2021-2111

In The

United States Court Of Appeals

For The Federal Circuit

INNOVATION SCIENCES, LLC,

Plaintiff - Appellant

v.

AMAZON.COM, INC., AMAZON WEB SERVICES, INC.,

Defendants - Appellees

AMAZON DIGITAL SERVICES, INC., AMAZON DIGITAL SERVICES, LLC, AMAZON FULFILLMENT SERVICES, INC., AMAZON WEB SERVICES, LLC, HTC CORPORATION, RESIDEO TECHNOLOGIES, INC.,

Defendants.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS IN NOS. 4:18-CV-00474-ALM, 4:18-CV-00475-ALM, AND 4:18-CV-00476-ALM, JUDGE AMOS L. MAZZANT, III

PETITION OF APPELLANT INNOVATION SCIENCES, LLC FOR REHEARING OR REHEARING *EN BANC*

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UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

CERTIFICATE OF INTEREST

Case Number 2021-2111

Short Case Caption Innovation Sciences, LLC v. Amazon.com, Inc.

Filing Party/Entity Innovation Sciences, LLC

Instructions: Complete each section of the form. In answering items 2 and 3, be specific as to which represented entities the answers apply; lack of specificity may result in non-compliance. **Please enter only one item per box; attach additional pages as needed and check the relevant box**. Counsel must immediately file an amended Certificate of Interest if information changes. Fed. Cir. R. 47.4(b).

I certify the following information and any attached sheets are accurate and complete to the best of my knowledge.

Date: 08/19/2022

Signature: /s/ Donald L. Jackson

Name: Donald L. Jackson

1. Represented Entities. Fed. Cir. R. 47.4(a)(1).	**2. Real Party in Interest.** Fed. Cir. R. 47.4(a)(2).	**3. Parent Corporations and Stockholders.** Fed. Cir. R. 47.4(a)(3).
Provide the full names of all entities represented by undersigned counsel in this case.	Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities. ☑ None/Not Applicable	Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities. ☑ None/Not Applicable
Innovation Sciences, LLC		

☐ Additional pages attached

4. Legal Representatives. List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

☐ None/Not Applicable ☐ Additional pages attached

James D. Berquist, Gregory A. Krauss, Alan A. Wright	Walter D. Davis. Jr., Aldo Noto	DAVIDSON BERQUIST JACKSON & GOWDEY, LLP
Roger D. Sanders, J. Michael Young	Sanders, Motley, Young, and Gallardo, PLLC	
Lisa B. Blue	Baron & Blue	

5. Related Cases. Provide the case titles and numbers of any case known to be pending in this court or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. Do not include the originating case number(s) for this case. Fed. Cir. R. 47.4(a)(5). See also Fed. Cir. R. 47.5(b).

☑ None/Not Applicable ☐ Additional pages attached

6. Organizational Victims and Bankruptcy Cases. Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

☑ None/Not Applicable ☐ Additional pages attached

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I. STATEMENT OF COUNSEL PURSUANT TO FEDERAL CIRCUIT RULE 35(B)

Based on my professional judgment, I believe the panel decision is contrary to the following decisions of the Supreme Court of the United States and the precedent of this Court:

1. *The Barbed Wire Patent*, 143 U.S. 275, 288-89 (1892), finding uncorroborated testimony of alleged prior art insufficient evidence upon which to invalidate a patent by anticipation.

2. *Juicy Whip, Inc. v. Orange Bang, Inc*., 292 F.3d 728, 740-743 (Fed. Cir. 2002), canvassing precedent and reversing jury's finding of anticipation given lack of clear and convincing evidence of prior public use of every element of the claimed invention and rejecting the use of non-anticipatory documents as an evidentiary aid of what prior art device could have looked like; and

Based on my professional judgment, I also believe this appeal requires an answer to one of more precedent-setting questions of exceptional importance:

1. Whether it is proper to treat a system built in 2019 for purposes of the litigation that included certain prior art components (*i.e*., the 2019 HAL System) as an anticipatory reference in the absence of proof that 2019 system actually existed prior to the 2006 critical date; and

2. Whether the suggestion that a prior art system *could have* existed before the critical date can meet the clear and convincing evidence standard required to prove invalidity.

II. ARGUMENT

The panel's decision in this case presents one centrally important question: Can an accused defendant use the patent claims asserted against it to assemble a "prior art" system more than a decade after the critical date where there is no evidence that anyone had assembled such as system prior to the critical date? Under existing precedent, the answer should be a resounding no. Not only does the approach approved by the panel violate long-standing precedent, it establishes a slippery slope that could wreak wholesale destruction of the patent system. Speculation that the purportedly anticipatory system could have been created before the priority date should never substitute for clear and convincing evidence of invalidity. The danger created by such a hindsight creation becomes even more acute where, as here, the component parts used to create the allegedly anticipatory reference may not have existed prior to the critical date.

A. The "HAL System" Presented At Trial As An Anticipatory Reference Is Not The Same As The Prior Art HAL2000 Software

The jury found that all thirteen of the asserted claims invalid. At trial, Amazon.com, Inc., and Amazon Web Services, Inc. ("Amazon" or "Appellee") argued that the asserted claims were invalid on the grounds that (i) Innovation Sciences, LLC ("Innovation" or "Appellant") could not prove entitlement to the

claimed August 2006 priority date[1] and, alternatively, (ii) Innovation's patent claims were invalid as anticipated by what Appellee's loosely labelled the "HAL System." The district court denied Appellant's Rule 50(b) motion on the mistaken legal grounds that a patent can be invalid under Section 112 if the patentee cannot prove its priority claim even in the absence of intervening prior art. Appx0029-0030. The panel decision side-stepped that error by upholding the invalidity finding on an alternate ground, finding that the claimed inventions were anticipated based on the admitted existence of the prior art HAL2000 software. Panel Opinion at 8. That determination misapprehends both the facts and the established precedent of this Court and the Supreme Court.

The following undisputed facts should clarify the error and demonstrate the need for reconsideration.

1. The HAL2000 product was a software product. That software, but only that software, is prior art.

2. The HAL2000 software included none of the hardware components recited in the asserted patent claims or the software modifications needed to support the hardware added.

3. Appellee never asserted that the HAL2000 software anticipated any of the claimed inventions and no witness testified that it did.

[1] Appellant claimed an August 2006 priority date based on a patent application filed on that date, with backup claims of January 2007 and May 2007 when continuations-in-part were filed. All three asserted patents stem from a common direct continuation application filed on March 15, 2013.

4. Appellee instead based its invalidity proofs at trial on a non-anticipatory system first assembled in 2019 (*i.e.*, the "2019 HAL System").

5. The 2019 HAL System was created by combining the HAL2000 software and the HALpro software, and adding the physical components needed to anticipate the asserted claims.

6. The inclusion of the additional components required modification of the HAL2000 software for the 2019 HAL System to operate. Appx2140, Appx2185-2186.

7. Appellee's testifying expert conceded that the 2019 HAL System was created using the asserted patent claims as the roadmap to the development. Appx2263-2264 ("Q. Mr. Shriver didn't use the claims to select those components, did he, Dr. Johnson? A. I assume so. Q. I'm sorry. You assume so? A. I believe he did, yes. …").

8. Commenting on the 2019 HAL System constructed, the developer of the HAL2000 software admitted that he had never seen a customer having a system like the 2019 HAL System. Appx1968 ("Q. … you don't know if any customer has ever been shipped a system that looks like this system? A. We don't – in that timeframe we weren't selling turnkey systems, so we wouldn't sell a turnkey system. We would sell the software and a customer would configure it.").

9. No witness testified that the 2019 HAL System, created to support Appellee's invalidity defense in this case, existed prior to 2019.

10. The 2019 HAL System was the only prior art relied upon at trial.[2]

The district court erred by overruling Appellant's objection to the admission of evidence relating to the non-anticipatory 2019 HAL System. The

[2] Amazon did present a second reference – a Zigbee communication protocol – in support of its validity challenge to claim 39 of the '983 patent and claim 6 of the '798 patent because those two claims recite a Zigbee wireless communication link. Amazon relied upon the 2019 HAL System exclusively for all other claims.

panel erred further by not finding that testimony of what "could have" existed in the prior art fails to meet the clear and convincing standard as a matter of law and by finding that the mere existence of the unmodified HAL 2000 *software* justified reliance on the so-called HAL *System* as an anticipatory reference.

Had Amazon asserted that the HAL2000 software, by itself, anticipated the asserted claims, there would have been no need to create the 2019 HAL System. But that was not the evidence presented at trial – Amazon presented the non-anticipatory 2019 HAL System as its proof of invalidity and relied upon the HAL2000 software to support the suggestion that system constructed in 2019 could have been constructed at an earlier date. That is both a logical and legal error.

B. The 2019 HAL System Presented To The Jury Is Not Prior Art And Cannot Support The Jury's Invalidity Finding

Amazon's prior art-based invalidity arguments fail factually and as a matter of law.[3] Amazon relied upon the so-called 2019 HAL System as invalidating prior art. The HAL System upon which Defendants-Appellees rely was created *in 2019* at the instruction of Amazon's lawyers using Plaintiff-Appellant's patent claims as the construction blueprint. Appx1964-1966, Appx1970, Appx2173-2175, Appx2263-2264. Given the timing of its creation, the 2019 HAL System cannot

[3] The district court denied Innovation's Rule 50(b) motion as to the question of validity to the Section 112 argument and did not address the questions of anticipation or obviousness over the 2019 HAL System.

qualify as prior art as of August 2006 or February 2007 (the earliest priority dates claimed by Plaintiff-Appellant), March 15, 2013 (the filing date of the application common to all three patents-in-suit), or as late as 2016 and 2017 (the filing dates of the applications giving rise to the patents in suit).

The 2019 HAL System demonstrated at trial, and the centerpiece of Amazon's invalidity argument, went far beyond simply loading the prior art HAL2000 software on a computer. Rather, Amazon's team was required to locate, assemble, and install several additional components. Appx1963-1967 (lamp modules, various interface modules, cables, speakers, microphones, video cameras), Appx1970 (Jasco incandescent night lights). Amazon's testifying expert explained that it was also necessary to modify the prior art HAL2000 software by including the HALpro software and by editing how the 2019 HAL System was configured to become capable of detecting motion based on input from a video camera (the camera being one of the hardware components added to track the asserted patent claims) and by adding an IP address to control how messages would be routed in the 2019 HAL System. Appx2140, Appx2185-2186, Appx1971. These are undisputed facts. Amazon's testifying expert (Dr. Johnson) relied upon these additions and modifications to assert that the HAL System created in 2019, not the HAL2000 software, anticipated the limitations of Innovation's asserted patent claims. Appx2135.

Critically, no witness ever testified that they had actually seen anything that looked like the 2019 HAL System prior to 2019. Indeed, the creator of the HAL2000 software, Mr. Shriver, testified in deposition (he did not testify at trial) that he personally never saw a system set up like the one Amazon's team created in 2019. Specifically, commenting on the 2019 HAL System, Mr. Shriver testified that:

> Q. So, you wouldn't know whether a customer would have set up a system like [the 2019 HAL System] on August 9th of 2006.
>
> A. No.

Appx1969-1970. Amazon's testifying expert (Johnson) likewise testified that he had no knowledge of anyone having created the 2019 HAL System before the critical date. Appx2204.

Under controlling precedent, none of the testimony relating to the 2019 HAL System should have been presented to the jury. *The Barbed Wire Patent*, 143 U.S. 275, 288-89 (1892); *see also Juicy Whip, Inc. v. Orange Bang, Inc.*, 292 F.3d 728, 739 (Fed. Cir. 2002). Not only was it improper for the district court to have admitted much of the evidence upon which Amazon relied – specifically the testimony of what prior art *might* have looked like if the 2019 HAL System had

been built before the critical date – that evidence is plainly insufficient to anticipate the asserted patent claims.[4]

Amazon's invalidity evidence is far less than that relied upon in either *Barbed Wire* or *Juicy Whip*. The accused infringers in those two cases presented testimony that they had seen, made and/or used the anticipatory reference years before the critical date. In *Barbed Wire*, more than 10 witnesses testified about the existence of the prior art. The problem in both cases was that testimonial evidence alone was found inadequate as a matter of law – contemporary documentation supporting that testimony was required. These two decisions in no way represent outliers. To the contrary, this Court has repeatedly reached the same conclusion. *See, e.g., Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1577 (Fed. Cir. 1996); *Woodland Trust v. Flowertree Nursery*, 148 F.3d 1368, 1369-70 (Fed. Cir. 1998); *Finnigan Corp. v. International Trade Commission*, 180 F.3d 1354, 1367-69 (Fed. Cir. 1999).

Here, no witness testified that they ever saw the system Amazon presented at trial at any time prior to 2019. In 2019, Mr. Shriver was given a list of parts and paid to assemble the 2019 HAL System. Appx1964-1968. The best Amazon could present was the conjecture that such a system was possible. Amazon's

[4] The district court overruled Innovation's repeated objections to the presentation of evidence relating to the non-anticipatory 2019 HAL System. *See, e.g.*, Appx0067-0071, Appx0685-0690, Appx1999.

"proof" consisted of the deposition testimony of Mr. Shriver that the network Amazon's team created – the 2019 HAL System – "could have and would have" operated the same way in 2006 as it did in 2019. Appx1952, Appx1957, Appx1961. But this is not proof that such a system *existed* prior to 2019. Indeed, the 2019 HAL System was created because there was no testimony or documentary evidence that such a system had been assembled in the relevant timeframe.

The *Juicy Whip* decision is instructive here for an additional reason. Like the district court here, the *Juicy Whip* district court permitted the accused defendant to present a non-anticipatory visual aid to the jury. That visual aid, created as part of the defense's case (like the 2019 HAL System), was found no more reliable than any of the oral testimony presented. *Juicy Whip*, 292 F.3d at 743, n.2. An after-the-fact sketch or model is not evidence that the device shown is properly treated as prior art. Just as here, the *Juicy Whip* defendant created a non-anticipatory working model to demonstrate what the prior art allegedly looked like (using the asserted patent claims as the roadmap). But even with a witness who testified that he had seen the working model demonstrated at trial prior to the critical date, the *Juicy Court* found the proofs there insufficient. The 2019 HAL System should have been treated the same (or worse given the absence of testimony that anyone had ever seen the 2019 HAL System before the critical date).

Unable to establish that the 2019 HAL System had been assembled prior to 2019, Amazon resorted to additional smoke and mirrors, introducing (i) the HAL2000 *software* on a disc and (ii) unauthenticated videos purporting to demonstrate the operation of the HAL2000 software. But no witness even attempted to explain how the software on that disc anticipated the elements of any of the asserted patent claims. The existence of the HAL2000 software, however, was never an issue. As noted above, that software by itself did not anticipate the claimed inventions. That is why Amazon's team built the 2019 HAL System in the first place.

Similarly, no witness was able to authenticate the three videos presented or to identify what was depicted in the three videos, D174, D329, and D330. The district court nevertheless allowed Amazon to run those videos for the jury because Amazon's expert purported to have considered them. Appx1999. The district court allowed those inadmissible videos as demonstratives. Not only were those unauthenticated videos *not* demonstrative of witness testimony or other admissible evidence, they were plainly insufficient. Given the nascent stage of wireless smart home technology at the time, the system depicted in those videos could well have been hardwired, with no wireless communication link whatsoever. Wireless communication links, however, are central elements of all thirteen of the asserted patent claims. The HAL2000 software supported hardwired connections and there

is absolutely no reason to believe that the system depicted in those videos utilized wireless links. Nor was it reasonable to conclude that the demonstrative videos depicted the system Amazon's team first assembled in 2019.

The speculation and inferences Amazon relied upon do not meet the high evidentiary burden to prove invalidity. It was Amazon's burden to show that the 2019 HAL System was prior art. *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1065 (Fed. Cir. 1998) ("burden is on an accused infringer to show by clear and convincing evidence facts supporting the conclusion that the patent is invalid"); *Equistar Chems., LP v. Westlake Chem. Corp.*, 2016 WL 4410049 at *2 (E.D. Tex. Feb. 26, 2016). No one testified that the 2019 HAL System existed prior to 2019 and no documentary evidence of that assertion has been presented. The inability of Mr. Shriver and Dr. Johnson to verify that the HAL System assembled and tested in 2019 was in fact sold or used before August 2006 should have been fatal to Amazon's validity challenge as a matter of law. Amazon failed to present any evidence – much less clear and convincing evidence – that the HAL System actually existed prior to the August 2006 stipulated priority date or even the 2016 and 2017 actual filing dates.

C. The Panel Misapprehended the Record and Deviated From Controlling Precedent

With all due respect to the panel, even if the HAL2000 *software* was prior art, that does not serve as proof that the 2019 HAL *System* was available as an

anticipatory reference. As demonstrated above, the two are not the same and should not have been treated as such. It is well established that most inventions are new combinations of old elements. *See Environmental Designs, Ltd. v. Union Oil Co. of California*, 713 F.2d 693, 698 (Fed. Cir. 1983) ("Virtually all inventions are combinations and virtually all are combinations of old elements."). The fact that the various components ultimately used to create the 2019 HAL System in 2019 may have been available years earlier does not serve as proof that that the patented combination was in fact made before the critical date (with the requisite modifications).[5]

Amazon convoluted the record below to create the very confusion exhibited by the panel. The creation of the 2019 HAL System had several critical components, only one of which is believed to qualify as prior art. Though the record is devoid of evidence as to when the HAL2000 software was first commercialized (it was not named for the year 2000 anymore than the HAL3000 software was named for the year of its creation), Innovation did not dispute that the HAL2000 software was available before August 10, 2006.

[5] The manner in which Amazon's team created the 2019 HAL System forecloses any argument that the modifications and addition to the HAL2000 software was obvious. Not only did Amazon not present that argument to the jury, Amazon's expert candidly conceded that Innovation's patent claims served as the roadmap to creating the 2019 HAL system. Appx2263-2264.

Critically, however, the evidence presented by Amazon (and relied upon by the panel) does not establish that the components Amazon's team collected to create the 2019 HAL System were available as prior art. The 2019 HAL System demonstrated to the jury combined the HAL2000 software (v. 3.6.9) and the HALpro (v. 3.6.1) software. Appx1971 (relied upon by the panel decision). In the testimony the panel relied upon, Mr. Shriver was asked *only* how he knew the HAL2000 software was available prior to the critical date. *Id.* Mr. Shriver was never asked about the availability of the HALpro software. *Id.*

Mr. Shriver elsewhere testified that the HALpro software was developed as an upgrade to the HAL2000 – again failing to identify when the HALpro software was developed. Appx1946-1947 (also cited by panel). Mr. Shriver did note, however, that the HAL2000 already "did lighting, thermostat, security, infrared" but that "[v]ideo was a necessary cog in those wheels" for his company to be considered a true automation company. *Id.* One of the brochures Amazon cited as support (Defendant Exh. 615) (2003), also relied upon in the panel decision, makes the same point – HAL2000 included the ability to control many devices within the home, but not video. Appx3743 (emphasis added). That omission is critical. The record is devoid of any evidence as to when the HALpro, and the ability to communicate wirelessly with a video camera was introduced. The HALpro software, however, was a critical part of the system built in 2019 which Amazon confusingly referred to as the HAL2000 system. Appx1966 (cited by panel); *see*

also Appx2009 (Johnson testimony that the system Amazon's team put together in 2019 was the HAL2000) (also cited by panel). The 2019 HAL System and the HAL2000 software are entirely different products and should not have been referred to as HAL.

Mr. Shriver's company was not selling anything other than his HAL2000 software and "UPB modules and X10" in 2006. Appx1969 (cited by panel). Those products, packaged together, as illustrated by a photograph included in Defendant's Exh. 173. Appx3740 (cited by panel).

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The UPB modules and X10 components are hardwired to the home's existing wiring and carry commands over that wiring. Indeed, the HAL brochure in question, Defendant's Exh. 173, promotes the fact that:

> HAL2000 uses X-10 technology to control your electrical and electronic devices – *through you homes electrical wiring!*

Appx3739 (cited by panel) (emphasis added). That same brochure also emphasizes the limited use of the HAL2000 software at that time (check phone messages, control lights, control temperature and select channels on DirectTV). *Id*. The 2003-era literature lacks reference to truly wireless video cameras.

Nor was there any evidence as to when the video camera Amazon's team used to create the 2019 HAL System was available. Mr. Shriver testified that his company did not sell video cameras. Appx1969. Mr. Shriver testified only as to his belief that such cameras were commercially available prior to August 10, 2006, but even that belief lacks support. Appx1961. Mr. Shriver candidly admitted that he never saw the combination of components assembled to create the 2019 HAL System prior to 2019. He testified only that he believed that such a combination could have been made by a customer, and if that customer had assembled that system, it "could have and would have operated" like the system assembled in 2019. Appx1957 (cited by panel).

Amazon's entire invalidity argument was built of a house of cards. The inclusion of a video camera in wireless communication with the HAL2000 was a central part of Amazon's invalidity case. *See, e.g*., Appx2128-2158 (cited by the panel). Amazon's entire argument is predicated on the misleading assertion that the system assembled at counsel's direction in 2019 was the same as the HAL2000

software. But even the evidence cited by Amazon, and relied upon by the panel, requires the assumption that at least the HAL2000, the HALpro and a compatible wireless video camera were available as prior art and that those components had in fact been assembled and operated together prior to August 10, 2006.

Amazon's assertions are built on inference not fact. Like the jury, the panel mistakenly accepted Amazon's false assertion that any system using the HAL2000 software is the "home automation software called HAL." Panel Decision 6. As noted above, however, in addition to the other modifications made to create the 2019 HAL System, Amazon's expert relied upon a combination of software (some version of the HAL2000 software coupled with a later developed HALpro software) combined with a wireless video camera. No witness testified that such a combination was ever made and Innovation's objections at trial and on appeal remain the same – the system created by Amazon's team in 2019 is not prior art and there was no evidence otherwise.

For corroboration of what it referred to as "HAL," the panel relied upon the 2003 brochure discussed above, Appx3743, and the demonstrative videos shown to the jury over Innovation's objections. Not only is it improper to rely upon demonstrative evidence of substantive proof, it is unknown what system configuration was used in the 2000-era clip of the Oprah Winfrey show or in the other two "demonstrative" videos. At best the demonstrative videos show the use

of the HAL2000 software that existed at that time in combination with a system that did not include a video camera of any type and a control system that was hard-wired and utilized the home's existing wiring. Appx3739. It was for this reason that Innovation objected to the introduction of these videos at trial. The fear was that the jury would confuse the system shown in those videos with the video of the system first constructed in 2019.

The panel's reliance on Innovation's argument for excluding those videos demonstrates that it was not just the jury who was confused by Amazon. Panel Decision at 6 (citing Appx1924). Innovation had urged the district court to exclude those videos because the jury could be confused into mistakenly believing that the videos documented existence of the 2019 HAL System at an earlier point in time. But there was no evidence about how the systems in the videos were constructed, and thus, there was no basis for Amazon to imply that the videos evidenced the existence of the 2019 HAL System before August 2006. Contrary to the panel's use, Innovation's objection to the use of these videos at trial cannot support the conclusion that the videos in question demonstrate the existence of the 2019 HAL System at an earlier point in time. Read in context, Innovation's point was the exact opposite.

III. CONCLUSION

Amazon has successfully employed smoke and mirrors to confuse Judge Mazzant, then the jury and most recently a panel of this Court. The anticipatory Section 102 reference was an illusion from the very beginning and continues to this day. There was no evidence that the HAL2000 software was ever modified so as to support the hardware components required by Innovation's patent claims until 2019 – years too late by any measure. Evidence as to what prior art could have existed is plainly insufficient and creates an open invitation to ignore the statutory scheme on which patent validity rests and the long history of the efforts of this Court and the Supreme Court to protect that statutory scheme.

August 19, 2022

Respectfully submitted,

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Counsel for Appellant Innovation Sciences LLC

NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

INNOVATION SCIENCES, LLC,
Plaintiff-Appellant

v.

AMAZON.COM, INC., AMAZON WEB SERVICES, INC.,
Defendants-Appellees

AMAZON DIGITAL SERVICES, INC., AMAZON DIGITAL SERVICES, LLC, AMAZON FULFILLMENT SERVICES, INC., AMAZON WEB SERVICES, LLC, HTC CORPORATION, RESIDEO TECHNOLOGIES, INC.,
Defendants

2021-2111

Appeal from the United States District Court for the Eastern District of Texas in Nos. 4:18-cv-00474-ALM, 4:18-cv-00475-ALM, 4:18-cv-00476-ALM, Judge Amos L. Mazzant, III.

Decided: July 20, 2022

DONALD LEE JACKSON, Davidson Berquist Jackson & Gowdey, LLP, McLean, VA, argued for plaintiff-appellant. Also represented by JAMES DANIEL BERQUIST.

J. DAVID HADDEN, Fenwick & West, LLP, Mountain View, CA, argued for defendants-appellees. Also represented by RAVI RAGAVENDRA RANGANATH, SAINA S. SHAMILOV; TODD RICHARD GREGORIAN, San Francisco, CA.

Before MOORE, *Chief Judge*, PROST and HUGHES, *Circuit Judges*.

MOORE, *Chief Judge*.

Innovation Sciences (IS) appeals two orders from the United States District Court for the Eastern District of Texas. The first order denied IS' post-trial motion for judgment as a matter of law or, alternatively, a new trial. The second order granted-in-part and denied-in-part Amazon's motion for costs. For the reasons that follow, we affirm the first order and affirm-in-part and reverse-in-part the second order.

BACKGROUND

IS owns U.S. Patent Nos. 9,912,983, 9,729,918, and 9,942,798, which all claim priority to U.S. Patent Application No. 11/501,747 and share a common written description. The patents generally relate to "[m]ethods and apparatus for efficiently directing communications" in a communication network. '983 patent at Abstract.

In one embodiment, the network includes a mobile terminal signal conversion module (MTSCM) configured to wirelessly receive a multimedia signal from a mobile terminal (e.g., a cell phone), convert it to a format or signal power level appropriate for an external display terminal, and provide the converted signal to the external display terminal. *Id.* at 15:52–17:18. The MTSCM may include a

decoder for decompressing multimedia signals that are in a compressed format (e.g., MPEG–4). *Id.* at 18:56–67.

In another embodiment, the network includes a task management system for delivering alerts when a task requires completion. *Id.* at 12:33–13:23. The task management system comprises, for example, a diaper condition sensing module and a central receiver. *Id.* The diaper condition sensing module monitors the condition of a diaper and wirelessly transmits a signal to the central receiver when the diaper is wet. *Id.* The central receiver then transmits an indication of the diaper's status to, e.g., a caregiver's phone. *Id.*

Claim 22 of the '983 patent is representative for this appeal and combines the above embodiments. It recites:

> 22. A wireless HUB system for managing information communications comprising:
>
> an input interface configured to receive a wireless signal through a wireless communication network;
>
> a decoder; and
>
> a network interface configured to provide a communication through a network communication channel,
>
> wherein the wireless HUB system is configured to perform a conversion of the wireless signal to accommodate production of a corresponding information content, the wireless signal comprising a compressed signal, the conversion comprising decompressing the compressed signal;
>
> wherein the decoder is configured to decompress the compressed signal;

> wherein the wireless HUB system is further configured to communicate, through the network communication channel, information for managing an item status of an item in connection with a short range wireless communication regarding an updated status of the item; and
>
> wherein the network communication channel is separate from a wireless channel for the short range wireless communication.

IS sued Amazon in the Eastern District of Texas, accusing Amazon's Echo, Fire Tablet, Fire TV, and Alexa Voice Service of directly infringing various claims of the '983, '918, and '798 patents. At trial, Amazon presented multiple independent grounds for finding the asserted claims invalid and not infringed. A jury returned general verdicts of invalidity and noninfringement. IS moved for (1) judgment as a matter of law (JMOL) that the claims are not invalid and that Amazon infringes them or (2) a new trial. Amazon moved for costs under 28 U.S.C. § 1920(4). The district court denied IS' motion and granted Amazon's motion in part. *Innovation Scis., LLC v. Amazon.com, Inc.*, No. 4:18-cv-00474-ALM, 2021 WL 2075677 (E.D. Tex. May 24, 2021); *Innovation Scis., LLC v. Amazon.com, Inc.*, No. 4:18-cv-00474-ALM, 2021 WL 2075676 (E.D. Tex. May 24, 2021) (*Costs Order*). IS appeals both orders. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

I

We first address IS' challenge to the district court's denial of JMOL. We review a district court's denial of JMOL under the law of the regional circuit. *Apple Inc. v. Wi-LAN Inc.*, 25 F.4th 960, 969 (Fed. Cir. 2022) (citing *Godo Kaisha IP Bridge 1 v. TCL Commc'n Tech. Holdings Ltd.*, 967 F.3d 1380, 1382 (Fed. Cir. 2020)). The Fifth Circuit reviews the

denial of JMOL de novo, applying the same standard as the district court. *Baisden v. I'm Ready Prods., Inc.*, 693 F.3d 491, 498 (5th Cir. 2012) (citing *Flowers v. S. Reg'l Physician Servs. Inc.*, 247 F.3d 229, 235 (5th Cir. 2001)). In general, a district court grants JMOL if substantial evidence does not support a fact finding that is necessary, as a matter of law, to establish a claim or defense. Fed. R. Civ. P. 50(a)(1).

When a jury returns a general verdict for which there are multiple independent factual bases, however, a lack of substantial evidence for some of those bases does not warrant JMOL. *Walther v. Lone Star Gas Co.*, 952 F.2d 119, 126 (5th Cir. 1992) ("[W]e will not reverse a verdict simply because the jury might have decided on a ground that was supported by insufficient evidence."); *Northpoint Tech., Ltd. v. MDS Am., Inc.*, 413 F.3d 1301, 1311 (Fed. Cir. 2005) ("[E]ven if some of the proposed factual grounds for liability are not legally sufficient to support a verdict, that is not fatal, because the critical question is whether the evidence, taken as a whole, was sufficient to support the jury's verdict." (collecting cases)). Rather, we must uphold the verdict if substantial evidence supports *any* of the proffered factual bases.

Here, Amazon presented multiple factual bases for the jury's general verdict of invalidity, including anticipation under 35 U.S.C. § 102. *Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1068 (Fed. Cir. 2017) ("[A]nticipation is a question of fact . . . ." (collecting cases)). Accordingly, although IS raises a panoply of issues, it concedes that we may affirm the denial of JMOL of no invalidity if substantial evidence supports a finding of anticipation. Oral Arg. at 9:48–10:09.[1] We conclude that it does.

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[1] *Available at* https://oralarguments.cafc.uscourts.gov/default.aspx?fl=21-2111_07052022.mp3.

To prove anticipation, Amazon relied on home automation software called HAL. HAL's creator, Tim Shriver, testified that the software was configured to operate a smart-home system comprising various devices, such as wireless cameras, thermostats, and light bulbs. J.A. 1940–49, 1961. He also testified that HAL existed before August 10, 2006, J.A. 1970–72, which the parties stipulated is the priority date of the asserted claims, J.A. 2810 ¶ 18. Corroborating Mr. Shriver's testimony, Amazon presented documentary and video evidence of HAL's existence and capabilities before the priority date, including a 2003 user manual, J.A. 3743, and a 2000 clip of The Oprah Winfrey Show in which Mr. Shriver demonstrated a HAL system, J.A. 1924, 2009–10; *see also* J.A. 3733–42, 4138, 2127–28.

IS does not dispute that HAL is prior art. Instead, it argues that Amazon's expert witness, Dr. David Johnson, improperly based his invalidity opinion on a reconstructed HAL system that is not prior art. As explained below, substantial evidence supports a finding that the HAL system on which Dr. Johnson based his opinion was representative of prior-art HAL systems. Accordingly, Dr. Johnson properly relied on the reconstructed HAL system to determine how prior-art HAL systems operated.

In response to a subpoena requesting a HAL system "as it would have existed on or before August 9, 2006," Mr. Shriver provided a system comprising the HAL software and various pieces of hardware, including a wireless camera and lamp modules. J.A. 1963–67. IS seizes on Mr. Shriver's testimony that each customer's system was "unique," J.A. 1967–68, and that he did not know whether a customer "would have set up a system like this on August 9th of 2006," J.A. 1969–70. Yet he also testified that, except for some light bulbs, all the system's components predated the priority date, J.A. 1965–66, 1970, that his customers' systems had the same components, J.A. 1967–68, and that the system operated the way prior-art HAL systems did, *see, e.g.*, J.A. 1952 (testifying that an

operation of the reconstructed system "would have been performed by HAL2000 prior to August 10, 2006"), J.A. 1957 (testifying that the reconstructed system operated as a system "would have operated prior to August 10, 2006"), J.A. 1958 (testifying that a configuration of the reconstructed system "was used by users of HAL2000 prior to August 10, 2006"). IS does not identify any element of the reconstructed HAL system that was allegedly absent from prior-art HAL systems.

IS further cites Mr. Shriver's testimony that he sold only software, not "turnkey systems." J.A. 1968. He later clarified, however, that he did indeed sell the HAL software along with certain smart-home hardware. J.A. 1969. He also testified that customers would complete the system by "buy[ing] a computer and install[ing]" the software. *Id.* Finally, IS contends that Dr. Johnson admitted he altered Mr. Shriver's system, but the cited testimony merely discusses modifying "simple configuration settings," e.g., adding his email address, so he would receive the system's email notifications. J.A. 2185–86. Considering the evidence as a whole, a reasonable juror could find that the system Mr. Shriver provided was representative of prior-art HAL systems.[2]

IS raises a laundry list of cursory challenges to the sufficiency of Dr. Johnson's expert testimony. IS Br. 19–30. For example, IS argues it was improper for Dr. Johnson to rely on the videos showing HAL's existence and capabilities before the priority date. *Id.* at 28. IS fails, however, to provide any reasoning or relevant authority supporting

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[2] We reject IS' argument that the district court abused its discretion in not excluding Mr. Shriver's testimony, Dr. Johnson's invalidity opinion, and the videos demonstrating HAL. Mr. Shriver had personal knowledge of HAL's existence and operation before the priority date, and Amazon presented corroborating evidence.

that conclusion. IS also argues Dr. Johnson did not identify anything in the HAL system that satisfies the "information for managing an item status" limitation. Yet his testimony included the following:

> Q. So, can you explain what you're illustrating here with respect to that X10 camera and the HAL system?
>
> A. Sure. The camera detects the motion, and then the computer running HAL2000 communicates through the network communication channel *information for managing that item status*. The . . . updated status is the presence of motion where there was no motion. And the HAL2000 system sends [an] e-mail. . . . [T]he subject line is HAL notification, and the body of the e-mail says: Motion detected on backyard wireless X10 camera.

J.A. 2135 (emphasis added). Dr. Johnson testified at length that HAL satisfies each limitation of the asserted claims. J.A. 2128–58. IS' scattershot arguments do not establish inadequacy in Dr. Johnson's testimony.

In sum, substantial evidence supports the jury's finding of anticipation. We therefore affirm the denial of JMOL and need not reach Amazon's alternative factual bases for the general verdicts of invalidity and noninfringement.

II

We now turn to IS' request for a new trial. We review the district court's denial of a new trial under regional circuit law. *Apple*, 25 F.4th at 971 (citing *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1309 (Fed. Cir. 2009)). The Fifth Circuit reviews such a denial for abuse of discretion. *Baisden*, 693 F.3d at 504 (citing *Alaniz v. Zamora–Quezada*, 591 F.3d 761, 770 (5th Cir. 2009)).

In seeking a new trial, IS largely relies on the same slew of arguments it raised regarding the denial of JMOL.

See IS Br. 52. We reject those arguments for the reasons already explained. The only separate argument IS advances is that Amazon's counsel made improper remarks to the jury regarding one of its other invalidity defenses. *Id.* at 52–55. IS forfeited this argument, however, by failing to object at trial. *Novo Nordisk A/S v. Becton Dickinson & Co.*, 304 F.3d 1216, 1220 (Fed. Cir. 2002) ("[C]ounsel . . . cannot as a rule remain silent, interpose no objections, and after a verdict has been returned seize for the first time on the point that the comments to the jury were prejudicial." (quoting *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 238–39 (1940))). To be sure, forfeiture does not preclude us "from taking remedial action when it is apparent that prejudice or unfairness entered the trial and the interest of justice requires." *Id.* But IS has not provided argument as to the interest of justice. Moreover, there is no prejudice given IS' concession that Amazon's other invalidity defenses would be moot if we conclude, as we have, that substantial evidence supported the jury's anticipation finding. Oral Arg. at 9:48–10:09. Accordingly, we affirm the denial of a new trial.

III

IS challenges the district court's award of graphics and printing costs. We review an award of costs under the law of the regional circuit. *Kohus v. Toys 'R' Us, Inc.*, 282 F.3d 1355, 1357 (Fed. Cir. 2002). The Fifth Circuit reviews an award of costs for abuse of discretion. *Edwards v. 4JLJ, LLC*, 976 F.3d 463, 466 (5th Cir. 2020) (citing *Pacheco v. Mineta*, 448 F.3d 783, 793 (5th Cir. 2006)).

We agree that the district court abused its discretion in awarding Amazon $126,399.19 in graphics costs. The district court relied on 28 U.S.C. § 1920(4), which allows the award of "[f]ees for exemplification and the costs of making copies of any materials where the copies are necessarily obtained for use in the case." The district court interpreted this language to "include[] graphics support." *Costs Order*,

2021 WL 2075676, at *4. That was error. Graphics do not meet the definition of exemplification, i.e., "[a]n official transcript of a public record, authenticated as a true copy for use as evidence." *Summit Tech., Inc. v. Nidek Co.*, 435 F.3d 1371, 1375 (Fed. Cir. 2006) (quoting *Kohus*, 282 F.3d at 1359); *see also id.* at 1376 (noting Fifth Circuit follows this definition). And, as Amazon concedes, "creating graphics is not copying." Oral Arg. at 26:53–56. Because the district court erred in its construction of § 1920(4), we reverse its award of $126,399.19 in graphics costs.

The district court did not, however, abuse its discretion in awarding Amazon $25,698.85 for printing two sets of trial exhibits. *Costs Order*, 2021 WL 2075676, at *3. IS argues Amazon's exhibit list was unreasonably long and improperly included expert reports, which it asserts are inadmissible. IS' own exhibit list, however, also included expert reports and had over 600 exhibits, only 79 of which were admitted into evidence. J.A. 3248–98; IS' Admitted Trial Exhibit List, *Innovation Scis., LLC v. Amazon.com, Inc.*, No. 4:18-cv-00474-ALM (E.D. Tex. Sept. 2, 2020), ECF No. 888. The district court did not abuse its discretion in awarding Amazon its printing costs.

CONCLUSION

Because substantial evidence supports the jury's finding that the asserted claims were anticipated, we affirm the district court's denial of JMOL. For similar reasons, we also affirm its denial of IS' motion for a new trial. And we affirm its award of Amazon's printing costs. We reverse, however, the district court's award of $126,399.19 in graphics costs as outside the scope of 28 U.S.C. § 1920(4).

AFFIRMED-IN-PART AND REVERSED-IN-PART

COSTS

No Costs.

United States Court of Appeals for the Federal Circuit

INNOVATION SCIENCES, LLC,
Plaintiff-Appellant

v.

AMAZON.COM, INC., AMAZON WEB SERVICES, INC.,
Defendants-Appellees

AMAZON DIGITAL SERVICES, INC., AMAZON DIGITAL SERVICES, LLC, AMAZON FULFILLMENT SERVICES, INC., AMAZON WEB SERVICES, LLC, HTC CORPORATION, RESIDEO TECHNOLOGIES, INC.,
Defendants

2021-2111

Appeal from the United States District Court for the Eastern District of Texas in Nos. 4:18-cv-00474-ALM, 4:18-cv-00475-ALM, 4:18-cv-00476-ALM, Judge Amos L. Mazzant, III.

JUDGMENT

THIS CAUSE having been considered, it is

ORDERED AND ADJUDGED:

AFFIRMED-IN-PART AND REVERSED-IN-PART

FOR THE COURT

July 20, 2022
Date

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court

CERTIFICATE OF FILING AND SERVICE

I hereby certify that, on August 19, 2022, I electronically filed the foregoing with the Clerk of Court using the CM/ECF System, which will send notice of such filing to all registered users.

I further certify that, upon acceptance and request from the Court, the required paper copies of the foregoing will be deposited with United Parcel Service for delivery to the Clerk, UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT, 717 Madison Place, N.W., Washington, D.C. 20439.

August 19, 2022

Respectfully submitted,

/s/ Donald L. Jackson

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CERTIFICATE OF COMPLIANCE

1. This petition complies with the type-volume limitation of Federal Circuit Rule 32(b)(1) and Federal Rule of Appellate Procedure 40(b)(1):

   The petition contains 3,878 words, excluding the parts of the petition exempted by Federal Rule of Appellate Procedure 32(f) and Federal Circuit Rule 32(b)(2).

2. This petition complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6)

   The petition has been prepared in a proportionally spaced typeface using Microsoft Word in a 14-point Times New Roman font.

Dated: August 19, 2022

/s/ Donald L. Jackson

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