

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

DT 09-044

New Hampshire Telephone Association
Petition for an Investigation into the Regulatory Status of
IP Enabled Voice Telecommunications Services

REPLY TESTIMONY OF
DOUGLAS DUNCAN MEREDITH AND VALERIE WIMER
ON BEHALF OF
THE NEW HAMPSHIRE TELEPHONE ASSOCIATION

I. INTRODUCTION

Q. PLEASE STATE YOUR NAMES.

A. Our names are Douglas Duncan Meredith and Valerie Wimer.

Q. ARE YOU THE SAME DOUGLAS DUNCAN MEREDITH AND VALERIE WIMER THAT SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of this testimony before the New Hampshire Public Utilities Commission (“Commission” or “PUC”) is to reply to the testimony of Comcast Phone of New Hampshire and its affiliates (“Comcast”) and TWC Digital Phone, LLC (“TWC”) to the extent that their testimony: 1) claims that Comcast and TWC are “interconnected VoIP” carriers; and 2) implies that they are not subject to the Commission’s jurisdiction for their Cable VoIP service offerings. In this testimony, we establish that the Comcast and TWC Cable VoIP services do not conform to the FCC’s definition of an interconnected VoIP service. Furthermore, the Comcast and TWC Cable VoIP services do not conform to the statutory definition of an information service, despite assertions by Comcast and TWC that there are features of their overall services that can be construed, now or in the future, as information services. We also emphasize that the Commission does have jurisdiction over any intrastate telecommunications service that the FCC has not specifically preempted, and the only relevant service over which the FCC has preempted state jurisdiction is

1 nomadic VoIP service, a service that is not offered by either Comcast or TWC.
2 Finally, this testimony will establish that some significant percentage of Comcast
3 and TWC Cable VoIP calls effect no net protocol conversion at all, despite certain
4 claims by Comcast. Consequently, there is no credible evidence that the voice
5 services offered by Comcast and TWC are any different from the regulated voice
6 service offered by the New Hampshire Telephone Association companies
7 (“RLECs”). The Commission should find that both are subject to the same
8 regulatory oversight as other telephone utilities in the state.

9 **Q. IS IT GOOD PUBLIC POLICY TO TREAT THE CABLE VOIP**
10 **PROVIDERS DIFFERENTLY?**

11 A: No. In the provision of voice services to customers in New Hampshire, it is not in
12 the public interest to treat two similarly situated competitors differently. While the
13 RLECs have carrier of last resort responsibilities that other carriers do not—duties
14 extended to establish a customer-oriented regulatory environment—it is still
15 imperative that this Commission establish, at minimum, the same regulatory
16 oversight as applies to all other non-incumbent competitive local exchange carriers.

17 The communities served by both the RLECs and either Comcast or TWC will
18 benefit from a regulatory regime in which all providers of voice services are subject
19 to regulatory oversight by the Commission and all customers have equal access to
20 the remedies that the Commission can provide. Customers will be assured of equal
21 standing before this Commission and before their chosen provider regardless of
22 what their choice of provider may be. An equal treatment regime will also have

benefits at the provider level as well. As is well known, both Comcast and TWC are very large multi-faceted corporations with tremendous resources at their disposal to leverage any regulatory advantage when dealing with small RLECs. Equality in terms of similar regulatory oversight for voice services will, in our view, help foster a robust environment that addresses the needs of the RLECs in serving their customers. So, at both the customer level and at the provider level, we believe it in the public interest to establish similar treatment for two competitors.

II. THE COMCAST AND TWC CABLE VoIP SERVICES ARE NOT SIMILAR TO VONAGE SERVICE AND HAVE NOT BEEN DETERMINED TO BE SUBJECT TO THE SAME REGULATORY TREATMENT.

Q. IS FIXED CABLE VOIP SPECIFICALLY ADDRESSED IN THE VONAGE ORDER, AS COMCAST CLAIMS?

A. No. On page 11 of its testimony, Comcast incorrectly asserts that the *Vonage Order*¹ specifically addressed the Cable VoIP service currently offered by Comcast. The *Vonage Order* did not make such a determination. The *Vonage Order* only stated that other services that were *comparable to the Vonage service* would also be exempt from state regulation.² These comparable services, eventually labeled “interconnected VoIP,” were defined in the *Vonage Order*.

Q. WHAT IS THE DEFINITION OF AN INTERCONNECTED VOIP SERVICE?

¹ *In re Vonage Holdings Corp.*, WC Docket No. 03-211, Memorandum Opinion & Order, 19 FCC Rcd 22404 (2004) (“*Vonage Order*”).

² *Id.* ¶ 46. (“Moreover, for services having the same capabilities as DigitalVoice, the regulations of other states must likewise yield to important federal objectives.”)

1 **A.** The FCC rules at 47 C.F.R. § 9.3 define interconnected VoIP service as “a service that

- 2 (1) Enables real-time, two-way voice communications;
3 (2) Requires a broadband connection from the user's location;
4 (3) Requires Internet protocol-compatible customer premises equipment (CPE);
5 and
6 (4) Permits users generally to receive calls that originate on the public switched
7 telephone network and to terminate calls to the public switched telephone
8 network.”
9

10 In order to meet this definition, the service must meet all four criteria. However, the
11 Comcast and TWC Cable VoIP services do not meet the second (broadband connection)
12 and third (CPE) criteria.

13 **Q. HOW IS THE SECOND CRITERION FOR A BROADBAND CONNECTION**
14 **EVALUATED?**

15 **A.** The *Vonage Order* provides direction on how to evaluate the requirement for a
16 broadband connection.

17 Vonage customers must have access to a broadband connection to the
18 Internet to use the service. . . . In marked contrast to traditional circuit-
19 switched telephony, however, *it is not relevant where that broadband*
20 *connection is located or even whether it is the same broadband connection*
21 *every time the subscriber accesses the service. Rather, Vonage's service*
22 *is fully portable*; customers may use the service anywhere in the world
23 where they can find a broadband connection to the Internet. According to
24 Vonage, it does not know where in the world its users are when using
25 DigitalVoice.³
26

27 Therefore, the “broadband connection” must be portable to “any” broadband connection.

28 **Q. CAN THE COMCAST OR TWC CABLE VOIP SERVICES OPERATE ON**
29 **“ANY” BROADBAND CONNECTION?**

30 **A.** No. Comcast and TWC admit that their services do not operate on any broadband

³ *Id.* ¶ 5. (emphasis supplied).

connections but their own.⁴ Comcast and TWC also admit that their Cable VoIP services are fixed services that are not nomadic.⁵ In regard to the Comcast and TWC Cable VoIP services, the same broadband connection must be used every time the subscriber accesses the service. Thus, the service is not fully portable and the Comcast and TWC Cable VoIP services do not conform to the definition of an Interconnected VoIP service in regard to that aspect of the broadband connection.

Q. WHY IS IT CRITICAL THAT “ANY” BROADBAND CONNECTION BE USED?

A. As stated in the Meredith Direct testimony,⁶ in the *Vonage Order*, the FCC only preempted the states because the Vonage service was nomadic and thus the originating and terminating points of the call could not be reasonably determined. However, this is not relevant to a fixed VoIP service.

Q. HAS THE FCC MADE ANY DETERMINATION ON NON-NOMADIC VOIP SERVICE?

A. Yes. For example, even for interconnected VoIP, the FCC found that “[a]n interconnected VoIP Provider with a capability to track that jurisdictional confine of customer calls would no longer qualify for the preemptive effects of our *Vonage Order* and would be subject to state regulation.”⁷

Q. CAN COMCAST AND TWC IDENTIFY THE JURISDICTION OF THEIR CABLE VOIP CUSTOMER CALLS?

⁴ Comcast Response to NHTA Data Request (“Comcast Response”)1-4(c) (all Comcast referenced responses are in Exh. VW 2-1, attached); TWC Response to NHTA Data Request (“TWC Response”)1-6 (all TWC referenced responses are in Exh. VW 2-2, attached).

⁵ See Wimer Direct at 5; Exh. VW 1-3.

⁶ Meredith Direct at 9:4-16.

⁷ *Universal Service Contribution Methodology*, WC Docket No. 06-122, Report and Order and Notice of Proposed Rulemaking, 21 FCC Rcd 7518 ¶ 56 (2006).

1 A. Yes. Both Comcast and TWC offer only fixed service to their end users, so the
2 origination location and termination location can be identified in the same manner as the
3 RLEC calls. In addition, both companies pay their USF contribution based on their
4 customers' calling information⁸ and do not use the default proxy available to nomadic
5 providers.

6 **Q. DOES THE CABLE VOIP SERVICE MEET THE THIRD CRITERION OF AN**
7 **INTERCONNECTED VOIP SERVICE REGARDING SPECIALIZED CPE?**

8 A. No. As the FCC explained in the *Vonage Order*,

9 Customers may choose among several different types of specialized CPE.
10 (1) a Multimedia Terminal Adapter (MTA), which contains a digital signal
11 processing unit that performs digital-to-audio and audio-to-digital
12 conversion and has a standard telephone jack connection; (2) a native
13 Internet Protocol (IP) phone; or (3) a personal computer with a
14 microphone and speakers, and software to perform the conversion
15 (softphone).⁹
16

17 In contrast, the Comcast and TWC Cable VoIP services do not provide that “customers
18 may choose among several different types of CPE.” Comcast and TWC claim that the
19 eMTA is CPE, despite the fact that it is owned by Comcast/TWC and the customer has
20 no control over the device. However, from the customer perspective, the analog
21 telephone used to originate the call is the CPE device for the voice service. In the case of
22 the Cable VoIP services provided by Comcast and TWC, the customers cannot select
23 their EMTA and do not own the EMTA. Furthermore, native IP phones do not work with
24 these services,¹⁰ nor do “soft phones.” Therefore, the eMTAs provided by Comcast and

⁸ See Comcast Response 1-6; TWC Response 1-12.

⁹ *Vonage Order* ¶ 6.

¹⁰ Wimer Direct at 6:6-7; Comcast Responses 1-2, 1-5, 1-8; TWC Responses 1-2, 1-5, 1-8.

1 TWC do not qualify as the specialized CPE that is an element of the definition of an
2 interconnected VoIP provider.

3
4 **III. THE BRAND X DECISION IS NOT APPLICABLE TO THIS PROCEEDING**

5
6 **Q. IS IT TRUE THAT THE SUPREME COURT'S BRAND X DECISION RULED**
7 **THAT ALL IP-BASED SERVICE OFFERINGS WOULD NOT BE SUBJECT TO**
8 **TRADITIONAL TELECOMMUNICATON COMMON CARRIER**
9 **REGULATION?**

10 A. No. Comcast claims that the *Brand X* decision affirmed that IP-based service offerings
11 would not be subject to traditional telecommunication common carrier regulation.¹¹
12 However, the decision was not nearly so broad. The *Brand X* decision hinged on whether
13 the underlying cable modem transmission services was sufficiently integrated with the
14 complete Internet access service to make it reasonable to describe the two as a single
15 service.

16 **Q. WHAT WAS THE COURT DETERMINATION ON THE COMBINATION OF**
17 **CABLE MODEM SERVICE TRANSMISSION SERVICE AND INFORMATION**
18 **SERVICE?**

19 A. The Court found that a cable modem transmission service is sufficiently integrated with
20 the Internet access service as to be considered a single service offered to the public. Thus
21 a cable company was not required to offer its cable modem transmission service as a
22 separate service. The FCC applied this rationale to RBOC DSL service as well, and now

¹¹ Comcast Direct at 10:20-21, 11:1-2.

1 RBOCS are no longer required to offer the transmission component of the DSL service as
2 a common carrier service either.

3 **Q. IS CABLE VOIP AN INFORMATION SERVICE ON TOP OF THE CABLE**
4 **MODEM TRANSMISSION SERVICE?**

5 A. No. In this proceeding, the service that is combined with a transmission service is “IP
6 voice,” not an information service like the Internet access service in the *Brand X* case.

7 **Q. WERE ANY OTHER INTEGRATED SERVICES CONSIDERED IN THE**
8 **BRAND X DECISION?**

9 A. *Brand X* also determined that a telecommunications service that is priced or bundled with
10 an information service is not automatically unregulated under Title II of the
11 Communications Act. Specifically, the Court considered the example of voicemail
12 bundled with telephone service. The Court found that there is a distinct, transparent
13 transmission path for telephone service that is independent of the information storage
14 capabilities represented by voice mail.¹² Therefore, the telephone service remains a
15 telecommunication service subject to common carrier regulation while the associated
16 voice mail service is considered an information service. This makes sense, because if the
17 Court had not ruled in this manner, a regulated telephone company could simply bundle
18 an information service with basic exchange service to avoid regulation.¹³ A similar “end-

¹² Nat'l Cable and Telecomms. Ass'n v. Brand X Internet Services, 545 U.S. 967, 998; 125 S.Ct. 2688, 2709 (2005) (“*Brand X*”).

¹³ *Id.*, 545 U.S. at 997-998, 125 S.Ct. at 2709. (“It is plain, for example, that a local telephone company cannot escape Title II regulation of its residential local exchange service simply by packaging that service with voice mail. . . [the] ability to convey and receive information using the call is only trivially affected by the additional voice-mail capability.”).

1 around” is now being attempted in New Hampshire where Comcast and TWC seek to
2 avoid meaningful regulation of their Cable VoIP services.

3 **Q. ARE THE ENHANCED FEATURES OFFERED BY COMCAST AND TWC**
4 **SIMILAR TO VOICE MAIL AS DESCRIBED BY BRAND X?**

5 A. Yes. The enhanced features offered by Comcast and TWC are only incidental to the voice
6 service, comparable to the voicemail arrangement discussed by the Court.

7 **Q. HOW ARE THE ADDITIONAL SERVICES OFFERED BY COMCAST**
8 **COMPARABLE TO VOICEMAIL?**

9 A. Comcast has described its web portal (the “SmartZone Communications Center”), which
10 allows customers to manage features such as call forwarding, call history reporting, and
11 voice mail.¹⁴ This web portal has other functions. It allows customers the option of
12 directly changing their services instead of calling a customer service representative and it
13 allows customers to access account information. None of these functions is required for a
14 customer to originate or terminate calls, however. Whether they use this web portal or
15 not, customers can still make and receive calls. Furthermore, they can receive paper bills
16 and contact customer service representatives without access to the web portal. Thus, the
17 Comcast Cable VoIP service is in no way dependent on the additional capabilities of the
18 web portal.

19 **Q. ARE ANY OF THE ADDITIONAL FEATURES DISCUSSED BY TWC TIGHTLY**
20 **INTEGRATED WITH THEIR VOIP SERVICE?**

¹⁴ Comcast Direct at 25:12-20.

1 A. It is unknown if any of those features are currently available from TWC.¹⁵ The features
2 discussed by TWC include access to voice mail via email, routing of caller ID to the
3 personal computer or TV, notification of calls via instant messaging, and managing call
4 features over the Internet.¹⁶ Similar to the services listed by Comcast, these service do
5 not impact the customer's ability to originate or terminate voice calls.

6 **Q. HOW DO THE RLECS TREAT THESE SAME "ENHANCED" FEATURES**
7 **WHEN OFFERED IN CONJUNCTION WITH LOCAL EXCHANGE SERVICE?**

8 A. As described in the Wimer Direct Testimony,¹⁷ Granite State Telephone, Inc. offers voice
9 mail via email and follow-me service associated with local exchange service. Other
10 companies offer access to account information on a website. The RLECs treat these
11 features as deregulated information services and/or as an alternative to traditional
12 customer service. The RLECs do not claim these services convert their regulated service
13 into an information service.

14 **Q. WHAT IS THE SIGNIFICANCE OF PROTOCOL CONVERSION AS**
15 **DESCRIBED BY COMCAST?**

16 A. With a few exceptions,¹⁸ the presence of a net protocol conversion is one of the criteria of
17 an information service. Comcast seems to imply that all the calls that travel between it

¹⁵ TWC Direct at 7:12. TWC lists a number of enhanced services that customers "soon will be able" to use.

¹⁶ TWC Direct at 7:15-21.

¹⁷ Wimer Direct at 4:16-19

¹⁸ See *Implementation of the Non-Accounting Safeguards* CC Docket No. 96-149, Order on Reconsideration, 12 FCC 2297 ¶ 106 (1997) ("*Non-Accounting Safeguards Order*") ("[W]e have treated three categories of protocol processing services as basic services, rather than enhanced services. These categories include protocol processing: 1) involving communications between an end-user and the network itself (e.g., for initiation, routing, and termination of calls) rather than between or among users; 2) in connection with the introduction of a new basic network technology (which requires protocol conversion to maintain compatibility with existing CPE); and 3) involving internetworking (conversions taking place solely within the carrier's network to facilitate provision of a basic network service, that result in no net conversion to the end-user.").

1 and the regulated network undergo a net protocol conversion of the type that would
2 qualify the service as an information service.¹⁹ We disagree. While the transmission
3 protocol may change within the network, there is no *net* change in the protocol.
4 Moreover, many of the Cable VoIP calls undergo no protocol conversion at all during the
5 course of the call. Comcast is not considering the end to end nature of the call. As stated
6 in the Wimer Direct testimony,²⁰ the call originates and terminates in an analog voice
7 format. There is no net change in form or protocol when analyzing the origination and
8 termination points. The FCC requires the protocol conversion to be between and among
9 end points, not between the network and the customer.²¹ Protocol conversion between
10 the end user and the network for the purposes of routing a call is not considered an
11 information service.²²

12 **Q. ARE THERE SOME CALLS THAT COMCAST AND TWC AGREE DO NOT**
13 **UNDERGO A PROTOCOL CONVERSION?**

14 **A.** Yes. Both Comcast and TWC agree that calls that both originate and terminate to their
15 customers, i.e., internal to their networks or “on-net,” do not undergo a net protocol
16 conversion.²³ At a minimum then, Comcast and TWC are providing a

¹⁹ Comcast Direct at 23.6-9

²⁰ Wimer Direct at 18:17, 19:1-3.

²¹ 47 U.S.C. 153(43) (“Telecommunications is the transmission, *between or among points specified by the user*, of information of the user’s choosing, without change in the form or content of the information as sent and received.” (emphasis added); see *Non-Accounting Safeguards Order* ¶ 106 (stating that net protocol conversion between the end user and the network is a basic, not information, service.)

²² See *supra*, n.18.

²³ Comcast Direct at 24:6-8; Comcast Response to Staff Data Request 1-26, Exh. VW 1-6 (“Calls that do not leave the Comcast’s managed IP network do not experience net protocol conversion.”); TWC Response to Staff Data Request 1-26, Exh. VW 1-6 (“A call that remains on TWCDP’s network end to end will not undergo a net protocol conversion.”).

1 telecommunications service for these calls.²⁴ The RLECs believe that the number of
2 these types of calls, which indisputably do not undergo a protocol conversion, is
3 substantial and will grow as the number of Cable VoIP customers grow, since there is no
4 reason to believe that the Cable VoIP customer calling patterns are different from those
5 of the RLECs.²⁵

6 **Q. DOES COMCAST ACTUALLY USE DNS ADDRESSING, AS IT IS**
7 **COMMONLY UNDERSTOOD IN INTERNET APPLICATIONS?**

8 A. No. In its testimony, Comcast describes its number translation databases as domain name
9 server ("DNS") databases, and tries to contrast them with traditional functions associated
10 with SS7 networks (and presumably the various translation databases attached to such
11 networks, e.g. SCP, LIDB, LNP, etc.).²⁶ However, this is a distinction without a
12 difference. According to Comcast, their Cable VoIP service uses DNS and an ENUM-
13 like database associated with IP addresses to translate ten-digit phone numbers into IP
14 addresses.²⁷ While claiming that they "do not route traffic based on NANPA numbers,"
15 they immediately contradict this claim by describing how their databases associate IP
16 addresses with ten-digit telephone numbers (obtained from NANPA through a LEC

²⁴ *Compass Global, Inc.*, File No. EB-06-IH-3060, Apparent Liability for Forfeiture, 23 FCC Rcd 6125 ¶ 18 (2008) ("[T]he fact that Internet Protocol is used exclusively as transport for the traffic has no bearing on whether these voice and data services are appropriately considered telecommunications service. The Commission has also said that services that are not so inextricably linked with information-processing capabilities, but are utilized by end-users of the service for basic transmission purposes, are telecommunications services and subject to Title II requirements.")

²⁵ Comcast provided a numerical response in Comcast Response 1-15(b). Based on Comcast Direct 4:10-11, Comcast Voice penetration is 29% of its cable customers. With this market share it is assumed that a high percentage of calls would remain on-net.

²⁶ Comcast Direct at 16:11-15.

²⁷ Comcast Direct at 16:11-22, 17:1-4.

1 partner),²⁸ translating these numbers into IP addresses in order to route calls on an end-to-
2 end basis.²⁹ The essence of the process used by Comcast is no different than the process
3 used by the RLECs for accessing routing information. Contrary to Comcast's claims,³⁰ it
4 is not similar to the World Wide Web DNS look-up. Comcast only uses internal
5 databases,³¹ whereas DNS addressing ultimately uses external third-party databases to
6 translate an alphanumeric web address, i.e. URL, to a public numeric IP address. In the
7 case of Comcast and the RLECs, the dialed telephone number is not an alphanumeric
8 URL, and any translated addresses are internal to the network and are associated with the
9 equipment used for routing the call. If the call is terminated on a local exchange service,
10 the telephone number is then used to route the call outside the VoIP provider network. A
11 database lookup associated with a Cable VoIP call is no different from a translation in a
12 regulated POTS call in which a table provides instructions on where to route a call.

13 **Q. IS COMCAST'S COMPARISON OF CABLE VOIP CALLS AND REGULAR**
14 **POTS CALLS ACCURATE?**

15 A. No. Comcast describes the differences between circuit switched technology and packet
16 IP based technology as if there is a distinction that determines whether the traffic is
17 POTS or not. Contrary to Comcast's testimony, POTS calls can and increasingly do use
18 both circuit and packet technologies.³² As described in the Wimer Direct testimony, the

²⁸ Comcast Direct at 5:5, 16:18.

²⁹ Comcast Direct at 16:21-17:3.

³⁰ Comcast Direct at 17:3-4.

³¹ Comcast Response to Staff Data Request 1-12, Exh. VW 1-5.

³² *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities*, CC Docket No. 02-33, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 ¶ 37 (2005) ("Packet-based technology is now deployed throughout wireline networks and is used in many circumstances, including increasingly to perform the switching and routing functions associated with POTS . . .").

1 regulated network also includes packet switching technologies, and IP technologies
2 specifically. For example, as previously mentioned, Granite State Telephone, Inc. has
3 deployed a softswitch and IP loop equipment that performs all the same internal routing
4 translation functions as described by Comcast.³³

5 **Q. ARE THERE OTHER TECHNICAL ISSUES THAT YOU WISH TO CLARIFY?**

6 A. Yes. Both Comcast and TWC emphasize that their dial tone is generated by the eMTA,
7 rather than the end office switch, as if this is a new or unique concept. In fact, the DLC
8 and FTTH equipment used by the RLECs also generate a dial tone from the DLC and
9 ONU equipment in the field and not from the switch. From a technical perspective, dial
10 tone generation is irrelevant to any discussion of modern network architectures. It is now
11 offered only as a convenience to customers.

12 **Q. DOES ROUTING OF A CALL THROUGH EQUIPMENT LOCATED OUTSIDE**
13 **OF THE STATE MAKE THE CALL NOMADIC OR CHANGE THE**
14 **JURISDICTION OF THE CALL?**

15 A. No. Both Comcast and TWC provide examples of instances where signaling information
16 or the VoIP call itself is routed to network elements on their network that are located
17 outside the state. This does not mean that the services are “nomadic.” The Comcast and
18 TWC Cable VoIP services are fixed services. Routing the calls out of state does not
19 change that fact, since the FCC has repeatedly ruled that the origination and termination
20 points of the call determine the jurisdiction and not the actual call path.³⁴ Comcast and

³³ Comcast Direct at 14-17.

³⁴ *Thrifty Call, Inc. Petition for Declaratory Ruling*, CCB/CPD File No. 01-17, Declaratory Ruling, 19 FCC Rcd 22240 ¶ 15 (2004) (“Thus, a call is intrastate if it originates and terminates in the same state. Courts have also found

1 TWC are free to locate their switches anywhere they like, but the jurisdiction of a call
2 that originates and terminates within New Hampshire is an intrastate call, subject to the
3 jurisdiction of this Commission.

4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

5 **A.** Yes.

that interstate communication extends from the inception of a call to its completion, regardless of any intermediate points of switching or exchanges between carriers.”)

VW EXHIBIT 2-1

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-2

Witness: Beth Choroser

REQUEST:

Regarding Comcast's testimony at page 4, line 14 through page 5, line 2, please clarify whether and how Comcast's future level of investment in New Hampshire and its contributions to New Hampshire charitable organizations are dependent on the outcome of this proceeding.

RESPONSE:

As the FCC has noted, the demand for VoIP services encourages broadband investment. *See In the Matters of IP-Enabled Services E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, WC Docket Nos. 04-36 and 05-196, FCC 05-116, ¶ 31 (Rel. June 3, 2005). The level of regulation currently imposed on interconnected VoIP providers (no state regulation and minimal federal regulation) encourages Comcast's continued investment in its broadband infrastructure. Moreover, the overall economic health of Comcast is what permits Comcast to continue its commitment to New Hampshire investment, including its facilities and charitable organizations.

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-4a

Witness: David J. Kowolenko

REQUEST:

In its testimony at page 8, lines 14-16, Comcast states that CDV and BCV customers use the last mile broadband facilities provided by Comcast's locally franchised cable television operating affiliates.

What bandwidth is required for a single VoIP call?

...

RESPONSE:

A single CDV or BCV call requires a minimum of 90 kilobits per second. However, Comcast does not offer any CDV or BCV service that is limited to making single calls without other features. CDV and BCV are feature-rich service offerings using varying amounts of bandwidth based on the number of features being invoked at any given moment (such as simultaneous calls, or use of the SmartZone™ web portal).

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-4b

Witness: David J. Kowolenko

REQUEST:

In its testimony at page 8, lines 14-16, Comcast states that CDV and BCV customers use the last mile broadband facilities provided by Comcast's locally franchised cable television operating affiliates.

...

What encoding protocol is used for the VoIP calls (i.e., G.711, G.728, G.729 or other)?

...

RESPONSE:

No "encoding protocol" is used. G.711 is the CODEC used.

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-4c

Witness: David J. Kowolenko

REQUEST:

In its testimony at page 8, lines 14-16, Comcast states that CDV and BCV customers use the last mile broadband facilities provided by Comcast's locally franchised cable television operating affiliates.

...

Can a Comcast customer use an independent third party broadband connection to originate and terminate CDV or BCV calls?

RESPONSE:

No.

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-5a; 1-5b

Witness: N/A

REQUEST:

On page 9, lines 7-9 of its testimony, Comcast states that it "works closely with the Public Utilities Commission's Consumer Affairs Division to ensure that any customer complaints or escalations are appropriately handled."

Regarding customer complaints for CDV service, does Comcast believe that it is legally obligated to respond to PUC complaints?

If so, under what law?

...

RESPONSE:

Subject to Comcast's objections filed November 2, 2009: No.

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-5c

Witness: Beth Choroser

REQUEST:

On page 9, lines 7-9 of its testimony, Comcast states that it "works closely with the Public Utilities Commission's Consumer Affairs Division to ensure that any customer complaints or escalations are appropriately handled."

...

If not, is Comcast's willingness to respond to PUC complaints permanent; i.e., would Comcast still respond to PUC complaints regardless of the outcome of this proceeding?

RESPONSE:

Yes.

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-6

Witness: Beth Choroser

REQUEST:

Regarding the Comcast testimony at page 9, lines 14-15, does Comcast calculate its USF contributions based on jurisdictional traffic studies, or does it use the FCC safe harbor percentage?

RESPONSE:

Comcast uses an allocation methodology to calculate its USF contributions. The FCC has not resolved whether such allocation methodologies constitute "traffic studies."

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-8

Witness: David J. Kowolenko

REQUEST:

Please confirm that Comcast does not currently allow customers to purchase their own eMTAs for use with their CDV or BCV service in New Hampshire.

RESPONSE:

Comcast does not currently offer eMTAs for customer purchase with CDV or BCV in New Hampshire. Comcast, however, anticipates giving customers the option to purchase their own eMTAs in New Hampshire and other Comcast markets in the near future.

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-12

Witness: David J. Kowolenko

REQUEST:

Please provide a representative sample of the specifications of eMTA devices utilized for New Hampshire residential customers and, if different, for business customers.

RESPONSE:

A representative sample of such specifications is being provided as attachment A hereto.

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-15a

Witness: David J. Kowolenko

REQUEST:

Regarding the Comcast testimony at page 20, lines 15-17;

What percentage of the calls remain "IP all the way" and do not traverse the PSTN, i.e. are "on-net" as opposed to "off-net?"

...

RESPONSE:

Comcast objects to this Data Request as stated in its Objections filed November 2, 2009. Without waiving those objections, and pursuant to data request instruction 9, Comcast notes that all of the "calls" described on page 20, lines 15-17 of its prefiled testimony "stay 'IP all the way' and do not traverse the PSTN."

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-15b

Witness: David J. Kowolenko

REQUEST:

Regarding the Comcast testimony at page 20, lines 15-17;

...

What percentage of calls are "off-net" calls?

...

RESPONSE:

Comcast objects to this Data Request as stated in its Objections filed November 2, 2009. Without waiving those objections, and pursuant to data request instruction 9, Comcast notes that all of the "calls" described on page 20, lines 15-17 of its prefiled testimony "stay 'IP all the way' and do not traverse the PSTN."

COMCAST PHONE OF NEW HAMPSHIRE, LLC

Docket No. DT 09-044

COMCAST'S RESPONSES TO FIRST SET OF NHTA DATA REQUESTS

Date Request Received: 10/23/09

Date of Response: 11/06/09

Request No. NHTA-Comcast 1-15c

Witness: N/A

REQUEST:

Regarding the Comcast testimony at page 20, lines 15-17;

...

Does the percentage of off-net calls to total calls in a particular area vary as the number of Comcast's customers for local voice service increase in that area? Please provide the basis for your answer, and provide copies of any studies or data that support this answer.

RESPONSE:

Comcast objects to this Data Request as stated in its Objections filed November 2, 2009.

VW EXHIBIT 2-2

TWC DIGITAL PHONE LLC
DT 09-044
FIRST SET OF NHTA DATA REQUESTS

Data Request Received: 10/23/09
Request No. NHTA 1-2

Date of Response: 11/06/09
Witness: James Medica

REQUEST:

In its testimony at page 4, lines 12-14, TWCDP states that a 200 Kbps connection is required for obtaining a Voice connection.

- a. Is additional bandwidth required for additional simultaneous voice connections?
- b. If yes, how much bandwidth is required for the second connection?
- c. What bandwidth is required for a single TW VoIP call?
- d. Does the 200 Kbps also accommodate data and video?
- e. Is there a minimum bandwidth dedicated to Cable VoIP service?
- f. If so, how much bandwidth is dedicated?

RESPONSE:

- a. Yes.
- b. Approximately 100 kbps is required for each voice communication.
- c. See response to 1-2(b) above.
- d. A broadband connection of at least 200 kbps would accommodate broadband Internet access service as well as Cable VoIP service. As TWCDP described in response to Staff Data Request No. 1-19, video traffic is not routed through the broadband connection.
- e. Yes.
- f. TWCDP reserves a certain amount of bandwidth on each upstream transmission to the CMTS for usage by all eMTAs on that upstream path for voice. Each 100 kbps stream request by an eMTA for a call is allocated from that bandwidth. Currently, that amount is approximately 5 Mbps.

**TWC DIGITAL PHONE LLC
DT 09-044
FIRST SET OF NHTA DATA REQUESTS**

Data Request Received: 10/23/09
Request No. NHTA 1-5

Date of Response: 11/06/09
Witness: James Medica

REQUEST:

Please provide a representative sample of the specifications of eMTA devices utilized for New Hampshire residential customers and, if different, for business customers.

RESPONSE:

TWCDP previously asserted that information regarding the manufacturers and model numbers of the eMTAs used with its Cable VoIP service was proprietary and thus sought confidential treatment of that information. Upon further consideration, and without conceding the relevance of such information, TWCDP has decided to waive that claim of confidentiality for purposes of this discovery. Accordingly, attached at Exhibits A through G to these responses, TWCDP is providing representative specifications for eMTAs used with its Cable VoIP service.

**TWC DIGITAL PHONE LLC
DT 09-044
FIRST SET OF NHTA DATA REQUESTS**

Data Request Received: 10/23/09
Request No. NHTA 1-6

Date of Response: 11/06/09
Witness: James Medica

REQUEST:

In its testimony at page 4, line 18 through page 5, line 2, TWCDP states that Cable VoIP customers use the last mile broadband facilities provided by TWCDP's locally franchised cable television operating affiliates.

- a. What encoding protocol is used for the VoIP calls (i.e. G.711, G.728, G.729 or other)?
- b. Can a TWCDP customer use an independent third party broadband connection to originate and terminate Cable VoIP calls?

RESPONSE:

- a. G.711.
- b. No, to the extent this data request seeks information regarding whether a TWCDP customer can use a physical broadband connection provided by an independent third party to originate and terminate Cable VoIP calls.

TWC DIGITAL PHONE LLC
DT 09-044
FIRST SET OF NHTA DATA REQUESTS

Data Request Received: 10/23/09
Request No. NHTA 1-8

Date of Response: 11/06/09
Witness: James Medica

REQUEST:

In its testimony at page 9, lines 10-12, TWCDP states that "in contrast to traditional telephone service, TWCDP's interconnected VoIP service does not require the customer to maintain a dedicated communications channel during the course of a communications session." Please describe the actions that a traditional telephone service customer must undertake to "maintain" a dedicated communications channel during the course of a communications session, and contrast those actions with those of a TWCDP customer during the course of a TWCDP communications session.

RESPONSE:

The actions of a TWCDP customer in connection with a typical TWCDP communications session are described in TWCDP's response to Staff Request No. 1-13. With a traditional telephone service, when a customer lifts the receiver on his or her telephone, the customer opens a circuit, which, as TWCDP understands the technology, requires the telephone company to dedicate capacity for as long as the circuit remains open. In contrast, with TWCDP's Cable VoIP service, voice communications are packetized and transmitted through the broadband connection without any need for the service provider to "open" a dedicated communications path.

TWC DIGITAL PHONE LLC
DT 09-044
FIRST SET OF NHTA DATA REQUESTS

Data Request Received: 10/23/09
Request No. NHTA 1-12

Date of Response: 11/06/09
Witness: Julie Laine

REQUEST:

Regarding the TWCDP testimony at page 12, line 12, does TWCDP calculate its USF contributions based on jurisdictional traffic studies, or does it use the FCC safe harbor percentage?

RESPONSE:

TWCDP currently calculates its USF contributions based on a traffic study, consistent with FCC rules.