

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CHARTER COMMUNICATIONS, INC.,
Petitioner,

v.

IARNACH TECHNOLOGIES, LIMITED,
Patent Owner.

Case IPR: 2024-01287
Patent No. 9,287,982

PETITIONER'S REQUEST FOR REHEARING

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I. INTRODUCTION AND STATEMENT OF REQUESTED RELIEF

Petitioner Charter Communications, Inc. (“Petitioner”) respectfully moves under 37 C.F.R. § 42.71(d) for rehearing of the Final Written Decision (Paper No. 43, “FWD”). First, the Board failed to give any meaning to the terms “service auto-configuration method/network” recited in the preambles of claims 1 and 6. There is no dispute that these terms are to be given their plain and ordinary meaning (*i.e.* automatic configuration of a service of a DPOE system). The Board did not do so. Second, the Board overlooked evidence throughout the Petition and supporting expert declaration concerning Bernstein’s disclosures of the automatic configuration of services. The Board should grant Petitioner’s request and find Claims 1 and 6 unpatentable.

II. ARGUMENT

A Petitioner who seeks rehearing bears the burden of specifically identifying matters that the Board “misapprehended or overlooked and the place where each matter was previously addressed.” 37 C.F.R. § 42.71(d).

A. The Board Erred in Failing to Apply Any Meaning

Claims 1 and 6 recite “[a] service auto-configuration [method/network] of a DOCSIS Provisioning Of EPON (DPOE) system.” Ex. 1001, claims 1 and 6. Both Petitioner and Patent Owner agreed the phrase “service auto-configuration” should be afforded its plain and ordinary meaning (FWD at 15 (citing Pet. at 11, Ex. 2009 at 3-4, Ex 2010 at 7)).

Construed in accordance with its ordinary meaning, both Petitioner and PO argued the limitation should be read as automatic configuration of a service of a DPOE system. Paper 42 at 59:6-21, 61:3-62:7 (Pet.) and 44:23-25 (PO). The PO emphasized at the hearing that “the key aspect of the invention is that it is a way to automate and automatically configure this OLT and ONU, automatically configure the system.” *Id.* at 38:17-20; *see also* 36:22-23 (“[W]hat service auto-configuration does capture is this idea that it’s automatically configuring both of these devices.”); 37:5-6 (“[I]t’s configuring, automatically configuring the services of a DPOE system.”); and 47:4-7 (“[T]he key part of the invention of the ‘982 Patent is this idea of automatically configuring these OLTs and ONUs, where you don’t have human intervention.”) In rejecting Petitioner’s challenge, the Board failed to apply this plain and ordinary meaning to Petitioner’s prior art evidence which taught the automatic configuration of services.¹

The Decision wrongly faults Petitioner for allegedly not providing a further construction for these phrases. FWD at 39 (noting “Petitioner fails, both in the

¹ The Board argues Petitioner did not adopt PO’s construction as its own or agree that PO’s construction was correct. FWD at 36. “37 C.F.R. § 104(b)(3) does not require [a] petitioner to express its subjective agreement regarding correctness of its proffered claim constructions or to take ownership of those constructions,” *Glux Visual Effects Tech (Shenzhen) Co. v. Ultravision Techs., LLC*, No. IPR2020-01052, 2021 WL 6338376 (P.T.A.B. Nov. 17, 2021) (citing *Western Digital Corp. v. Spex Techs, Inc.*, IPR2018-00084, Paper 14 at 11 (PTAB April 25, 2018)).

Petition and the Reply, to make any *proper* claim construction argument for the term “service auto-configuration method[.]” (emphasis added). This is wrong. Petitioner asserted in its petition that the preamble limitation should be accorded its ordinary and customary meaning. Pet. at 11 (asserting words in the claims “given their plain meaning” and no contrary construction necessary). As the Board has previously declared, a Petitioner complies with the requirements of 37 C.F.R. § 104(b)(3) when its petition “identifies that, for the purposes of this proceeding, claim terms should be interpreted under their ordinary and customary meaning as understood by one of ordinary skill in the art.” *Polycom, Inc. v. Directpacket Rsch., Inc.*, No. IPR2019-01233, 2020 WL 207143, *4 (P.T.A.B. Jan. 13, 2020) (“In the context of *inter partes* review, the rules do not require more than this.”); *see also Palo Alto Networks, Inc. v. Centripetal Networks, Inc.*, No. IPR2022-00182, 2023 WL 5033832, *12 (P.T.A.B. May 23, 2023) (“Rule 42.104(b)(3) simply requires that the Petition set forth ‘[h]ow the challenged claim is to be construed,’ which Petitioner has done by asserting that the language of the claims is entitled to its ordinary meaning[.]”)

Patent Owner, in both its Preliminary Response and Response, agreed the term should be given its plain and ordinary meaning, declining to advance any conflicting construction of its own. Prelim. Resp. at 21-23 and PO Resp. at 15-20. Patent Owner offered only that the ordinary meaning of the phrase was consistent with statements in the specification that “the present document adds the configuration information

about the OLT of the DPOE system in the configuration file, and completes the automatic configuration on the OLT and the ONU at the same time; [during] the process of the ONU initialization[.]” Resp. at 18-19 (quoting EX1001, 7:65-8:2); *see also* EX2008, ¶42 (quoting EX1001, 8:19-31) (PO’s expert emphasizing “configuration of the OLT and the ONU at the same time through a configuration file including the configuration information of the ONU and the configuration information of the OLT in the DPOE system; [during] the process of the ONU initialization.”) This is the exact position offered in the Petition and accompanying declaration. Pet. at 7-8, EX1005¶¶ 39-42; Reply, 2-7; EX1016, ¶¶6-16, 36-43.

In rejecting Petitioner’s challenge to Claims 1 and 6, the Board does not articulate its construction of “service auto-configuration.” The Board was required to apply the limitation’s plain meaning (*i.e.* a method configuring a service in a DPOE system automatically) or otherwise articulate an alternative construction. The Board’s failure to do either constitutes error. *See, e.g., O2 Micro Intern. Ltd. v. Beyond Innovation Technology Co.*, 521 F. 3d 1351, 1361-62 (Fed. Cir. 2008) (“***it is the court's duty to resolve***” parties’ dispute over plain and ordinary meaning) (emphasis added); *Axonics, Inc. v. Medtronic, Inc.*, 75 F.4th 1374, 1380-81 (Fed. Cir. 2023) (vacating FWD for failing to articulate construction of claim limitation); *Nearmap US, Inc., v. Eagle View Technologies, Inc.*, IPR2022-00734, Paper No. 43, Decision Vacating Final Written Decision (February 20, 2024) (“[W]here that

[construction] dispute materially affects the Board’s determinations, it is necessary to resolve the dispute.”)

B. The Board Overlooked Petitioner’s Prior Art Evidence Disclosing a Service Auto-Configuration Method/Network

The Board’s conclusion that Petitioner failed to demonstrate where the prior art met the challenged limitation rests upon what it deemed Petitioner’s predicate failure to articulate a more elaborate construction for “service auto-configuration.” FWD at 39 (“Without this claim construction, Petitioner does not demonstrate where the prior art meets the challenged limitation.”) Neither Petitioner nor PO were required to provide a construction beyond proposing it be accorded its plain and ordinary meaning. *See Polycom*, 2020 WL 207143 at *4.

Further, Petitioner did demonstrate how the prior art automatically configured DOCSIS services in a DPOE system. Rule 42.104(b)(4) requires the Petition “specify where each element of the claim is found in the prior art patents or printed publications relied upon.” Petitioner did just that.

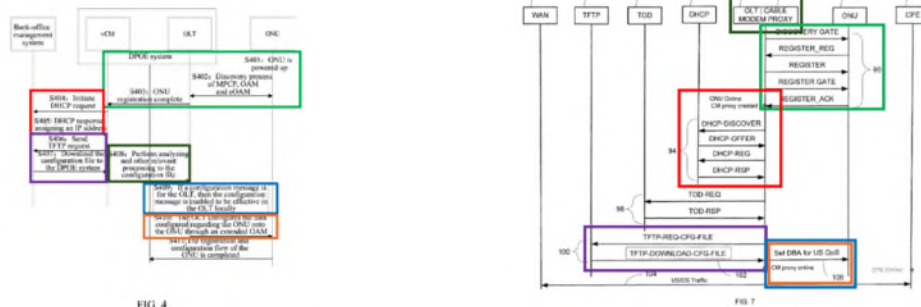
The Petition states “Bernstein discloses this element [i.e. the preamble’s service auto-configuration method/network].” FWD at 30 (quoting Pet. at 24). Petitioner asserted that Bernstein discloses a DPOE system having a service auto-configuration method/network therein. *See* Pet. at 24. *citing* EX1005, ¶59 (citing EX1006, Abstract and 2:2-5, 2:44-3:36). The Petitioner further identified the components of Bernstein responsible for the “service auto-configuration

method/network.” Specifically, Petitioner pointed to the DPoE system shown and described in Bernstein’s Figure 3, **“comprising OLT 18 including DPON 40 and Cable Modem Proxy 60 (a virtual cable modem.)”** Pet. at 24 (citing EX1005, ¶59 and EX1006, 3:37-46) (emphasis added).

In discussing Claims 1 and 6, Petitioner articulated how Bernstein’s DPON 40 and Cable Modem Proxy 60 automatically configured services. Petitioner demonstrated how each of the recited steps of the claimed method, and each of the recited components of the claimed network, were disclosed in Bernstein. The body of Claims 1 and 6 recite the steps and/or components responsible for configuring services in a DPOE network, whereas the preamble specifies that those steps/components are automatic. *See, e.g.*, Paper No. 42 at 37:10-16 (Judge Ogden noting that remainder of claim recites configuring services, whereas preamble specifies that such configuration is automatic.) In addressing these steps/components, Petitioner also explicitly stated that Bernstein taught/rendered obvious “automatically configur[ing] both the ONU and OLT at the same time” by DPON 40’s software without any human involvement. EX1005, ¶80; *see also id.*, ¶81 (eliminating manual intervention); *id.*, ¶82 (Bernstein’s Fig. 4 motivated automatic configuration); and, Pet. at 24-46.²

² Petitioner also made clear in its Reply that the entire discussion of Claims 1 and 6 was intended to demonstrate how the prior art taught a service *auto*-configuration method/network. Reply, 4-7 (incorporating arguments from body of claim).

Petitioner specifically observed that Bernstein's Figure 7 depicted the same service auto-configuration method illustrated in the '982 Patent's flow chart:



Pet. at 39-42 (citing EX1005, ¶91 (citing EX1001, Fig. 4) (annotated)) and EX1006, Fig. 7 (annotated)).

The Board agreed this Figure from the '982 Patent “illustrates a flow chart of auto-configuration of an OLT and an ONU.” FWD at 9. Figure 4 depicts the “configuration of the ONU and OLT of the DPOE system” at the same time in connection with the power-up and registration process of the ONU. *Id.* Figure 4 thereafter describes the VCM’s initiation of a “a Dynamic Host Configuration Protocol (DHCP) request to a DHCP server of the back-office management system,” to which the DHCP server responds, assigning the vCM an IP address. *Id.* at 9-10.

Petitioner’s Reply was not improper. *See Apple Inc. v. Andrea Electronics Corp.*, 949 F.3d 697, 706 (Fed. Cir. 2020) (arguments are properly considered part of Petition where related to the same “legal ground,” rely on the “same prior art,” and support the “same legal argument.”); *Rembrandt Diagnostics, LP v. Alere, Inc.*, 76 F.4th 1376, 1384 (Fed. Cir. 2023) (Petitioner allowed to clarify earlier generic statement of “efficiencies” gained by explaining specific “efficiencies” in Reply).

Figure 4 depicts the vCM then initiating a TFTP request to a TFTP server for a configuration data file for the ONU. *Id.* at 10. The TFTP server, according to Figure 4, responds to the request by downloading the file. *Id.* According to Figure 4, the DPOE system “identif[ies] the configuration data of the OLT and the configuration data of the ONU automatically,” configuring the OLT locally and the ONU via a management channel. *Id.* Figure 4 further illustrates that, after completing the configuration, the ONU notifies the DPOE system and registration ends. *Id.* at 11. Figure 4 explains such steps “*auto-configur[e]*” the OLT and ONU, through automated, electronic communications with no human involvement. *See Li v. Apple Inc.*, No. 2024-2148, 2025 WL 1618217, *2 (Fed. Cir. June 9, 2025) (absence of feature like human involvement may be inferred by prior art’s omission thereof).

The Board does not explain how Bernstein’s identical messaging depicted in its Figure 7 fails to disclose a service auto-configuration method/network. The Board’s discussion of Bernstein echoes that of the Petition (See Discussion in subsections a-e, below). Figure 7 depicts Bernstein configuring services in the same manner as the ‘982 Patent: electronically without manual intervention. *See FWD* at 20-23. The Board found that Bernstein’s service configuration proceeds similarly, with the ONU 24 establishing a “physical layer” 90, completing “address registration 94,” acquiring a configuration file in “TFTP session 100,” where “CM proxy 60” sends a TFTP request to “TFTP server 52” which responds with a “TFTP

configuration file 102,” and using that file to configure “Dynamic Bandwidth Allocation (DBA) 106 for Upstream (US) Quality of Service (QoS) between OLT 18 and ONU 24.” *Id.* After the registration process is complete, “communications links are established between OLT 18 and ONU 24 that operate according to the DOCSIS parameters” in the configuration file. *Id.*

The Board should have considered the full content of the Petition’s discussion of Claim 1 and 6 when determining whether Bernstein’s configuration process disclosed a system that automatically configures services in a DPOE network. This is particularly appropriate here, where the Board has acknowledged that “service auto-configuration method” recited in the preamble served as an antecedent to the method more fully recited in the body of the claims. Paper No. 12 at 15.

Claim 1 recites automatically configuring services in a DPOE network by (1) acquiring a configuration file from a back-office management system; (2) analyzing the acquired configuration file to obtaining configuration information of both the ONU and OLT; (3) configuring the OLT locally using configuration information converted into a message format identifiable to the OLT; (4) configuring the ONU at the same time as the OLT via a management channel using configuration information converted into a message format identifiable to the ONU; and, (5) performing the configuration during ONU initialization. Claim 6 recites synonymous components of a network that performs such a method. EX1001 at

9:31-7:14 (reciting and “acquisition unit,” and “analyzing unit,” a “configuration unit,” and back-office management system). Petitioner specifically explained how Bernstein performed its configuration automatically (*i.e.* without human effort).

a. Automatically acquiring configuration file

Petitioner demonstrated that Bernstein’s Cable Modem proxy 60 acquires a configuration file as part of an automated, electronic process. Cable Model 60 “issues a request to the TFTP provisioning server 52 ... to obtain different DOCSIS service definitions” within a configuration file. Pet. at 25-26 (citing EX1006, 2:44-3:36, 5:31-32 (“[T]he CM proxy 60 may send a TFTP request for a DOCSIS configuration file download.”) This request is issued as part of an ONU initialization sequence shown in Figure 7 of Bernstein. Pet, *id.* (citing FIGS. 3 and 7). As shown in Figure 7, Cable Modem proxy 60 issues its request in response to receiving an electronic registration request from an ONU, in accordance with the DOCSIS standard and without any human intervention. *Id.* Petitioner explained that the “TFPT [sic] replies with the configuration file[,]” again without human intervention. Pet. at 26 (citing EX1006, 5:32-34) (“The TFTP server 52 replies with a TFTP download configuration file 102” and showing all communications associated with registration and configuration file acquisition in Figure 7 being sent and/or received by hardware (e.g. ONU, OLT, back-office system) or software (e.g. DPON40, Cable Modem proxy 60, firmware for ONU/OLT/back-office system) components

according to DOCSIS standard and failing to show any communications transmitted to or from an operator).

b. Automatically analyzing the acquired configuration file to obtaining both ONU and OLT configuration information

Petitioner demonstrated that DPON 40 receives and analyzes the configuration file by means of an automated, software-based process. Petitioner explained that, in response to acquiring the configuration file, Bernstein's DPON 40 is programmed to automatically process that file with "a 'DOCSIS-to-PON translator 84' that analyzes the configuration file, obtaining configuration information of both the OLT and ONU, that it then converts 'into associated PON parameters 63 that can be used by the OLT 18 and ONU 24'" without human intervention. Pet. at 28 (citing EX1005, ¶66 (citing EX1006, 3:53-63)); Pet. at 29-32 (showing in Fig. 8 a single algorithm/continuous process implemented by DPON 40/Cable Modem proxy 60 starting with configuration file acquisition, processing of configuration file and configuration of ONU/OLT with information from file to open DOCSIS services without human intervention).

c. Automatically configuring the OLT locally using configuration information converted into an OLT-identifiable message

Petitioner demonstrated that, immediately after extracting the OLT configuration information, DPON 40's programming automatically locally configures the OLT with the OLT configuration information. Pet. at 29 ("Bernstein

explains the PON parameters derived by Bernstein's [] DPON 40 using the DOCSIS-to-PON translator 84 are 'programmed into a PON Driver 86' residing locally on the OLT 18." (citing EX1005, ¶69 (citing EX1006, 3:53-59, Fig. 3)). In one example, the downloaded configuration file "may contain a request for a video service at 10 million bits per second (Mbps), a voice service of 100 thousand bps (Kbps), and data service of 50 million bits per second (Mbps)." *Id.* at 31-32 (citing EX1005, ¶71 and EX1006, 5:59-6:16). Bernstein's DPON 40, including Cable Modem 60 and DOCSIS-to-PON translator 84, translates these requirements into an overall bandwidth requirement for the "pipe" to a given ONU, along with priorities for each service. *Id.* (citing EX1005, ¶71 and EX1006, 6:17-31). This information is automatically formatted by these components into translation table 89 and loaded into OLT hardware 88 for use when communicating with a given ONU, all without human intervention. *Id.* 29-32 (citing EX1006 at 6:32-57 and FIG. 3) (annotated) and 44-46 (showing in FIG. 8 single algorithm configuration process starting with acquisition of configuration file and continuing through loading of OLT translation table into OLT memory without human intervention).

d. Automatically configuring the ONU at the same time via a management channel using ONU-identifiable message

Petitioner demonstrated that DPON 40's programming similarly automatically configures ONU 24 at the same time. "Bernstein explains that at the same time the OLT is configured locally by DPON 40 from PON parameters

obtained by Proxy 60, the ONU 24 is also configured by DPON 40 using PON parameters 63 translated by the DOCSIS-to-PON translator 84 from the configuration file 102.” Pet. at 32-39 (citing EX1005, ¶73 (citing EX1006, 3:55-56 (“PON parameters 63 that can be used by the OLT 18 and ONU 24.”))

Petitioner pointed out that FIG. 7 shows an ONU being configured at the same time as an OLT with information from the same downloaded configuration file. Petitioner highlighted Bernstein’s explanation that “[t]he information in the TFTP file 102 is then translated and used for configuring schedulers/classifiers or other features on the OLT 18 **and ONU 24**. For example, the information in TFTP configuration file 102 may be used to configure Dynamic Bandwidth Allocation (DBA) 106 for Upstream (US) Quality of Service (QoS) between the OLT 18 **and ONU 24**.” Pet. at 32-33 (emphasis added) (citing EX1005, ¶¶74-80 (citing EX1006 5:31-40) and Pet. at 33-34 (citing FIG. 7 (showing configuration of ONU/OLT performed by DPON40/CM proxy 60 to provide Dynamic Bandwidth Allocation services as single step response to acquiring configuration file)).

e. Automatically Configuring During ONU Initialization

As noted in subsection (a), Petitioner demonstrated that, Bernstein’s automatic configuration steps are performed “during registration” of the ONU. Pet. at 39-42 (citing EX1005, ¶89 (citing EX1006, 3:31-34 (“A translation function shown in Fig. 3 then translates the information obtained by the cable modem proxy

60 during the registration or post registration sessions into corresponding PON parameters.”)) Figure 7 confirms the OLT and ONU configurations automatically occurs as part of the execution of a protocol for registering the ONU automatically performed by the DPoE system. *Id.* (citing EX1005, ¶90 (citing EX1006, 4:62-66; Fig. 7 (90) (a registration request [shown in LIGHT GREEN] is communicated to DPoE System [DARK GREEN] which responds automatically)); *compare* Pet. at 41-42 (citing EX1005, ¶91 (citing EX1001, Fig. 4) (annotated) (showing same)).

C. The Board Overlooked Additional Evidence that Automatic Configuration Would Have Been Obvious in View of Tsuge

The Board further overlooked Petitioner’s arguments that to the extent that Bernstein did not disclose the claimed service auto-configuration method/network, it would have been obvious to have configured such services automatically either alone or in view of the teachings of Tsuge. Pet. at 32-39 (citing EX1005, ¶¶80-88) (In view of Tsuge, “[a] POSA would have been motivated to **automatically configure** both the OLT and the ONU at the same time because to do so would have been more efficient[.]”) Petitioner explained that a POSA would have been motivated to employ Tsuge’s auto-configuration process to eliminate delays that may arise from configurations that relied upon “manual intervention.” *Id.*; *see also* Pet. at 36-39 (citing EX1005, ¶¶86-87) (a POSA would have recognized Tsuge’s approach “had the advantages described above with respect to greater efficiency and faster opening of services.”). The Petition explained that Tsuge taught an automated

process reliant on iterating loops through a software algorithm. Pet. at 36-39 (citing EX1005, ¶83 (citing EX1008 at 1:21-5:35, 16:53-17:24, FIGS. 9 and 13) and *id.* at 65-71; *see also* FWD 22-29 (describing the automated configuration of services disclosed in Tsuge)).

D. The Board Erred To The Extent It Failed To Consider The Disclosures

The Petition described Bernstein's configuration process as being performed entirely by the software code embedded in DPON 40. That software code driven process automatically proceeds without any human involvement in response to the electronic registration request generated by the ONU when connected to the network. Petitioner has satisfied its burden under Rule 42.104(b)(4) of specifying where each element of the claimed "service auto-configuration method/network" is found and how Claims 1 and 6 are unpatentable. The Board erred by not considering the full breadth of Bernstein's configuration process as described in the Petition as the body of the claim relates to the preamble directly for antecedent support.

III. CONCLUSION

Rehearing is appropriate because the Board failed to apply the plain and ordinary meaning of "service auto-configuration method/network" or articulate and apply an alternative construction. The Board further overlooked Bernstein's disclosures of a method/network almost identical to that disclosed in the '982 Patent.

Respectfully submitted,

March 23, 2026

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that, pursuant to 37 CFR §§ 42.6(e), copies of the foregoing “PETITIONER’S REQUEST FOR REHEARING” is being served today, March 23, 2026, by electronic mail on counsel for the Patent Owner and through filing this document through the Patent Trial and Appeal Board End to End System:

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