

Filed on behalf of TQ Delta, LLC

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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DISH NETWORK, L.L.C.,  
Petitioner,  
v.

TQ DELTA, LLC,  
Patent Owner

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Case IPR2016-01469  
Patent No. 9,094,268

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**PATENT OWNER'S NOTICE OF APPEAL**

*Patent Owner's Notice of Appeal*  
*IPR2016-01469*  
*Patent No. 9,094,268*

Pursuant to 35 U.S.C. §§ 141, 142, and 319, 37 C.F.R. §§ 90.2, 90.3, and 104.2, and Rule 4(a) of the Federal Rules of Appellate Procedure, Patent Owner TQ Delta, LLC ("Patent Owner") hereby appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision (Paper 44) entered by the Patent Trial and Appeal Board on February 10, 2018, and all rulings leading up to that decision.

In particular, and in accordance with 37 C.F.R. § 90.2(a)(3)(ii), Patent Owner identifies at least the following issues on appeal:

- The Board's finding that Claims 1, 2, 11, and 12 of U.S. Patent No. 9,094,268 are unpatentable as obvious over Bowie, Morelli, and ANSI T1.413;
- The Board's finding that Claims 4, 14, 16, and 18 of U.S. Patent No. 9,094,268 are unpatentable as obvious over Bowie and Morelli;
- The Board's claim construction; and
- Any Board finding, determination, judgment, or order supporting or related to the aforementioned issues as well as all other issues decided adversely to Patent Owner in any orders, decisions, ruling, and opinions.

Patent Owner is concurrently filing a copy of this Notice of Appeal with the Director of the United States Patent and Trademark Office and the Patent Trial and

*Patent Owner's Notice of Appeal*  
*IPR2016-01469*  
*Patent No. 9,094,268*

Appeal Board, and a copy of the same, along with the required fees, with the United States Court of Appeals for the Federal Circuit.

Dated: April 9, 2018

Respectfully submitted,

/Peter J. McAndrews/

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*Lead Counsel for Patent Owner*

*Patent Owner's Notice of Appeal*  
*IPR2016-01469*  
*Patent No. 9,094,268*

**CERTIFICATE OF FILING**

The undersigned hereby certifies that, in addition to being electronically filed through PTAB E2E, a true and correct copy of the above-captioned **NOTICE OF APPEAL** is being filed by hand with the Director on April 9, 2018, at the following address:

Director of the U.S. Patent & Trademark Office  
c/o Office of the General Counsel, 10B20  
Madison Building East  
600 Dulany Street  
Alexandria, VA 22314

The undersigned also hereby certifies that a true and correct copy of the above-captioned **NOTICE OF APPEAL** and the filing fee is being filed via CM/ECF with the Clerk's Office of the United States Court of Appeals for the Federal Circuit on April 9, 2018.

Dated: April 9, 2018

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*Patent Owner's Notice of Appeal*  
*IPR2016-01469*  
*Patent No. 9,094,268*

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing **Patent Owner's Notice of Appeal** was served on April 9, 2018, via email to counsel for Petitioners at the following:

Lead Counsel	Back-up Counsel
<p>Heidi L. Keefe Cooley LLP ATTN: Patent Group 1299 Pennsylvania Ave., NW, Suite 700 Washington, DC 20004 Tel: 650-843-5001 Fax: 650-849-7400 USPTO Reg. No. 40,673 <a href="mailto:hkeefe@cooley.com">hkeefe@cooley.com</a> <a href="mailto:zpatdcdocketing@cooley.com">zpatdcdocketing@cooley.com</a></p>	<p>Stephen McBride ATTN: Patent Group 1299 Pennsylvania Ave., NW, Suite 700 Washington, DC 20004 Tel: 703-456-8000 Fax: 703-456-8100 <a href="mailto:smcbride@cooley.com">smcbride@cooley.com</a> <a href="mailto:Dish-TQDelta@cooley.com">Dish-TQDelta@cooley.com</a> <a href="mailto:zpatdcdocketing@cooley.com">zpatdcdocketing@cooley.com</a></p> <p>Jennifer Volk ATTN: Patent Group 1299 Pennsylvania Ave., NW, Suite 700 Washington, DC 20004 Tel: 703-456-8000 Fax: 703-456-8100 USPTO Reg. No. 62,305 <a href="mailto:jvolkfortier@cooley.com">jvolkfortier@cooley.com</a></p>

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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DISH NETWORK, LLC,  
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TQ DELTA, LLC,  
Patent Owner.

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Case IPR2016-01469  
Patent 9,094,268 B2

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Before SALLY C. MEDLEY, TREVOR M. JEFFERSON, and  
MATTHEW R. CLEMENTS, *Administrative Patent Judges*.

JEFFERSON, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*Inter Partes* Review  
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

## I. INTRODUCTION

We instituted *inter partes* review, pursuant to 35 U.S.C. § 314, on a Petition (Paper 1, “Pet.”) filed by DISH Network L.L.C. (“Petitioner”) requesting *inter partes* review of claims 1, 2, 4, 11, 12, 14, 16 and 18 of U.S. Patent No. 9,094,268 B2 (Ex. 1001, “the ’268 patent”) owned by TQ Delta, LLC (“Patent Owner”). This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed below, Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable. Patent Owner’s Motion to Exclude is *dismissed*.

### A. Procedural History

Petitioner filed a Petition requesting an *inter partes* review of claims 1, 2, 4, 11, 12, 14, 16 and 18 of the ’268 patent. Pet. Patent Owner filed a Preliminary Response to the Petition. (Paper 8, “Prelim. Resp.”). We instituted *inter partes* review of (1) claims 1, 2, 11, and 12 of the ’268 patent as unpatentable as obvious under 35 U.S.C. § 103(a) over Bowie,<sup>1</sup> Morelli,<sup>2</sup> and ANSI T1.413,<sup>3</sup> and (2) claims 4, 14, 16, and 18 of the ’268 patent as unpatentable as obvious under 35 U.S.C. § 103(a) over Bowie and Morelli. Paper 13 (“Inst. Dec.”), 21.

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<sup>1</sup> U.S. Patent No. 5,956,323; issued Sep. 21, 1999 (Ex. 1004, “Bowie”).

<sup>2</sup> U.S. Patent No. 6,236,674 B1; issued May 22, 2001 (Ex. 1005, “Morelli”).

<sup>3</sup> *Network and Customer Installation Interfaces – Asymmetric Digital Subscriber Line (ADSL) Metallic Interface*, AMERICAN NATIONAL STANDARDS INSTITUTION (ANSI) T1.413-1995 STANDARD (Ex. 1006, “ANSI T1.413”).

Patent Owner filed a Patent Owner Response (Paper 26, “PO Resp.”), and Petitioner filed a Corrected Reply to Patent Owner’s Response (Paper 32, “Reply”).

We held a hearing on November 8, 2017, and a transcript of the hearing is included in the record. Paper 43 (“Tr.”).

### *B. Related Proceedings*

Petitioner states that the ’268 patent is asserted in *TQ Delta LLC v. Comcast Corp., et al.*, Case No. 1:15-cv-00611 (D. Del.); *TQ Delta LLC v. CoxCom LLC et al.*, Case No. 1:15-cv-00612 (D. Del.); *TQ Delta LLC v. DirecTV et al.*, Case No. 1:15-cv-00613 (D. Del.); *TQ Delta LLC v. DISH Network Corp. et al.*, Case No. 1:15-cv-00614 (D. Del.); *TQ Delta LLC v. Time Warner Cable Inc., et al.*, Case No. 1:15-cv-00615 (D. Del.); and *TQ Delta LLC v. Verizon Services Corp.*, Case No. 1:15-cv-00616 (D. Del.). Pet. 1–2, Paper 4, 2–3. The ’268 patent is related to U.S. Patent No. 8,611,404, which is involved in IPR2016-01160, IPR2016-01466, and IPR2016-01470.

### *C. The ’268 Patent*

The ’268 patent describes “a multicarrier transmission system having a low power sleep mode and a rapid-on capability.” Ex. 1001, 3:35–37. The sleep mode idles a multicarrier transceiver when it is not needed to transmit or receive data, with transmission and reception capabilities quickly restored without requiring full initialization after inactivity. *Id.* at Abstract. The system includes a transceiver at the local central telephone office’s location (“CO transceiver”) and a transceiver at the customer’s premises (“CPE

transceiver”), which communicate over a telephone line. *Id.* at 3:66–4:9.

Figure 1 reproduced below depicts a preferred embodiment of the invention.

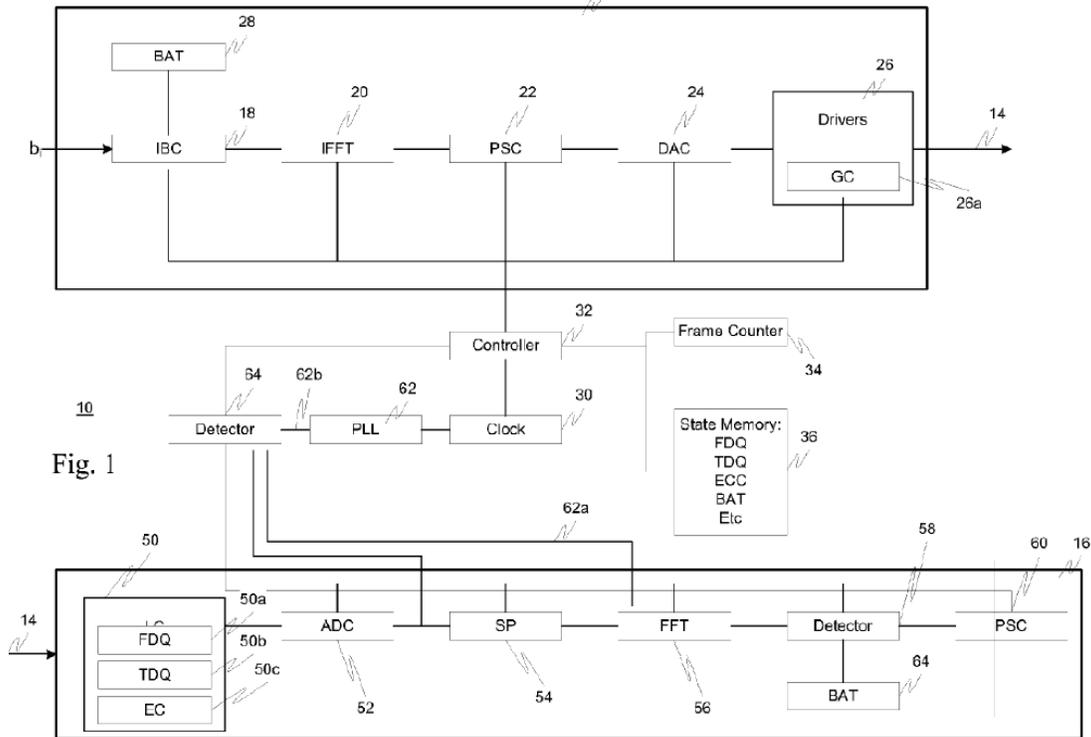


Figure 1 shows a block diagram of a multicarrier transmission system. *Id.* at 3:50–53. Each transceiver includes “DSL transceiver 10” with “transmitter section 12 for transmitting data over digital subscriber line 14 and receiver section 16 for receiving data from the line.” *Id.* at 4:18–21, FIG. 1. In one embodiment, the transmitter and receiver sections 12, 16 enter a low power mode (or “sleep” mode), where power is reduced or cut off to the digital modulators/demodulator portions (sections 12, 16) of the transmitter and receiver sections (corresponding to the IFFT 20 (data modulator) and FFT 56 (demodulator) of the CPE transceiver of Figure 1). *Id.* at 6:66–7:21. In

another embodiment, the transceiver is placed into a “partial” sleep mode “in which only part of each transceiver is powered down.” *Id.* at 8:52–60.

The ’268 patent specification discloses that a transceiver entering a low power mode must first store a variety of line parameters comprising its “state memory.” *Id.* at 6:66–7:14. During sleep mode state, the CO transceiver monitors data subscriber line 14 for an “Exiting Sleep Mode” signal from the CPE transceiver. *Id.* at 6:64–69. The CPE transceiver transmits this signal when the “controller receives an ‘Awaken’ indication. . . . In response to the ‘Awaken’ signal, the CPE transceiver retrieves its stored state from the state memory 38 [and] restores full power to its circuitry.” *Id.* at 7:64–8:6.

#### *D. Illustrative Claims*

Claims 1 and 11 are independent and reproduced below as illustrative of the claims at issue:

1. A method, in a multicarrier transceiver, comprising:  
transmitting or receiving a message to enter a low power mode; and  
entering the low power mode, wherein a transmitter portion of the transceiver does not transmit data during the low power mode and a receiver portion of the transceiver receives data during the low power mode, wherein the transceiver is a device that is capable of transmitting or receiving internet and video data.
  
11. A method, in a multicarrier transceiver, comprising:  
transmitting or receiving a message to enter a low power mode for a transmitter portion while a receiver portion remains in a full power mode; and

entering the low power mode for the transmitter portion while the receiver portion remains in the full power mode, wherein the transceiver is a device that is capable of transmitting or receiving internet and video data.

Ex. 1001, 10:6–14, 10:64–11:4.

## II. ANALYSIS

### A. *Claim Interpretation*

We interpret claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *see* *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142–46 (2016). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

#### 1. “*low power mode*”

Our Decision on Institution construed “low power mode” to mean “a mode in which power to the circuitry is reduced for the purpose of power conservation.” Inst. Dec. 7. Patent Owner does not propose a different construction for this term (PO Resp. 23–24) and Petitioner does not address this construction. Based on the record developed during this proceeding, we continue to apply this construction.

2. “*transceiver*”

Our Decision on Institution construed “transceiver” as “a communications device capable of transmitting and receiving.” Inst. Dec. 8. Patent Owner does not propose a different construction for this term (PO Resp. 23–24) and Petitioner does not address this construction. Based on the record developed during this proceeding, we continue to apply this construction.

3. “*data*”

Our Decision on Institution determined that no further interpretation is required for “data.” Inst. Dec. 8. Neither party addressed this determination in subsequent briefing. Based on the record developed during this proceeding, we determine that no further interpretation is required for “data.”

4. “*maintaining synchronization*”

Dependent claims 2 and 12 recite “maintaining synchronization with a second transceiver during the low power mode.” Petitioner did not propose a construction for, and our Decision on Institution did not construe this term.

Patent Owner argues that

the broadest reasonable interpretation of “maintaining synchronization with a second transceiver,” in view of the specification, is “maintaining a timing relationship between two transceivers by correcting errors or differences in the timing of the timing reference of the transceiver and the timing reference of a second transceiver,” and the Board should adopt this construction.

PO Resp. 26 (citing Ex. 2012 ¶ 57). Patent Owner argues that the ’268 patent explains synchronization based on clock synchronization reference signals between the transmitter and receiver clocks and not synchronization of

incoming packet data. PO Resp. 25–27 (citing Ex. 1001, 4:62–5:4, 5:44–50; Ex. 2012 ¶¶ 56, 59). Patent Owner further contends that the '268 patent

explains that the clock of a 'remote transceiver, such as that at a subscribers premises will be synchronized' to the clock in CO transceiver, i.e., a master clock. Ex. 1001 at 4:64-67. Thus, in the context of the '268 patent maintaining synchronization is the process used to 'drive[] clock 30 [in one transceiver] in synchronism with the Master Clock in the driving transmitter [in another transceiver].' Ex. 1001 at 5:53-55.

PO Resp. 25. Thus, Patent Owner argues that the construction consistent with the specification of the '268 patent requires maintaining synchronization as described in the '268 patent, which means “maintaining a timing relationship between two transceivers by correcting errors or differences in the timing of the timing reference of the transceiver and the timing reference of a second transceiver.” PO Resp. 26–27.

Patent Owner argues that their proposed construction is consistent with technical dictionaries that refer to checking and correcting variations in timing. PO Resp. 27 (citing Ex. 2017, 360; Ex. 2012 ¶ 59). Patent Owner also asserts that the Board's preliminary construction in its Decision to Institute in a related case, IPR2016-01466, credits an argument that maintained synchronization between transceivers based on timing and correction of timing errors between DSL transceivers. PO Resp. 27–28 (citing *Cisco Sys., Inc. v. TQ Delta, LLC*, No. IPR2016-01466, slip op. at 11 (PTAB Feb. 9, 2017) (Paper 7) (“Petitioner explains that ANSI T1.413 uses a synchronization symbol in order to maintain timing by correcting timing errors in communication between DSL transceivers.” (citing Ex. 1007, 64)); Ex. 2012 ¶ 59).

Petitioner responds that the '268 patent describes two types of synchronization, timing and frame synchronization, both of which are used to maintain synchronization. Reply 1–2 (citing Ex. 1001, 5:5–20, 5:42–67, 6:50, 8:64–9:10; 9:31–36; Ex. 2012 ¶ 55;<sup>4</sup> Ex. 1060, 15:6–16:8, 19:4–10)). Thus, Petitioner argues that Patent Owner’s proposed construction is too narrow, as the '268 patent does not disclose synchronizing as limited to time syncing “by correcting errors or differences between a timing reference of the transmitter and a timing reference of the receiver of the signal.” Reply 2. Indeed, Petitioner contends that the embodiment in the '268 patent specification that uses timing reference signals (Ex. 1001, 5:42–67) does not require correcting errors or differences between timing references and is merely a preferred embodiment that does not limit “maintaining synchronization” to the embodiment discussed. *Id.* at 2–3 (citing Ex. 1001, 3:51–53, Fig. 1).

Petitioner argues that Patent Owner’s declarant admits that the claims of the '268 patent do not specify a particular type of synchronization. Reply 1–2 (Ex. 1060, 19:4–10). Furthermore, Petitioner asserts the Patent Owner’s declarant admits that frame synchronization can be used to maintain superframe alignment or synchronization. Reply 1–2 (citing Ex. 1001, 5:5–20; Ex. 1060, 24:6–15); *see also* Ex. 1001, 7:52–54 (discussing frame synchronization during low power mode). Thus, Petitioner argues that Patent Owner’s proposed construction of “maintaining synchronization” improperly

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<sup>4</sup> Petitioner’s Reply cites Exhibit 2003, but appears to refer to Exhibit 2012, which is the Declaration of Douglas A. Chrissan, PhD. Reply 1.

limits the claim term to just timing synchronization and excludes frame synchronization. Reply 2.

Petitioner argues that the dictionary definition cited by Patent Owner quotes the definition for “synchronous transmission” and not “synchronization” as recited in the claims. Reply 3–4; Ex. 1061, 6. Petitioner also notes that the related proceeding, IPR2016-01466, cited by Patent Owner (PO Resp. 27–28) involved a different set of claim terms—“synchronization signal” and “synchronization frame”—that are not present in the challenged claims of the ’268 patent. Reply 4. Finally, Petitioner argues that “maintaining synchronization,” which must encompass both time and frame synchronization, is not limited to time synchronization and should be given its plain and ordinary meaning. *Id.*

Having considered the parties’ arguments and evidence, we do not agree with Patent Owner’s proposed construction that “maintaining synchronization” requires timing synchronization by correcting errors or differences between timing references. The claims of the ’268 patent do not recite “synchronization signal” or “synchronization frame” but refer only to “maintaining synchronization” during low power mode without specification as to the method of synchronization. *See, e.g.*, Ex. 1001, 10:6–17 (claims 1 and 2). Indeed, claims 2 and 12 do not recite any particular synchronization signal or synchronization frame as a limitation.

We are not persuaded by Patent Owner’s argument that the broad recitation of “maintaining synchronization” excludes the frame synchronization described in the ’268 patent specification. Patent Owner’s declarant testified that “in the context of the ’268 patent, there are two

different types of synchronization that occur between transceivers: timing (clock) synchronization and frame synchronization” (Ex. 2012 ¶ 55) and that the ’268 specification provides an example of both types of synchronization (Ex. 1060, 15:6–16:8). In the examples cited by Patent Owner’s declarant (Ex. 1001, 4:42–58, 5:16), we find no support for limiting “maintaining synchronization,” as recited in claims 2 and 12, to timing synchronization by “maintaining a timing relationship between two transceivers by correcting errors or differences in the timing of the timing reference of the transceiver and the timing reference of a second transceiver” as Patent Owner asserts. PO Resp. 26; *see* Ex. 1060, 15:6–16:8. Instead, we find that the ’268 patent discusses several types of synchronization, including synchronization frames, synchronizing pilot tones, and timing signals. *See* Ex. 1001, 5:5–20, 5:42–67, 6:50, 8:64–9:10; 9:31–36.

We also are not persuaded by Patent Owner’s argument regarding the preliminary construction of limitations in a related case, IPR2016-01466, being consistent with Patent Owner’s narrow construction. The claim terms at issue in that case involved limitations on distinct synchronization signals that are not present in the claims of the ’268 patent. Petitioner also points to testimony in a related case, IPR2016-01466, in which Patent Owner’s declarant admitted that the “by correcting” language in Patent Owner’s proposed construction was added in response to arguments made by Petitioner’s expert in that case and not because of teachings in the ’268 patent specification. *Reply* 4 (citing Ex. 1062, 85:12–15). Thus, we do not find the related case persuasive with respect to the recited “maintaining synchronization” construction Patent Owner proposes. We also are not

persuaded by Patent Owner’s dictionary definition, which does not address “synchronization” as recited in the challenged claims, but instead, is directed to “synchronous transmission.” PO Resp. 27 (citing Ex. 2017; Ex. 2012 ¶ 59).

In sum, we agree with Petitioner that “maintaining synchronization” encompasses both timing and frame synchronization. Reply 2. Accordingly, we are not persuaded by Patent Owner’s proposed construction that narrowly limits maintaining synchronization to timing synchronization by correcting errors, as Patent Owner proposes. Based on the full record, we determine that “maintaining synchronization” encompasses both timing and frame synchronization, but carries its ordinary and customary meaning.

5. *“parameter associated with [a/the] full power mode”*

Independent claim 4 recites “at least one parameter associated with a full power mode,” and independent claim 14 recites a similar limitation. Ex. 1001, 10:29–30, 11:17–20.

Patent Owner proposes construing this term to mean “parameter associated with the transmission and/or reception of data during normal operation.” PO Resp. 28 (citing Ex. 2012 ¶ 61). The ’268 patent describes storing a list of parameters comprising the “state” of transceiver. Ex. 1001, 6:66–7:14. Patent Owner argues that this list “includes communication protocol-specific parameters that are used for the transmission of data and does not include loop characteristics.” PO Resp. 29 (citing Ex. 2012 ¶ 62).

Petitioner counters that the term should have its ordinary and customary meaning. Reply 5–6. Petitioner argues that the list of characteristics Patent Owner relies on are merely exemplary. Petitioner contends that the ’268 patent expressly states that stored parameters “preferably include at least” the

items listed, indicating that other parameters may be stored. Reply 5–6 (citing Ex. 1001, 7:8–9). Absent a clear disavowal of scope, Petitioner argues that the claims are simply not limited to the types of parameters listed in the specification. Reply 5–6 (citing *Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1367 (Fed. Cir. 2012) (holding full scope of plain and ordinary meaning is appropriate “unless the patentee explicitly redefines the term or disavows its full scope”); *In re Am. Acad. Of Sci. Tech Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004) (holding that features relating to particular embodiments may not be read into the claims absent clear disclaimer in the specification)).

In light of the arguments and evidence presented, we are not persuaded that this term requires an express construction. Patent Owner’s proposed construction does not add necessary clarity to the claims, as it merely replaces “full power mode operation” with “transmission and/or reception of data during normal operation.” The parties, however, do not dispute the meaning of “full power mode operation.” Accordingly, an express construction is not necessary to resolve the disputes between the parties.

#### *B. Level of Ordinary Skill in the Art*

Petitioner contends that a hypothetical person of ordinary skill in the art, with respect to and at the time of the ’268 patent, “would hold a bachelor’s degree or the equivalent in electrical engineering (or related academic fields) and at least four years of additional work experience in the area of digital and/or telecommunication system design, as applicable to DSL systems, or,

alternately, eight years of equivalent work experience.” Pet. 12 (citing Ex. 1002 ¶¶ 26–33).

Patent Owner contends that such a person “would have had a bachelor’s degree in electrical engineering (or a similar technical degree or equivalent work experience) and at least 3 years of experience working with such multicarrier communication systems.” PO Resp. 21.

We determine that no express finding on a specific corresponding level of technical education and experience is necessary. Here, the level of ordinary skill in the art is reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

### *C. The Parties’ Post-Institution Arguments*

In our Decision on Institution, we concluded that the arguments and evidence advanced by Petitioner demonstrated a reasonable likelihood that claims 1, 2, 11, and 12 of the ’268 patent are unpatentable as obvious under 35 U.S.C. § 103(a) over Bowie, Morelli, and ANSI T1.413 and that claims 4, 14, 16, and 18 of the ’268 patent are unpatentable as obvious under 35 U.S.C. § 103(a) over Bowie and Morelli. Inst. Dec. 21. We must now determine whether Petitioner has established by a preponderance of the evidence that the specified claims are unpatentable over the cited prior art. 35 U.S.C. § 316(e). Our Order previously instructed Patent Owner that “any arguments for patentability not raised in the [Patent Owner Response] will be deemed waived.” Paper 14, 5–6; *see also* 37 C.F.R. § 42.23(a) (“Any material fact not specifically denied may be considered admitted.”); *In re Nuvasive, Inc.*, 842 F.3d 1376, 1379–1382 (Fed. Cir. 2016) (holding Patent Owner waived an

argument addressed in Preliminary Response by not raising the same argument in the Patent Owner Response). Additionally, the Board's Trial Practice Guide states that the Patent Owner Response "should identify all the involved claims that are believed to be patentable and state the basis for that belief." Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012).

With the complete record before us, we note that we have reviewed arguments and evidence advanced by Petitioner to support its unpatentability contentions where Patent Owner chose not to address certain limitations in its Patent Owner Response. In this regard, we determine that the record now contains persuasive, unrebutted arguments and evidence presented by Petitioner regarding the manner in which the asserted prior art teaches corresponding limitations of the claims against which that prior art is asserted. Based on the preponderance of the evidence before us, we conclude that the prior art identified by Petitioner teaches or suggests all uncontested limitations of the reviewed claims. The limitations that Patent Owner contests in the Patent Owner Response are addressed below.

*D. Obviousness of Claims 1, 2, 11, and 12 based on Bowie, Morelli, and ANSI T1.413 and Obviousness of Claims 4, 14, 16, and 18 based on Bowie and Morelli*

Petitioner contends that Bowie, Morelli, and ANSI T1.413 teach the limitations of claims 1, 2, 11, and 12. Pet. 23–43. Petitioner provides citations to prior art, argument, and declaration of Petitioner's declarant, Mr. Hoarty (Declaration of W. Leo Hoarty, Ex. 1002), in support of its

contentions. *Id.* Petitioner also contends that Bowie and Morelli teach the limitations of claims 4, 14, 16, and 18. Pet. 43–48.

*1. Principles of Law*

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We analyze this asserted ground based on obviousness with the principles identified above in mind.

*2. Bowie (Ex. 1004)*

Bowie discloses a power conservation system for transmission systems in which data is modulated over a communications loop from a central office location to a customer premise. Ex. 1004, 1:4–8. Bowie discloses that to provision ADSL service, ADSL units are located at each end of a wire loop, a first ADSL unit at the customer premises (CPE) and a second ADSL unit at the telephone company central office (COT). *Id.* at 3:51–58.

ADSL units enter a low power mode to reduce power requirements. *Id.* at 5:6–8. CPE unit initiates low power mode by sending a “shut-down” signal to the COT unit. *Id.* at 5:8–10. Both the CPE unit and COT unit may store

loop characteristics that enable rapid resumption of user data transmission when units return to full power mode. *Id.* at 5:18–25. Each unit then enters low power mode by shutting off the now unnecessary sections of the signal processing, transmitting, and receiving circuitry, including signal processing 111, transmitting 112, and receiving 113 circuitry. *Id.* at 5:26–28. After shutdown, the loop is in an inactive state. *Id.* at 5:28–29. During low power operation, circuitry 115 remains capable of detecting the resume signal. *Id.* at 5:28–29. This resume signal may be detected by the COT unit using a 16 kHz AC signal detector 115 that employs conventional frequency detection techniques and remains operative when the COT unit is in low-power mode. *Id.* at 5:52–56. The units return to full power mode after the CPE unit transmits to the COT unit a resume signal. *Id.* at 5:48–59. The stored loop characteristics are used to restore the loop parameters. *Id.* at 5:60–66.

### 3. *Morelli (Ex. 1005)*

Morelli discloses a transceiver with a low power mode (or sleep mode) operation. Ex. 1005, Abstract. Morelli includes a transmitter 12 and a receiver 16, where transmitter 12 can be placed in a low power mode to conserve power when data transmission is not necessary. *Id.* at 1:11–15, 2:4–10, 6:54–62. Receiver 16 can also be placed in a low power mode when packets are not being received, but upon detection of a packet, can be awoken from the low power mode to resume full power receipt of packets. *Id.* at 1:11–15, 2:37–58, 6:66–7:17, 8:43–49, 9:53–57, 14:6–19, 14:57–64, 19:7–10. Morelli also discloses that the receiver 16 remains in “active mode” while the transmitter 12 switches between a low power mode and full power mode, as needed to conserve power. *Id.* at 21:51–54. Morelli also discloses “data

packets” are communicated between transceivers, which include “synchronizing bits for synchronizing the receiver 16.” *Id.* at 9:1–3, 1:45–50, FIG. 2.

#### 4. *ANSI T1.413 (Ex. 1006)*

ANSI T1.413 discloses electrical characteristics of Asymmetric Digital Subscriber Line (ADSL) signals appearing at a network interface. Ex. 1006, Abstract. ADSL allows for the provision of Plain Old Telephone Service (POTS) and a variety of digital channels. *Id.* at 1. Digital channels consist of full duplex low-speed channels and simplex high-speed channels in the direction from the network to the customer premises, and low-speed channels in the opposite direction. *Id.*

#### 5. *Petitioner’s Contentions*

Petitioner contends that Bowie, Morelli, and ANSI T1.413 teach the limitations of claims 1, 2, 11, and 12. Pet. 23–43. Petitioner also contends that Bowie and Morelli teach the limitations of claims 4, 14, 16, and 18. Pet. 43–48.

Petitioner argues that Bowie, Morelli and ANSI T1.413 are analogous art from the same field of endeavor and directed to the field of power conservation (low power and sleep modes) in multicarrier communication systems. Pet. 26 (citing Ex. 1004, Abstract, 3:24–4:9, 4:55–58; Ex. 1005, Abstract, 11:45–53; Ex. 1006, 45, 70; Ex. 1002 ¶ 119).

Petitioner further argues that Bowie teaches a multicarrier transceiver and transmitting a message to enter low power mode, where the transceiver does not transmit data during low power mode of claim 1. Pet. 26–28. Petitioner argues that Bowie combined with Morelli discloses a low power

mode where the transmit transceiver (as Morelli suggests) is shut down while the receiver remains in active mode to receive data packets. Pet. 29–30 (citing Ex. 1005, 1:11–15, 1:45–50, 2:4–10, 6:43–51, 54–62, 8:16–20, 8:46–59; Ex. 1002 ¶¶ 148–149). Petitioner asserts that Bowie’s system can be modified to incorporate the teachings of Morelli by applying known techniques to yield predictable results. Pet. 30–34 (citing Ex. 1002 ¶¶ 151–55).

Petitioner argues that Bowie, Morelli, and ANSI T1.413, in combination, teach the “transceiver is a device that is capable of transmitting or receiving internet and video data” limitation of claim 1. Pet. 33–38. Petitioner provides articulated reasoning to combine the ADSL functions and capabilities of Bowie and ANSI T1.413 with the data transmission and low power system of Morelli in the transmission of video data. *Id.* (citing Ex. 1002 ¶¶ 156–65, 167–69).

With respect to dependent claim 2, which recites “maintaining synchronization with a second transceiver during the low power mode,” Petitioner cites Morelli, which teaches that “incoming data packets received by receiver portion 16 include ‘a synchronization field 46 including synchronizing bits for synchronizing the receiver 16.’” Pet. 38 (quoting Ex. 1005, 9:1–3; citing Ex. 1005, 8:60–9:17, 11:1–44, 1:45–50, FIG. 2). Petitioner argues that the system of Bowie could be modified to use the data packets and synchronization bits of Morelli in combination with ANSI T1.413. Pet. 39–40 (Ex. 1002 ¶¶ 113, 173–74). Specifically, Petitioner argues that:

It would also be obvious to maintain this synchronicity when Bowie’s modified system is the low power mode because the receiver is still operating at full power and receiving messages

while the unit 232, 242 is overall in a low power mode state. (*Id.*, ¶ 174.) Thus, a POSITA would understand that, because the first transceiver's receiver is still receiving data packets from the second transceiver, the two communicating transceivers must be synchronized. (*Id.*, ¶ 174.)

Pet. 39–40. With respect to independent claim 11 and dependent claim 12, which recite limitations similar to claims 1 and 2, Petitioner relies on the same arguments presented for claims 1 and 2. Pet. 40–43. With respect to claims 4, 14, 16, and 18, Petitioner relies on the arguments presented above for Bowie and Morelli with respect to claims 1, 2, 11, and 12 with respect to Bowie and Morelli. *Id.* at 43–49 (citing *id.* at 26–43).

Notwithstanding Patent Owner's arguments, which we have considered and which we address below, we are persuaded by a preponderance of the evidence by Petitioner's showing, which we adopt as our own findings and conclusions, that claims 1, 2, 11, and 12 of the '268 patent are unpatentable as obvious under 35 U.S.C. § 103(a) over Bowie, Morelli, and ANSI T1.413; and that claims 4, 14, 16, and 18 of the '268 patent are unpatentable as obvious under 35 U.S.C. § 103(a) over Bowie and Morelli.

#### 6. *Patent Owner's Contentions*

Patent Owner argues that Petitioner has failed to show that the combination of Bowie, ANSI T1.143, and Morelli teaches (1) the "receives data during the low power mode" limitation or that (2) "the receiver portion remains in the full power mode" while the transmitter is in low power mode limitation. PO Resp. 30–35. Patent Owner further argues that Bowie teaches away from the combination with Morelli because such a combination renders Bowie unsuitable for its intended purpose. *Id.* at 35–39. Patent Owner

contends that Bowie, ANSI T1.143, and Morelli do not teach “maintaining synchronization” during low power mode as recited in dependent claims 2 and 12. *Id.* at 39–49. Finally, Patent Owner asserts that the combination of Bowie, ANSI T1.143, and Morelli does not render obvious the limitation for “storing, during the low power mode, at least one parameter associated with [a/the] full power mode” recited in claims 4 and 14. PO Resp. 50–60. We address each of Patent Owner’s arguments below.

*a. Receives data during low power mode /  
Receiver remains in full power mode*

Patent Owner argues that the portion of Morelli cited by Petitioner is “boilerplate catch-all” that describes the function of either the transmitter or receiver in Morelli entering a sleep mode while the other is in active mode, but does not describe the function of the receiver in Morelli. PO Resp. 32 (citing Ex. 1005, 21:51–54 (stating that “[n]evertheless, it is equally possible to have either the transmitter 12 or the receiver 16 be designed to enter a sleep mode as described herein while the other is always in an active mode.”)). Patent Owner argues that Morelli is not an enabling disclosure as it describes alternatives that are contrary to the rest of the reference, which do not support Petitioner’s contentions. PO Resp. 32–33 (citing *Fromson v. Anitec Printing Plates*, 132 F.3d 1437, 1447 (Fed. Cir. 1997)).

Patent Owner also argues that Morelli does not clearly support receiving data during the low power mode by keeping the receiver in full power mode while the transmitter is in low power mode. PO Resp. 33. Specifically, Patent Owner argues that Petitioner assumes that the receiver portion is active during the transceiver’s low power mode, when it is equally

likely that the transceiver resumes full power mode to process data received during low power operation. *Id.* at 33–34 (citing Ex. 2012 ¶ 69). Patent Owner argues that Petitioner’s assumption improperly fills gaps in Morelli.

We are not persuaded by Patent Owner’s arguments, because as Petitioner notes, Morelli expressly discusses the receiver receiving while the transmitter is in low power mode. Reply 8–9; Ex. 1005, Fig. 6A (block 102), 15:46–52; 16:29–34). Thus, Morelli does not disclose mere boilerplate language that is not specific or nonenabling, but specifically discloses a transmitter 12 and receiver 16 in Figures 6A–9 where the receiver remains *on* while the transmitter is *off*. Reply 7–8. We are not persuaded by Patent Owner’s argument regarding Morelli’s Received Signal Strength Indicator (RSSI). PO Resp. 31–32, 33–34 (discussing RSSI). We do not agree with Patent Owner that Morelli’s teaching regarding using RSSI to determine whether to enter or exit a low power (“sleep”) (Ex. 1005, Abstract) could indicate that the receiver in Morelli is performing the RSSI function to determine when data is “available to be received,” but not actually using the receiver to receive data during the transceiver’s low power mode. *Id.* Such speculation is belied by the express teachings of Morelli.

As Petitioner argues, Morelli states that “it is equally possible to have either the transmitter 12 or receiver 16 be designed to enter a sleep mode as described herein while the other is always in an active mode” (Ex. 1005, 21:51–54). Pet. 23, 40–41. We are also persuaded by Petitioner’s argument and evidence that Morelli is enabling, as it discloses in Figures 6A–9 and accompanying embodiments that the data received by the receiver is provided to MAC 30 to determine if the received packet requires a response necessary

to switch the transmitter from sleep to active mode. Reply 9; Ex. 1005, Figs. 1 (control signal on line 38), 6A (block 102), 15:46–52, 15:59–62, 16:29–34; *see also* Pet. 40–41 (citing Ex. 1005, 1:45–50, 6:43–51, 8:16–20, 8:46–59, Fig. 2, 8:60–9:57, Fig. 3, 14:6–64, 19:7–10, 21:51–54). As Petitioner argues, in the case when Morelli determines that a response is not required, the receiver in Morelli is on and actively receiving data to make the determination based on the data received, while the transmitter is off or sleeping. Reply 8–9; Ex. 1005, Fig. 5A, 15:46–52; *see also* Pet. 40–41. We also note that Petitioner has provided testimony that a person of ordinary skill in the art would have been able to configure a circuit in accordance with the operation of Morelli and Bowie combined. Ex. 1002 ¶¶ 152–153; Pet. 41; Reply 8–9.

Accordingly, we determine that Morelli provides sufficient detailed disclosure teaching of a receiver in full power mode and the transmitter in low power mode as required in the challenged claims.

*b. Bowie Teaches Away*

Patent Owner argues that combining Morelli with Bowie is improper because “Bowie teaches away from keeping the receiver active during low power mode, and doing so would in fact render Bowie unsuitable for its intended purpose of achieving maximum power savings and improperly change its principle of operation.” PO Resp. 36–37. Patent Owner argues that Bowie “teaches that when its ADSL unit goes into the low power mode, the unit’s receiver, transmitter, and signal processing circuitry are all shut off. Importantly, Bowie expressly states that in its low power mode ‘the loop 220 will then be in an inactive state.’” PO Resp. 37 (citing Ex. 1005, 5:25–28; Ex. 2013, 76:15–77:5). Based on this inactive state in Bowie, Patent Owner

argues that “the intended purpose of Bowie is to save maximum power (up to five watts) when in the low power mode” and that modifying Bowie (to incorporate Morelli’s “off” transmitter and “on” receiver) would defeat this purpose. PO Resp. 37 (citing Ex. 1005, Abstract, Title, 1:4–8, 2:1–6, 3:1–5; Ex. 2012 ¶¶ 70, 71).

Petitioner replies that Bowie’s intended purpose is not to save “maximum” power and does not require its receiver, transmitter, and signal processing circuitry to remain “off” during low power mode. Reply 9–10. To the contrary, Bowie teaches explicitly that “the particular circuit components that can be placed in a low power mode may vary among differing brands, models, and versions of ADSL units.” Ex. 1004, 5:45–47; *see* Reply 10 (citing same); Ex. 1002 ¶¶ 153–154. Petitioner further argues that, even assuming some circuitry in Bowie’s receiver is “on” to receive a synchronization signal, power saving is still achieved because the transmitter is “off.” Reply 11.

We agree with Petitioner. Patent Owner’s argument relies on a mischaracterization of Bowie, which teaches ways to reduce power, but does not teach that “maximum” power reduction is its intended purpose. Patent Owner also relies heavily on Bowie’s teaching that its loop is “inactive” during low per mode, but that teaching does not imply that *all* circuitry must be shut off during low power mode in order to achieve Bowie’s intended purpose. The very next sentence in Bowie describes Resume Signal Detector 115 remaining “on” in order to “remain capable of signal detection during low power operation.” Ex. 1004, 5:28–30; *see also id.* at 5:55–56 (“This detector 115 *remains operative* when the unit 232 is in low-power mode.”) (emphasis

added)). Thus, Bowie explicitly recognizes the need for some circuitry to remain “on” during low power mode to receive signals. As a result, we are not persuaded that Bowie teaches away.

*c. maintaining synchronization*

With respect to dependent claims 2 and 12, Patent Owner contends that Petitioner’s reliance on Morelli’s teachings of synchronizing bits does not teach “maintaining synchronization” as recited in the claims. PO Resp. 39–43. Patent Owner argues that the synchronizing bits in Morelli, which are specific to wireless, multi-point, carrier networks, are different from the synchronization system in Bowie or ANSI T1.143. *Id.* at 40–42. As such, Patent Owner argues that the synchronization bits described in Morelli are not compatible with ADSL systems, like Bowie, and cannot teach “maintaining synchronization.” PO Resp. 40–43.

We are persuaded by Petitioner’s argument and evidence that Bowie’s synchronization bits need not be bodily incorporated into Bowie and ANSI T1.142, but instead teach synchronization bits akin to the ADSL superframe structure, “perform[ing] the same function as the synchronization frame and pilot carrier in the ADSL technology.” Reply 13–14 (quoting Ex. 1002 ¶ 172); Ex. 1002 ¶ 172. Petitioner’s argument and evidence relies on ““modify[ing] Bowie by incorporating the teachings of Morelli so that the receiver portion in Bowie . . . receives data having synchronization information while the transceiver 232, 242 is in a low power mode.”” Reply 14 (quoting Ex. 1002 ¶ 173); *see also* Ex. 2013, 187:1–10, 189:4–192:22.

On the full record, we are not persuaded by Patent Owner’s argument and evidence that relies on importing the specific data packet synchronization

scheme from Morelli into Bowie. Patent Owner's argument relies on applying specific ADSL synchronization to Morelli, but does not persuasively address Petitioner's argument regarding the similarity between the synchronization bits in Morelli and the superframe structure in ADSL such as Bowie or the combination of receiving synchronization data while the Bowie transceiver is in low power mode. Pet. 38–40 (citing Ex. 1002 ¶¶ 113, 140-169, 173, 174); *see also* Reply 13–14.

We also are not persuaded by Patent Owner's argument that the synchronization disclosed in Morelli is “established intermittently only upon receipt of a packet” and, therefore, does not maintain synchronization in accordance with the claim term. PO Resp. 43–46. Patent Owner's arguments are not commensurate with the scope of the claims, which do not recite a temporal limitation on when the transceivers in the combination are synchronized. *See* Reply 14–15; *In re Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011). Patent Owner's position essentially requires that “maintaining synchronization” means continuous synchronization as opposed to intermittent or periodic synchronization. Patent Owner has not persuasively shown that claims 2 and 12 exclude intermittent synchronization or are limited to continuous synchronization.

We agree with Petitioner that the superframe synchronization discussed in the '268 patent discussion establishes that such synchronization is transmitted periodically and not continuously. Reply 15–16 (citing Ex. 1001, 5:5–18; Ex. 1005, 7:8–9). Similarly, Petitioner has provided persuasive evidence that the combination of Morelli and Bowie with ANSI T1.143 explains that “[s]ynchronization of the corresponding transmitter and receiver

superframe counters is *maintained* using the synch symbol in the ADSL frame structure’ even though superframes and their synchronization frames may be transmitted between transceivers periodically.” Reply 16 (quoting Ex. 1006, 113). Based on the foregoing, we find that Morelli, Bowie, and ANSI T1.143 teach “maintaining synchronization” via the periodic superframe synchronization as disclosed by the combination of the references.

Patent Owner argues that Petitioner’s rationale to combine Morelli’s synchronization bits with Bowie’s ADSL is circular and conclusory hindsight. We disagree. Petitioner has provided articulated reasoning and rationales regarding the combination of Bowie with the teachings on synchronization bits in Morelli. *See* Pet. 38–39; Ex. 1003 ¶¶ 170–174. Petitioner has provided sufficient rationale and explanations for the modifications of Bowie based on Morelli including evidence and argument that an ordinarily skilled artisan would have expected success based on the teachings of Bowie and Morelli. Pet. 30–33; Ex. 1002 ¶ 155; Ex. 1004, 5:34–47. With respect to maintaining synchronization, Petitioner provides persuasive evidence that a person of ordinary skill in the art would have understood that synchronization bits would function to synchronize the receiver and transmitter in the modified Bowie system in order to maintain synchronicity when the receiver is in full power mode and receiving messages while the transmitter is in a low power state. Pet. 39; Ex. 1002 ¶¶ 172–174.

We also disagree with Patent Owner’s argument that the synchronization bits of Morelli would not reach Bowie’s ADSL unit (PO Resp. 49) for the same reasons we are not persuaded that Bowie teaches away from the combination with Morelli.

Based on the foregoing, we find that Morelli, Bowie, and ANSI T1.143 teach “maintaining synchronization” via periodic superframe synchronization as disclosed by the combination of the references.

*d. “storing, during the low power mode”*

Patent Owner argues that the “loop characteristics parameters” in Bowie cannot be the claimed “parameter associated with a full power mode” because they are physical attributes that exist independent of any power mode. PO Resp. 50 (citing Ex. 2012 ¶ 92; Ex. 1005, 5:1–3, Ex. 1004, 5:1–3). Specifically, Patent Owner avers that “that transmission parameters (i.e., ‘parameters associated with a full power mode’) are different from ‘loop characteristics’ because they are determined in part from loop characteristics in a separate step of the initialization process.” PO Resp. 52 (citing Ex. 2012 ¶¶ 92–95; Ex. 1009, 9, 87). Patent Owner argues that a person of ordinary skill in the art would not have characterized loop characteristics as being parameters associated with the full power mode as recited in the claims. PO Resp. 50, 52–53.

Petitioner counters that Bowie’s loop transmission characteristics that directly affect transmission are necessarily associated with transmitting data in full power mode. Reply 18–19 (citing Ex. 1002 ¶ 135 (stating that loop characteristics are “required for reliable data transmission between devices”)); see Pet. 19–21 (discussing Bowie stored parameters). Indeed, such loop characteristics “enable data transmission to resume quickly by reducing the time needed to determine loop transmission characteristics” which affects transceiver transmission capability. Ex. 1004, 5:62–66; Reply 19–20.

Petitioner notes that Patent Owner’s distinction between physical attributes and power mode characteristics misreads Bowie, which does not describe loop characteristics as physical attributes. Reply 20. Instead, Bowie describes a “loop loss characteristic” that is a function of or calculated from physical attributes. *Id.* (citing Ex. 1004, 5:1–3).

We agree with Petitioner. Patent Owner’s argument is based upon its contention that “parameter associated with [a/the] full power mode” operation should be understood to “include[] only those communication protocol-specific parameters that are used for the transmission of data and does not include loop characteristics.” PO Resp. 29, 49–57; Reply 5. We disagree. The plain language of the claim—“associated with”—is very broad, and the Specification does not define or limit “parameter associated with the full power mode operation” to exclude loop characteristics. Indeed, the challenged claims of the ’268 patent do not recite any particular parameter.

Patent Owner relies upon a list of state parameters described in the ’268 patent at column 7, lines 7 to 14, but that passage does not support Patent Owner’s argument because it discloses that “[t]he state . . . preferably includes *at least*” the parameters listed, as opposed to “[t]he state . . . preferably includes *only*” the parameters listed. We, therefore, agree with Petitioner that the Specification contemplates parameters other than those listed explicitly in column 7 of the ’268 patent. Reply 5–6, 20–21.

Also, we disagree with Patent Owner’s contention that Bowie’s loop characteristics “are physical attributes of the transmission loop” like “loop length, wire gauge, wire composition, resistance, inductance, capacitance, *etc.*” PO Resp. 50. Bowie expressly distinguishes “loop loss characteristics”

from these physical attributes by describing loop loss characteristics as “a function of” these physical attributes. Ex. 1004, 5:1–3. In addition, Bowie discloses “loop loss characteristics” as merely one example of the type of information exchanged during handshaking. *Id.* As a result, we disagree with Patent Owner’s contention that Bowie stores only physical attributes of the transmission loop.

Patent Owner’s argument that storing parameters associated with the full power mode would have been useless and incompatible with Bowie is unavailing. PO Resp. 56–57. Patent Owner argues that, in Bowie, parameters associated with full power mode would have to be re-calculated when the unit comes out of low power mode and, therefore, storage of such characteristics would be unnecessary and of no value. *Id.* at 57. We disagree, as Bowie expressly teaches storing loop transmission characteristics to enable rapid resumption of user data transmission during a return to full power mode. Reply 22; Ex. 1004, 5:23–25, 5:66–6:2; *see* Pet. 13, 31 (discussing rapid resumption). The restored loop characteristics allows that additional handshaking may occur, but is not required to take place. *Id.*

In sum, we are not persuaded by Patent Owner’s argument that Bowie would have led a person of ordinary skill in the art away from the proposed combination because Bowie takes a different approach for using stored data when coming out of a low power mode. PO Resp. 58–60. Patent Owner’s argument is belied by Bowie’s express teaching to use stored parameters from the full power mode to reduce initialization during resumed transmission in full power mode. Ex. 1004, 5:23–25, 5:66–6:2; *see also* Pet. 19–21 (citing Ex. 1002 ¶¶ 132–38; Ex. 1004, 5:18–25 7:23–26, 8:8–9, 8:22–25, 9:1–5)

(discussing Bowie’s teaching of storing characteristics for rapid handshaking); Pet. 30–33, 44 (discussing combination of Bowie with Morelli).

Based on the foregoing, Petitioner has provided sufficient and persuasive evidence that Bowie teaches the limitation “storing, during the low power mode, at least one parameter associated with [a/the] full power mode.”

### 7. Summary

For the foregoing reasons and based on the full record, we find that Petitioner has shown by a preponderance of the evidence that claims 1, 2, 11, and 12 would have been obvious over Bowie, Morelli and ANSI T1.413, and that claims 4, 14, 16, and 18 would have been obvious over Bowie and Morelli.

## III. MOTIONS TO EXCLUDE AND OBJECTIONS

Patent Owner filed a Motion to Exclude Evidence (Paper 34, “PO Mot.”). Petitioner opposed Patent Owner’s motion in Petitioner’s Opposition to Patent Owner’s Motion to Exclude (Paper 38, “Pet. Opp.”) and Patent Owner replied (Paper 40). As movant, Patent Owner has the burden of proof to establish that it is entitled to the requested relief. *See* 37 C.F.R. § 42.20(c). For the reasons stated below, Patent Owner’s Motion to Exclude is *dismissed*.

### A. Exhibits 1019, 1035, 1036, and 1052

Patent Owner moves to exclude Exhibits 1019, 1035, 1036, and 1052. PO Mot. 1–3. These exhibits appear to be printouts of articles published on the Internet. Ex. 1019; Ex. 1035; Ex. 1036; Ex. 1052. Patent Owner argues that we should exclude them under Rule 901 of the Federal Rules of Evidence (“FRE”) because there is no evidence that they are authentic and they do not

fall within any of the self-authenticating exceptions of FRE 902. PO Mot. 1–2.

Exhibit 1019 was cited only in connection with Petitioner’s discussion of the Motorola CopperGold chip set, on which we do not rely. Pet. Opp. 3. Exhibits 1035 and 1052 appear in the materials considered by Petitioner or their declarant. Pet. Opp. 3. Exhibit 1036 was cited in the technology tutorial of Mr. Hoarty’s declaration (Ex. 1002 ¶ 75). Pet. Opp. 3. Although Mr. Hoarty cites Exhibits 1036 in his declaration, we did not rely on Exhibit 1036, or on Mr. Hoarty’s statements with respect to Exhibits 1036 in rendering our decision. We also did not need or consider Exhibits 1019, 1035, or 1036. We have determined that Petitioner has demonstrated, by a preponderance of the evidence, that the challenged claims are unpatentable, without considering the specific objected to evidence or the portion of Mr. Hoarty’s statements that discuss Exhibits 1036. Accordingly, we *dismiss* Patent Owner’s Motion to Exclude as moot as to Exhibits 1019, 1035, 1036, and 1052.

*B. Exhibits 1021–1031, 1033, 1038–1043, 1045–1048, and 1051*

Patent Owner moves to exclude Exhibits 1021–1031, 1038, 1039, 1043, and 1047. PO Mot. 3–4. Exhibits 1021–1030 appear to be Technical Reports of the ADSL Forum. Exhibits 1031, 1038, and 1039 appear to be PowerPoint presentations. Exhibit 1043 is styled “ETSI TS 102 250-2 V2.5.1 (2016-06).” Exhibit 1047 is styled “ADSL2 and ADSL2plus – THE NEW ADSL STANDARDS, March 25, 2003.”

Patent Owner argues that we should exclude them under Rule 901 of the Federal Rules of Evidence (“FRE”) because there is no evidence that they are authentic and they do not fall within any of the self-authenticating

exceptions of FRE 902. PO Mot. 3–4. Patent Owner also argues that they are hearsay under FRE 801 and 802. *Id.* Patent Owner also moves to exclude Exhibits 1033, 1041, 1042, 1046, and 1051 under FRE 901 and FRE 801–802. Mot. 4. Finally, Patent Owner moves to exclude Exhibits 1023–1028, 1035, 1039–1041, 1045, 1047, and 1048, on the grounds that “none of these exhibits were specifically cited or referenced in the Petition or Hoarty declaration.” Mot. 5.

Petitioner argues that these exhibits are not hearsay because “[t]hey are offered for what they describe, and not to prove the truth of the matter asserted.” Pet. Opp. 4. According to Petitioner, Exhibits 1021, 1022, 1029–1031, 1033, 1038, 1042 and 1043 are cited in the technology tutorial section of Mr. Hoarty’s declaration, Exhibit 1046 is cited by Mr. Hoarty for corroboration, and Exhibits 1023–1028, 1040, 1041, 1045, 1047, 1048, and 1051 are listed solely in Mr. Hoarty’s “materials considered” section “because they are relevant ‘references [that] accurately characterize the state of the art at the relevant time’ and were considered by Petitioner’s expert as part of preparing his declaration. (Ex. 1002, ¶ 25.)” *Id.* at 4–5. Petitioner also argues that, even if these exhibits are hearsay, Petitioner’s expert is permitted to rely upon them regardless of their admissibility. *Id.*

We did not and need not consider Exhibits 1021–1031, 1033, 1038–1043, 1045–1048, and 1051. We have determined that Petitioner has demonstrated, by a preponderance of the evidence, that the challenged claims are unpatentable, without considering the specific objected to evidence. Accordingly, we *dismiss* Patent Owner’s Motion to Exclude as moot as to Exhibits 1021–1031, 1033, 1038–1043, 1045–1048, and 1051.

#### IV. CONCLUSION

Petitioner has demonstrated, by a preponderance of the evidence, that: claims 1, 2, 11, and 12 of the '268 patent are unpatentable as obvious under 35 U.S.C. § 103(a) over Bowie, Morelli, and ANSI T1.413 and that claims 4, 14, 16, and 18 of the '268 patent are unpatentable as obvious under 35 U.S.C. § 103(a) over Bowie and Morelli.

#### V. ORDER

For the foregoing reasons, it is:

ORDERED that claims 1, 2, 4, 11, 12, 14, 16, and 18 of the '268 patent are held *unpatentable*;

FURTHER ORDERED that Patent Owner's Motion to Exclude is *dismissed*; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2016-01469  
Patent 9,094,268 B2

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