

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

CALIFORNIA INSTITUTE OF
TECHNOLOGY,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD.,
SAMSUNG ELECTRONICS AMERICA,
INC.,

Defendants.

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CIVIL ACTION NO. 2:21-CV-00446-JRG

CLAIM CONSTRUCTION MEMORANDUM AND ORDER

Before the Court is the Opening Claim Construction Brief (Dkt. No. 101) filed by Plaintiff California Institute of Technology (“Plaintiff” or “Caltech”). Also before the Court are the Responsive Claim Construction Brief (Dkt. No. 109) filed by Defendants Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. (collectively, “Defendants” or “Samsung”) and Plaintiff’s Reply (Dkt. No. 112). The Court held a hearing on February 28, 2023. (Dkt. No. 118; *see also* Dkt. No. 124.)

I. BACKGROUND

Plaintiff alleges infringement of United States Patent Nos. 7,116,710 (the “’710 Patent”), 7,421,032 (the “’032 Patent”), 7,916,781 (the “’781 Patent”), and 8,284,833 (the “’833 Patent”) (collectively, “the Patents-in-Suit”). (Dkt. No. 101.) Plaintiff refers to the Patents-in-Suit as the “IRA Patents.”

Plaintiff submits that “the IRA Patents cover a revolutionary communications technology known as ‘irregular repeat and accumulate codes’ or ‘IRA codes.’ IRA codes are used in a variety

of digital-communication applications. . . . The IRA Patents are directed to the field of error-correction coding, which seeks to achieve error-free communication at the highest data rates possible. This generally involves transmitting information in the form of encoded ‘codewords’ that are resilient against noise in the communication channel.” (Dkt. No. 101 at 1–2.) Plaintiff also submits that all of the Patents-in-Suit claim priority to the application that issued as the ’710 Patent and that all four Patents-in-Suit share a common specification. (*Id.*)

The ’710 Patent, titled “Serial Concatenation of Interleaved Convolutional Codes Forming Turbo-Like Codes,” issued on October 3, 2006, and bears an earliest priority date of May 18, 2000.

The ’710 Patent states:

A serial concatenated coder includes an outer coder and an inner coder. The outer coder irregularly repeats bits in a data block according to a degree profile and scrambles the repeated bits. The scrambled and repeated bits are input to an inner coder, which has a rate substantially close to one.

(’710 Patent at Abstract.) The Central District of California construed disputed terms of the Patents-in-Suit in *California Institute of Technology v. Broadcom Ltd., et al.*, No. 2:16-CV-3714-GW-AGRx (“*Broadcom*”) and *California Institute of Technology v. Hughes Communications Inc., et al.*, No. 2:13-CV-7245-MRP-JEM (“*Hughes*”). Plaintiff submits several claim construction documents from *Broadcom* and *Hughes*. (*See* Dkt. Nos. 101-8, 101-9, 101-10, 101-11, 101-12.)

Plaintiff also submits that in 2020, a jury found that certain Apple and Broadcom products infringed the ’710, ’032, and ’781 Patents. *See Broadcom*, No. 2:16-CV-3714-GW, Dkt. No. 2114. The Federal Circuit affirmed the finding of infringement as to the ’710 Patent and the ’032 Patent, vacated as to the ’781 Patent, and remanded for a new trial on infringement as to the ’781 Patent as well as for a new trial on damages. *See Cal. Inst. of Tech. v. Broadcom Ltd.*, 25 F.4th 976 (Fed. Cir. 2022).

II. LEGAL PRINCIPLES

It is understood that “[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).

“In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction” discussed in *Markman. Id.* (citing 517 U.S. 370).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent’s claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s invention. Otherwise, there would be no need for claims. *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own

lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court's claim construction analysis is substantially guided by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term "is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application." *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of "a fully integrated written instrument." *Id.* at 1315 (quoting

Markman, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing claims. *Id.* at 1314–17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

Phillips, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the United States Patent and Trademark Office (“PTO”) understood the patent. *Id.* at 1317. However, because the file history “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; see also *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation”).

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