

THE STATE OF NEW HAMPSHIRE

BEFORE THE

PUBLIC UTILITIES COMMISSION

Petition for Investigation into the Regulatory

Status of IP Enabled Voice Telecommunications

Service

Docket No. DT 09-044

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Comcast Phone of New Hampshire, LLC ("Comcast Phone") on behalf of itself and its affiliates, respectfully files the following responses to the NHTA First Set of Data Requests approved by Staff in the above-captioned proceeding.

**OBJECTIONS**

Comcast hereby reiterates, and incorporates by reference, its Objections to the NHTA First Set of Data Requests approved by Staff filed on August 10, 2009.

**RESPONSES**

Comcast provides two interconnected Cable VOIP Services in New Hampshire: Comcast Digital Voice ("CDV"), a residential service, and Comcast Business Class Voice ("BCV"), a commercial service. Unless otherwise noted, Comcast's responses below refer to both services.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-1

Witness: David J. Kowolenko

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**REQUEST:**

**Does the Cable VoIP Service that Comcast, Time Warner or Metrocast offer provide for the ability of customers to make telephone calls with content of their own choosing to any other person or entity that is assigned a telephone number (even if that number is translated to an Internet protocol (IP) address by the provider)?**

**RESPONSE:**

Comcast's CDV and BCV services allow customers to communicate the voice content of their choosing to a person or entity that has been assigned and is using a telephone number.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

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**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-2

Witness: David J. Kowolenko

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**REQUEST:**

**Do customers using Cable VoIP Service utilize their own POTS compatible telephone devices, inside wiring and RJ-11/14/25/45 wall jacks? If not, specifically what equipment do customers use (identifying in each case whether such equipment is owned by the customer or the cable telephone service provider (or any affiliate thereof))? Can a Cable VoIP Service customer use an IP telephone device such as a session initiation protocol (SIP) telephone for access to Cable VoIP Service?**

**RESPONSE:**

Customers can use POTS-compatible telephones and devices, inside wiring and wall jacks, or can forgo use of the inside wiring and connect a telephone directly to the Embedded Multimedia Terminal Adapter ("eMTA"). The eMTA is owned by Comcast's cable affiliate. Use of a SIP phone is possible with certain customer-provided equipment.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-3

Witness: David J. Kowolenko

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**REQUEST:**

**Does the Cable VoIP Service customer use the same cable company connection as that used to provide Internet access? If the cable connection is channelized, does the Cable VoIP Service call use the same channel(s) as the connection used to provide Internet access?**

**RESPONSE:**

Comcast's VoIP services and Comcast High Speed Internet ("CHSI") are provided over a common broadband connection from the customer premise to the Cable Modem Termination System ("CMTS") on the Comcast network. From the eMTA to the CMTS, Comcast reserves dedicated bandwidth for its VoIP services. After passing through the CMTS, CDV/BCV traffic continues to be transmitted as a dedicated service.

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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-4

Witness: David J. Kowolenko

**REQUEST:**

**Does the Cable VoIP Service enable customers to engage in real time, two-way voice communications?**

**RESPONSE:**

Yes.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-5

Witness: David J. Kowolenko

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**REQUEST:**

**Does the Cable VoIP Service use customer premises equipment (CPE) capable of generating and receiving IP packets/datagrams? If so, specifically identify and describe the CPE used. Is this device the same as the device that provides Internet access? Are there two separate Cable VoIP Service and Cable Internet access devices? Are the functions separate but use the same device? For each item of equipment, please state whether the customer or the service provider (or any affiliate thereof) owns the equipment. If a lease or other ownership arrangement is used, please describe that arrangement.**

**RESPONSE:**

Yes. The CPE at the CDV customer's home that is capable of generating and receiving IP packets/datagrams is the Embedded Multimedia Terminal Adapter ("eMTA"). The eMTA reformats the analog voice signals created by the handset into the IP packets for routing on the CDV network and is the "home" for the IP address that allows the network to communicate with the eMTA for the proper routing of CDV packets. For CDV customers who purchase CHSI, the eMTA also provides the end user a high-speed data connection for accessing the Internet (CHSI is provided to BCV customers through a separate device). These functions are separate but use the same device. The eMTA is owned by Comcast's Cable affiliate and leased to the customer.

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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-6

Witness: David J. Kowolenko

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**REQUEST:**

To provide Cable VoIP Service, does the service provider or any affiliate of the service provider own or operate any property or equipment within or attached to the building where the customer's premises is located? If so, describe this equipment in detail and the specifics of such ownership or operation. Please also specify the exact location of the equipment, e.g. on the outside of the building, inside the building, adjacent to the TV or computer, etc.

**RESPONSE:**

A coaxial cable "drop" is affixed to the customer premise. It is owned by Comcast's cable affiliate up to the point of demarcation with the customer premises, generally twelve inches outside of the home. The eMTA, which is CPE owned by the Comcast cable affiliate and leased to the customer, is typically located inside the customer premises at a location convenient to the customer. As the eMTA is also used to supply CHSI for CDV customers purchasing that service, Comcast installs the eMTA close to the customer's computer.

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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-7

Witness: David J. Kowolenko

**REQUEST:**

To provide Cable VoIP Service, does the service provider or any affiliate of the service provider own or operate any plant or equipment between the nearest public street and the building where the customer's premises is located? If so, please describe this equipment in detail. If such equipment is owned or operated by any person other than the customer, please identify the owner and describe the ownership arrangement.

**RESPONSE:**

Please see Response to DR 1-6, *supra*.



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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-8

Witness: David J. Kowolenko

**REQUEST:**

Does the provider of Cable VoIP Service use or rely on a device known as an embedded multimedia terminal adapter (eMTA) to provide voice service? If so, where is this equipment typically located? Who manufactures this equipment, and what is a typical model name/number? Can customers retain the use of their telephones, inside wire and jacks? Does the eMTA format the analog electrical signal from the customer's telephone into IP packets for the transmission of calls over the cable service provider's IP voice network? Who owns the eMTA? Can the customer provide his/her own eMTA? Who maintains the eMTA? If the eMTA needs to be replaced, who replaces it? What physical connections can be accommodated by the eMTA (i.e., coaxial F connector, RJ 11 connector, USB connector, etc.)? What communications protocols can be accommodated by the eMTA? Does the eMTA perform a Protocol Conversion? Would the customer be provided with an eMTA if the customer took other services (such as cable Internet access service or video service) but not Cable VoIP Service?

**RESPONSE:**

Due to the number of separate inquiries contained within this Data Request, Comcast is providing responsive information broken down by subpart.

*Does the provider of Cable VoIP Service use or rely on a device known as an embedded multimedia terminal adapter (eMTA) to provide voice service? If so, where is this equipment typically located?*

Please see Responses to DR 1-5 and 1-6, *supra*.

*Can customers retain the use of their telephones, inside wire and jacks?*

Please see Response to DR 1-2, *supra*.

*Who manufactures this equipment, and what is a typical model name/number?*

Per its objections filed August 10, 2009, Comcast objects to this subpart of the Data Request as irrelevant.

*Does the eMTA format the analog electrical signal from the customer's telephone into IP packets for the transmission of calls over the cable service provider's IP voice network?*

Please see Response to DR 1-5, *supra*.

*Who owns the eMTA?*

Comcast's cable affiliate.

*Can the customer provide his/her own eMTA?*

No.

*Who maintains the eMTA? If the eMTA needs to be replaced, who replaces it?*

Comcast's cable affiliate.

*What physical connections can be accommodated by the eMTA (i.e., coaxial F connector, RJ 11 connector, USB connector, etc.)?*

eMTAs can accommodate RJ11, RJ45, F Connectors and AC power connections. Some models will accommodate a USB connection. Only the RJ11, F Connectors, and AC power connections are used in the provision of VoIP service.

*What communications protocols can be accommodated by the eMTA?*

DOCSIS and PacketCable Standard protocols.

*Does the eMTA perform a Protocol Conversion?*

No.

*Would the customer be provided with an eMTA if the customer took other services (such as cable Internet access service or video service) but not Cable VoIP Service?*

An eMTA is not required for services other than Cable VoIP; it is sometimes, but not always, provided to CHSI customers. An eMTA would generally not be provided to customers purchasing stand-alone video service.

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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-9

Witness: David J. Kowolenko

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**REQUEST:**

**Please identify and describe all equipment that would be located between the eMTA and the demarcation point referenced in Data Request 10, below. Who owns this equipment? Who supplies it? Who maintains it? If it needs replacement, who replaces it?**

**RESPONSE:**

The equipment located between the EMTA and the demarcation point is inside wiring owned and maintained by the customer (although customers have the option of purchasing a maintenance plan from Comcast). This inside wiring consists of coaxial cable. It may also include interior passive splitters.

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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-10

Witness: David J. Kowolenko  
Beth Choroser

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**REQUEST:**

Please identify and describe specifically the demarcation point between the customer's premises and the Cable VoIP Service provider's network. What equipment comprises the demarcation? Where physically is the demarcation point located? If the demarcation point location varies from customer to customer, please describe the possible locations and types of equipment. Does the equipment used to provide the demarcation point for Cable VoIP Service also provide the demarcation for other services (Internet access, cable video or other)?

**RESPONSE:**

Comcast's VoIP and high-speed Internet services share the same plant as its video service. The demarcation point for Comcast's video network is at "a point at (or about) twelve inches outside of where the cable wire enters the subscriber's premises." 47 C.F.R. § 76.5(mm)(1). The precise location and equipment used for the demarcation point may vary based on the architectural features of the particular structure.

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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-11

Witness: David J. Kowolenko

**REQUEST:**

If a customer purchases both Internet access and voice service from the cable telephone service provider, do the Internet and voice communications travel over the same communications path? If not, how do the transmission paths differ? Do the Internet access and voice service share the same bandwidth or channel? If not, on which bandwidth/channel are they carried, respectively, and what are the characteristics of each bandwidth/channel that make it most appropriate for the assigned service? Is the Internet used for transmitting voice communications, or are private/dedicated networks used? If the Internet is used and the Internet pathway happens to experience congestion, will the voice signal become degraded? If not, why not? Can the Cable VoIP Service use any commercial broadband connection? Is the broadband connection required to be supplied by the Cable VoIP Service provider (or its affiliate?)

**RESPONSE:**

Due to the number of separate inquiries contained within this Data Request, Comcast is providing responsive information broken down by subpart.

*If a customer purchases both Internet access and voice service from the cable telephone service provider, do the Internet and voice communications travel over the same communications path? If not, how do the transmission paths differ?*

All CHSI and CDV/BCV packets travel over the same hybrid fiber-coaxial ("HFC") cable network, which runs from the customer's home to the Comcast headend. The headend is the facility where the HFC network ends. All packets, whether VoIP or CHSI, pass through a CMTS located at the headend, which then sends VoIP packets to a call management server ("CMS"), also known as a "soft switch."

*Do the Internet access and voice service share the same bandwidth or channel? If not, on which bandwidth/channel are they carried, respectively, and what are the*

*characteristics of each bandwidth/channel that make it most appropriate for the assigned service?*

Please see Response to DR 1-3, *supra*.

*Is the Internet used for transmitting voice communications, or are private/dedicated networks used?*

Private/dedicated networks are used.

*If the Internet is used and the Internet pathway happens to experience congestion, will the voice signal become degraded? If not, why not?*

N/A.

*Can the Cable VoIP Service use any commercial broadband connection? Is the broadband connection required to be supplied by the Cable VoIP Service provider (or its affiliate?)*

A CDV or BCV customer can only place or receive calls using the Comcast broadband connection; other features of the VoIP service (such as those accessed through the web portal) can be accessed from any broadband connection or computer.

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**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-12

Witness: David J. Kowolenko

**REQUEST:**

If a Cable VoIP Service customer initiates a call, please describe in full detail the steps to complete the call, including all equipment involved and the signaling used, for a call (i) to a customer of the Cable VoIP Service provider served by the same soft switch; (ii) to a customer of that same Cable VoIP Service provider served by a different soft switch; (iii) to a customer of a different Cable VoIP Service provider; (iv) to an ILEC customer physically located in the same exchange; (v) to an ILEC customer physically located outside of the local exchange area but within the same LATA (describing fully the exchange access service utilized); and (vi) to an ILEC customer physically located in a different LATA (describing fully the exchange access service utilized).

**RESPONSE:**

Due to the number of separate inquiries contained within this Data Request, Comcast is providing responsive information broken down by subpart.

Also, for the purposes of Comcast's responses to this Data Request below, all signaling from the eMTA to the soft switch in all scenarios is IP protocol (PacketCable 1.5 for CDV and PacketCable 2.0 for BCV), and from the media gateway to termination on the PSTN, all calls are in time-division multiplexing ("TDM") protocol.

*(i) to a customer of the Cable VoIP Service provider served by the same soft switch;*

Comcast uses one soft switch, located in Chelmsford, MA, to serve CDV customers in New Hampshire, as well as in several other New England States. Therefore, the response below describes all intrastate calls among CDV customers, as well as many interstate calls between CDV customers in New Hampshire and CDV customers in other New England States.

With respect to BCV, Comcast uses geographically redundant switching facilities (soft switches), in Philadelphia, PA and Denver, CO to service BCV customers.

Therefore, with respect to BCV, the response below describes all intrastate calls between BCV customers in New Hampshire, as well as between BCV customers in New Hampshire and BCV customers in other states served by the same switching facility.

- (1) Call Origination: The eMTA formats the caller's voice in IP packets and routes the IP packets to the CMTS. From the CMTS the call is routed on the Comcast IP network to the Comcast soft switch. For CDV customers, the soft switch is located in Chelmsford, MA; for BCV customers, the soft switch is a geographically redundant facility located in Philadelphia, PA and Denver, CO.
- (2) Soft Switch: Because the customers are on the same soft switch, the soft switch conducts an internal subscriber database inquiry and determines that the telephone number is assigned to another Comcast VoIP customer. Accessing the same database, the switch then supplies the IP address of the eMTA of the called party. The soft switch then directs a second database inquiry to obtain information to populate the caller ID fields and call signals.
- (3) Call flow from soft switch: Once these data fields are correctly populated, the signaling information is sent by the soft switch to the eMTA of the called party, and the VoIP data packets are routed on Comcast's IP Network to the called party's eMTA, which receives the call.

*(ii) to a customer of that same Cable VoIP Service provider served by a different soft switch;*

These calls are routed differently depending on whether the call is CDV or BCV. CDV calls are carried on Comcast's network; BCV calls are routed through a third-party provider.

(A) CDV calls to CDV Customers Served by a Different Soft Switch:

- (1) Call Origination: Same as (i)(1) above.
- (2) Originating Switch functionality: The soft switch conducts a database inquiry (an external, SS7 inquiry to a local number portability database) and determines that the telephone number is assigned to another Comcast VoIP customer. This information is used to conduct a second database inquiry to determine the correct switch for the terminating telephone number. The call path is set up by the two soft switches.
- (3) Call flow from soft switch: Once these data fields are correctly populated, the signaling information is sent by the originating soft switch to the eMTA of the called party and the VoIP data packets are routed on Comcast's IP Network to the called party's eMTA, which receives the call.



(B) BCV calls to Comcast Customers Served by a Different Soft Switch:

Step 1 is the same as in (1)(i) above.

- (2) Soft Switch functionality: The soft switch communicates with the switch for the third party provider's IP network, sets up a call path, and routes the call accordingly, meeting the the third party provider's IP network at an IP-based firewall called a session border controller ("SBC"). The third party provider then communicates with the Comcast soft switch serving the terminating customer, which routes the call to the terminating customer's eMTA.

*(iii) to a customer of a different Cable VoIP Service provider;*

BCV calls always follow the in path ii (B) above.

CDV calls can take four paths: they can be (A) transited through the local ILEC to the other cable provider in TDM; (B) handed in IP to a third-party Interexchange Carrier (IXC), which carries the call to the other VoIP Service Provider; (C) handed in TDM to an IXC, which carries the call to the other VoIP Service Provider, or (D) handed directly to the other VoIP Service Provider in IP pursuant to a peering arrangement.

Comcast does not directly interconnect with either Time Warner or Metrocast in New Hampshire. For that reason, intraLATA CDV calls in New Hampshire that terminate to the New Hampshire customer of another cable VoIP provider follow the call paths described in (A), (B), and (C) below; interLATA CDV calls to customers of other VoIP providers can follow the paths in (B), (C), or (D) below.

(A) IntraLATA call transited through FairPoint to another NH Cable VoIP Provider:

BCV calls always follow the path in ii (B) above.

For CDV:

- (1) See call origination in (i) above.
- (2) Soft Switch: The soft switch conducts an internal database inquiry and determines that the call needs to be routed to FairPoint. The soft switch will then direct additional database inquiries. The first is to the Local Number Portability database (LNP) to determine whether the number has been ported and if so to which carrier. The switch also determines the destination carrier tandem information and uses this information to set up the

appropriate TDM trunk group to route through the media gateway to the terminating carrier. The soft switch also does an SS7 signaling request to establish the time slot within the trunk group to exchange the call with FairPoint and appropriate call signaling information. The calling party's name is populated by the terminating carrier's switch.

- (3) Media Gateway: The soft switch then communicates with the media gateway to set up the IP connection between the media gateway and the originating eMTA. The media gateway converts the CDV IP packets to TDM so that the call can be routed to the PTSN.
- (4) The Media Gateway then hands the call in TDM protocol to Comcast Phone of New Hampshire, LLC, which routes the call to the Comcast interconnection point with FairPoint in Concord, NH. Pursuant to Comcast's interconnection agreement with FairPoint, FairPoint will transit the call to the partner CLEC of called party's VOIP provider who will, in turn, route the call to the cable VOIP provider's network for conversion into IP protocol and termination to the called party.

(B) Calls handed to an IXC in IP (can be inter- or intra-LATA).

Step 1 is the same as in (iii)(A)(1) above.

- (2) Soft Switch functionality: The soft switch communicates with the switch for the IXC's IP network, sets up a call path, and routes the call accordingly, meeting the IXC's IP network at an IP-based firewall called a session border controller ("SBC"). The IXC then routes the call to the other VOIP provider in IP, which terminates the call.

(C) InterLATA calls handed to an IXC in TDM (can be inter- or intra-LATA).

Steps 1-3 are same as in (iii)(A) above.

- (4) The call is handed to the relevant Comcast Phone affiliate in TDM protocol, which routes the call to an IXC for delivery to the partner CLEC of the called party's cable VOIP provider. The partner CLEC of the called party's cable VOIP provider then routes the call to the cable VOIP provider's network for conversion into IP protocol and termination to the called party.

(D) InterLATA Call from Comcast Customer to Directly-Connected Cable VoIP provider.

Step 1 is the same as in (i)(A) above.

- (2) The Comcast soft switch conducts an internal database inquiry and determines that the call is destined for a terminating Cable VOIP carrier

with whom Comcast has a direct interconnection. The call path is set up by the soft switch between the originating eMTA over the Comcast IP network to a "peering router" which routes the IP call to an SBC.

- (3) The Comcast IP network meets the terminating cable VoIP carrier's IP network at the SBC. The call is set up by the called party's cable VoIP provider's network for termination.

*(iv) to an ILEC customer physically located in the same exchange;*

CDV:

Steps 1-3 are the same as in (iii)(A) above.

- (4) Comcast Phone hands the call to FairPoint, which terminates the call.

BCV:

Steps 1-3 are the same as in (iii)(B) above.

- (4) The IXC routes the call to FairPoint for termination.

*(v) to an ILEC customer physically located outside of the local exchange area but within the same LATA (describing fully the exchange access service utilized);*

Interexchange, intraLATA CDV calls can be routed one of three ways in New Hampshire: either (A) through FairPoint, (B) through an IXC in IP, or (C) through an IXC in TDM. BCV calls use only call path (B). These three options are described below.

(A) Through FairPoint:

Steps 1-3 are the same as in (iii)(A) above.

- (4) Comcast Phone hands the call to FairPoint, which terminates the call. If the called party is the customer of a rural ILEC, FairPoint will transit the call to the rural ILEC for termination.

(B) Through an IXC in IP:

These calls follow the same path as (iii)(B) *supra*, except that IXC then terminates the call to the called party's ILEC on the PSTN.

(C) Through an IXC in TDM:

These calls follow the same path as (iii)(C) *supra*, except that IXC then terminates the call to the called party's ILEC on the PSTN.

*(vi) to an ILEC customer physically located in a different LATA (describing fully the exchange access service utilized).*

These calls are routed through third-party IXC's. They can be handed to those IXC's in either IP or TDM, and follow the same call flows as interexchange intraLATA calls described in (v)(B) and (v)(C) *supra*.

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Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-13

Witness: David J. Kowolenko

**REQUEST:**

When an end user initiates a Cable VoIP Service call, how is the call initiated? Does the customer dial a telephone number? How does the customer know the network is ready to initiate a call? Does the Cable VoIP Service customer receive notification prior to making a call that the called party is available to receive calls? How does the customer know if the network has completed the processing or routing of the call and is waiting for the terminating party to answer? How does the customer know a call is waiting? How does the customer know if the called party is busy? Is there an automated process for Cable VoIP Service customers to access or modify their account information? If so, how is access provided, e.g. computer interface, telephone connected to the Cable VoIP Service, etc? Does the end user customer know the IP address of his/her eMTA? Can customers share the IP address with other users? Does the end user customer ever see the IP address of the called party? Does the end user Cable VoIP Service customer have a identifying number and password to gain access to the Cable VoIP Service? Does the Cable VoIP service call route through the Cable VoIP Service provider's equipment each time there is information passed between the calling and called parties?

**RESPONSE:**

Due to the number of separate inquiries contained within this Data Request, Comcast is providing responsive information broken down by subpart.

*When an end user initiates a Cable VoIP Service call, how is the call initiated? Does the customer dial a telephone number?*

Yes.

*How does the customer know the network is ready to initiate a call?*

The customer hears a dial tone.

*Does the Cable VoIP Service customer receive notification prior to making a call that the called party is available to receive calls?*

No.

*How does the customer know if the network has completed the processing or routing of the call and is waiting for the terminating party to answer?*

The customer hears a ring tone.

*How does the customer know a call is waiting?*

A customer hears a call waiting tone and sees the display of caller ID information on phones with this ability, as well as on their television screens and/or computer screens if they have Comcast's Universal Caller ID service.

*How does the customer know if the called party is busy?*

The customer hears a busy signal.

*Is there an automated process for Cable VoIP Service customers to access or modify their account information? If so, how is access provided, e.g. computer interface, telephone connected to the Cable VoIP Service, etc?*

Comcast VoIP customers can access or modify their account information, call features, functionality and voicemail remotely through a web portal. It can be accessed from any computer or Internet connection. Customers can also access limited automated account functions through a telephone interface.

*Does the end user customer know the IP address of his/her eMTA? Can customers share the IP address with other users? Does the end user customer ever see the IP address of the called party?*

No.

*Does the end user Cable VoIP Service customer have an identifying number and password to gain access to the Cable VoIP Service?*

A password is not required to place or receive calls. One is required to access features of the CDV service offered through the SmartZone web portal.

*Does the Cable VoIP service call route through the Cable VoIP Service provider's equipment each time there is information passed between the calling and called parties?*

All calls route through equipment owned by a Comcast entity.

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Date of Response: 08/21/09

Request No. Staff 1-14

Witness: David J. Kowolenko

**REQUEST:**

Does a call originated by a Cable VoIP Service customer travel over coaxial cable from the customer's premises to a node? If so, what equipment comprises the node, and where is the node typically located? If not, how does the call travel? Does the call then travel over fiber to a cable modem termination system (CMTS) located at the Cable VoIP Service provider's head end? Is the plant between the customer premises and the head end known as a hybrid fiber-coaxial (HFC) network? Is the CMTS the interface between the cable VoIP provider's HFC network and its IP backbone network? Does the CMTS separate voice traffic from Internet traffic? Does the call then traverse the IP backbone network to the Cable VoIP Service provider's soft switch? If not, how does the call travel?

**RESPONSE:**

Due to the number of separate inquiries contained within this Data Request, Comcast is providing responsive information broken down by subpart.

*Does a call originated by a Cable VoIP Service customer travel over coaxial cable from the customer's premises to a node? If so, what equipment comprises the node, and where is the node typically located? If not, how does the call travel?*

Yes. A call from a CDV customer travels over coaxial cable from the customer's eMTA to a node. The node can be located either aerially on a pole, or on a pedestal in the public right-of-way. The node is comprised of electronics which connect the RF coaxial cable to the fiber portion of the plant and converts electrical RF to optical RF.

*Does the call then travel over fiber to a cable modem termination system (CMTS) located at the Cable VoIP Service provider's head end?*

Yes.

*Is the plant between the customer premises and the head end known as a hybrid fiber-*

*coaxial (HFC) network?*

Yes.

*Is the CMTS the interface between the cable VoIP provider's HFC network and its IP backbone network?*

No.

*Does the CMTS separate voice traffic from Internet traffic?*

Yes.

*Does the call then traverse the IP backbone network to the Cable VoIP Service provider's soft switch? If not, how does the call travel?*

This depends on the destination of the call. Please see response to Data Request 1-12, *supra*.



**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-15

Witness: David J. Kowolenko

**REQUEST:**

**Regarding the CMTS: What functions does the CMTS provide? Do the Cable VoIP Service calls route through the CMTS? Do Internet communications route through the CMTS? Do cable video transmissions route through the CMTS? How many CMTS devices serve the state of New Hampshire? Where are they located? What communication protocol(s) can the CMTS accept on the HFC side of the equipment? What communication protocol(s) can the CMTS deliver on the trunk side of the equipment?**

**RESPONSE:**

The CMTS is the interface between the Comcast HFC network and the Ethernet/IP network, and allows for the communications between the Headend and the eMTAs deployed in the field. Both CDV/BCV and CHSI packets route through the CMTS. Information remains in IP protocol on both the HFC and trunk sides of the CMTS. There are twelve CMTSes in New Hampshire. Consistent with its objections filed August 10, 2009, Comcast objects on the grounds that the locations of its CMTSes in New Hampshire are not relevant and that identifying them could compromise the security of its network.

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-16

Witness: Beth Choroser

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**REQUEST:**

In your company group, which entity owns: the coaxial cable to the node? the node? the fiber to the CMTS? the CMTS? the IP backbone? the soft switch? other equipment used by the Cable VoIP Service provider or any of its affiliates for the call? If different, which entity operates each such equipment component? If different, which entity manages each such equipment component? Which company installs such equipment component? Which company maintains such equipment component? Which company replaces such equipment component if it needs replacement?

**RESPONSE:**

Due to the number of separate inquiries contained within this Data Request, Comcast is providing responsive information broken down by subpart.

*In your company group, which entity owns: the coaxial cable to the node? the node? the fiber to the CMTS? the CMTS? the IP backbone?*

Comcast's cable affiliates.

*The soft switch?*

CDV: Comcast IP Phone II, LLC.

BCV: A Comcast affiliate.

*Other equipment used by the Cable VoIP Service provider or any of its affiliates for the call? If different, which entity operates each such equipment component? If different, which entity manages each such equipment component? Which company installs such equipment component? Which company maintains such equipment component? Which company replaces such equipment component if it needs replacement?*

CDV: All of the facilities and equipment over which the residential CDV calls

flow on the Comcast side of the Network are managed, operated and installed by a Comcast affiliate.

BCV: All of the facilities and equipment over which the BCV calls flow are managed, operated and installed by a Comcast affiliate until the soft switch. The soft switch is owned by a Comcast affiliate and is managed by a third-party vendor.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-17

Witness: David J. Kowolenko

**REQUEST:**

Please describe fully the difference in routing between a call that remains on the Cable VoIP Service provider's network from one that originates or terminates on the public switched telephone network.

**RESPONSE:**

Please see response to DR 1-12, *supra*, with respect to calls originating on Comcast's network.

Calls that originate on the PSTN and terminate on Comcast's network follow the reverse of the call flows described in DR 1-12(iv).

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-18

Witness: David J. Kowolenko

**REQUEST:**

Is there a Protocol Conversion in the HFC network between the coax interface and the fiber termination? Does the signal change between an electric signal and an optical signal (or vice versa) during the processing of a Cable VoIP Service call within the HFC network? If yes, does the Cable VoIP service provider consider this to be a Protocol Conversion?

**RESPONSE:**

Due to the number of separate inquiries contained within this Data Request, Comcast is providing responsive information broken down by subpart.

*Is there a Protocol Conversion in the HFC network between the coax interface and the fiber termination?*

No.

*Does the signal change between an electric signal and an optical signal (or vice versa) during the processing of a Cable VoIP Service call within the HFC network?*

Yes.

*If yes, does the Cable VoIP service provider consider this to be a Protocol Conversion?*

No.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-19

Witness: David J. Kowolenko

**REQUEST:**

**How are the voice, Internet and video signals carried on the HFC network? Is there capacity allocated to each service? If so, how is capacity allocated? Do voice, Internet and video services have different quality of service priorities?**

**RESPONSE:**

Please see responses to DR 1-3 and 1-11.

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-20

Witness: David J. Kowolenko

**REQUEST:**

**From the CMTS, does the Cable VoIP Service call travel to a router? If so: What functions does the router provide? Do the Cable VoIP Service calls route through the router? Do the Internet communications route through the router? Do cable video transmissions route through the router? How many routers serve Cable VoIP Service customers located in New Hampshire? What communication protocols are accommodated by the router?**

**RESPONSE:**

Due to the number of separate inquiries contained within this Data Request, Comcast is providing responsive information broken down by subpart.

*From the CMTS, does the Cable VoIP Service call travel to a router? If so: What functions does the router provide?*

Yes. Routers direct the IP packet flow toward its destination.

*Do the Internet communications route through the router?*

Yes.

*Do cable video transmissions route through the router?*

Not through the CMTS router.

*How many routers serve Cable VoIP Service customers located in New Hampshire?*

Routers are serve various functions and are pervasive throughout Comcast's network; identification of every router that "serve[s]" a CDV or BCV customer located in New Hampshire would be impossible.

*What communication protocols are accommodated by the router? IP. IP.*

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-21

Witness: David J. Kowolenko

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**REQUEST:**

With regard to the IP transport facilities used to transport Cable VoIP Service traffic: Specifically what functions does the IP transport provide? Do the IP transport facilities carry other traffic, such as video or Internet traffic? If so, are there separate quality of service criteria for the Cable VoIP Service traffic? Do the IP transport facilities use the same physical cables as the HFC network? Do IP transport facilities use separate dedicated transport facilities? What are the communication protocols that are supported by the transport? Is more than one communication protocol used for the transport of Cable VoIP Service traffic?

**RESPONSE:**

Due to the number of separate inquiries contained within this Data Request, Comcast is providing responsive information broken down by subpart.

The Data Request is unclear in that it does not define the term "IP transport facilities." Comcast is answering this Data Request to the best of its ability by treating it as requesting information regarding Comcast's HFC network and its IP backbone network.

*Specifically what functions does the IP transport provide?*

Please see response to DR 1-12, *supra*.

*Do the IP transport facilities carry other traffic, such as video or Internet traffic?*

Yes as to CHSI traffic. Yes in part as to video (cable) traffic.

*If so, are there separate quality of service criteria for the Cable VoIP Service traffic?*

Please see responses to DR 1-3 and 1-11, *supra*.

*Do the IP transport facilities use the same physical cables as the HFC network?*



In part.

*Do IP transport facilities use separate dedicated transport facilities?*

No.

*What are the communication protocols that are supported by the transport?*

IP.

*Is more than one communication protocol used for the transport of Cable VoIP Service traffic?*

“With regard to the IP transport facilities used to transport [Comcast] Cable VoIP Service traffic,” all Comcast VoIP service traffic is in IP.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-22

Witness: David J. Kowolenko

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**REQUEST:**

**With regard to the media gateway: What functions does the media gateway provide? Is the media gateway part of the soft switch? Are the vendors of the media gateway and the soft switch the same? Do the Cable VoIP Service calls route through the media gateway? Do Internet communications route through the media gateway? Do cable video transmissions route through the media gateway? How many media gateways serve Cable VoIP Service customers within the state of New Hampshire? Where are the media gateways located that serve the state of New Hampshire? What communication protocols are accommodated by media gateways?**

**RESPONSE:**

The media gateway is a component of the soft switch which performs the protocol conversion from IP to TDM and vice versa. There is a single media gateway which serves New Hampshire CDV customers, which is located in Chelmsford, MA. Only calls sent from or to the PSTN traverse the media gateway. The media gateway does not process any video or Internet traffic. For data transport, the media gateway accommodates Time Division Multiplexing ("TDM") on the TDM side of the network and Real-Time Transport Protocol ("RTP") on the IP side of the network. Media Gateway Control Protocol ("MGCP") and Trunking Gateway Control Protocol ("TGCP") are accommodated for signaling.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-23

Witness: David J. Kowolenko

**REQUEST:**

**Regarding the soft switch: What functions does the soft switch provide? Do Cable VoIP Service calls route through the soft switch? Do Internet communications route through the soft switch? Do cable video transmissions route through the soft switch? How many soft switches serve Cable VoIP Service customers within the state of New Hampshire? Where are the soft switches located that serve Cable VoIP Service customers within the state of New Hampshire? What communication protocols are accommodated by the soft switches?**

**RESPONSE:**

The soft switch performs a variety of functions including the selection of processes that can be applied to a call and the provision of routing instructions for a call within the network based on signaling and customer database information. The soft switch manages the routing of a call, and determines whether it is intended for another Comcast VoIP customer, a peering partner, or the PSTN. The soft switch also communicates with off-network databases in order to interact with SS7 databases to ensure proper call identification and PSTN routing information. A single soft switch, located in Chelmsford, MA, serves New Hampshire CDV customers; a geographically redundant switching complex in Philadelphia, PA and Denver, CO serves New Hampshire BCV customers. The soft switch does not process Internet traffic. The soft switch accommodates PacketCable 1.5 NCS/MGCP and PacketCable 2.0 SIP protocols.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-24

Witness: Beth Choroser

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**REQUEST:**

**Does the Cable VoIP Service provider or any affiliate thereof own any physical facilities in New Hampshire used to interconnect with the PSTN? If so, which Comcast Entity, Metrocast Entity or Time Warner Entity (as the case may be) owns the physical facility (listing each entity if more than one owns the soft switch)? Does the same entity control the facilities from a provisioning and engineering perspective? If not, please identify the Company that controls the facilities from a provisioning and engineering perspective. Is the soft switch leased? If so, please identify the lessor and lessee.**

**RESPONSE:**

Comcast Digital Voice: Comcast Phone of New Hampshire, LLC owns, leases or controls all facilities in New Hampshire used to interconnect with the PSTN. The soft switch is owned by Comcast IP Phone, II and is not leased.

Business Class Voice: A third-party provider owns or controls all facilities in New Hampshire used to interconnect with the PSTN. The soft switch is owned by a Comcast affiliate and is not leased; a third-party vendor manages the soft switch facility.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-25

Witness: David J. Kowolenko

**REQUEST:**

**Where in the network does the Cable VoIP Service provider claim that a Protocol Conversion or conversions take place?**

- a. Is there Protocol Conversion between the telephone and the eMTA?**
- b. Is there Protocol Conversion between the eMTA and the CMTS?**
- c. Is there Protocol Conversion between the CMTS and any router?**
- d. Is there Protocol Conversion between the router and the media gateway?**
- e. Is there Protocol Conversion between the media gateway and the soft switch?**
- f. Is there Protocol Conversion between the media gateway and the PSTN?**

**If any of the answers to a - f are "Yes," please list the respective communication protocols and provide reference to the standards and/or guidelines document(s) that describes each communication protocol.**

**RESPONSE:**

- a. No.
- b. No.
- c. No.
- d. No.
- e. No.
- f. Protocol conversion occurs at the media gateway. The media gateway converts calls between Internet Protocol and Time Division Multiplexing ("TDM") protocol.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-26

Witness: David J. Kowolenko

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**REQUEST:**

**For a call that remains on the Cable VoIP Service provider's network end to end, is there any net change in communication protocol? If so, please describe fully each protocol change, identify the location of the change and the equipment effecting the change.**

**RESPONSE:**

Calls that do not leave Comcast's managed IP network do not experience net protocol conversion.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

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**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-27

Witness: N/A

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**REQUEST:**

(No Data Request 1-27 was issued)

**RESPONSE:**

N/A

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-28

Witness: David J. Kowolenko

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**REQUEST:**

**For a call that originates on Cable VoIP Service provider's network and terminates on the PSTN, is there any net change in protocol? If so, please describe fully each protocol change, identifying the location of the change and the equipment effecting the change.**

**RESPONSE:**

Yes. Please see Response to DR 1-22.



**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-29

Witness: David J. Kowolenko

**REQUEST:**

Does the Cable VoIP Service provider provide Lifeline service?

**RESPONSE:**

No.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-30

Witness: David J. Kowolenko

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**REQUEST:**

**Does the Cable VoIP Service provider provide Telephone Relay Service?**

**RESPONSE:**

CDV provides access to Telephone Relay Service via the Local Interconnection Service provided by Comcast Phone to Comcast IP Phone.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-31

Witness: Beth Choroser

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**REQUEST:**

**Does the Cable VoIP Service provider collect and remit the communications services tax under New Hampshire RSA 82-A? If so, exactly what entity or affiliate pays such tax and identify which type of "communications services" are provided under RSA 82-A:2(II).**

**RESPONSE:**

CDV collects and remits the NH communications service tax imposed under NH RSA 82-A. Comcast objects to the identification of the specific "communications service" as calling for a legal conclusion, and as irrelevant to the issues in this proceeding. The definition of a "communications service" contained in RSA 82-A is irrelevant to the definition of a "public utility" contained in RSA 362:2.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-32

Witness: Beth Choroser

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**REQUEST:**

**Does the Cable VoIP Service provider pay the utility assessment under New Hampshire RSA 363-A? If so, exactly what entity or affiliate pays such tax, and what revenues are used as the basis to calculate the payment?**

**RESPONSE:**

Comcast Phone of New Hampshire, LLC pays the utility assessment under NH RSA 363-A on behalf of its customers and based on end-user revenues.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-33

Witness: Beth Choroser

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**REQUEST:**

**If customers of the Cable VoIP Service provider decide to move to another carrier, are they able to port their telephone numbers to the new carrier? Are standard NPAC interfaces used for the transition? For the purposes of number porting, does the Cable VoIP Service provider characterize the service from its porting partner as a resold telecommunications service?**

**RESPONSE:**

CDV and BCV customers can port their numbers if they decide to move to another carrier. Standard NPAC interfaces are used. Pursuant to the FCC's Order in the IP-Enabled Services Proceeding, *see In the Matter of Telephone Number Requirements for IP-Enabled Services Providers*, Docket 95-116, 04-36, 07-243, FCC No. 07-188 (Nov. 8, 2007), Comcast Phone of New Hampshire, LLC fills the role of "Numbering Partner" as described in the Order with respect to the CDV service. With respect to the BCV service, a third-party fills the role of numbering partner.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

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**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-34

Witness: David J. Kowolenko

**REQUEST:**

**In assigning telephone numbers, does the Cable VoIP Service provider make such assignments so that the assigned numbers conform to geographic area where the customer is physically located?**

**RESPONSE:**

Yes.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-35

Witness: David J. Kowolenko

**REQUEST:**

**Are operator service and directory assistance provided to Cable VoIP Service customers? If yes, how are they provided?**

**RESPONSE:**

Customers have access to these services via third parties.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-36

Witness: David J. Kowolenko

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**REQUEST:**

Are the telephone numbers of Cable VoIP Service customers listed in telephone directories?

**RESPONSE:**

Yes, if requested by customers.



**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

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**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-37

Witness: Beth Choroser

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**REQUEST:**

**Can end users purchase voice as a stand alone service without buying Internet access or video? In addition to voice communications, what other services are provided or offered to Cable VoIP Service customers? Please describe such services in full detail with the associated pricing.**

**RESPONSE:**

Yes. All Comcast products and services can be viewed at [www.comcast.com](http://www.comcast.com).

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-38

Witness: David J. Kowolenko

**REQUEST:**

**To the extent that the Cable VoIP Service provider asserts that the combination of any additional services with voice service makes its service an information service, please describe each such additional service, how it is integrated with the voice service, the terms under which it is offered and the pricing.**

**RESPONSE:**

The ability to place and receive calls via CDV is integrated with other Comcast products such as (1) the SmartZone web portal: The SmartZone web portal integrates key functions of CDV with Comcast high speed internet and video services. It allows CDV customers to access and interact with CDV features including the ability to review call logs online, listen to voicemails online, forward voicemails as email attachments, change and manage account information online, all from any computer with an Internet connection, or with certain applications, via their television connections. SmartZone also integrates universal online address books, and will in the future integrate remotely programmable DVRs ; (2) Universal Caller ID, which allows customers to view caller ID information on their television and/or computer in real time; (3) Enhanced Cordless Telephone (ECT): The ECT handset is integrated with the CDV service and gives customers access to email, allows them to view voicemail, and provides access to information on the Internet such as weather, sports, horoscopes and directory listings. The ECT is currently in market trials and scheduled to launch in 2009.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-39

Witness: N/A

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**REQUEST:**

**What intercarrier compensation arrangements does the Cable VoIP Service provider (or any affiliate thereof) have with any other carriers?**

**RESPONSE:**

Pursuant to its objections filed August 10, 2009, Comcast objects to this Data Request as overbroad, unduly burdensome, and irrelevant.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-40

Witness: Beth Choroser

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**REQUEST:**

**Please provide a corporate organizational chart that shows the entities within the Comcast corporate group, including the parent entity and all subsidiaries and affiliates, direct and indirect.**

**RESPONSE:**

Pursuant to its general objections filed August 10, 2009, Comcast objects to this Data Request as overbroad and unduly burdensome.

Without waiving this objection, Comcast is providing to Staff, subject to a request for confidential treatment, an organizational chart showing Comcast entities providing services in New Hampshire. See Exhibit 1.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-41

Witness: Beth Choroser

**REQUEST:**

For all of the entities listed in the response to Item 40 that engage in any business activity in New Hampshire, please describe the corporate relationships (i.e., parent, shareholder, owner, affiliate, subsidiary, partner, etc.), including all intermediate relationships. For each entity also identify its legal name and all d/b/a's, assumed names, trade marks, service marks, and brands, and describe the existing and planned or contemplated roles of the entity in the providing of telephone, telecommunications, voice, Internet, or cable television services in New Hampshire, including, without limitation, whether the entity provides retail or wholesale voice, Internet or video services.

**RESPONSE:**

Pursuant to its objections filed August 10, 2009, Comcast objects to this Data Request as overbroad, unduly burdensome, and not calculated to lead to the discovery of evidence relevant to the questions posed in the Commission's May 6, 2009 Order of Notice, as well as on the basis that the Data Request calls for competitively sensitive business plans and/or trade secrets insofar as it requests information regarding the "planned or contemplated" roles of each Comcast entity.

Without waiving this objection, please see Responses to DR 1-40 and DR 1-42 and Exhibit 2 submitted herewith.

DR 1-41  
Exhibit 2

Comcast Cable Communications Management, LLC
Comcast Business Communications, LLC
Comcast Spotlight, Inc.
Comcast Phone of New Hampshire, LLC
Comcast Phone, LLC
Comcast MO Financial Services, Inc.
Comcast MO Interactive Services, Inc.
Comcast of New Hampshire, Inc.
Comcast of Massachusetts/New Hampshire, LLC
Comcast IP Phone II, LLC
Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC
Comcast/TWC New Hampshire Cable Advertising, LLC
Comcast/TWC Littleton/Plymouth Cable Advertising, LLC
Comcast of Maine/New Hampshire, Inc.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-42

Witness: Beth Choroser

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**REQUEST:**

**Which Comcast entities are authorized to provide telecommunications within the State of New Hampshire? Which Comcast entities are involved in providing Cable VoIP Service to customers in New Hampshire? Which Comcast entities are involved in providing telecommunications services to end user customers? Which Comcast entities provide retail Internet services to customers in New Hampshire? In the response to each of the questions in this Item 42, please list in each case all services provided by each entity in the end to end provisioning of voice services to end user customers.**

**RESPONSE:**

Comcast Phone of New Hampshire LLC (Comcast Phone) is authorized to provide telecommunications service in FairPoint and TDS territories in New Hampshire. Comcast Phone provides wholesale telecommunications services to eligible interconnected VOIP providers. Comcast Phone also offers a business service and a schools and libraries network service to end user customers in New Hampshire pursuant to a publicly filed Rate Schedule.

Comcast Cable affiliates provide Comcast High Speed Internet service in New Hampshire.

Comcast IP Phone II, LLC provides retail residential (CDV) and commercial (BCV) interconnected VOIP service to end users in New Hampshire.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-43

Witness: N/A

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**REQUEST:**

**Please provide a corporate organizational chart that shows the entities within the Metrocast corporate group, including the parent entity and all subsidiaries and affiliates, direct and indirect.**

**RESPONSE:**

N/A.



**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-44

Witness: N/A

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**REQUEST:**

For all of the entities listed in the response to Item 43 that engage in any business activity in New Hampshire, please describe the corporate relationships (i.e., parent, shareholder, owner, affiliate, subsidiary, partner, etc.), including all intermediate relationships. For each entity also identify its legal name and all d/b/a's, assumed names, trade marks, service marks, and brands, and describe the existing and planned or contemplated roles of the entity in the providing of telephone, telecommunications, voice, Internet, or cable television services in New Hampshire, including, without limitation, whether the entity provides retail or wholesale voice, Internet or video services.

**RESPONSE:**

N/A.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-45

Witness: N/A

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**REQUEST:**

**Which Metrocast entities are authorized to provide telecommunications within the State of New Hampshire? Which Metrocast entities are involved in providing Cable VoIP Service to customers in New Hampshire? Which Metrocast entities are involved in providing telecommunications services to end user customers? Which Metrocast entities provide retail Internet services to customers in New Hampshire? In the response to each of the questions in this Item 45, please list in each case all services provided by entity in the end to end provisioning of voice services to end user customers.**

**RESPONSE:**

N/A.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-46

Witness: N/A

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**REQUEST:**

Please provide a corporate organizational chart that shows the entities within the Time Warner corporate group, including the parent entity and all subsidiaries and affiliates, direct and indirect.

**RESPONSE:**

N/A.

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-47

Witness: N/A

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**REQUEST:**

For all of the entities listed in the response to Item 46 that engage in any business activity in New Hampshire, please describe the corporate relationships (i.e., parent, shareholder, owner, affiliate, subsidiary, partner, etc.), including all intermediate relationships. For each entity also identify its legal name and all d/b/a's, assumed names, trade marks, service marks, and brands, and describe the existing and planned or contemplated roles of the entity in the providing of telephone, telecommunications, voice, Internet, or cable television services in New Hampshire, including, without limitation, whether the entity provides retail or wholesale voice, Internet or video services.

**RESPONSE:**

N/A.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-48

Witness: N/A

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**REQUEST:**

Which Time Warner entities are authorized to provide telecommunications within the State of New Hampshire? Which Time Warner entities are involved in providing IP voice services to voice customers in New Hampshire? Which Time Warner entities are involved in providing purported telecommunications services to end user customers? Which Time Warner entities provide retail Internet services to customers in New Hampshire? In the response to each of the questions in this Item 48, please list in each case all services provided by entity in the end to end provisioning of voice services to end user customers.

**RESPONSE:**

N/A.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-49

Witness: David J. Kowolenko

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**REQUEST:**

Please describe in detail how traffic from a Comcast, Metrocast or Time Warner Cable VoIP Service end user customer would be delivered to a customer of one of the other Cable VoIP Service end user customers physically located in the same ILEC local exchange area. Would there be a net protocol conversion between the two ends of the call?

**RESPONSE:**

Please see Response to DR 1-12(iii), *supra*.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-50

Witness: David J. Kowolenko

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**REQUEST:**

Please describe in detail how traffic from a Cable VoIP Service end user customer in Manchester, New Hampshire would be delivered to a customer of Granite State Telephone, Inc. ("GST") in Weare, New Hampshire exchange (which has extended areas service ("EAS") to Manchester).

**RESPONSE:**

Please see Response to DR 1-12, *supra*.

**COMCAST PHONE OF NEW HAMPSHIRE, LLC**

**Docket No. DT 09-044**

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-51

Witness: David J. Kowolenko

**REQUEST:**

**Please describe in detail how an interLATA call from a Comcast, Metrocast or Time Warner Cable VoIP Service end user customer in Maine would be delivered for termination to a GST end user customer in Weare, New Hampshire.**

**RESPONSE:**

Please see Response to DR 1-12, *supra*.



COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

**COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS**  
**APPROVED BY STAFF**

Date Request Received: 07/31/2009

Date of Response: 08/21/09

Request No. Staff 1-52

Witness: David J. Kowolenko

**REQUEST:**

Please describe in detail how an intraLATA call from a Comcast Cable VoIP Service end user customer in Manchester, New Hampshire, a Metrocast Cable VoIP Service end user customer in Meredith, New Hampshire or a Time Warner Cable VoIP Service end user customer in Campton, New Hampshire would be delivered for termination to a Merrimack County Telephone Company ("MCT") end user customer in Contoocook, New Hampshire.

**RESPONSE:**

Please see Response to DR 1-12, *supra*.

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