

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

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**CIRCUIT CHECK INC.,**  
*Plaintiff-Appellant*

v.

**QXQ INC.,**  
*Defendant-Appellee*

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2015-1155

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Appeal from the United States District Court for the Eastern District of Wisconsin in No. 1:12-cv-01211-WCG, Judge William C. Griesbach.

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Decided: July 28, 2015

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COURTLAND COLLINSON MERRILL, Anthony Ostlund Baer & Louwagi P.A., Minneapolis, MN, argued for plaintiff-appellant. Also represented by DANIEL RYAN HALL.

MICHAEL LEE HARRISON, Michael L. Harrison Attorney at Law, Los Gatos, CA, argued for defendant-appellee.

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Before LOURIE, DYK, and MOORE, *Circuit Judges*.

MOORE, *Circuit Judge*.

Circuit Check, Inc. appeals from the Eastern District of Wisconsin's judgment as a matter of law after a jury verdict that claims of U.S. Patent Nos. 7,592,796; 7,695,766; and 7,749,566 are invalid as obvious. We *reverse* the court's judgment as a matter of law and *re-mand*.

#### BACKGROUND

Manufacturers of circuit boards, which are used in various electronic devices, use circuit board testers to test circuit boards before the boards are integrated into finished products. Many testers require an interface plate, which is a plastic grid with holes that permit connections between the tester and the circuit board. In order to align circuit boards during testing, it is advantageous to mark certain holes on the interface plate. Prior art methods of marking interface plates included placing Mylar masks on the surface of the interface plate, painting the surface of interface plates, and making shallow drill marks on interface plates.

The patents at issue claim systems and methods related to marking interface plates. Claim 1 of the '796 patent is representative:

1. An indicator interface plate configured to provide readily visible identification of predetermined holes, the plate comprising:

a surface including a plurality of holes having visually discernable markings to allow a user to visually determine which of said plurality of holes are to be populated, wherein a region of the plate said plurality of holes have a first predetermined indicia covering the surface surrounding said plurality of holes, the plate further comprising: *a second removable indicia overlying said first predetermined indicia*, said

second indicia being different from said first predetermined indicia, *wherein said second indicia is removed from areas of said plate adjacent each of said predetermined holes*, said predetermined holes are visually identifiable to a user by the appearance of the first indicia.

'796 patent col.6 ll.36–51 (emphases added).

Circuit Check sued QXQ, Inc., alleging that QXQ's interface plates infringed its patents. QXQ stipulated to infringement and the parties stipulated that three references describing interface plate marking techniques were prior art to the patents: the TTCI Specifications; the Plexus Specification; and the method depicted in Figure 1 of the '796 patent and described in its specification (collectively, the "stipulated prior art"). J.A. 1983–84. These documents disclosed several marking techniques, such as painting near the hole or drilling near the hole and painting over the drill mark. QXQ concedes in its briefing that the stipulated prior art does not disclose an interface plate comprising "a second removable indicia overlying said first predetermined indicia . . . wherein said second indicia is removed from areas of said plate adjacent each of said predetermined holes." '796 patent col.6 ll.45–50.

At trial, QXQ argued that three additional references—rock carvings, engraved signage, and a machining technique known as Prussian Blue (collectively, the "disputed prior art")—disclose the limitation not present in the stipulated prior art and constitute analogous prior art. Circuit Check argued that the references were not analogous. With respect to rock carvings, in which a varnish is applied to rocks and then scrapped off to make designs, Circuit Check presented testimony that a skilled artisan at the time of the invention would not have considered rock carvings to have been reasonably pertinent to the marking problem. J.A. 1388, 1447. With respect to engraved signage, in which the top layer of a multi-layer

product is removed to expose a bottom layer, Circuit Check presented testimony that engraved signage was not relevant to the problem solved by the patents. J.A. 1388, 1434. And with respect to Prussian Blue, a machining technique whereby dye is applied to a workpiece and then removed by a scribe or drill, Circuit Check presented testimony that Prussian Blue could not be used to make the claimed invention and had no connection to the problem solved by the patents. J.A. 1387–88, 1397, 1430–32, 1443–44.

The validity of claims 1, 2, 3, 5, 6, 8, 10, 11, 13, and 14 of the '796 patent; claims 1, 2, 3, 5, 7, 8, 9, 11, 12, and 14 of the '766 patent; and claims 1, 2, 3, 5, 7, 8, 9, 11, and 12 of the '566 patent was submitted to the jury. The jury found the asserted claims not invalid for obviousness. J.A. 1995–96. The jury also found that the infringement was willful and awarded damages. J.A. 1996–97.

After the jury verdict, QXQ filed a motion for judgment as a matter of law that the asserted claims are invalid as obvious. The district court granted QXQ's motion, acknowledging that QXQ's "obviousness argument is not premised on citing specific examples of prior art in the applicable field, nor does it rely on nuanced discussion about the level of ordinary skill in that particular field." J.A. 6. It found that although there was no doubt that rock carvings "are not technically pertinent to the 'field' of circuit testers," and "witnesses credibly testified that Prussian Blue dye had not been used on alignment plates," "any layman" would have understood that interface plates could be marked using the techniques described in the disputed prior art. J.A. 8. It further noted that "any vandal who has 'keyed' a car knows that stripping the paint with a key will result in the underlying metal color showing through." J.A. 5. It found that none of the objective considerations affected its conclusion that the asserted claims would have been obvious. J.A. 13. With respect to claims 5 and 11 of the

'796 patent, the court determined that even though QXQ did not present evidence that the additional limitations of the claims would have been obvious, those additional limitations were too trivial to support nonobviousness. Circuit Check appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

#### DISCUSSION

Judgment as a matter of law is permitted on an issue following jury trial if “the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue.” Fed. R. Civ. P. 50(a). We review a district court’s grant of judgment as a matter of law after a jury verdict *de novo*. *Spectralytics, Inc. v. Cordis Corp.*, 649 F.3d 1336, 1341 (Fed. Cir. 2011). Under Seventh Circuit law, we can overturn a jury’s decision only if no rational jury could have come to the same conclusion. *E.E.O.C. v. AutoZone, Inc.*, 707 F.3d 824, 834–35 (7th Cir. 2013). In reviewing a jury’s obviousness verdict, “[w]e first presume that the jury resolved the underlying factual disputes in favor of the verdict winner and leave those presumed findings undisturbed if they are supported by substantial evidence. Then we examine the legal conclusion *de novo* to see whether it is correct in light of the presumed jury fact findings.” *Jurgens v. McKasy*, 927 F.2d 1552, 1557 (Fed. Cir. 1991) (citations omitted).

A patent is invalid for obviousness “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103(a) (2006).<sup>1</sup>

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<sup>1</sup> Because the patents were filed before the effective date of the America Invents Act, the earlier, pre-Act

“Obviousness is a question of law based on underlying factual findings . . . .” *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012). The underlying factual inquiries include: (1) the scope and content of the prior art, (2) the differences between the prior art and the claims at issue, (3) the level of ordinary skill in the art, and (4) any relevant objective considerations, such as commercial success, long felt but unsolved needs, and the failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

By finding the claims nonobvious, the jury presumably found that the disputed prior art is not analogous and therefore not within the scope of the prior art. *See Jurgens*, 927 F.2d at 1557. Substantial evidence supports the jury’s presumed finding. To be considered within the prior art for purposes of the obviousness analysis, a reference must be analogous. *Wang Labs., Inc. v. Toshiba Corp.*, 993 F.2d 858, 864 (Fed. Cir. 1993). Whether a reference is analogous art is a question of fact. *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1237 (Fed. Cir. 2010). Prior art is analogous if it is from the same field of endeavor or if it is reasonably pertinent to the particular problem the inventor is trying to solve. *Id.*

The jury was instructed that “the field of the invention is circuit board testers and test fixtures used in the manufacture of electronics.” J.A. 1984. The disputed prior art—rock carvings, engraved signage, and Prussian Blue—is not part of the field of circuit board testers and test figures. Therefore, the disputed prior art can be analogous only if it is reasonably pertinent to the particular problem solved by the inventor. *Wyers*, 616 F.3d at 1237. Although “familiar items may have obvious uses

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version of § 103(a) applies. *See Leahy–Smith America Invents Act*, Pub. L. No. 112–29, 125 Stat. 284, 293 (2011).

beyond their primary purposes,” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 420 (2007), a reference is only reasonably pertinent when it “logically would have commended itself to an inventor’s attention in considering his problem,” *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). The jury heard testimony that a person of ordinary skill in the art would not have thought about rock carvings, engraved signage, or Prussian Blue in considering how to mark interface plates. J.A. 1387–88, 1397, 1430–32, 1434, 1443–44, 1447. The jury was entitled to weigh this testimony, find that an ordinarily skilled artisan would not find that the disputed prior art “logically would have commended itself to an inventor’s attention,” and thus find the disputed prior art not analogous. *See In re Clay*, 966 F.2d at 659.

Just because keying a car, for example, is within the common knowledge of humankind does not mean that keying a car is analogous art. An alleged infringer should not be able to transform all systems and methods within the common knowledge into analogous prior art simply by stating that anyone would have known of such a system or method. The question is not whether simple concepts such as rock carvings, engraved signage, or Prussian Blue dye are within the knowledge of lay people or even within the knowledge of a person of ordinary skill in the art. Rather, the question is whether an inventor would look to this particular art to solve the particular problem at hand. Here, Circuit Check put forward evidence that an inventor would not have considered the disputed prior art when trying to improve marking. It is not hard to arrive at that conclusion. Even though an inventor may be aware of rock carvings, it is not surprising that the inventor would not have looked to rock carvings to improve the process of painting small dots on interface plates for expensive circuit board testers. And, even though an inventor may work in an office with engraved signage, the inventor would not necessarily have considered using the

techniques disclosed in engraved signage to solve the problem of marking circuit board tester interface plates. Finally, even though an inventor in this case was aware of Prussian Blue, it is not surprising that one of skill in the art would not consider using a machining technique that employed removable dye on interface plates where such dye could fall into and interfere with the underlying electronics of the circuit board testers. Because the jury's presumed finding that the disputed references are not analogous is supported by substantial evidence, the only references within the scope of the prior art are the stipulated prior art.

Substantial evidence also supports the jury's presumed finding that the differences between the stipulated prior art and the claims were significant. The nature of the differences between the prior art and the claims is a question of fact. *Graham*, 383 U.S. at 17–18. Indeed, as QXQ acknowledges, the stipulated prior art fails to disclose an interface plate with the claimed “second removable indicia.” Appellee's Br. 29. A reasonable jury could have concluded that QXQ did not prove by clear and convincing evidence that the differences between the prior art and the claimed invention were insignificant. The stipulated prior art does not disclose what makes the patented claims unique: placing a second removable indicia on top of the interface plate and then selectively removing that layer to identify certain holes on the interface plate. Additionally, Circuit Check presented testimony that the stipulated prior art taught away from the invention. The jury heard testimony that manufacturer specifications contemplated minimizing the amount of paint on interface plates because paint had a tendency to chip off and fall into the tester, which caused serious problems. J.A. 1362, 1372. It also heard testimony that the specifications counselled against covering the entire interface plate with paint. J.A. 1372–73. Thus, substantial evidence supports the jury's presumed finding that



one of skill would not have been motivated to use more paint to cover the entire surface of the interface plate.<sup>2</sup>

Substantial evidence supports the jury's presumed findings that objective considerations existed to support nonobviousness. Whether objective considerations support a conclusion of nonobviousness is a question of fact. *Graham*, 383 U.S. at 17–18. Because the jury rendered a general verdict that the claims were not obvious, we must presume that they found in favor of Circuit Check on all relevant questions supported by substantial evidence. *See Jurgens*, 927 F.2d at 1557. Circuit Check presented evidence of copying, long-felt need, commercial success, skepticism, and unexpected results. With respect to copying, the jury heard testimony that QXQ developed its infringing plates after a customer saw Circuit Check products embodying the invention and asked QXQ to mark its interface plates by painting the surface and then selectively removing the paint. J.A. 1409–10, 1520–21. With respect to long-felt need, the jury heard testimony that the industry tried multiple prior art marking methods preceding Circuit Check's invention. J.A. 1359–62. With respect to commercial success, the jury heard testimony that once Circuit Check's customers received products embodying the patents, they refused to return to interface plates using the prior art marking methods.

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<sup>2</sup> Although the parties propose slightly different levels of ordinary skill in the art, they only dispute the level of skill to affect the scope and content of the prior art. *See* Appellant's Br. 43–44; Appellee's Br. 47–48. Under either level of ordinary skill, however, the jury's presumed finding about the content of the prior art is supported by substantial evidence. This record provides substantial evidence for the jury's presumed finding that rock carvings, engraved signage, and Prussian Blue dye were not analogous arts.

J.A. 1409. With respect to skepticism, the jury heard testimony that Circuit Check’s customers were worried about using the new interface plates because the claimed method increased the amount of paint on the interface plate and therefore increased the likelihood that paint would flake off and damage the testers. J.A. 1373, 1405. And with respect to unexpected results, the jury heard testimony that a skilled artisan would have been surprised that, because paint was likely to fall into the tester, increasing the amount of paint used would produce desirable interface plates. J.A. 1370–71, 1373, 1379–80. Having been presented with this testimony, the jury is entrusted to weigh evidence and credibility in making its findings. The jury’s presumed findings regarding objective considerations are therefore supported by substantial evidence.

Regarding the legal conclusion of obviousness, the jury’s presumed findings regarding the scope and content of the prior art, differences between the claimed invention and the stipulated prior art, and objective considerations of nonobviousness are supported by substantial evidence. Under these circumstances, a reasonable jury could have concluded that the subject matter as a whole would not have been obvious at the time of the invention. The court erred by granting judgment as a matter of law.

Finally, the court erred by invalidating dependent claims 5 and 11. Although the court acknowledged that QXQ presented no evidence that the additional limitations in those claims were present in the prior art and presented no evidence that the additional limitations were trivial, it concluded that these claims were obvious because Circuit Check, the patentee, did not explain why the additional limitations rendered the claims non-obvious. J.A. 22. The court erred in shifting the burden of production to disprove invalidity. “Each claim of a patent . . . shall be presumed valid independently of the validity of other claims; dependent or multiple dependent

claims shall be presumed valid even though dependent upon an invalid claim.” 35 U.S.C. § 282. Additionally, “[t]he burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.” *Id.* Although “in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle,” there must be evidence presented on the obviousness of the claim as a whole. *KSR*, 550 U.S. at 420. Even assuming that the claims from which these claims depend are invalid, it was improper for the court to invalidate the claims absent any evidence regarding the additional limitations of these claims.

Whatever doubts we have about these patents, the jury verdict was supported by substantial evidence. We therefore *reverse* the district court’s grant of judgment as a matter of law and *remand* for further proceedings consistent with this opinion.

### **REVERSED AND REMANDED**

#### **COSTS**

No Costs.