No. 2014-1047

United States Court of Appeals for the Federal Circuit

HITACHI CONSUMER ELECTRONICS CO., LTD.
and HITACHI ADVANCED DIGITAL, INC.,

Plaintiffs-Appellants,

v.

TOP VICTORY ELECTRONICS (TAIWAN) CO., LTD., TPV INTERNATIONAL (USA), INC., ENVISION PERIPHERALS, INC., TOP VICTORY ELECTRONICS (FUJIAN) CO. LTD., TPV ELECTRONICS (FUJIAN) CO. LTD., and TPV TECHNOLOGY LTD.,

Defendants-Appellees.

Appeal from the United States District Court for the Eastern District of Texas in No. 2:10-cv-00260-JRG, Judge J. Rodney Gilstrap.

REPLY BRIEF FOR PLAINTIFFS-APPELLANTS HITACHI CONSUMER ELECTRONICS CO., LTD. AND HITACHI ADVANCED DIGITAL, INC.

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CERTIFICATE OF INTEREST

Counsel for the appellants certifies the following:

1. The full name of every party or amicus represented by me is:

Hitachi Consumer Electronics Co., Ltd. and Hitachi Advanced Digital, Inc. As of April 1, 2014, Hitachi Advanced Digital, Inc. was merged into Hitachi Information & Control Solutions, Ltd.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

In addition to the above entities, Hitachi Maxell, Ltd. has an interest as assignee of the patents-in-suit.

3. All parent corporations and any publicly held companies that own 10% or more of the stock of the party or amicus curiae represented by me are:

Hitachi Consumer Electronics Co., Ltd. and Hitachi Information & Control Solutions, Ltd. are private corporations duly incorporated under the laws of Japan and are each owned 100% by Hitachi Ltd. Hitachi Ltd. and Hitachi Maxell, Ltd. are Japanese public corporations that are listed on stock exchanges in Japan. Hitachi Ltd. owns more than 10% of Hitachi Maxell, Ltd.'s stock. No single entity owns 10% or more of Hitachi Ltd.'s stock.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or are expected to appear in this court are:

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INTRODUCTION

Hitachi invented the technology in the '375 and '310 patents, disclosed its inventions to the public, and obtained presumptively valid patents. Hitachi's disclosure to the public of something not previously accessible is consideration for Hitachi's patents. *In re Tenney*, 254 F.2d 619, 624 (C.C.P.A. 1958).

TPV now argues that Hitachi's patents are invalid because another company, General Instrument, also invented the technology and allegedly did so before Hitachi's patents' priority date. TPV relies on the so-called DigiCipher document, an internal General Instrument proposal dated only weeks before the July 20, 1990 priority date. But the patent laws do not recognize as a first inventor someone who has not made the invention accessible to the public. *Gayler v. Wilder*, 51 U.S. 477, 497 (1851). Without disclosure, the public "derive[s] no advantage from the invention"; it is "as if the improvement had never been discovered." *Id.* Thus, "a secret inventor is not a 'first inventor.'" *Gillman v. Stern*, 114 F.2d 28, 31 (2d Cir. 1940) (L. Hand, J.).

Therefore, to overcome the presumption of validity of Hitachi's patents, TPV had to prove by clear and convincing evidence that the DigiCipher document was "known by others" or "a printed publication" before the patents' priority date. 35 U.S.C. § 102(a). It is "settled law" that the "knowledge contemplated by section 102(a) must be accessible to the public." *In re Borst*, 345 F.2d 851, 854

(C.C.P.A. 1965). Section 102(a) precludes only patents that "withdraw[] from the public domain technology already available to the public." *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1453 (Fed. Cir. 1984).

TPV did not come close to meeting its burden. TPV called a single witness, Scott Lery, to establish public accessibility, but all Lery had to say was, "I don't know," and "I can only, you know, speculate." A8822. TPV relies on the document's access *within General Instrument*, but that is not enough to invalidate a patent. TPV had to prove by clear and convincing evidence that the document was generally available *outside* the company. Nor does the mere absence of confidentiality markings suffice; proof of actual distribution or availability is required—even for documents specifically intended for public distribution. And although TPV argues that the DigiCipher document was submitted to the FCC, there was no testimony establishing *when* that submission occurred or that it made the document publicly accessible.

On appeal, TPV argues there was a DigiCipher *system*, identical to Hitachi's invention, that was publicly known before the priority date. But at trial, TPV's invalidity case depended solely on the DigiCipher *document*. TPV's expert testified only about the document itself. Indeed, the district court correctly excluded evidence and demonstratives referring to a purported system, as there was no evidence establishing any system's existence, much less what was in it.

Lery testified that the system proposed in the DigiCipher document was never even built.

The jury's findings of non-infringement also cannot stand. TPV repeatedly argues that the jury was entitled to believe TPV's expert over Hitachi's. But TPV has no response to the point that a verdict cannot be sustained where it is based on an expert's testimony about additional limitations not present in the claims. *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1313-1314 (Fed. Cir. 2003) (per curiam). The only disputes between the experts here concerned what the claims require; TPV points to no disagreement about how the accused devices operate. TPV's experts were wrong about the claim requirements, and their testimony thus cannot sustain the verdict.

Accordingly, the judgments of invalidity and non-infringement should be reversed. At a minimum, if the Court reverses on invalidity, a new trial on infringement is warranted because of the erroneous admission of the DigiCipher document. Although TPV now argues that the DigiCipher document was irrelevant to infringement, it argued the opposite in the district court. Hitachi was entitled to a trial not tainted by the DigiCipher document.

ARGUMENT

I. TPV FAILED TO PROVE BY CLEAR AND CONVINCING EVIDENCE THAT THE DIGICIPHER DOCUMENT WAS PRIOR ART

A. There Is No Substantial Evidence That The DigiCipher Document Was "Known By Others" Or A "Printed Publication" Before The Priority Date

To overcome the presumption of validity, TPV had to prove by clear and convincing evidence the existence of invalidating prior art. *Minnesota Mining & Mfg. Co. v. Chemque, Inc.* ("*3M*"), 303 F.3d 1294, 1301 (Fed. Cir. 2002). TPV's expert, Wechselberger, testified that the DigiCipher document invalidated the asserted claims of the '375 and '310 patents. A8954-A8973. TPV failed, however, to prove that the DigiCipher document was prior art.

1. TPV had to prove the DigiCipher document was generally available to the public before the priority date

A reference is prior art under 35 U.S.C. § 102(a) if it was either (1) "known" or (2) "used" by others "in this country," or if it was either (3) "patented" or (4) "described in a printed publication" in "this or a foreign country." Section 102(a) "exclude[s] from consideration for patent protection knowledge that is *already available* to the public." *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 148 (1989) (emphasis added). "'The identity of two inventions having been established, ... [i]f one existed *in a manner accessible to the public* when the other was invented, the latter is not new to the public . . . .'" *Tenney*,

254 F.2d at 623 (quoting 1 Robinson on Patents at 423 (1890)) (emphases added by *Tenney*).

TPV argued that the DigiCipher document was known or a printed publication. Notwithstanding TPV's attempts to minimize its burden, under either prong TPV had to establish that the DigiCipher document was "generally available" such that "anyone could have had access to the document[] by the exercise of reasonable diligence." *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 936-937 (Fed. Cir. 1990); *see Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1370 (Fed. Cir. 1998). Hitachi has not "conflated" the known-by-others and printed-publication inquiries (*contra* TPV Br. 26); both inquiries require public accessibility. Where, as here, a document is relied upon to establish invalidity, the known-by-others inquiry effectively collapses into the printed-publication inquiry. *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 138-139 (Fed. Cir. 1986) (performing combined known-by-others and printed-publication inquiry for print advertisement).

Indeed, it is TPV that is applying the incorrect legal standard. TPV argues that it needed to show only knowledge of the invention by a single person under no obligation to keep the knowledge secret. TPV Br. 2, 23, 31. But in so arguing, TPV relies on portions of decisions pertaining to the "public use" bar of Section 102(b). *Id.* at 23 (citing *Baxter Int'l, Inc. v. Cobe Labs., Inc.*, 88 F.3d

1054, 1058 (Fed. Cir. 1996); *Woodland*, 148 F.3d at 1371). This Court has described "public use" as "including 'any use of [the claimed] invention by a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor.'" *Baxter*, 88 F.3d at 1058 (alteration in original) (quoting *In re Smith*, 714 F.2d 1127, 1134 (Fed. Cir. 1983)). That is not so for the known-by-others and printed-publication inquiries. *3M*, 303 F.3d at 1301; *Woodland*, 148 F.3d at 1370-1371; *Carella*, 804 F.2d at 138-139.

TPV also cites the section of *Chisum on Patents* discussing "use" under Section 102(a). TPV Br. 23 (citing 1 Donald S. Chisum, *Chisum on Patents* § 3.05[2][a] (Matthew Bender)). But TPV falls into the very trap of which that section warns: "fail[ing] to distinguish prior use from prior knowledge." *Chisum* § 3.05[2][a]. *Chisum* explains that "[b]ecause the latter includes descriptions not necessarily reduced to practice, there are good reasons for requiring a higher standard of publicity than in the case of a clear use of a complete product or process." *Id.* (footnote omitted); *see Coffin v. Ogden*, 85 U.S. 120, 124-125 (1874) (where prior invention is "complete" and "put in use," "prior knowledge and use by a single person is sufficient"); *Borst*, 345 F.2d at 853-854.

2. TPV failed to prove public accessibility by clear and convincing evidence

The correct inquiry is thus whether the DigiCipher document was available to the public—i.e., "disseminated or otherwise made available to the extent that

persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it." *In re Lister*, 583 F.3d 1307, 1311 (Fed. Cir. 2009) (internal quotation marks omitted). On that question, TPV wholly failed to meet its burden—much less by clear and convincing evidence.

As Hitachi explained, there is no evidence establishing public accessibility of the DigiCipher document before the priority date. Hitachi Br. 30-39. The DigiCipher document bears a date of June 8, 1990, just weeks before the patents' priority date of July 20, 1990. A16841. But the document was not published until December 1990, in a journal that did not publish any paper already "submitted or published elsewhere." A9110-A9111; A15283-A15292. TPV has no response to that fact.

TPV's key witness, Lery, could testify only: "I don't know when this document was given to the public." A8822. TPV argues that Lery was merely uncertain about the applicable legal standard for public accessibility. TPV Br. 30-31. But even if so, that would not matter: Lery never testified that the DigiCipher document was available outside General Instrument before the priority date.

TPV relies principally on three arguments to try to establish public accessibility. All are insufficient.

a. *First*, TPV relies on the DigiCipher document's availability to persons working at General Instrument, including Lery and his officemate Chris Heegard. TPV Br. 28, 31. But access within General Instrument does not establish that the public could have accessed the document. *See Northern Telecom*, 908 F.2d at 936. TPV tries to distinguish *Northern Telecom* on its facts, but the legal principle of that decision is that internal distribution is not enough: there must be proof that "anyone could have had access to the documents by the exercise of reasonable diligence." *Id.* at 936-937. If distribution within General Instrument alone could establish public accessibility, virtually any non-confidential internal business document would be a printed publication. That is not the law.

Despite TPV's references to "outside consultants" (*e.g.*, TPV Br. 28), only a single consultant, Heegard, had access to the document. That he was labeled a "consultant" rather than an "employee" does not matter; the important point is that he worked *within* General Instrument on the DigiCipher system. A8819-A8820; *Northern Telecom*, 908 F.2d at 936 (no public accessibility despite document being "distributed to approximately fifty persons or organizations involved in the AESOP-B project"). Moreover, General Instrument generally had consultants like Heegard sign non-disclosure agreements. A9109.

TPV contends that "[t]his case is materially indistinguishable from *Cooper Cameron*." TPV Br. 29. But *Cooper Cameron* only underscores the insufficiency

of the evidence here. *Cooper Cameron Corp. v. Kvaerner Oilfield Prods., Inc.*, 291 F.3d 1317 (Fed. Cir. 2002). There, the reports were distributed to nine companies before the priority date: three joint-venture members and six participant companies. *Id.* at 1323. Affidavits from employees of those companies stated that not only were the reports not confidential, they actually "were distributed to interested parties." *Id.* "[T]hose with access to the documents were asserted to be a significant portion of the interested public," and "any other interested persons exercising reasonable diligence could have sought information" in the reports, "much if not all of which information was available without restriction." *Id.* at 1324. In stark contrast, there was no testimony here that the DigiCipher document was distributed outside General Instrument before the priority date.

b. *Second*, TPV asserts that "public accessibility" is established by the mere absence of confidentiality markings. TPV Br. 35. It is not. A document "is considered publicly accessible if it was disseminated or otherwise made available" to the public. *Lister*, 583 F.3d at 1311 (internal quotation marks omitted); *see ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 865 (Fed. Cir. 2010) (per curiam).

Evidence of distribution or availability is necessary even for documents created specifically for public distribution. Hitachi Br. 35. Thus, promotional brochures are not considered publicly accessible without "information about the

circulation and availability of the brochures." *In re Omeprazole Patent Litig.*, 536 F.3d 1361, 1381 (Fed. Cir. 2008). Nor does sending a manuscript to a journal for publication suffice. *Borst*, 345 F.2d at 853-854. Even for mailers and magazines mailed to the public, this Court has required evidence of "the date of receipt." *Carella*, 804 F.2d at 139. TPV has no response.

The only testimony about General Instrument's document-access policies was Hamilton's testimony that General Instrument's VideoCipher division had "well-established document control and secrecy policies" due to its history of making secure communications systems for the military, and thus did not share internal documents with interested members of the public. A9108. Hamilton testified that even as an employee, he had difficulty obtaining technical documents. A9108. Hamilton's testimony was not "flatly contradicted" by Lery. *Contra* TPV Br. 33 n.3. Lery testified only that the DigiCipher document was not marked "confidential." A8817-A8818. He did not testify that the document was publicly available under General Instrument's access policies.

c. *Third*, TPV argues that the purported "submission of the DigiCipher document to the FCC in June 1990" shows public accessibility. TPV Br. 35. But mere "distribution to government agencies and personnel alone" is insufficient without evidence that the submission made the document generally available to the public. *Northern Telecom*, 908 F.2d at 936 (internal quotation marks omitted).

For instance, in *Lister*, a manuscript was submitted to the Copyright Office, but the Copyright Office's databases did not index the manuscript in a way permitting a researcher to locate it exercising reasonable diligence, and there was no proof of the date the manuscript was listed in publicly accessible commercial databases. 583 F.3d at 1314-1317; *see In re Cronyn*, 890 F.2d 1158, 1159-1161 (Fed. Cir. 1989) (document filed at university library not printed publication if not publicly accessible).

Here, as in *Lister*, there was no evidence that mere submission to the FCC working group made the document available in a manner that the public could locate it and obtain a copy. TPV baldly asserts that "there was no confidentiality designation" on the FCC submission and that working-group members "were free to convey the information contained in the document more broadly." TPV Br. 35. But there was no evidence of that at trial.

In any event, there was no testimony establishing *when* the document was submitted. Hamilton never testified about the submission date. *Contra* TPV Br. 24-25, 31 n.2. He explained only that a *cable* television standard had been proposed by June 1990, not the DigiCipher broadcast standard at issue here. A8333-A8334. When asked whether General Instrument "had presented a proponent system to the FCC" by June of 1990, Hamilton averred: "No, I don't

think so. And I haven't seen anything that tells me that." A8334; *see* A8329, A8332-A8333, A9106-A9107.

Nor can the mere words "Submitted By" on the document's cover (TPV Br. 25) establish to whom the document purportedly was submitted, the date of submission, or that any submission resulted in the document being generally available to the interested public. *Borst*, 345 F.2d at 853-854 (mere submission of manuscript to publisher does not prove public accessibility). Sheer speculation about when and to whom it might have been submitted is far from clear and convincing evidence that the document was publicly available.

Moreover, although the district court relied on Reader's testimony to show that the DigiCipher document had been presented to the FCC (A147), Hitachi explained that Reader never testified when that presentation occurred. Hitachi Br. 37. TPV rightly does not try to rely on Reader's testimony on appeal.

Finally, TPV argues that the jury could "reasonably interpret" Lery's testimony to mean that the DigiCipher document had been submitted by June of 1990. TPV Br. 31 n.2. But Lery testified only that "the government agency had a copy of it" at some point. A8822. He did not say when that occurred. For the jury to have assigned a date to Lery's testimony would have been rank speculation, not reasonable inference—and certainly not clear and convincing evidence.

In sum, there is no clear and convincing evidence establishing that the DigiCipher document was publicly available before the priority date and thus prior art under Section 102(a).

B. TPV Cannot Rely On A DigiCipher "System" To Establish Invalidity

TPV's primary argument on appeal is that an underlying DigiCipher "system" was publicly known and could qualify as prior art. TPV Br. 2, 22-26. But for an alleged system to anticipate under Section 102(a) based on already being known, knowledge of that system must have been publicly accessible and "sufficient to enable one with ordinary skill in the art to practice the invention." *3M*, 303 F.3d at 1301. There was no evidence that any system existed at all, much less one that met the enablement requirement.

It is thus by no means "conceded" that a DigiCipher system "preexisted and was materially identical to the system Hitachi sought to patent as of July 20, 1990." TPV Br. 22. To the contrary, the district court precluded evidence and demonstratives referencing a DigiCipher system because there was no proof of any system. A7452-A7455; A7856-A7859. All that existed was the DigiCipher *document*, which was the sole basis of TPV's expert's invalidity opinion. A8954-A8973.

Indeed, the DigiCipher document described merely a "proposed system." TPV Br. 24. Lery testified that no system existed when he started at General

Instrument in June 1990; rather, he was "asked to design and help build" it. A8815-A8820. The DigiCipher document was "a description of -- of the system that we were to -- to build and -- and further design." A8815. Lery referred to the DigiCipher document as his "plans," which he "needed to study . . . and figure out, you know, how I was going to really build -- help design and build this system." A8818-A8819; *see* TPV Br. 24 (Lery was hired to "help design and build the DigiCipher system").

Moreover, the system proposed in the DigiCipher document was never actually built. Lery explained that after studying the DigiCipher document, he concluded the proposed system "would not meet the coverage requirements that existed under the then current analog television broadcast system." A8820. He thus ultimately designed and built a "different better system." A8820. That different system was publicly demonstrated—but not until 1992. A8820.

And Hamilton testified that General Instrument used the term "DigiCipher" to describe many projects, not just an HDTV broadcast system. *See* A8334 ("The term DigiCipher was used for very many things"; "It was a brand name that was thrown around in GI for many things."). References to the existence of "DigiCipher" thus do not establish the existence of any prior-art system that could invalidate Hitachi's claims.

Finally, TPV repeatedly references "press releases" to try to establish that a DigiCipher system was publicly known. TPV Br. 24 & n.1, 25, 34, 36. But no press releases were ever before the jury, as the district court properly excluded them—in a ruling not challenged on appeal. A7452-A7455. The press releases therefore cannot constitute substantial evidence. In any event, the mere existence of press releases does not indicate what, if any, technical details about a DigiCipher system might have been available to the public. *3M*, 303 F.3d at 1301 (prior art must be "publicly accessible, and it must be sufficient to enable one with ordinary skill in the art to practice the invention" (citations omitted)). At most, there is testimony that some press releases existed; without their content, they establish nothing.

* * *

Judgment of non-invalidity is warranted given the lack of evidence of public availability. In the alternative, because the jury's invalidity verdict is against the great weight of the evidence, the Court at least should remand for a new trial.

II. JUDGMENT OF INFRINGEMENT AS A MATTER OF LAW SHOULD HAVE BEEN GRANTED ON THE '375 AND '310 PATENT CLAIMS

Because undisputed evidence established that the '375 and '310 patents are infringed, judgment of infringement as a matter of law should have been entered.

A. TPV's Arguments Confirm That The Only Disagreement Between The Experts Involved What The Claims Require, Not How TPV's Devices Operate

As Hitachi explained, the only disagreement between Hitachi's and TPV's experts involved what the claims require, not how TPV's devices operate. Hitachi Br. 43-45. Despite the experts' agreement concerning the devices' operation, the district court held that the jury could have found that "Hitachi failed to make a *prima facie* case of infringement" because the jury was "at liberty to disbelieve Mr. Hamilton's infringement testimony, or find the selection of documents was not representative of all the accused products." A137. That conclusion was incorrect, given the complete agreement between the parties' experts that each of the accused devices has a receiver, a demodulator, an error corrector, a video expander, and an audio expander. Hitachi Br. 43-45. TPV does not defend that holding.

Instead, TPV argues that Hitachi does not construe the facts in the light most favorable to the verdict. TPV Br. 5. Not so: Hitachi accepts as true all of Wechselberger's testimony about factual questions within the province of the jury. His testimony admitted facts that amount to infringement, and thus judgment of infringement should have been entered. *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1333 (Fed. Cir. 2013).

At bottom, TPV argues that the jury was free to choose between conflicting expert testimony about what the claims require. TPV Br. 38. For example, TPV

relies on Wechselberger's view that claim 7 of the '310 patent "require[s] the same signal throughout the process" and thus excludes additional components that process the signal. TPV Br. 45; *see id.* at 47 (arguing that the jury was free to accept Wechselberger's description of the claim terms). And regarding the '375 patent, TPV relies on Wechselberger's testimony "that the slight variation in language from the '310 patent is immaterial" and that the '375 patent thus contains the same limitation. TPV Br. 48.

But as Hitachi explained (Hitachi Br. 40, 52-53, 55), that testimony depended on adding limitations not present in the claims. TPV has no response to the law establishing that if the claims do not contain those additional limitations, Wechselberger's testimony cannot support the verdict. *Integra Lifesciences I, Ltd. v. Merck KGaA*, 496 F.3d 1334, 1341-1342 (Fed. Cir. 2007); *Moba*, 325 F.3d at 1313-1314. As explained below, because the claims do not contain those limitations, the judgment must be reversed.

B. TPV's Non-Infringement Theory Depends On Requirements Not Present In The Claims

1. The asserted claims of the '375 and '310 patents require only a particular order of processing

TPV contends that the accused devices do not infringe the asserted claims of the '375 and '310 patents because the devices have additional components that perform "intervening processing steps." TPV Br. 44. But nothing in the claim

language precludes additional processing components. To the contrary, each claim is a "comprising" claim (A218(col.23:17, col.24:18); A185(col.18:65)), meaning that it "does not exclude additional unrecited elements." *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1271 (Fed. Cir. 1986); Hitachi Br. 48-49.

The language of all the asserted claims requires only that the digital signal or information be processed by the components in a particular order. Claim 26 of the '375 patent recites that the error corrector is "configured to correct an error of the digital information demodulated by the demodulator." A218(col.23:29-30). Claim 30 recites that the error corrector is "configured to correct an error of a digital information which is previously demodulated by the demodulator." A218(col.24:30-32). Similarly, claim 7 of the '310 patent recites that the bit expanders "bit-expand[] the video [or audio] signal of the digital signal corrected by the error corrector." A186(col.20:1-5). TPV's devices perform the processing in that order. Hitachi Br. 47; A9008.

According to TPV, the additional components take their products outside the claims because "those intervening process[es] operate to change 'the signal.'" TPV Br. 45. Focusing solely on the language of claim 7, TPV argues that because of additional components between the trellis decoder (i.e., the error corrector) and the bit expanders, by the time the signal is received by the bit expanders, "it has been transformed into a signal different from the signal processed by the trellis

[de]coder." TPV Br. 43-44. According to TPV, "[t]he expander thus does not bit-expand '*the* digital signal corrected by the error corrector.'" TPV Br. 44.

As an initial matter, the phrase "the . . . signal," appears only in claim 7 of the '310 patent. So even if TPV's argument had any force, it would apply at most only to that one claim. *See infra* Part II.B.2.

But TPV's argument is unavailing even as to claim 7, because it is inconsistent with the '310 patent's use of "the . . . signal." Nothing in the patent suggests that performing processing on the digital signal creates a new, different signal. Rather, the patent refers to a single digital signal undergoing processing by various components. *E.g.*, A177(col.2:32-34). The additional components in TPV's devices simply provide additional processing; they do not make "the digital signal" into a new signal. Thus, when the digital signal reaches the bit expanders in TPV's devices, it is still the same signal, as that term is used in the patent. It simply has had additional processing performed on it, which is permitted because the claims are "comprising" claims. *Moleculon*, 793 F.2d at 1271.

TPV argues that the jury was free to rely on Wechselberger's testimony concerning what "the . . . signal" in the claims requires and that, if Hitachi disagreed with that view, Hitachi should have sought a different construction of "the . . . signal." TPV Br. 47. This Court rejected a similar argument in *Moba*. Like the patentee there, Hitachi "does not wish to alter the district court's claim

construction on appeal, but seeks enforcement" of it. *Moba*, 325 F.3d at 1314. The district court correctly instructed the jury to apply the plain and ordinary meaning of undefined claim terms (A9182-A9183) and that "comprising" claims do not preclude additional elements. A9184. It is TPV that seeks to alter that construction by precluding additional processing components. If TPV "desired such a narrow definition, it could (and should) have sought a construction to that effect." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 520 (Fed. Cir. 2012).

By permitting the jury to credit Wechselberger's testimony about claim limitations, "the district court allowed the jury to add an additional limitation" not present in the claim language or the district court's instructions. *Moba*, 325 F.3d at 1313. "In this, the district court erred. Claim construction is a question of law and is not the province of the jury." *Id.*

2. Claims 26 and 30 lack the language "the . . . signal" on which TPV's non-infringement argument depends

Even though TPV's non-infringement theory for claims 26 and 30 of the '375 patent rests entirely on the phrase "the . . . signal" (TPV Br. 48-50), that language is only in claim 7 of the '310 patent. It thus cannot support the judgment of non-infringement of claims 26 and 30.

a. Digital "information," not "signal"

Claims 26 and 30 recite only digital "information," not digital "signal." Claim 26 recites that the error corrector is "configured to correct an error of the

digital *information* demodulated by the demodulator." A218(col.23:29-30) (emphasis added). And claim 30 recites that the error corrector is "configured to correct an error of *a* digital *information* which is previously demodulated by the demodulator." A218(col.24:30-32) (emphasis added).

TPV accuses Hitachi of playing "word-games" by pointing out the differences in claim language. TPV Br. 50. But it is axiomatic that specific claim language matters. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc); *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 419 (1908) ("the claims measure the invention"). TPV points to no intrinsic evidence suggesting that even though the patentees used a different claim term, a skilled artisan would understand "information" to have the same meaning as "signal."

Contrary to TPV's argument, Wechselberger never "testified that the information passing from the de-modulator is not the same information that reaches the Reed-Solomon decoder, because the information is transformed by intervening processes." TPV Br. 48 (emphasis omitted). At the transcript pages cited by TPV (A8933-A8935), Wechselberger never used "information." He testified there were "stages of *signal* processing, each of which changes the *signal*" (A8934 (emphasis added)); he never testified that the *information* represented by the digital signal changed. Wechselberger's testimony suggests the digital

information remains the same throughout processing: "the information . . . flows through a number of steps on its way to being constructed into a picture." A8903; *see* A9002 (agreeing that information representing audio and video is present after each stage of processing).

Because there was no testimony that the digital information changes, TPV's non-infringement theory necessarily fails with respect to claims 26 and 30.[1]

b. "A" (not "the") digital information

Claim 30 not only recites "information" rather than "signal," it lacks the word "the" that is critical to TPV's theory. Claim 30 requires an error corrector "configured to correct an error of *a digital information which is previously demodulated* by the demodulator." A218(col.24:30-32) (emphasis added). Rather than grapple with specific claim language, TPV engages in hand waving, arguing that claims 26 and 30 have "materially identical language." TPV Br. 13; *see id.* at 50 ("minor wording differences"). Wechselberger did the same on the witness stand, testifying that claim 30 "has all the same requirements" as claim 26. A8951.

But Wechselberger's own testimony confirms that claim 30 is infringed. Error correction (specifically, Reed-Solomon decoding) is performed in the

[1] TPV contends that the jury was not "confused" by Wechselberger's testimony treating claims 26 and 30 of the '375 patent the same as claim 7 of the '310 patent. TPV Br. 50-51. But jury confusion is not the issue. The issue is whether the '375 patent claims preclude additional processing steps. They do not.

accused devices on digital information that previously was demodulated. Hitachi Br. 47 (Wechselberger demonstrative). Wechselberger specifically agreed that "demodulation . . . come[s] before error correction." A9008.

TPV contends that claim 30 is not infringed because "*the* 'digital information' which reaches the error corrector" must be "the same as *the* information that is demodulated." TPV Br. 49-50 (emphasis added). But claim 30 recites "*a* digital information" (A218(col.24:30-31) (emphasis added)), not "*the* digital information." TPV's theory, which is divorced from the claim language, cannot save the judgment.

* * *

In sum, Wechselberger's testimony about additional limitations not present in the claims cannot sustain the jury's non-infringement verdict. *Moba*, 325 F.3d at 1313-1314.

C. TPV's Additional Non-Infringement Theory For Claim 7 Of The '310 Patent Also Fails

TPV offers an additional non-infringement theory as to claim 7 of the '310 patent. TPV argues that the transmitted digital signal does not have "an error correction signal added commonly to both the video signal and the audio signal." TPV Br. 39-42. To try to prove that at trial, TPV's expert Wechselberger testified that a specific form of error correction, a "parity signal," is not added. Hitachi Br. 53-55; A8923-A8924. But as Hitachi explained, claim 7 does not require

addition of a parity signal. Hitachi Br. 55. Rather, the accused products meet the "error correction" limitation in claim 7 because the transmitted signal is trellis encoded, and trellis encoding is a form of error correction—facts that TPV does not dispute. *Id.*; TPV Br. 39-42.

TPV now argues that "trellis encoding does not 'add' anything to the video or audio signals." TPV Br. 39 (emphasis omitted). But TPV cannot escape that the sole non-infringement theory Wechselberger offered the jury—that trellis encoding does not add a *parity* signal—is not supported by the claim language. Wechselberger testified that "[t]he claim[] says parity is added" but that "trellis encoding does not generate a parity signal." A8924. Relying on Figure 1 of the specification, he explained that the patent requires a "parity adder." A8923. He testified parity addition is required because it is the only error correction the patent discloses. A8921. Although TPV points to Wechselberger's testimony that trellis encoding "'transforms the information'" (TPV Br. 40 (quoting A8913)), TPV leaves off the next two sentences of Wechselberger's testimony: "It doesn't have a parity signal. There's no parity addition that takes place." A8913.

Trying to recast this testimony, TPV argues that when Wechselberger testified that parity addition is required, he was just using "parity signal" "as a shorthand for 'error correction'" generally. TPV Br. 41. But that flies in the face of Wechselberger's express testimony that not all error correction involves parity

addition. A8924. Given that testimony, it would not be reasonable for a jury to ignore Wechselberger's testimony and instead substitute "error correction" for each time he said "parity." *Contra* TPV Br. 41.

In any event, Wechselberger's testimony establishes that trellis encoding does involve addition of error correction. Wechselberger explained that trellis encoding provides "redundancy to the transmitted signal" because it is "*adding* something extra to the basic information." A8900-A8901 (emphasis added). In particular, he testified that trellis encoding in the ATSC standard involves every "two bits get[ting] turned into three, which *adds* -- which *appends* the redundancy, *adds* the -- it provides the redundancy that's in these three bits." A8909 (emphasis added). Wechselberger's testimony that every two bits are "'transformed'" into other bits (TPV Br. 40 (quoting A8910, A8913)) does not mean that error correction is not added to the transmitted signal.

Undisputed evidence thus establishes infringement of claim 7. Denial of judgment as a matter of law should be reversed or, at a minimum, a new trial should be ordered.

III. THE '243 PATENT IS INFRINGED BECAUSE THE SCALER AND DEINTERLACER IN THE ACCUSED DEVICES ARE VIDEO PROCESSOR SECTIONS

Judgment of infringement as a matter of law also should have been entered with respect to claims 4 and 5 of the '243 patent. The claims require "a plurality of

video processor sections" that provide "video processing according to a different video signal format." A259(col.7:35-37). It is undisputed that each accused device has a scaler and a deinterlacer, both of which provide video processing. A8175 (Myler); A8849-A8850, A8857-A8858 (Reader).

As Hitachi explained (Hitachi Br. 56-63), the scalers and deinterlacers each process according to a video signal format. Scalers process according to video signal formats by, for example, adjusting the picture of 480i and 720p signals to match the television's display resolution. A8138, A8181 (Myler); A8866 (Reader). Deinterlacers likewise process according to a video signal format. For example, based on a 480i or 1080i format, a deinterlacer will convert the picture from interlaced to progressive format for display. A8136, A8177-A8180 (Myler).

TPV argues the claims require each video processor section to "provide processing according to *both* the number of lines *and* their progressive/interlaced nature." TPV Br. 52. As TPV's brief confirms, TPV's disagreement with Hitachi is solely over what type of processing the claims require. TPV Br. 52. Although TPV contends that the jury's resolution of this dispute is "controlling," TPV Br. 53, an issue of a claim requirement "is a question of law and is not the province of the jury." *Moba*, 325 F.3d at 1313.

TPV's argument is based entirely on the word "and" in the district court's construction of "video signal format." TPV Br. 53. The district court construed

"video signal format" as meaning "number of scan lines and whether the lines are progressive or interlaced." A46-A49. Contrary to TPV's assertion, Hitachi does not "ignore the word 'and' out of existence, or change it to the word 'or.'" TPV Br. 53. Indeed, it is TPV that overreads the "and," trying to use it to bootstrap a non-existent requirement into "video processor section." All that the district court's construction of "video signal format" means is that each format describes two distinct characteristics of the picture transmitted over the signal: (1) number of scan lines and (2) whether the lines are progressive or interlaced. Just because a video signal format is characterized by two properties, that does not turn it into a requirement that both characteristics be used in processing "according to" a format. A259(col.7:37). Processing to provide the correct output to the display is performed according to the video signal format of the received signal, whether such processing includes scaling or deinterlacing or both.

TPV's theory conflicts with the district court's construction of "processing." Hitachi Br. 62. The district court gave "processing" its ordinary meaning, rejecting TPV's argument that "processing" is limited to "conversion into an appropriate analog video signal." A41-A44. "[P]rocessing" encompasses several forms of processing, including scaling, deinterlacing, and conversion to an analog signal. A41-A44. TPV now essentially argues that "processing" is limited to processing

based on multiple distinct characteristics. TPV Br. 51-54. But the district court's unchallenged construction is not so limited.

Once TPV's expert's incorrect view of the claim requirements is set aside, the undisputed evidence establishes infringement of the asserted claims of the '243 patent. Judgment of infringement as a matter of law or, at a minimum, a new trial should be ordered.

IV. AT A MINIMUM, A NEW TRIAL ON INFRINGEMENT SHOULD HAVE BEEN GRANTED

If this Court determines that the DigiCipher document is not prior art but does not reverse the denial of judgment of infringement as a matter of law as to any asserted claim, a new trial should be granted on infringement of the '243, '310, '375, and '497 patents. Hitachi Br. 63-68. Because the DigiCipher document is not prior art, its admission was legal error and an abuse of discretion. The erroneous admission of the DigiCipher document was prejudicial, confusing to the jury, and may have affected the verdict on infringement.

TPV disputes the legal standard for a new trial in the Fifth Circuit, arguing that Hitachi must establish the erroneous admission actually affected the jury's verdict. TPV Br. 55-56. But Hitachi need show only a reasonable likelihood that the improper admission affected its substantial rights, not that the trial would have turned out differently. *Johnson v. William C. Ellis & Sons Iron Works, Inc.*, 609 F.2d 820, 823 (5th Cir. 1980). That is confirmed by the *Polythane* decision

cited by TPV, which explains that an "'error is harmless if the court is *sure*, after reviewing the entire record, that the error did not influence the jury or had but a very slight effect on its verdict.'" *Polythane Sys., Inc. v. Marina Ventures Int'l, Ltd.*, 993 F.2d 1201, 1209 (5th Cir. 1993) (emphasis added) (quoting *United States v. Underwood*, 588 F.2d 1073, 1076 (5th Cir. 1979)).

There is no such certainty here. Although TPV now contends its non-infringement arguments "did not depend on DigiCipher in any way" (TPV Br. 58), that is not what TPV told the district court. TPV argued that the DigiCipher document "went directly to issues of non-infringement and invalidity of the Patents-in-suit." A9548. TPV should be precluded from telling this Court the opposite.

In any event, TPV's statement to the district court accurately described its theory of the case. TPV acknowledges a key part of its non-infringement theory was that Hitachi was not involved in developing the ATSC standard. TPV Br. 44 n.7, 57-58. Indeed, TPV still argues that "Hitachi played absolutely no role in developing the ATSC standard" (TPV Br. 44 n.7), as if that mattered to infringement.

TPV contends that it could have made those arguments even without admission of the DigiCipher document. TPV Br. 57-59. But the DigiCipher document's introduction is what allowed TPV to elicit testimony that the Grand

Alliance, not Hitachi, developed the ATSC standard, and other testimony about inventorship. Hitachi Br. 66. Without the document, there would have been no justification for such testimony or argument because Hitachi's lack of involvement in developing the ATSC standard, and other such inventorship issues, has no bearing on the infringement question—i.e., whether TPV's devices meet the limitations of Hitachi's patents. Nor did Hitachi "open[] the door" to such testimony and arguments by arguing that its patents are essential to the ATSC standard. TPV Br. 57-58. Hitachi's patents are essential to the standard because a standard-compliant product necessarily meets all the limitations of Hitachi's claims; it makes no difference whether Hitachi helped develop the standard.

A new trial thus should be granted if the Court sets aside the invalidity verdict but does not order judgment of infringement as a matter of law. There is at least a reasonable likelihood that, absent admission of the DigiCipher document, the jury would have found the patents infringed, particularly because the jury was instructed that "[i]nvalidity is a defense to patent infringement." A9181. Moreover, on these facts, where invalidity and infringement issues were so intertwined at trial, it would be inappropriate to leave intact the infringement portion of the verdict if the invalidity verdict were set aside. *See Gasoline Prods. Co. v. Champlin Ref. Co.*, 283 U.S. 494, 500 (1931); *Williams v. Slade*, 431 F.2d

605, 609 (5th Cir. 1970).[2] Hitachi was entitled to a trial not tainted by the DigiCipher document.

CONCLUSION

Judgment of non-invalidity of the asserted ’375 and ’310 patent claims should be ordered, as well as judgment of infringement of the asserted ’375, ’310, and ’243 patent claims. In the alternative, a new trial should be ordered on the asserted ’243, ’310, ’375, and ’497 patent claims.

[2] In a footnote, TPV suggests these decisions hold only that where a partial new trial—as opposed to judgment as a matter of law—is ordered, a new trial also must be held on other, non-separable issues. TPV Br. 56 n.10. But Hitachi asks for a new trial on invalidity as an alternative to judgment of non-invalidity as a matter of law. Hitachi Br. 39. If a new trial on invalidity is ordered, these decisions require a new trial on infringement also. If the Court orders judgment of non-invalidity as a matter of law (as it should), that is all the more reason for granting a new trial on infringement, as it demonstrates even more strongly that something went awry with the verdict.

Respectfully submitted,

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s/ Deanne E. Maynard

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CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Federal Circuit by using the appellate CM/ECF system on May 15, 2014.

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CERTIFICATE OF COMPLIANCE WITH RULE 32(a)

This brief complies with the type-volume limitation of Rule 32(a) of the Federal Rules of Appellate Procedure because it contains 6,992 words.

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