

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

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**PERSONALIZED MEDIA COMMUNICATIONS, LLC,**  
*Appellant*

v.

**APPLE INC.,**  
*Appellee*

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2018-1936

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. IPR2016-  
00755.

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Decided: March 13, 2020

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DC, argued for appellant. Also represented by CE LI,  
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Before REYNA, TARANTO, and STOLL, *Circuit Judges*.

STOLL, *Circuit Judge*.

Personalized Media Communications, LLC (PMC) appeals from the final written decision of the Patent Trial and Appeal Board holding certain claims of U.S. Patent No. 8,191,091 unpatentable on anticipation and obviousness grounds. PMC specifically challenges certain claim constructions underpinning the Board's anticipation and obviousness determinations. Because we agree that the Board erred in construing one of the claim terms at issue, we reverse the Board's decision as to the applicable claims. We affirm the Board's decision as to the remaining claims.

## BACKGROUND

### I

The '091 patent is directed to methods for enhancing broadcast communications with user-specific data by embedding digital signals in those broadcast communications. The specification discloses a number of embodiments that include analog broadcast signals with embedded digital signals.

Claim 13 of the '091 patent is illustrative:

13. A method of decrypting programming at a receiver station, said method comprising the steps of:

receiving *an encrypted digital information transmission including encrypted information*;

detecting in said *encrypted digital information transmission* the presence of an instruct-to-enable signal;

passing said instruct-to-enable signal to a processor;

determining a fashion in which said receiver station locates a first decryption key by processing said instruct-to-enable signal;

locating said first decryption key based on said step of determining;

decrypting said encrypted information using said first decryption key; and

outputting said programming based on said step of decrypting.

'091 patent col. 285 l. 61–col. 286 l. 9 (emphases added to disputed claim terms).

Independent claim 20 also recites “an encrypted digital information transmission including encrypted information.” *Id.* at col. 286 ll. 29–47. Independent claim 26 recites “an information transmission including encrypted information,” which lacks the “encrypted digital” modifier. *Id.* at col. 286 l. 63–col. 287 l. 9.

The '091 patent issued from one of several hundred continuation applications filed shortly before the GATT rules impacting patent expiration dates went into effect. Accordingly, the '091 patent has priority to at least 1987, yet remains unexpired.

## II

In March 2016, Apple Inc. filed a petition requesting inter partes review of claims 13–16, 18, 20, 21, 23, 24, 26, 27, and 30 of the '091 patent. The Board instituted an IPR of all the challenged claims in September 2016. Following an oral hearing in June 2017, the Board issued a final written decision holding the challenged claims anticipated and obvious. *See generally Apple Inc. v. Personalized Media Comm'ns, LLC*, No. IPR2016-00755, 2017 WL 4175018 (P.T.A.B. Sept. 19, 2017) (*Decision*).

The Board's anticipation and obviousness determinations were premised on its construction of various claim terms. The primary prior art references asserted by Apple undisputedly disclosed mixed analog and digital information transmissions as opposed to information

transmissions that were entirely digital. PMC argued that the broadest reasonable interpretation of the claim phrase “an encrypted digital information transmission including encrypted information” must be limited to entirely digital transmissions—i.e., “an information transmission carrying *entirely digital* content at least a portion of which is encrypted.” *Decision*, 2017 WL 4175018, at \*3 (quoting J.A. 468). Apple disagreed with PMC’s construction, contending that the broadest reasonable interpretation is not so limited, and may also include transmissions with information that is not encrypted or digital—i.e., “an information transmission that is partially or entirely digital, at least a portion of which is encrypted.” *Id.* (quoting J.A. 192).

After considering the claim language, specification, and prosecution history of the ’091 patent and related patents, the Board agreed with Apple:

[A]n “encrypted digital information transmission including encrypted information” includes at least some encrypted digital information, and does not preclude, with that transmission, non-encrypted information or scrambled analog information. In other words, the “transmission” requires some encrypted digital information, but does not preclude other information such as non-encrypted information or analog information, and “encrypted information” does not preclude scrambled analog information.

*Id.* at \*9 (internal citation omitted). In doing so, the Board specifically found that there was no plain and ordinary meaning of “encrypting” at the time of the invention, as the term was used somewhat interchangeably with the analog process of “scrambling” through at least 1987. *Id.* at \*14.

The Board also denied PMC’s request for rehearing, which challenged the Board’s claim construction based on three statements in the prosecution history. *See generally*

*Apple Inc. v. Personalized Media Commc'ns, LLC*, No. IPR2016-00755, 2018 WL 1224738 (P.T.A.B. Mar. 6, 2018) (*Rehearing Decision*). Of particular relevance here, the Board rejected PMC's reliance on the prosecution history because "the prosecution history presents a murky picture as opposed to a clear waiver." *Id.* at \*11 (first citing *Inverness Med. Switz. GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1380–82 (Fed. Cir. 2002); then citing *Athletic Alts., Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996); and then citing *Rambus Inc. v. Infineon Techs. AG*, 318 F.3d 1081, 1090 (Fed. Cir. 2003)).

PMC appeals the Board's decisions. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

#### DISCUSSION

On appeal, PMC challenges the Board's construction of "an encrypted digital information transmission including encrypted information."<sup>1</sup> We review de novo the Board's ultimate claim constructions and any supporting determinations based on intrinsic evidence. *Knowles Elecs. LLC v. Cirrus Logic, Inc.*, 883 F.3d 1358, 1361–62 (Fed. Cir. 2018). We review any subsidiary factual findings involving extrinsic evidence for substantial evidence. *Id.* at 1362.

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<sup>1</sup> PMC's challenge is more generally directed to the "encryption/decryption terms" of the challenged claims, a group that includes this phrase. *See* Appellant's Br. 27–50. We focus on this phrase because it is dispositive for the challenged claims. PMC also challenges the Board's construction of the claim terms "locates" and "locating," which appear only in claim 13 and its dependent claims. *See id.* at 50–55. Because we reverse the Board's determination for claim 13 and its dependent claims based on the Board's erroneous construction of "an encrypted digital information transmission," we do not reach this issue.

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