

**United States Court of Appeals
for the Federal Circuit**

THE CHAMBERLAIN GROUP, INC.,
Plaintiff-Appellee

v.

**TECHTRONIC INDUSTRIES CO., TECHTRONIC
INDUSTRIES NORTH AMERICA, INC., ONE
WORLD TECHNOLOGIES, INC., OWT
INDUSTRIES, INC., RYOBI TECHNOLOGIES, INC.,**
Defendants-Appellants

ET TECHNOLOGY (WUXI) CO.,
Defendant

2018-2103, 2018-2228

Appeals from the United States District Court for the
Northern District of Illinois in No. 1:16-cv-06097, Senior
Judge Harry D. Leinenweber.

Decided: August 21, 2019

JUANITA ROSE BROOKS, Fish & Richardson, PC, San Di-
ego, CA, argued for plaintiff-appellee. Also represented by
MARIA ELENA STITELER, Minneapolis, MN; BENJAMIN
ELACQUA, Houston, TX; STEFFEN NATHANAEL JOHNSON,
Wilson Sonsini Goodrich & Rosati, Washington, DC;
KATHERINE VIDAL, MATTHEW R. McCULLOUGH, MICHAEL

RUECKHEIM, Winston & Strawn LLP, Menlo Park, CA.

JASON C. WHITE, Morgan, Lewis & Bockius LLP, Chicago, IL, argued for defendants-appellants. Also represented by MICHAEL J. ABERNATHY, SANJAY K. MURTHY, NICHOLAS A. RESTAURI; JULIE S. GOLDEMBERG, Philadelphia, PA; WILLIAM R. PETERSON, Houston, TX; SEAN C. CUNNINGHAM, ERIN GIBSON, STANLEY JOSEPH PANIKOWSKI, III, DLA Piper LLP (US), San Diego, CA.

Before LOURIE, O'MALLEY, and CHEN, *Circuit Judges*.

CHEN, *Circuit Judge*.

Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., One World Technologies, Inc., OWT Industries, Inc., and Ryobi Technologies, Inc. (collectively, TTI) appeal from the opinion and order of the United States District Court for the Northern District of Illinois denying TTI's motion for judgment as a matter of law (JMOL) and granting Chamberlain Group, Inc.'s (CGI) motions for enhanced damages and attorney fees. TTI also appeals the jury's verdict with respect to infringement and validity. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

Because we conclude that claims 1, 5, and 15 of CGI's U.S. Patent No. 7,224,275 ('275 patent) are directed to an abstract idea and therefore patent-ineligible, we reverse the district court's JMOL decision with respect to the '275 patent on 35 U.S.C. § 101 grounds. We affirm the jury's verdict with respect to its finding of no anticipation of claims 14, 17, and 18 of CGI's U.S. Patent No. 7,635,966 ('966 patent) by U.S. Patent No. 6,484,784 (Weik). Accordingly, we vacate the district court's injunction and its awards of enhanced damages and attorney fees, and remand to the district court for reconsideration of enhanced damages and attorney fees with respect to only the '966 patent.

A. THE '275 PATENT

The '275 patent relates to an apparatus and method for communicating information about the status of a movable barrier, for example, a garage door. The '275 patent explains that, “[o]ver time, the capabilities of and features supported by . . . movable barrier operators . . . expanded to include actions other than merely opening and closing a corresponding movable barrier.” '275 patent at col. 1, ll. 31–34. Some movable barrier operators could provide ambient lighting, for example, or sense the presence of an obstacle in the path of the movable barrier and take an appropriate action. *Id.* at col. 1, ll. 34–38. The '275 patent explains that the movable barrier operator may communicate information relating to the movable barrier’s status with respect to these actions with various peripheral devices, including sensors, alarms, displays, lights, and so forth. *Id.* at col. 1, ll. 54–61. Rather than communicating this information over a physical signaling path, the asserted claims recite communicating it wirelessly. *Id.* at col. 1, l. 64 – col. 2, l. 16. The specification describes wireless transmitters as being “well understood in the art.” *Id.* at col. 3, l. 54 – col. 4, l. 4.

The parties do not contest the district court’s treatment of claim 1 as representative. Claim 1 recites:

1. A movable barrier operator comprising:

a controller having a plurality of potential operational status conditions defined, at least in part, by a plurality of operating states;

a movable barrier interface that is operably coupled to the controller;

a wireless status condition data transmitter that is operably coupled to the controller, wherein the wireless status condition data transmitter transmits a status condition signal that:

corresponds to a present operational status condition defined, at least in part, by at least two operating states from the plurality of operating states; and

comprises an identifier that is at least relatively unique to the movable barrier operator, such that the status condition signal substantially uniquely identifies the movable barrier operator.

Id. at claim 1.

TTI moved for JMOL that the asserted claims of the '275 patent are directed to patent-ineligible subject matter under § 101. The district court denied TTI's motion, disagreeing with TTI's allegation that the asserted claims are directed to the abstract idea of wireless transmission of content. *See* J.A. 98. The district court determined that, "[h]ere, the '275 patent claims are not directed to the transmission of data, but to garage door openers that wirelessly transmit status information." J.A. 99 (internal quotation marks omitted). The district court further determined that the asserted claims are directed to "a particular improvement over prior art which uses a particular manner of sending and experiencing data," which it deemed patent-eligible in light of this court's decision in *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018), and various other decisions. J.A. 103–05. Because it concluded that the asserted claims were not directed to any abstract idea, the court did not reach step two of *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 218 (2014). J.A. 106.

Patent eligibility under § 101 is a question of law that may contain underlying issues of fact. *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1342 (Fed. Cir. 2018) (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018)). We review an ultimate conclusion on patent eligibility de novo. *See id.*

The Supreme Court has deemed certain categories of subject matter, including abstract ideas, ineligible for patent protection under § 101. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012). “The ‘abstract ideas’ category embodies the longstanding rule that an idea of itself is not patentable.” *Alice Corp.*, 573 U.S. at 218 (internal brackets and quotation marks omitted). To determine whether claimed subject matter is patent-eligible, we apply the two-step framework set forth in *Alice*. *Id.* First, we “determine whether the claims at issue are directed to a patent-ineligible concept,” such as an abstract idea. *Id.* Second, if so, we “examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Id.* at 221 (quoting *Mayo*, 566 U.S. at 72, 80).

1. Step One

At step one, we “look at the focus of the claimed advance over the prior art to determine if the claim’s character as a whole is directed to excluded subject matter.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (internal quotation marks omitted). “[T]he specification [is] helpful in illuminating what a claim is ‘directed to.’” *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 766 (Fed. Cir. 2019). “But while the specification may help illuminate the true focus of a claim, when analyzing patent eligibility, reliance on the specification must always yield to the claim language in identifying that focus.” *Id.*

We conclude that claim 1 is directed to wirelessly communicating status information about a system. *See, e.g.*, ’275 patent at claim 1 (reciting that “the wireless status condition data transmitter transmits a status condition signal that: corresponds to a present operational status condition defined, at least in part, by at least two operating states”). The specification supports this conclusion. The

only described difference between the prior art movable barrier operator systems and the claimed movable barrier operator system is that the status information about the system is communicated wirelessly, in order to overcome certain undesirable disadvantages of systems using physical signal paths—additional cost, exposed wiring, and increased installation time. *See id.* at col. 1, l. 49 – col. 2, l. 16, col. 3, ll. 16–26.

Wirelessly communicating status information about a system is similar to abstract ideas we have found in our previous cases. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (explaining that courts typically “examine earlier cases in which a similar or parallel descriptive nature can be seen” as part of their abstract idea analysis). In *DIRECTV*, we found claims reciting the function of wirelessly communicating regional broadcast content to an out-of-region recipient to be directed to the abstract idea of “providing out-of-region access to regional broadcast content.” *DIRECTV*, 838 F.3d at 1258. In *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266 (Fed. Cir. 2016), we found claims reciting media systems that deliver streaming content to a handheld wireless electronic device to be directed to the abstract idea of “delivering user-selected media content to portable devices.” *Id.* at 1269. As such, the broad concept of communicating information wirelessly, without more, is an abstract idea.

This case is unlike those in which we have determined that the claims were not directed to abstract ideas. In *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1344–45 (Fed. Cir. 2017), to which CGI likens the asserted claims, the claimed advance over the prior art related to a new, specific way in which sensors measured inertial changes. *See id.* at 1345. In the prior art, the measurement occurred with respect to the earth, but, in the asserted claims, “[w]hen the moving platform accelerates or turns, the inertial sensor on the platform directly measures the

gravitational effect in the moving reference frame and the system therefore requires fewer measured inputs (and fewer points of potential error) to determine the position and orientation of the tracked object.” *Id.* at 1345. “By changing the reference frame, one [could] track the position and orientation of the object within the moving platform without input from a vehicle attitude reference system or calculating orientation or position of the moving platform itself.” *Id.* This created multiple advantages over prior art systems, including increased accuracy and independent operation. *Id.* The asserted claims here are not limited to a specific implementation of a technological improvement to communication systems. Rather, they simply recite a system that wirelessly communicates status information.

Nor do the asserted claims “focus on a specific means or method that improves the relevant technology,” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016), or “effect an improvement in any other technology or technical field,” *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1265 (Fed. Cir. 2014) (quoting *Alice*, 573 U.S. at 225). The specification admits that the act of transmitting data wirelessly is “well understood in the art,” and no other changes to the generically claimed movable barrier operator are recited in the asserted claims or described in the specification. ’275 patent at col. 3, ll. 54–60. Moreover, that the claimed invention transmits data wirelessly and therefore does not rely on a wired path is not itself a technological improvement, but rather simply a feature of wireless communication, which the specification explains was already a basic, conventional form of communication.

The district court likened this case to *Core Wireless*. In *Core Wireless*, we determined that claims drawn to improved interfaces for electronic devices with small screens that allowed users to more quickly access desired data stored in, and functions of applications included in, the electronic devices were not drawn to the abstract idea of an

index. *Core Wireless*, 880 F.3d at 1359, 1362. We concluded that the claims recited “a specific improvement over prior systems, resulting in an improved user interface for electronic devices.” *Id.* at 1363. The same is not true here, where the claims merely recite a system that communicates status information, in the same “well understood” manner that wireless transmissions have always occurred. *See* ’275 patent at col. 3, ll. 54–60. Unlike *Core Wireless*, no specific manner of performing the abstract idea is recited in these claims.

CGI alleges that its claims are not directed to an abstract idea, but instead to a novel combination of its prior art movable barrier operator with a transmitter that is wireless. The district court’s analysis mirrored CGI’s approach. *See* J.A. 99–105. But “[t]he Supreme Court and this court have repeatedly made clear that merely limiting the field of use of the abstract idea to a particular existing technological environment does not render the claims any less abstract.” *DIRECTV*, 838 F.3d at 1259.

Last, CGI’s reliance on the asserted claims being directed to “physical real world manifestation[s] of an improved machine” is misplaced. *See* Appellee’s Op. Br. at 22. Without more, the mere physical nature of CGI’s claim elements (*e.g.*, controller, interface, and wireless data transmitter) is not enough to save the claims from abstractness, where the claimed advance is directed to the wireless communication of status information using off-the-shelf technology for its intended purpose. *See In re Marco Guldenaar Holding B.V.*, 911 F.3d 1157, 1161 (Fed. Cir. 2018).

Because we find that the asserted claims are drawn to the abstract idea of wirelessly communicating status information about a system, we proceed to step two of the analysis.

2. Step Two

“The ‘inventive concept’ step requires us to look with more specificity at what the claim elements add, in order to determine whether they identify an ‘inventive concept’ in the application of the ineligible subject matter to which the claim is directed.” *DIRECTV*, 838 F.3d at 1258 (internal quotation marks omitted). “Simply appending conventional steps, specified at a high level of generality, [i]s not enough to supply an inventive concept.” *Alice*, 573 U.S. at 222 (internal quotation marks and emphasis omitted).

The specification describes each individual element of the asserted claims—including the controller, the interface, and the wireless data transmitter—as “well understood in the art.” ’275 patent at col. 3, l. 27 – col. 4, l. 4. These conventional components, all recited in a generic way, are no better equipped to save the claim from abstractness than were, for example, the conventional computer used in *Alice* or the scanner used in *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014).

CGI argues that the ordered combination of the asserted claims’ elements provides the inventive concept because “there is no evidence in the record” that “a new type of movable barrier operator that includes an integrated controller and a wireless transmitter to transmit a status signal” was “well-understood, routine and conventional to a skilled artisan.” Appellee’s Op. Br. at 28 (citing *Berkheimer*, 881 F.3d at 1368). CGI misunderstands our case law. The appropriate question is not whether the entire claim as a whole was “well-understood, routine [and] conventional” to a skilled artisan (*i.e.*, whether it lacks novelty), but rather, there are two distinct questions: (1) whether each of “the [elements] in the claimed [product] (apart from the natural laws themselves) involve well-understood, routine, conventional activity previously engaged in by researchers in the field,” *Mayo*, 566 U.S. at 73, and

(2) whether all of the steps “*as an ordered combination* add[] nothing to the laws of nature that is not already present when the steps are considered separately,” *id.* at 79 (emphasis added). In other words, beyond the idea of wirelessly communicating status information about a movable barrier operator, what elements in the claim may be regarded as the “inventive concept”? This analysis applies to both system and method claims. *Alice*, 573 U.S. at 226.

As we explained above, the specification makes clear that transmitting information wirelessly was conventional at the time the patent was filed and could be performed with off-the-shelf technology. ’275 patent at col. 3, l. 54 – col. 4, l. 4. Yet wireless transmission is the only aspect of the claims that CGI points to as allegedly inventive over the prior art. *See, e.g.*, Appellee’s Op. Br. at 31 (“[T]he ’275’s claims, like Bascom’s, are patent-eligible because they ‘carve out’ a specific implementation (a specific type of operator with an integrated controller and wireless transmitter to transmit status information) that provide [sic] greater flexibility than the prior art physical interfaces approach.”). Wireless communication cannot be an inventive concept here, because it is the abstract idea that the claims are directed to. *See Interval Licensing*, 896 F.3d at 1347. Because CGI does not point to any inventive concept present in the ordered combination of elements beyond the act of wireless communication, we find that no inventive concept exists in the asserted claims sufficient to transform the abstract idea of communicating status information about a system into a patent-eligible application of that idea.

We therefore reverse the district court’s opinion and order to the extent that it found the asserted claims of the ’275 patent eligible for patent protection under § 101.

B. ’966 PATENT

The ’966 patent relates to a rechargeable battery backup system for a barrier movement operator. In the

event of a power outage, many garage door openers that are powered via electrical outlet cannot open and close the garage door, so, consequently, the garage door must be opened and closed manually. '966 patent at col. 1, ll. 25–27. It is therefore useful for the barrier movement operator to have a rechargeable battery to be used as a backup, but it is also inefficient to use separate, distinct rechargeable batteries for multiple devices, for example, with cordless power tools. *Id.* at col. 1, ll. 31–50. Accordingly, the invention of the '966 patent includes the ability for the barrier movement operator to be powered by a main power source, and the operator also possesses a battery charging system that charges a rechargeable battery capable of being used with both the barrier movement operator and other electrically powered equipment that may be stored in a garage. *Id.* at claim 1.

The jury found, *inter alia*, that the asserted claims of the '966 patent were not anticipated by Weik. J.A. 90. TTI moved for JMOL that Weik anticipates the asserted claims, which the district court denied. J.A. 134. The district court explained, quoting CGI's expert, that Weik “teaches a motor-operated door and discloses two different embodiments, one of which has a portable battery and no charger and one of which has a nonportable battery but does have a charger.” J.A. 131 (internal quotation marks omitted). TTI argued that a particular combination of these two embodiments (a portable battery with a charger) anticipates the asserted claims of the '966 patent. *Id.* Citing *Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1069 (Fed. Cir. 2017), the district court stated that “[t]hough combinations of adjacently disclosed embodiments may be considered under the obviousness analysis, the same is not true for anticipation” and concluded that any testimony by TTI's expert explaining an anticipation theory relying on the combination of the two embodiments was improper as a matter of law. J.A. 132–33.

To the extent the district court suggested a blanket rule that two embodiments disclosed in a reference can never be considered in combination to make a finding of anticipation, this was incorrect. In *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376 (Fed. Cir. 2015), we explained that “a reference can anticipate a claim even if it ‘d[oes] not expressly spell out’ all the limitations arranged or combined as in the claim, if a person of skill in the art, reading the reference, would ‘at once envisage’ the claimed arrangement or combination.” *Id.* at 1381. Thus, even when a reference discloses elements in different locations in the disclosure, the relevant question is whether the reference is sufficiently clear in disclosing the combinability of those elements such that a skilled artisan would “at once envisage” the claimed combination. However, because TTI does not allege that the jury ever received the district court’s recitation of the law from the JMOL, and because TTI does not appeal any jury instructions containing the court’s language, we find any error by the district court to be harmless under the circumstances.

“Anticipation is a factual question, and a jury verdict regarding anticipation is reviewed after trial for substantial evidence.” *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1343 (Fed. Cir. 2003). Because Weik’s disclosure as to the possible combinability of the embodiments in the way TTI urges is less than clear, we agree with the district court that TTI has not met its burden of showing that the jury’s no-anticipation verdict was not supported by substantial evidence. Accordingly, we affirm the verdict.

C. TTI’S REQUESTS FOR A NEW TRIAL

TTI moved at the district court for a new trial based on two grounds: (1) because the district court allegedly erred in denying TTI’s motion to transfer venue after the Supreme Court’s *TC Heartland* decision, and (2) because the district court allegedly erred in admitting into the record the Patent Trial and Appeal Board’s (Board) non-

institution decision with respect to TTI's petition for *inter partes* review of the '966 patent as evidence. The district court denied TTI's motion. We decline to reverse on either ground.

“In reviewing a district court's disposition of . . . a new trial motion, this court applies the law of the regional circuit where the district court sits,” here, the Seventh Circuit. *Bettcher Indus., Inc. v. Bunzl USA, Inc.*, 661 F.3d 629, 638 (Fed. Cir. 2011). The Seventh Circuit “give[s] great deference to a district court's rulings on motions to transfer venue.” *In re Chi., Milwaukee, St. Paul & Pac. R.R.*, 974 F.2d 775, 789 (7th Cir. 1992). “Indeed, [the appellate] court can only reverse a district court's determinations in this regard if [it] find[s] a ‘clear abuse of discretion.’” *Id.* (quoting *Cote v. Wadel*, 796 F.2d 981, 985 (7th Cir. 1986)). The Seventh Circuit's “standard of review in determining whether the district court committed reversible error in either the admission or exclusion of evidence is abuse of discretion.” *Geitz v. Lindsey*, 893 F.2d 148, 150 (7th Cir. 1990).

We do not find that the district court abused its discretion on either ground. As we explained in *In re Micron Technology, Inc.*, 875 F.3d 1091 (Fed. Cir. 2017), “Congress has provided express statutory confirmation of judicial authority to consider the timeliness and adequacy of a venue objection: 28 U.S.C. § 1406(b) provides that [n]othing in this chapter shall impair the jurisdiction of a district court of any matter involving a party who does not interpose timely and sufficient objection to the venue.” *Id.* at 1101. “[D]istrict courts have authority to find forfeiture of a venue objection,” for example where “venue objections based on *TC Heartland* . . . were presented close to trial.” *Id.* at 1101–02. In *Micron*, we pointed to cases—including for a writ of mandamus previously filed to our court by TTI that stemmed from the same underlying proceeding as this appeal—where we had previously denied mandamus and found no clear abuse of discretion where the motion to

transfer venue was filed two to three months before trial. *Id.* at 1102 & n.4. TTI waited almost thirty days after *TC Heartland* and two months before trial to file a motion to transfer venue. The district court did not abuse its discretion in denying TTI's motion to transfer venue under the circumstances here.

Nor did the district court abuse its discretion in admitting the Board's non-institution decision. TTI requested and the district court gave a limiting instruction to the jury explaining that the legal standards applied by the Patent Office and the legal standards the jury must apply may differ, for example the application of different claim constructions. *See* J.A. 148–49. The Supreme Court has previously approved of limiting instructions that direct juries to consider differences between proceedings at the Patent Office and in front of the district court. *See, e.g., Microsoft Corp. v. I4I Ltd. P'ship*, 564 U.S. 91, 111 (2011) (“When warranted, the jury may be instructed to consider that it has heard evidence that the PTO had no opportunity to evaluate before granting the patent. When it is disputed whether the evidence presented to the jury differs from that evaluated by the PTO, the jury may be instructed to consider that question.”). But district courts should still exercise caution when admitting evidence of a denial of institution because it may be confusing to the jury and prejudicial. We have often affirmed district courts in similar situations where the district courts exclude evidence of a non-final determination from ongoing proceedings at the Patent Office. *See SSL Servs., LLC v. Citrix Sys., Inc.*, 769 F.3d 1073, 1093 (Fed. Cir. 2014); *Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1342–43 (Fed. Cir. 2009). Although ongoing proceedings may be prejudicial for different reasons, such as being non-final, the concerns of confusing the jury because the Patent Office uses different standards from the district courts remains the same. Accordingly, both ongoing proceedings and denials of institution provide limited probative value that is likely to be outweighed by

the prejudice to the opposing party, and limiting instructions to the jury do not necessarily cure the prejudice. However, under the circumstances of this case, TTI has not shown an abuse of discretion. We affirm the district court's denial of TTI's motion for a new trial.

D. ENHANCED DAMAGES AND ATTORNEY FEES

Much of the district court's analysis awarding TTI enhanced damages and attorney fees was focused on activities relating to the '275 patent. Because we conclude that the asserted claims of the '275 patent are invalid under § 101 but affirm the jury's verdict with respect to the '966 patent, we vacate the district court's enhanced damages and attorney fees award and remand for the court to reconsider whether the award is warranted with respect to only the '966 patent.

CONCLUSION

For the reasons stated above, we reverse the district court's judgment as a matter of law with respect to the asserted claims of the '275 patent. We affirm the jury's verdict on anticipation with respect to the asserted claims of the '966 patent and the district court's determinations on TTI's motion for a new trial. We vacate the district court's injunction and its awards of enhanced damages and attorney fees, and we remand for reconsideration of enhanced damages and attorney fees consistent with this opinion. We have considered the parties' remaining arguments and find them unpersuasive.

REVERSED-IN-PART, AFFIRMED-IN-PART, AND VACATED-AND-REMANDED-IN-PART

No costs.