

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

IARNACH TECHNOLOGIES LTD.,

Plaintiff,

v.

CHARTER COMMUNICATIONS, INC.,
CHARTER COMMUNICATIONS HOLDING
COMPANY, LLC, CHARTER
COMMUNICATIONS OPERATING, LLC,
SPECTRUM MANAGEMENT HOLDING
COMPANY, LLC, and SPECTRUM GULF
COAST, LLC,

Defendants.

Civil Action No. 2:24-cv-00230-JRG

JURY TRIAL DEMANDED

IARNACH TECHNOLOGIES LTD.’S LOCAL PATENT RULE 4-2 STATEMENT

Pursuant to Local Patent Rule 4-2 and the Court’s Docket Control Order (Dkt. 55 at 4), Plaintiff Iarnach Technologies Ltd. (“Plaintiff” or “Iarnach”) discloses its preliminary proposed constructions of each claim term, phrase, or clause which the parties collectively have identified in their Local Patent Rule 4-1 disclosures. Plaintiff’s proposed terms are based on information that is currently available to Plaintiff. Plaintiff reserves the right to modify this disclosure in light of Defendants’ Charter Communications, Inc., Charter Communications Holding Company, LLC, Charter Communications Operating, LLC, Spectrum Management Holding Company, LLC, and Spectrum Gulf Coast, LLC, (collectively, “Defendants” or “Charter”) preliminary constructions, and should additional information become available through discovery. Further, Plaintiff reserves the right to supplement, amend, and/or modify this disclosure for any other reason including, consistent with P.R. 4-2(c), to facilitate the preparation of the Joint Claim Construction and

Prehearing Statement, and in light of arguments made or positions taken by Charter as this case proceeds.

Plaintiff further provides its extrinsic evidence supporting its preliminary claim constructions. Plaintiff reserves the right to rely on all portions of the extrinsic evidence (not just those portions cited in the chart below). Further, Plaintiff may rely on additional extrinsic evidence, including extrinsic evidence cited by Defendants.

Plaintiff does not presently intend to rely on any expert testimony for claim construction or indefiniteness, but may do so should Defendants submit expert testimony in support of their claim constructions or indefiniteness positions.

Subject to the foregoing, Plaintiff preliminarily proposes the following constructions and extrinsic evidence:

I. U.S. PATENT NO. 8,942,378

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
1.	“optical line terminal (OLT)” (II) Claims 1, 3-6, 8	“a device in a passive optical network that communicates information to/from optical network units (ONUs) in the passive optical network”	• “Optical Line Terminal (OLT): The OLT is the ultimate network manager and controls all of the GPON network traffic, in the form video, data and voice signals, and sends them downstream to the ONTs on the other end. The OLT also receives these signals from the end user’s ONT, and sends them on their way to their destination over the Internet.” https://www.multicominc.com/gpon-network-components-features-and-advantages/

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
2.	“optical network unit (ONU)” (II) Claims 1-6, 8-9, 11-13	“a device in a passive optical network that communicates information to/from an optical line terminal (OLT) in the passive optical network”	• “Optical Network Terminal (ONT): The ONT is an ‘optical modem’ that connects to the opposite end of the OLT – at the end user’s residence. It acts as the interface with the end user’s equipment – computers, televisions, WiFi, VoIP phones, etc. Data received from the end user is then aggregated, optimized and sent by the ONT to the upstream OLT. ONT’s also have the ability to broadcast WiFi throughout the end user’s home – see how below. The ONT is also known as Optical Network Unit (ONU). ONT is an ITU-T term, while ONU is an IEEE term.” https://www.multicominc.com/gpon-network-components-features-and-advantages/
3.	“service” (II) Claims 1-9, 11-13	“the activity that a user on the passive optical network is provided; a ‘service’ is not the same as a ‘source.’”	
4.	“multicast service” (Δ) Claims 1, 9	See above for construction of “service”; otherwise, plain and ordinary meaning.	• “multicasting The process of sending a message simultaneously to more than one destination on a network.” Microsoft Computer Dictionary (Third Ed.) • “multicasting A transmission system in which messages are directed to a particular group of nodes on a network. It is thus

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
			intermediate between a transmission directed to a single address and one directed to all the addresses on a network (see BROADCASTING).” Oxford Dictionary of Computing.

II. U.S. PATENT NO. 9,287,982

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
5.	“DPOE system” (II) Claims 1, 4, 6-7	“One or more devices, software and/or firmware that provide DPoE functionality within a network”	• DPoE-SP-ARCHv2.0 specification at, <i>e.g.</i>, §§1.6, 3, 7.2.3
6.	“optical line terminal (OLT)” (II) Claims 1-6, 8-11	“a device in a passive optical network that communicates information to/from optical network units (ONUs) in the passive optical network”	• DPoE-SP-ARCHv2.0 specification at, <i>e.g.</i>, §§1.1, 1.6. • “Optical Line Terminal (OLT): The OLT is the ultimate network manager and controls all of the GPON network traffic, in the form video, data and voice signals, and sends them downstream to the ONTs on the other end. The OLT also receives these signals from the end user’s ONT, and sends them on their way to their destination over the Internet.” https://www.multicominc.com/gpon-network-components-features-and-advantages/

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
7.	“optical network unit (ONU)” (II) Claims 1-6, 8-11	“a device in a passive optical network that communicates information to/from an optical line terminal (OLT) in the passive optical network”	• DPoE-SP-ARCHv2.0 specification at, <i>e.g.</i>, §§1, 1.6, 3, 7.2.4 • “Optical Network Terminal (ONT): The ONT is an ‘optical modem’ that connects to the opposite end of the OLT – at the end user’s residence. It acts as the interface with the end user’s equipment – computers, televisions, WiFi, VoIP phones, etc. Data received from the end user is then aggregated, optimized and sent by the ONT to the upstream OLT. ONT’s also have the ability to broadcast WiFi throughout the end user’s home – see how below. The ONT is also known as Optical Network Unit (ONU). ONT is an ITU-T term, while ONU is an IEEE term.” https://www.multicominc.com/gpon-network-components-features-and-advantages/
8.	“back-office management system” (II & Δ) Claims 1, 4, 6-7	“a system that provides configuration files to the DPoE system”	• DOCSIS Provisioning of EPON Specifications DPoE v2.0, DPoE Operations and Support System Interface Specification, at, <i>e.g.</i>, §5
9.	“configuring the OLT locally according to the configuration information of the OLT and meanwhile configuring the ONU according to the	No construction necessary; plain and ordinary meaning	• “meanwhile: the time before something happens or before a specified period ends.” Merriam-Webster’s Online Dictionary.

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
	configuration information of the ONU” (Δ) Claim 1		• “meanwhile: the intervening time.” Merriam-Webster’s Collegiate Dictionary (10th ed.).
10.	“service auto-configuration method of a DOCSIS Provisioning of EPON (DPoE) System” (Δ) Claims 1, 6	No construction necessary; the preamble is limiting.	

III. U.S. PATENT NO. 9,674,035

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
11.	“DPOE system” (II) Claims 19, 25, 31	“One or more devices, software and/or firmware that provide DPoE functionality within a network”	• DPoE-SP-ARCHv2.0 specification at, <i>e.g.</i>, §§1.6, 3, 7.2.3
12.	“optical line terminal (OLT)” (II) Claims 19, 25, 31	“a device in a passive optical network that communicates information to/from optical network units (ONUs) in the passive optical network”	• DPoE-SP-ARCHv2.0 specification at, <i>e.g.</i>, §§1.1, 1.6. • “Optical Line Terminal (OLT): The OLT is the ultimate network manager and controls all of the GPON network traffic, in the form video, data and voice signals, and sends them downstream to the ONTs on the other end. The OLT also receives these signals from the end user’s ONT, and sends them on their way to their destination over the Internet.” https://www.multicominc.com/gpon-network-components-features-and-advantages/

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
13.	“optical network unit (ONU)” (II) Claims 1-2, 5-6, 9-10, 13-14, 20, 26, 32	“a device in a passive optical network that communicates information to/from an optical line terminal (OLT) in the passive optical network”	• DPoE-SP-ARCHv2.0 specification at, <i>e.g.</i>, §§1, 1.6, 3, 7.2.4 • “Optical Network Terminal (ONT): The ONT is an ‘optical modem’ that connects to the opposite end of the OLT – at the end user’s residence. It acts as the interface with the end user’s equipment – computers, televisions, WiFi, VoIP phones, etc. Data received from the end user is then aggregated, optimized and sent by the ONT to the upstream OLT. ONT’s also have the ability to broadcast WiFi throughout the end user’s home – see how below. The ONT is also known as Optical Network Unit (ONU). ONT is an ITU-T term, while ONU is an IEEE term.” https://www.multicominc.com/gpon-network-components-features-and-advantages/
14.	“virtual cable modem (vCM)” (II) Claims 1, 3-5, 7-9, 11-13	“software in a DPoE system that emulates a physical cable modem”	• DPoE-SP-ARCHv2.0 specification at, <i>e.g.</i>, §§1.6, 6.4.
15.	“notifying...providing” / “notifies...provides” / “receiving a notification... obtaining the updated configuration file” /	No construction necessary; plain and ordinary meaning	• “notify: to give notice to; inform.” American Heritage Dictionary (4th ed.) • “provide: to make available (something needed or desired); furnish; to supply something needed or

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
	“receives a notification... obtains the updated configuration file” / “receiving a notification... obtaining the updated configuration file” / “means for receiving...means for obtaining the updated configuration file” (Δ) Claims 1, 5, 9, 13, 14, 20, 26, 32		desired to” American Heritage Dictionary (4 th ed.)
16.	“means for generating an updated configuration file for the ONU” (Π & Δ) Claim 13	Function: “generating an updated configuration file for the ONU” Corresponding Structure: “DOCSIS back-office systems, including module 602, that permit an operator to edit a CM config file and/or associated service definitions and are implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof.”	
17.	“means for notifying a virtual cable modem (vCM), prior to successful update of the ONU, that the updated configuration file is available for the ONU” (Π & Δ) Claim 13	Function: “notifying a virtual cable modem (vCM), prior to successful update of the ONU, that the updated configuration file is available for the ONU” Corresponding Structure: “DOCSIS back-office systems, including a DHCP server and module 604, that set the dpoeVcmDynCfgNowMIB object to ‘set’ and/or inform the vCM about the target config file name as well as the	

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
		list of TFTP address servers holding its config file, that are implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof.”	
18.	“means for providing, when requested by the vCM, to the vCM, the updated configuration file” (Π & Δ) Claim 13	Function: “providing, when requested by the vCM, to the vCM, the updated configuration file” Corresponding Structure: “DOCSIS back-office systems, including TFTP server and module 606, that transmit the updated configuration file to the vCM and that are implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof.”	
19.	“means for monitoring the vCM for an indication of successful update of the ONU by the vCM using the updated configuration file” (Π & Δ) Claim 13	Function: “monitoring the vCM for an indication of successful update of the ONU by the vCM using the updated configuration file” Corresponding Structure: “DOCSIS back-office systems, including module 608, that determine whether the vCM’s dpoeVcmDynCfgState MIB object is set to ‘updateComplete’ and that are implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof.”	

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
20.	“means for receiving a notification that an updated configuration file is available for the ONU” (Π & Δ) Claim 32	Function: “receiving a notification that an updated configuration file is available for the ONU” Corresponding Structure: “A DPoE System, including a DHCP server and module 802, that receives a dpoeVcmDynCfgNowMIB object configured to ‘set’ and/or receives the target config file name as well as the list of TFTP address servers holding the config file, and that is implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof.”	
21.	“means for obtaining the updated configuration file” (Π & Δ) Claim 32	Function: “obtaining the updated configuration file” Corresponding Structure: “A DPoE System, including module 804, polls a TFTP server based on information from a DHCP request and receives the updated configuration file, and that is implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof.”	
22.	“means for performing a first validation of the updated configuration file for structural errors” (Π & Δ) Claim 32	Function: “performing a first validation of the updated configuration file for structural errors” Corresponding Structure: “A DPoE System, including module 806, that changes the status of the	

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
		dpoeVcmDynCfgState MIB object to 'validationInProgress' and then verifies the updated configuration file for configuration errors (structural errors) and, if errors are detected, changes the status of the dpoeVcmDynCfgState MIB object to 'validationFailed', and that is implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof."	
23.	"means for determining changes between the current configuration file of the ONU and the updated configuration file to identify ONU resources to implement to the changes" (II & Δ) Claim 32	Function: "determining changes between the current configuration file of the ONU and the updated configuration file to identify ONU resources to implement to the changes" Corresponding Structure: "A DPoE System, including module 808, that assesses the differences between a current active CM configuration file and an updated configuration file, and that is implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof."	
24.	"means for performing a second validation about whether the ONU resources to implement the changes are available or not at the ONU" (II & Δ) Claim 32	Function: "performing a second validation about whether the ONU resources to implement the changes are available or not at the ONU" Corresponding Structure: "A DPoE System, including module 810, that sets the dpoeVcmDynCfgState MIB	

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
		object to 'resourceValidationInProgress' ' and confirms the availability of hardware and software resources on the target DPoE ONU to make sure that the new configuration can be executed successfully and, if not, change the status of the dpoeVcmDynCfgState MIB object to 'resourceValidationFailed,' and that is implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof."	
25.	"means for applying the changes to the ONU when it is determined that the ONU resources to implement the changes are available at the ONU" (Π & Δ) Claim 32	Function: "applying the changes to the ONU when it is determined that the ONU resources to implement the changes are available at the ONU" Corresponding Structure: "A DPoE System, including module 812, that changes the status of the dpoeVcmDynCfgState MIB object to 'updateInProgress', converts the configuration delta into a set of eOAM configuration parameters addressed to the target ONU, and sends the eOAM configuration parameters to the target ONU so that they can be used to add/modify/delete specific service instances, and changes the status of the dpoeVcmDynCfgState MIB object to 'updateComplete' to	

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
		reflect the successful completion of the committing process, and that is implemented in digital electronic circuitry, or in computer software, firmware, or hardware, and equivalents thereof.”	
26.	“generator,” “notifier,” “file provider,” “monitor” (Δ) Claims 5-8	No construction necessary; plain and ordinary meaning.	• DPoE v2.0 MAC and Upper Layer Protocols Interface Specification • Generator: 4. Computer Science A program that produces specific programs from the definition of an operation. The American Heritage Dictionary, Fourth Ed. • Generator (3) (computing systems). A controlling routine that performs a generate function, for example, report generator, input-output generator. The New IEEE Standard Dictionary of Electrical and Electronics Terms, Fifth Edition • PacketCable Residential SIP Telephony Feature Specification at 172. (“Upon receiving this SUBSCRIBE, the notifier sends a 200 OK response and a NOTIFY with a Subscription-State header value of ‘terminated.’”). • monitor (3) (software) a software tool or hardware device that operates concurrently with a system

	CLAIM TERM	PRELIMINARY CONSTRUCTION	EXTRINSIC EVIDENCE
			or component and supervises, records, analyzes, or verifies the operation of the system or component. The New IEEE Standard Dictionary of Electrical and Electronics Terms, Fifth Ed. • Monitor 3a. A usually electronic device used to record, regulate, or control a process or system. The American Heritage Dictionary, Fourth Ed. • Monitor 8. any of various devices for checking or regulating the performance of machines, aircrafts, guided missiles, etc. Webster's New World College Dictionary, Fourth Ed.
27.	“receiver,” “obtainer,” “first validator,” “determiner,” “second validator,” “applier” Claims 8, 20-22	No construction necessary; plain and ordinary meaning.	• DPoE v2.0 MAC and Upper Layer Protocols Interface Specification • Receiver 3. A device for the reception and, if necessary, demodulation of electronic signals. Modern Dictionary of Electronics, 6th Ed. • DPOE Physical Layer Specification • DPOE Security and Certificate Specification

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served on all counsel of record
via email.

/s/ Eric Enger
Eric Enger