

NOTE: This disposition is nonprecedential.

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

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**BARKAN WIRELESS ACCESS TECHNOLOGIES,  
L.P.,**  
*Plaintiff-Appellant*

v.

**CELLCO PARTNERSHIP, d/b/a VERIZON  
WIRELESS,**  
*Defendant-Appellee*

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2017-2264

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Appeal from the United States District Court for the Eastern District of Texas in No. 2:16-cv-00293-JRG-RSP, Judge J. Rodney Gilstrap.

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Decided: August 29, 2018

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ROBERT DAVID KATZ, Katz PLLC, Dallas, TX, argued for plaintiff-appellant.

MEGAN S. WOODWORTH, Venable LLP, Washington, DC, argued for defendant-appellee. Also represented by FRANK C. CIMINO, JR, JONATHAN L. FALKLER.

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Before WALLACH, TARANTO, and STOLL, *Circuit Judges*.

STOLL, *Circuit Judge*.

Barkan Wireless Access Technologies, L.P. appeals the district court's construction of the term "Access Point," under which Appellee Cellco Partnership d/b/a Verizon Wireless concededly does not infringe the asserted claims. We determine that the district court erred by concluding that the patents expressly define "Access Point," but we nevertheless affirm the district court's ultimate decision.

#### BACKGROUND

Barkan's U.S. Patent Nos. 8,559,369 and 9,042,306<sup>1</sup> acknowledge "a growing number of WiFi public hot-spots (or Access Points—'AP')" and explain that such Access Points allow WiFi-enabled devices (called "STAs")—such as laptops—within their range to connect to the internet. *See* '306 patent col. 1 ll. 30–33. The patents describe a "viral-like method" for spreading internet access. *Id.* at col. 1 ll. 20–26. According to the invention, as shown in Figure 1, STA 11 connects to Access Point 10 and spreads connectivity by itself acting as an Access Point through which additional STAs 12 and 13 connect to the internet. *See id.* at col. 5 ll. 58–64, col. 11 ll. 33–41.

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<sup>1</sup> These related patents share substantially similar specifications. We refer to the '306 patent unless otherwise noted.

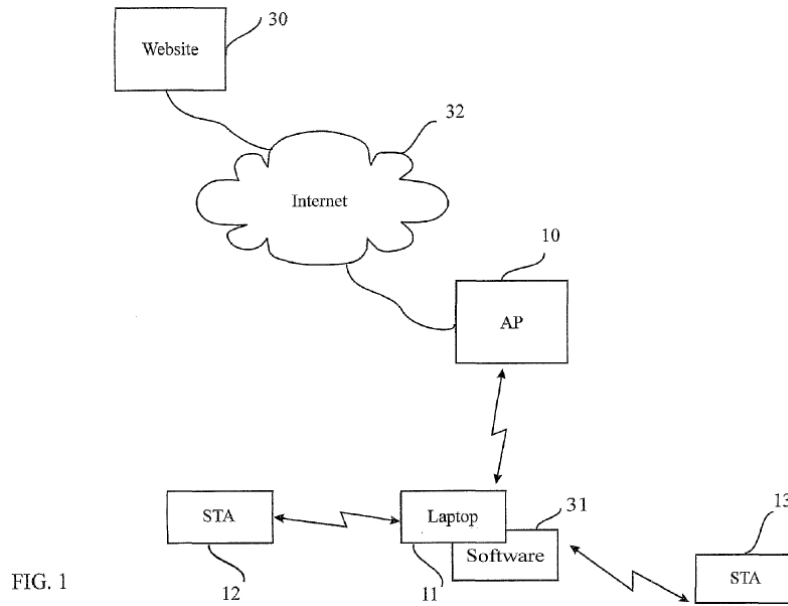


FIG. 1

*Id.* at Fig. 1.

Claim 1 of the '306 patent illustrates the invention:

1. A computing device comprising:

at least one communication module adapted to:

(1) wirelessly connect said computing device to an IP based network via a first wireless access point (AP) having a first AP Identification (APID); and

(2) wirelessly communicate with other wireless enabled computing devices;

a user interface and display adapted to allow a user of said computing device to interact with destinations over the IP based network, through the first wireless AP, using a first public IP address associated with the computing device; and

an AP module adapted to:

(1) provide a given device of the other wireless enabled computing devices with access to the IP based network by causing said computing device to serve the given device as a second AP having a second APID, distinct from the first APID, and provide the given device access to the network via the first AP; and

(2) tunnel data traffic from the given device, through said computing device, through the first AP, through the IP network, to a proxy server, such that the proxy server acts as a proxy of the given device and the data traffic is secure from said computing device and first AP and the given device operates on the network using a second public IP address distinct from the first public IP address, with the second public IP address associated with the given device.

*Id.* at col. 32 ll. 26–53. Each independent claim at issue in this case similarly recites “a first wireless access point” and requires a device connected to the first wireless access point to serve as a “second A[ccess] P[oint].” *Id.* at col. 33 ll. 30–65, col. 35 l. 50–col. 36 l. 10; ’369 patent col. 32 ll. 38–62; J.A. 1–2.

In 2016, Barkan sued Verizon for infringing the ’369 and ’306 patents. As relevant to this appeal, the parties briefed competing constructions of several terms, including “Access Point.” Barkan urged the district court to construe “Access Point” as “a device that connects a computer to a network,” thus including both WiFi and cellular connections. *See Barkan Wireless Access Techs., L.P. v. Cellco P’ship*, No. 2:16-cv-293, 2017 WL 2099565, at \*11 (E.D. Tex. May 14, 2017) (“*Markman Order*”). Verizon proposed construing the term as “WiFi public hotspots,” arguing that the specification defined “Access Point” and limited the term to WiFi connections by dis-

closing “a growing number of WiFi public hotspots (or Access Points—‘AP’).” *Id.*

The district court agreed that the specification expressly defined “Access Points” as “WiFi public hotspots.” *See Markman Order*, 2017 WL 2099565, at \*12–14; J.A. 4. Accordingly, the district court construed “Access Point” as proposed by Verizon. The parties then stipulated to noninfringement, stating “the Accused Instrumentalities do not connect to an IP based network via a first wireless access point wherein the first wireless access point is a WiFi public hotspot.” J.A. 3. Barkan now appeals. We have jurisdiction. 28 U.S.C. § 1295(a)(1).

#### DISCUSSION

We review the ultimate construction of the claim, a legal question, de novo. *See MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1310 (Fed. Cir. 2017). Constructions based solely on intrinsic evidence receive de novo review, and we review any subsidiary factual findings for clear error. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

#### I

We first consider whether the specification defines “Access Point.” A patentee may define claim terms in the specification. When the patentee acts as his own lexicographer, his “definition [u]sually . . . is dispositive; it is the single best guide to the meaning of a disputed term.” *Jack Guttman, Inc. v. Kopykake Enters., Inc.*, 302 F.3d 1352, 1360 (Fed. Cir. 2002) (quoting *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (alterations in original)). Our cases, however, set a high standard for lexicography. “[A] patentee must ‘clearly set forth a definition of the disputed claim term’” and “‘clearly express an intent’ to redefine the term.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (quoting *CCS Fitness, Inc. v. Brunswick*

*Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002); *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2008)). We hold that, given other statements in the specification, the statement “there is a growing number of WiFi public hotspots (or Access Points—‘AP’),” ’306 patent col. 1 ll. 30–31, does not meet this standard.

The district court read “WiFi public hotspots (or Access Points—‘AP’)” as an “explicit[]” definition because it uses “or” and capitalizes “Access Points” and because the specification refers in the next sentence to “these APs.” *Markman Order*, 2017 WL 2099565 at \*12.

But the specification uses similar “or” phrases when discussing Access Points (or APs) that deliver no definitions. A section explaining “managed networks, such as cellular networks, campuses, or office environment[s]” states that “[i]n managed networks, the APs (*or the cellular cells*) are synchronized . . . and are usually controlled by some other network entity (*e.g., BSC—base station controller in cellular systems*).” ’306 patent col. 2 ll. 52–61 (emphases added). These parentheticals analogize WiFi APs and cellular technology; they do not define “APs” or “network entit[ies].” Because “(or the cellular cells)” defines no term, we see no basis to read the parenthetical “(or Access Points)” as a definition based on its structure. Similarly, though Verizon asserts parentheticals inherently suggest a definition, we disagree in the context of this specification. *See* Appellee’s Br. 11–13.

We also cannot conclude “Access Point’s” capitalization necessarily designates a definition. Elsewhere, this specification capitalizes “Internet,” “Portable,” “Laptops,” and even “Connect” mid-sentence. But it does not define these terms. *See, e.g.*, ’306 patent col 1 ll. 20–33.

And although the specification’s use of “[t]hese APs” to refer back to “WiFi public hotspots (or Access Points—‘AP’),” *id.* at col. 1 ll. 30–33, supports construing “Access Point” to encompass “WiFi public hotspots,” it does not

evinced a clear intent to define “Access Point.” As in the preceding paragraph, “these” may simply reference something recently described.

## II

Having determined that the specification does not clearly define the term “Access Point,” we now consider its appropriate construction. We construe claim terms according to their ordinary meaning, that is, their “meaning to the ordinary artisan after reading the entire patent.” See *Eon Corp. IP Holdings v. Silver Spring Networks*, 815 F.3d 1314, 1320 (Fed. Cir. 2016) (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc)).

The parties agree that an Access Point connects a device to a network. See Appellant’s Br. 5; Appellee’s Br. 4–5, 10 (explaining that a “WiFi public hotspot” allows devices to connect to the internet). They dispute how the Access Point, and particularly, the claimed “first wireless access point,” must make that connection on the device (not network) side of the Access Point—in terms of Figure 1, the nature of the connection from AP 10 to Laptop 11 and from Laptop 11 to STA 12 (not from AP 10 to Internet 32). See Appellant’s Br. 7–8; Oral Arg. at 10:07–11:15, <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2017-2264.mp3>. Barkan argues that an Access Point may use any wireless technology, including both WiFi and cellular, while Verizon argues an Access Point must use WiFi. We hold that Barkan’s broad construction lacks support in the specification and conclude that the district court properly rejected it.

WiFi, not cellular technology, characterizes the patents. The specification envisions WiFi “compet[ing] with or complement[ing] . . . cellular service,” ’306 patent col. 2 ll. 25–34, and it announces the disclosure as one “for producing a wireless [i]nternet connection to *WiFi*-

*enabled devices,” id.* at Abstract (emphasis added). The specification describes WiFi public hotspots as Access Points, *id.* at col. 1 ll. 30–33, and it describes the STAs in its system as “WiFi-enabled,” *id.* at col. 1 ll. 31–33. The specification details WiFi-specific security configurations, *id.* at col. 8 ll. 45–59. It notes that the system capitalizes on “local” networks, while explaining that “the coverage of a single WiFi AP is very small,” *id.* at col. 9 ll. 21–25, col. 2 ll. 35–37. And it emphasizes the “innovative,” “viral-like” spread of its system, *see, e.g., id.* at col. 1 ll. 20–26, col. 9 ll. 40–54, col. 12 ll. 5–48, a concept Barkan concedes relates only to WiFi, Oral Arg. at 12:00–12:15, 14:14–14:18.

Further, the patents address WiFi-specific problems. The specification advertises improved handovers, which overcome the “major difficult[y] . . . that the coverage of a single WiFi AP is very small,” ’306 patent col. 2 ll. 7–18, col. 2 ll. 35–41. It states that the invention “prevent[s] exhaustion of resources at the APs,” *id.* at col. 8 ll. 15–20, col. 25 ll. 38–49, an issue associated with WiFi protocols, *id.* at col. 4 ll. 57–65. It touts that the invention provides service (legally) when “WiFi coverage . . . exist[s] but [the Access Point] is locked,” *see id.* at col. 5 ll. 16–19, col. 9 ll. 7–8, and it explains that the invention reduces location updates problematic under “[c]urrent WiFi protocols,” *see id.* at col. 5 ll. 20–45, col. 8 ll. 21–36, col. 26 ll. 1–18.

The “Disclosure of Invention” and “Best Mode for Carrying out the Invention” sections of the specification refer to “WiFi” at least twenty-two times. ’306 patent col. 5 l. 54–col. 32 l. 23. In contrast, as Barkan concedes, neither section refers to cellular technology at all. *See* Oral Arg. at 8:16–9:27 (“At the moment, I don’t see references specifically to cellular . . . .”); *Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1364 (Fed. Cir. 2016) (“[T]he patentee’s choice of preferred embodiments can shed light on the intended scope of the claims.” (quoting



*Astrazeneca AB v. Mut. Pharm. Co.*, 384 F.3d 1333, 1340 (Fed. Cir. 2004)).

The specification does mention cellular technology in its “Background Art” section; however, it does so to explain concepts borrowed from the cellular context and to contrast WiFi and cellular technology. The patent introduces handovers by referencing cellular networks, ’306 patent col. 2 ll. 52–55, and it compares WiFi and cellular technology to explain the unique challenges of location updates with WiFi, *id.* at col. 5 ll. 31–42; *see also id.* at col. 5 ll. 20–22 (comparing low battery operation for WiFi and cellular). But the specification nowhere recounts an embodiment of the claimed invention in which the Access Points use cellular technology—rather, the specification’s emphasis on WiFi undermines Barkan’s broad construction of “Access Point.” *See GPNE Corp. v. Apple Inc.*, 830 F.3d 1365, 1370 (Fed. Cir. 2016) (construing term based on “repeated” description of “the devices in the patented system”); *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1318 (Fed. Cir. 2014) (“The fact that [feature] is ‘repeatedly and consistently’ used to characterize the invention strongly suggests that it should be read as part of the claim.” (quoting *Eon-Net LP v. Flagstar Bancorp.*, 653 F.3d 1314, 1321–23 (Fed. Cir. 2011))).

Barkan argues that dependent claims requiring cellular networks or systems, equating “Access Points” and cellular cells, and mandating multiple wireless protocols, *see, e.g.*, ’306 patent col. 32 l. 62–col. 33 l. 3, conclusively demonstrate that “Access Point” includes cellular technology. Appellant Br. 13–15. “[D]ependent claims can aid in interpreting the scope of claims from which they depend, [however,] they are only an aid to interpretation and are not conclusive. The dependent claim tail cannot wag the independent claim dog.” *Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350, 1360 (Fed. Cir. 2016) (quoting *N. Am. Vaccine, Inc. v. Am. Cyanamid Co.*, 7 F.3d 1571, 1577 (Fed. Cir. 1993)). The

dependent claims Barkan identifies do not compel a construction of “Access Point” inconsistent with the specification, particularly where these claims were added after the patent application filing date.

Barkan also asserts that limiting “Access Point” to WiFi improperly excludes wired embodiments disclosed in the specification. Appellant Br. 8–9 (citing ’306 patent col. 11 ll. 42–44). Again, we disagree. The specification states:

When laptop 11 is connected to AP 10 through a wired connection, it can simply set its wireless connection as an AP (Infrastructure mode). However, *when laptop 11 is connected to AP 10 through a wireless connection*, the situation is more complex. *Disclosed is a novel method* in which laptop 11 can be connected to AP 10 and serve as an AP *using only a single wireless network card*.

’306 patent col. 11 ll. 42–48 (emphases added). If anything, this disclosure undermines Barkan’s argument—only *wireless* connections between the device and the first Access Point implicate the “novel method.” *Id.*; *see also id.* at Title (describing invention as a “Wireless Internet System and Method”).<sup>2</sup> Indeed, each asserted independent claim commands wireless device-Access Point connection. *Id.* at col. 32 ll. 26–53, col. 33 ll. 30–65, col. 35 l. 50–col. 36 l. 10; ’369 patent col. 32 ll. 38–62; J.A. 1–2.

We therefore conclude that although the specification does not expressly define “Access Point,” the district court

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<sup>2</sup> In its reply, Barkan also cites the Abstract’s discussion of “connect[ing] a STA by wire to [a] network,” Appellant’s Reply Br. 4. But that disclosure relates to a “method for *configuring* STAs to connect to a *wireless* network.” ’306 patent Abstract (emphases added).

did not err in rejecting Barkan's proposed construction in favor of Verizon's. Accordingly, the district court's judgment of noninfringement is affirmed.

CONCLUSION

We have considered the parties' remaining arguments and find them unpersuasive. Thus, for the foregoing reasons, we affirm the district court.

**AFFIRMED**

COSTS

Costs to Appellee.