

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner,

v.

CHRIMAR SYSTEMS, INC.,
Patent Owner.

Case IPR2018-01515
Patent 9,812,825 B2

Before KARL D. EASTHOM, ROBERT J. WEINSCHENK, and
FREDERICK C. LANEY, *Administrative Patent Judges*.

LANEY, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Cisco Systems, Inc. (“Cisco”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1, 15, 34, 38, 49, and 64 (“challenged claims”) of U.S. Patent No. 9,812,825 B2 (Ex. 1006, “the ’825 patent”). Chrimar Systems, Inc. (“Chrimar”) filed a Preliminary Response (Paper 7, “Prelim. Resp.”) to the Petition.

Under 35 U.S.C. § 314, an *inter partes* review must not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Upon considering the evidence presented and the arguments made, we determine that Cisco has not demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the challenged claims. Accordingly, we do not institute an *inter partes* review.

A. *Related Proceedings*

The parties indicate that the ’825 patent is the subject of several cases in the United States District Court for the Eastern District of Michigan and the United States District Court for the Eastern District of Texas. Pet. 1–2; Paper 4 (“Patent Owner’s Mandatory Notice”), 1. The parties also indicate that the ’825 patent shares a common specification with several other patents for which Cisco has filed petitions for *inter partes* review. Pet. 1; Prelim. Resp. 1. Moreover, since the filing of the Petition, Cisco has filed another petition for *inter partes* review of the ’825 patent. IPR2019-00401.

B. *The ’825 Patent*

The ’825 patent relates to a system for managing, tracking, and identifying remotely located electronic equipment. Ex. 1006, 1:30–33.

According to the '825 patent, one of the difficulties in managing a computerized office environment is keeping track of a company's electronic assets. *Id.* at 1:35–60. Previous systems for tracking electronic assets suffered from several deficiencies. *Id.* at 1:65–2:2. For example, previous systems could not determine the connection status or physical location of an asset and could only track assets that were powered-up. *Id.* at 2:2–6.

To address these deficiencies, the '825 patent describes a system for tracking an electronic asset. *Id.* at 2:7–11, 3:23–27. In one embodiment described in the '825 patent, the system includes a central module and a remote module. *Id.* at 4:47–51. The remote module attaches to the electronic asset and transmits a low frequency signal. *Id.* at 5:37–65. In response to a signal received by the central module, the remote model encodes a preprogrammed unique identification number and transmits it to the central module. *Id.* at 6:12–29. A receiver in the central module receives the encoded identification number and determines whether the electronic asset is authorized. *Id.* at 6:30–44.

C. *Illustrative Claim*

Of the challenged claims, claims 1 and 38 are independent. Claim 1 is reproduced below.

1. A BaseT Ethernet device *configured to interrogate for predetermined response* via at least one direct current (DC) signal, the Base T Ethernet device comprising:

an Ethernet jack connector of the BaseT Ethernet device, the Ethernet jack connector comprising first and second pairs of contacts, each of the first and second pairs configured to carry BaseT Ethernet communication signals wherein the first pair of contacts consists of a transmit pair of the Ethernet jack connector and wherein the second pair of

contacts consists of a receive pair of the Ethernet jack connector; and

at least one direct current (DC) supply of the BaseT Ethernet device, the at least one direct current (DC) supply coupled to at least one of the contacts of the first pair of contacts and at least one of the contacts of the second pair of contacts of the Ethernet jack connector,

the BaseT Ethernet device configured to provide or receive at least one direct current (DC) signal via at least one of the contacts of the first pair and configured to receive or provide the at least one direct current (DC) signal via at least one of the contacts of the second pair, *the predetermined response carried by at least two different magnitudes in the flow of the at least one direct current (DC) signal.*

Ex. 1006, 17:35–58 (emphasis added). As discussed below, the above emphasized language is central to the disposition of this Petition.

D. *Evidence of Record*

In addition to the Declaration of George A. Zimmerman, Ph.D. (Ex. 1001, “Zimmerman Dec.”), Cisco’s unpatentability arguments rely on the following prior art:

Reference or Declaration	Exhibit No.
The Institute of Electrical and Electronics Engineers, Inc., IEEE Standard 802.3u-1995 (1995) (“IEEE 802.3-1995”)	Ex. 1021
The Institute of Electrical and Electronics Engineers, Inc., IEEE Standard 802.3-1993 (1993) (“IEEE 802.3-1993”)	Ex. 1022
Bloch et al., U.S. Patent No. 4,173,714 (issued Nov. 6, 1979) (“Bloch”)	Ex. 1025
Bulan et al., U.S. Patent No. 5,089,927 (issued Feb. 18, 1992) (“Bulan”)	Ex. 1027
Hunter et al., PCT Publication No. WO 96/23377 (published Aug. 1, 1996) (“Hunter”)	Ex. 1033
Peguiron, Swiss Patent No. CH 643 095 A5 (issued May 15, 1984) (“Peguiron”)	Ex. 1034

E. *Asserted Grounds of Unpatentability*

Cisco challenges claims 1, 15, 34, 38, 49, and 64 of the '825 patent on the following grounds:

Claim(s)	Basis	References
1, 15, 34, 38, 49, and 64	35 U.S.C. § 103	Hunter and Bulan
1, 15, 34, 38, 49, and 64	35 U.S.C. § 103	Bloch, IEEE 802.3-1993, IEEE 802.3-1995, and Peguiron

II. ANALYSIS

A claim is unpatentable under 35 U.S.C. § 103(a) if “the differences between the subject matter sought to be patented and the prior art are such that the subject 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, when in evidence, (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). The burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

We analyze the challenges presented in the Petition in accordance

with the above-stated principles.

Cisco's unpatentability contentions for the challenged claims in this Petition are all based on their alleged obviousness in view of the prior art. Pet. 4. For each of the unpatentability grounds, Cisco alleges the prior art discloses the "predetermined response" limitations that independent claims 1 and 38 recite. In the first asserted ground of unpatentability, Cisco contends that these limitations are disclosed by Bulan. Pet. 23–24, 30–33 (citing Ex. 1027, 1:28–29, 1:52–62, 2:52–62, 3:65–4:2, 4:17–5:5, 6:36–7:13; Ex. 1001, ¶¶ 98–105, 109, 120, 373–74, 382–84, 386–88, 390–91). Cisco's second asserted ground of unpatentability contends Bloch/Peguiro disclose these limitations. *Id.* at 58–59, 63–64 (citing Ex. 1025, 3:24–36, 5:27–30, 5:44–55, 5:56–6:2, 10:22–26, 10:28–40, 11:1–5, Fig. 7; Ex. 1034, pp. 16L:7–14, 16L:43–49, 16R:15–26, 17L:18–23, 17R:8–32, 18L:25–45, 18L:48–18R:48; Ex. 1001, ¶¶ 255–57, 412–17, 428–29). After considering the submitted evidence and Cisco's contentions about what the evidence shows, we find the issue of whether the prior art discloses the "predetermined response" limitations that independent claims 1 and 38 recite to be dispositive of this Petition.

Chrimar does not respond to either of Cisco's alleged grounds of patentability, but asserts that we should exercise our discretion to deny institution because "Cisco plainly seeks to game the system" and because denial would allegedly conserve resources and promote fairness. Prelim. Resp. 2–6. For the reasons explained below, however, we are not persuaded there is a reasonable likelihood that Cisco would prevail in showing the prior art discloses the "predetermined response" limitations. As a result, Chrimar's argument is moot and will not be discussed further.

A. Level of Ordinary Skill in the Art

Cisco contends that a person of ordinary skill in the art “would have had at least a B.S. degree in electrical engineering or computer science, or the equivalent, and at least three years of experience in the design of network communication products.” Pet. 9 (citing Ex. 1001 ¶ 42). Patent Owner does not provide an assessment of the appropriate level of skill in the art. *See generally* Prelim. Resp.

We are persuaded that the assessment proposed by Cisco is correct. Further, in this case, the applied prior art reflects the appropriate level of skill at the time of the claimed invention, which is consistent with the level of skill that Cisco proposes. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

B. Claim Interpretation

The parties assert that, for purposes of this IPR, claim terms of the ’825 patent should construed under the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). Pet. 4; Prelim. Resp. 3. Specifically, Cisco indicates, and Chrimar appears to agree, that a *Phillips*-type construction is appropriate because the ’825 “is set to expire during the pendency of this proceeding (if instituted), on May 23, 2019.” *Id.* Because the parties agree to adopt the claim construction principles articulated in *Phillips*, and because the ’825 patent would expire during the pendency of any trial proceeding if instituted, we apply the *Phillips* standard.

Under *Phillips*, claim terms are afforded “their ordinary and customary meaning.” *Phillips*, 415 F.3d at 1312. “[T]he 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.” *Id.* at 1313. “Importantly, 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.* Because the claims do not stand alone, but are part of “a fully integrated written instrument,” consisting principally of a specification that concludes with the claims, the claims “must be read in view of the specification, of which they are a part.” As [the Federal Circuit] stated in *Vitronics [Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)]*, the specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315.

Only terms that are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (cited with approval in *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017)). Cisco proposes constructions for certain limitations—namely, “BaseT” and “powered-off.” Pet. 4–6. In addition, Cisco contends the preambles of independent claims 1 and 38 are non-limiting and, thus, do not need to be construed. *Id.* at 6. Chrimar does not respond to Cisco’s proposed interpretations.

Based on our review of the Petition and the Preliminary Response, we determine that it is not necessary for us to construe either “BaseT” or “powered-off” to resolve the dispositive issue in this Petition. We do, however, find it is necessary to address whether the preamble is limiting and to construe “predetermined response,” which is found both in the preamble and the body of independent claims 1 and 38.

1. *the preambles of claims 1 and 38 are limiting*

Cisco asserts that the phrases “configured to interrogate” and “configured to be interrogated” found in the respective preambles of claims 1 and 38 demonstrate that the preambles are “superfluous and [have] no limiting effect because they “merely provide an intended use for the claimed apparatus.” Pet. 6 (citing *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002); *Am. Med. Sys., Inc. v. Biolitec, Inc.*, 618 F.3d 1354, 1359 (Fed. Cir. 2010)). Cisco’s argument that the preambles are “superfluous,” however, ignores the antecedent basis the preambles provide to limitations found in the body of the claims. Although Cisco is correct that preamble language that merely states a purpose or intended use of an invention is generally not treated as limiting the scope of a claim, “when limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.” *Pacing Techs., LLC v. Garmin Int’l, Inc.*, 778 F.3d 1021, 1024 (Fed. Cir. 2015). The *Catalina* decision that Cisco relies upon is in accord with the *Pacing* holding and further holds that a preamble may also be limiting when it “is essential to understand limitations or terms in the claim body.” 289 F.3d at 808.

In this case, we find the preambles of both claims 1 and 38 are limiting because they provide an antecedent for positively recited limitations and are essential to understanding those limitations. In particular, the preamble of claim 1 recites, “[a] BaseT Ethernet device configured to interrogate for [a] predetermined response via at least one direct current (DC) signal,” which the body of the claim subsequently refers to by reciting, “*the predetermined response* carried by at least two different magnitudes in

the flow of the at least one direct current (DC) signal.” Ex. 1006, 17:35–37, 17:56–58 (emphasis added). Similarly, the preamble of claim 38 recites, “[a] powered-off BaseT Ethernet device configured to be interrogated for a predetermined response via at least one direct current (DC) signal,” which the body of the claim subsequently refers to by reciting, “*the predetermined response* carried by at least two different magnitudes in the flow of the at least one direct current (DC) signal.” Ex. 1006, 19:63–65, 20:18–20 (emphasis added). The interrogation is for the predetermined response that the Ethernet device must be configured to receive (claim 1) or return (claim 38).

In both claims, the preamble provides an antecedent basis for “the predetermined response” and is essential to understanding what it is a reaction to—a query received/provided “via at least one direct current (DC) signal” of the BaseT Ethernet device. Therefore, we disagree that the preamble of claims 1 and 38 merely provides an intended use for the claimed apparatuses and we determine that they are limiting because they provide an antecedent basis and are necessary to understand limitations recited in the body of claims 1 and 38 in the ’825 patent.

2. “*predetermined response*”

Cisco does not propose an interpretation for “predetermined response” in the Claim Construction portion of its Petition. See Pet. 4–7. Nevertheless, in applying the prior art to the claims, Cisco argues that “a ‘predetermined response’ may be any two magnitudes of DC current flow” because this is allegedly the broad meaning Chrimar’s infringement contentions suggest. *Id.* at 30–31 (citing Ex. 1014, ¶¶ 45–46). As a result, we find it necessary to determine whether a “predetermined response” is

properly understood, in the context of the '825 patent specification and the challenged claims, to mean “any two magnitudes of DC current flow.”

The problem with Cisco’s proposed interpretation is that it broadly recites any two magnitudes of DC current flow, regardless of whether those magnitudes of DC current are communicating a response that was predetermined. Thus, within the context of the claims, Cisco’s proposed interpretation appears to render “predetermined” meaningless because *any* two magnitudes of DC current flow encompasses even those responses that would not have been predetermined. Furthermore, claims 1 and 38 expressly state that the “predetermined response” is “carried by at least two different magnitudes in the flow of the at least one direct current (DC) signal.” Cisco’s proposed interpretation improperly conflates the predetermined response with the two different magnitudes of DC current flow used to carry the predetermined response. The plain language of the claims indicates that the two are not synonymous—the at least two different magnitudes of direct current are identified as the means by which the predetermined response is transferred.

The specification of the '825 patent supports our interpretation that a “predetermined response” is not just any two magnitudes of DC current flow. At several points, the specification discusses a BaseT Ethernet device that sends an interrogating signal from a central module to a remote module by way of a DC signal to request information previously defined. See Ex. 1006, 5:37–6:52, 9:1–17, 10:35–42, 15:56–16:35. For example, the specification describes the remote module as providing “a preprogrammed unique identification number” in response to a status request initiated by the central module. *Id.* at 6:6–14. This information is then compared to

information predefined to be what the status signal was intended to retrieve and a determination is made about whether the response is valid. *Id.* at 6:30–44; *see also* 9:1–17, 10:35–42, 16:30–35. Thus, the examples of a predetermined response that the ’825 patent specification provides were known identification numbers.

Citing similar portions of the specification, Cisco appears to acknowledge that “the asset tracking and management system” disclosed in the specification supports claims 1 and 38. *See* Pet. 8 (“In district court patent litigation, Chrimar seeks to expand the scope of the ’825 patent claims beyond the asset tracking and management system.”). Cisco describes that disclosed system as a modulation scheme:

The specification discloses a central module that has a DC power supply where the voltage it supplies is modulated to provide “both status information and power” across the transmit and/or receive lines to a remote module also on the network. Ex.1006, 5:62–65; Zimmerman ¶40. The specification further discloses that a remote module can send Manchester-encoded binary modulated information bits to the central module by altering the total current draw by the remote module. 6:15–18; Zimmerman ¶40.

Id. In relevant context, claims 1 and 38 require the Ethernet device to be configured for providing or returning a “carried” predetermined response, implying a form of modulation. *See* Ex. 1006, 5:57–6:35 (describing modulator 7, a “pulse train,” “FSK,” and other types of modulation).

Because the interpretation of “predetermined response” may be ascertained from the claims and specification of the ’825 patent, Chrimar’s infringement contentions are extrinsic evidence that cannot overcome the more persuasive intrinsic evidence. *Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009) (“While helpful, extrinsic sources . . . cannot overcome

more persuasive intrinsic evidence.”).

Therefore, for the foregoing reasons, we determine that the term “predetermined response” does not mean just “any two magnitudes of DC current flow.”

*C. Bulan, Bloch, and Peguiron Do Not
Disclose a Predetermined Response*

Cisco’s first asserted ground of unpatentability of the challenged claims relies exclusively on Bulan to disclose the recited “predetermined response.” See Pet. 23–24, 30–33. For the second ground of unpatentability asserted against the challenged claims, Cisco asserts both Bloch and Peguiron disclose the recited “predetermined response,” but it does not rely on the IEEE 802.3-1995 and IEEE 802.3-1993 references for this limitation. *Id.* at 58–59, 63–64. Therefore, because this issue is dispositive, our discussion below is limited to addressing each of the Bulan, Bloch, and Peguiron references to explain why we are not persuaded Cisco has shown that they disclose a “predetermined response,” as each claim requires (either directly or indirectly).

1. Bulan (Ex. 1027)

Bulan relates to an improved current protection circuit. Ex. 1027, 2:9–14. Bulan explains that a typical current protection circuit with just a single threshold value is inadequate because it cannot distinguish between a normal power up event for a DC-to-DC converter and an operational fault. *Id.* at 1:26–31, 1:52–2:8. As a result, a typical current protection circuit may stop current from flowing during a normal power up event and prevent the terminal equipment from starting properly, or may allow current to flow during an operational fault and jeopardize the terminal equipment. *Id.* at 1:65–2:8.

Bulan describes an improved current protection circuit that addresses the aforementioned problem. *Id.* at 2:9–14. Specifically, Bulan teaches a current control apparatus that detects whether DC current flow in a path exceeds static and dynamic current limits, and, if so, switches a high impedance into the path. *Id.* at 3:5–21, 4:35–40, 6:34–43. If the high impedance reduces the DC current flow to a trickle and then zero, the current control apparatus detects a normal start up event for a DC-to-DC converter and switches the high impedance out of the path to allow the terminal equipment to start up properly. *Id.* at 3:22–25, 4:62–5:1, 6:43–58. On the other hand, if the high impedance only reduces the DC current flow to a trickle, the current control apparatus detects an operational fault and keeps the high impedance in the path to protect the terminal equipment. *Id.*

Cisco contends that “[t]he current sensor [Bulan discloses] detects various different magnitudes of DC current in the circuit path loop, which are predetermined responses.” Pet. 24, 35–36 (citing Ex. 1027, 1:28–29, 4:60–5:1, 6:36–58; Ex. 1001, ¶¶ 109, 373–74). Cisco contends “Bulan discloses that the hub detects a predetermined response by detecting the magnitude of the circuit loop.” *Id.* at 31, 41 (citing Ex. 1027, 6:36–7:13, 1:52–62).

A first predetermined response, according to Cisco, “indicates an operational fault and consists of three different magnitudes of DC current flow: (i) a measured current that exceeds the static limit; (ii) a measured current that exceeds the dynamic limit; and (iii) a measured current that stays indefinitely at a ‘trickle’ magnitude.” *Id.* at 32, 42–43 (citing Ex. 1001, ¶¶ 98–102, 386). Cisco contends a second predetermined response disclosed by Bulan indicates normal DC-DC startup and “may consist of at

least two different magnitudes of DC current flow: (i) a measured current that exceeds the static limit; and (ii) a measured current below the dynamic limit.” *Id.* at 32, 43 (citing Ex. 1001, ¶¶ 98–99, 105, 387). Cisco contends next that a third predetermined response also indicates normal DC-DC startup, but “consist of at least three different magnitudes of DC current flow: (i) a measured current that exceeds the static limit; (ii) a measured current that exceeds the dynamic limit; and (iii) a measured current magnitude of 0 amperes (i.e. the open circuit condition).” *Id.* (citing Ex. 1001, ¶¶ 98–99, 100–103, 388).

After considering the submitted evidence and Cisco’s contentions about what the evidence shows, we find that it does not demonstrate persuasively that Bulan teaches the “predetermined response” limitation independent claims 1 and 38 recite. In each of the examples Cisco identifies as teaching a “predetermined response,” Cisco points to a response that consists of two or more magnitudes of DC current flow. Pet. 30–33. As discussed above, the term “predetermined response” requires more than just any response consisting of two magnitudes of DC current flow—i.e., the response must have been predetermined. *See supra* Section II.B.2. Petitioner, however, does not identify any teaching in Bulan indicating that the response carried by the two or more magnitudes of DC current flow is a *predetermined* response. *See* Pet. 30–33. For example, Cisco’s declarant, Dr. Zimmerman, states,

Bulan discloses the hub can interrogate for and determine a TE’s internal condition via a direct current (DC) signal; for example, if the sensed current of the circuit path loop exceeds both the static and dynamic control signals, then drops to, and remains at, a trickle current level, a fault is present at the TE. Bulan, 1:26–31, 6:44–47, 4:62–67. If the overdrawn circuit

path loop current drops to zero, then returns to normal operating level, Bulan's hub recognizes the TE's DC-DC converter is attempting a normal startup. Bulan, 6:44–51, 4:67–5:1.

Ex. 1001, ¶ 373; *see id.* ¶¶ 97–105. In other words, Bulan does not teach that its power feed circuit interrogates a TE for a predetermined response, but instead it interrogates to gather unknown information to determine a TE's internal condition and control the circuit's operation. Therefore, Petitioner has not shown sufficiently that Bulan teaches a “predetermined response.”¹

2. Bloch (Ex. 1025)

Bloch describes a system that comprises a control unit and a terminal connected by two communication channels with each communication channel having two conductors. Ex. 1025, Abstract. According to Bloch, “[p]ower feed and bi-directional signalling are accomplished simultaneously over the same four conductors used for the two communication channels without interference.” *Id.* Although Bloch describes this phantom power circuit in the context of a key telephone system, Bloch explains that it “can find application in many different control unit/terminal applications.” *Id.* at 4:49–52.

Bloch explains that the control unit detects DC current pulses applied to the conductors when the terminal switches a resistor into and out of the path. *Id.* at 5:44–55. The DC current pulses detected by the control unit provide information regarding the status of different elements of the

¹ The Board considered an asserted ground of unpatentability based on Bulan in several other cases—IPR2016-01389, IPR2016-01391, IPR2016-01397, and IPR2016-01399. But the challenged claims in those cases did not recite a “predetermined response.”

terminal. *Id.* at 5:56–6:2. In response to the detected DC current pulses, the control unit applies voltage pulses to the conductors to control indicators in the terminal. *Id.* at 10:34–40, 11:1–5.

Cisco contends that Bloch discloses a “predetermined response,” as recited in claims 1 and 38, with the following teachings. First, Cisco quotes the following portion of the Bloch disclosure:

[l]ogic circuitry in the terminal 20 uses the information to control corresponding functions or physical equipment in the terminal. Current pulse information regarding the status of a particular function or element is transmitted during the fourth interval of each word from the terminal 20 via the four conductor 1,2,3,4 phantom circuit and is received in the control unit 10 for use in making logic decisions for controlling the various elements and/or functions of terminal 20.

Pet. 58 (quoting Ex. 1025, 10:28–40; citing also 5:55–6:2, 10:22–26, 11:1–5; Ex. 1001, ¶ 413). Second, Cisco asserts “Bloch teaches a terminal is interrogated by a hub, followed by the interrogated terminal sending its status (a predetermined response) to the hub.” *Id.* at 66 (emphasis omitted). Thirds, Cisco adds that the control unit 10 logic circuitry, in Bloch, scans/polls each function once every 20.4 milliseconds and the “terminal responds to the information from the control unit and returns a status via a direct current DC signal.” *Id.* (citing Ex. 1025, 10:22–26, 10:28–40, 3:24–36, 5:44–6:2, 11:1–5; Ex. 1001, ¶¶ 412–416). Fourth, Cisco asserts that “Bloch explains the direct current (DC) signal is at least two different magnitudes because ‘[i]nformation is transmitted to the control unit from the terminal by modulating a resistor in parallel with a constant current sink at the terminal end of the circuit arrangement ([Ex. 1025], 3:28–33) and ‘data from the terminal is superimposed on the d.c. level supplied by voltage sources 10, 12 by modulator 100.’ ([Ex. 1025], 5:27–30).” *Id.* at 70, 63

(citing Ex. 1025, 5:20–30, 5:44–55, 9:6–15, 10:56–65; Ex. 1001 ¶¶439, 425–429).

After considering the submitted evidence and Cisco’s contentions about what the evidence shows, we find that it does not demonstrate persuasively that Bloch teaches the “predetermined response” limitation independent claims 1 and 38 recite. Cisco asserts that Bloch teaches a response that consists of two magnitudes of DC current flow. Pet. 63 (“the bi-directional DC current pulses in Bloch have at least two different magnitudes”). As discussed above, the term “predetermined response” requires more than just a response consisting of two magnitudes of DC current flow. *See supra* Section II.B.2. Petitioner, however, does not identify any teaching in Bloch indicating that the response carried by the two magnitudes of DC current flow is a *predetermined* response. *See* Pet. 63–64. Instead, like Bulan, the evidence that Cisco offers from Bloch suggests that the control circuitry is interrogating a terminal for information about an unknown condition of a terminal component. Ex. 1025, 5:61–6:2, 11:30–36. Therefore, Petitioner has not shown sufficiently that Bloch teaches a “predetermined response.”²

3. *Peguiro* (Ex. 1034)

Peguiro teaches a data collection installation comprising a central unit 1 that can interrogate any one of a plurality of peripheral units 2. Ex. 1034, 16L:43-45. Central unit 1 sends all of the peripheral units 2 an

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interrogation signal containing address information. *Id.* at 16L:44-46. In response, the correspondingly addressed peripheral unit with the address contained in the interrogation signal “reacts to the interrogation signal by, in turn, sending data possessed by [the] peripheral unit to the central unit.” *Id.* at 16L:45-50. Peguiron suggests that its data collection process allows for a considerable simplification of the data collection installation because “a single two-wire bus is used for the transmission at the same time of the interrogation signal, the data signal, as well as the supply voltage of the peripheral units, the three transmissions being able to be performed simultaneously.” *Id.* at 16R:27–31.

To support its contention Peguiron discloses a “predetermined response,” Cisco points to Peguiron’s teaching of a central unit using an address specific interrogation of any one of a plurality of peripheral units, which causes current modulation that allows the respective peripheral unit to transmit the data it possesses. Pet. 59 (citing Ex. 1034, 16L:7–14, 16L:43–49, 18L:25–45, 17L:18–23; Ex. 1001, ¶417); see *id.* at 66. Cisco asserts “Peguiron teaches a central unit that sends data pulses to a peripheral unit and receives from the peripheral unit a predetermined response of data pulses, where the data pulses are of two different magnitudes.” *Id.* at 64 (emphasis omitted); see *id.* at 71. Cisco asserts the responsive data the peripheral unit sends to the control module is a “predetermined response.” *Id.*

After considering the submitted evidence and Cisco’s contentions about what the evidence shows, we find that it does not demonstrate persuasively that Peguiron discloses the “predetermined response” limitation independent claims 1 and 38 recite. Cisco asserts that Peguiron teaches a

response that consists of two magnitudes of DC current flow. Pet. 64 (“where the data pulses are of two different magnitudes”). As discussed above, the term “predetermined response” requires more than just any response consisting of two magnitudes of DC current flow. *See supra* Section II.B.2. Petitioner, however, does not identify any teaching in Peguiron indicating that the response carried by the two magnitudes of DC current flow is a *predetermined* response. *See* Pet. 64. Instead, like Bulan and Bloch, the evidence that Cisco offers from Peguiron suggests that the control module is interrogating a peripheral unit for information, rather than causing a predetermined response to be transmitted. Therefore, Petitioner has not shown sufficiently that Peguiron teaches a “predetermined response.”

4. *Summary*

Each of the challenged claims recite, either directly (claims 1, 34, 38, 64) or indirectly (claims 15, 49), a BaseT Ethernet device that communicates a “predetermined response.” Cisco has not persuasively demonstrated that the cited prior art teaches this limitation and, as a result, we conclude that Cisco has not demonstrated a reasonable likelihood that it would be able to show that each and every limitation recited by at least one claim of the ’825 patent challenged in the Petition was previously known to a skilled artisan.

III. CONCLUSION

For the foregoing reasons, we determine that Cisco has not demonstrated a reasonable likelihood that it would prevail in showing at least one of the challenged claims in the ’825 patent is unpatentable. Therefore, we do not institute an *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is denied and no *inter partes* review of the '825 patent is instituted.

IPR2018-01515
Patent 9,812,825 B2

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