserted claims was the abstract idea itself without significantly more. The court reasoned that “the alleged ‘inventive concept’ that solves problems identified in the field is that the charging stations are network-controlled. But network control is the abstract idea itself, and ‘a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.’ *BSG Tech*, 899 F.3d at 1290.”²² Thus, the claims were found patent ineligible.

A review of the court’s analysis in *ChargePoint v. SemaConnect* identifies illogical and inconsistent positions. For instance, the court concluded that the need for an efficient communication network for managing peak load leveling using Demand Response and V2G was a business problem but did not take into account that managing peak load on a power grid has technological benefits as well. For example, if

there is too much demand for electricity at a given time, the power grid may experience adverse effects such as brownouts and failure, while if there is too little demand, electricity is wasted. The ‘715 patent explicitly states “Electricity grids have periods of high demand where the demand may approach or even exceed the electricity supply. Conversely, there are periods of low demand which coincide with high electricity production.”²³ As such, the specification itself implies that the inventors contemplated that their invention could be used to make the electrical grid more efficient, in addition to the business advantages described in the specification.

A review of the court’s analysis in *ChargePoint v. SemaConnect* identifies illogical and inconsistent positions.

With respect to the preemption analysis, the claims of the ‘715 patent state:

...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.* (Emphasis added).

The court states that “the claim language here would cover any mechanism for implementing network communication on a charging station, thus preempting the entire industry’s ability to use network charging stations.”²⁴ However, the court conveniently omits that the communications are used to *enable and disable charge* transfer using a control device, a transceiver, and a controller, providing a system that arguably does not preempt all networked charging stations. For example, the court identified from the Applicant’s specification that “there will be a need for a system for collections

of taxes and consumption information,”²⁵ and independent claim 1 of the ‘715 patent does not preempt the use of a networked charging station that transfers consumption information. Nor would claim 1 cover a system that reports error information over the network, provides sensor information over the network, streams video over the network to the network charging station, and/or performs countless different uses via a network connection. Furthermore, the combination of the network, the control device, the transceiver, and the controller do not preempt enabling and disabling electrical flow at the charging station, which is really what claim 1 of the ‘715 patent is directed to.

The court conveniently omits that the communications are used to enable and disable charge transfer using a control device, a transceiver, and a controller, providing a system that arguably does not preempt all networked charging stations.

In addition, the use of *O’Reilly v. Morse* and *Wyeth v. Stone* seemed peculiar in the courts’ preemption analysis, as the claims at issue appear very different than the one claim that was at issue in *O’Reilly v. Morse*, which was directed to using electromagnetism for making any markings at a distance and was found patent ineligible (while claims using electromagnetism and the various components were found patent eligible). Furthermore, the claim in *Wyeth v. Stone* was directed to cutting ice by means of any power other than human power. In contrast, the claims of the ‘715 patent appear to be more similar to those in *Diamond v. Diehr*,²⁶ which were directed to using a mathematical formula in a rubbing curing process. As stated by the Court in *Diehr*, “When a claim containing a mathematical formula implements or applies the formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies § 101’s requirements.”²⁷ In the claims of the ‘715 patent, the communications received by the transceiver from the server via the network are used by the controller and the control

device to physically switch the flow of electricity on or off, which would appear to replace a manual switch in a conventional charging station.

The Takeaway

In any case, one takeaway from both of these cases is that the CAFC is relying heavily on the teachings of the specification when making its determination on patent eligibility. If the drafters of the ‘715 patent were aware of how patent law would change in the years following the filing of this application, they may have made an attempt to describe the technical improvements that this invention provides for a power grid and/or a charging station which, from the CAFC’s opinion in *ChargePoint v. SemaConnect*, may have resulted in a different outcome for these claims. Thus, these cases reinforce that it is important to thoroughly describe the technical improvements in the specification while avoiding any discussion of business improvements realized via the invention.

Notes

1. 573 U.S. 208, 134 S. Ct. 2347 (2014).
2. No. 2017-2223 (Fed. Cir. March 20, 2019) (*SRI v. Cisco*).
3. No. 2018-1739 (Fed. Cir. March 28, 2019) (*ChargePoint v. SemaConnect*).
4. 830 F.3d 1350 (Fed. Cir. 2016) (*Electric Power*).
5. *SRI v. Cisco* at p. 10.
6. 822 F.3d 1327 (Fed. Cir. 2016).
7. *SRI v. Cisco* at p. 9.
8. *SRI v. Cisco* at p. 3 (Lourie, dissenting).
9. *Id.*
10. *See, e.g., Majority Op.* at 9.
11. *Id.* at p. 4.
12. *ChargePoint v. SemaConnect* at pp. 7-8.
13. *Id.* at p. 9.
14. *Id.* at p. 11.
15. *Id.*
16. *Id.* at p. 12.
17. *Id.* at p. 13.
18. 56 U.S. (15 How.) 62 (1853).
19. 30 F. Cas. 73 (C.C.C.D. Mass. 1840) (No. 18,107).
20. *ChargePoint v. SemaConnect* at p. 13.
21. *Id.* at p. 16.
22. *Id.* at p. 23.
23. Col. 1, ll. 39-42.
24. *ChargePoint v. SemaConnect* at p. 15.
25. *Id.* at 11 (citing the ‘715 at col. 2 ll.18-20).
26. 450 U.S. 175 (1981) (*Diehr*).
27. *Id.* at 176.

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