

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Petition for Investigation into the Regulatory)
Status of IP Enabled Voice Telecommunications) DT 09-044
Service)

JOINT PREFILED TESTIMONY OF
JAMES MEDICA AND JULIE LAINE
ON BEHALF OF TWC DIGITAL PHONE LLC

OCTOBER 9, 2009

1 **INTRODUCTION**

2 **Q1. Please state your names, titles, and business addresses.**

3 A1. My name is James Medica. I am employed by Time Warner Cable Inc. as Vice
4 President, Voice and IP Services Engineering for the Advanced Technology Group. My
5 business address is 13920 Sunrise Valley Drive, Herndon, Virginia, 20171.

6 My name is Julie P. Laine. I am employed by Time Warner Cable Inc. as Group
7 Vice President and Chief Counsel, Regulatory. My business address is 60 Columbus
8 Circle, New York, New York, 10023.

9 **Q2. Please describe your educational background and professional experience, including**
10 **your current responsibilities at Time Warner Cable.**

11 A2. (Mr. Medica) I am responsible for the architecture, design, integration, and support of
12 Time Warner Cable’s voice infrastructure supporting the residential, commercial, and
13 wireless lines of business. In particular, I have been responsible for evolving that
14 infrastructure to an Internet Protocol (“IP”) multimedia network, allowing Time Warner
15 Cable to offer IP-based services such as the interconnected Voice-over-Internet-Protocol
16 (“VoIP”) services discussed below. Prior to joining Time Warner Cable, I worked at
17 Cisco Systems, where I was responsible for the implementation and management of
18 customer engagements across multiple business units within the Service Provider line of
19 business and the Voice Technology Group. Prior to joining Cisco, I consulted at MCI,
20 where I held several program management positions. In addition, I have held positions at

1 the law firm of Skadden, Arps, Slate, Meagher & Flom LLP, and the Office of
2 Management and Budget (Executive Office of the President). I have a Bachelor of
3 Business Administration in Computer Information Systems from the George Washington
4 University.

5 (Ms. Laine) I am responsible for legal and regulatory matters relating to Time
6 Warner Cable's video, Internet, VoIP, and telecommunications offerings. I have held this
7 position since July 2008. Until that time, I worked as Time Warner Cable's Vice
8 President & Chief Counsel, Telephony and was responsible for legal and regulatory
9 matters relating to the company's VoIP and telecommunications offerings. Before
10 joining Time Warner Cable in 2002, I was Associate General Counsel at the IP telephony
11 company Net2Phone, Inc. I also have served as an Attorney Advisor in the Policy
12 Division of the Federal Communications Commission's Common Carrier Bureau, and
13 have taught at the Seton Hall Law School. I received my undergraduate degree from the
14 University of Pennsylvania and my law degree from the College of William & Mary.

15 **Q3. On whose behalf is this testimony being filed?**

16 **A3.** This testimony is being filed on behalf of TWC Digital Phone LLC ("TWCDP"), which
17 intervened in, and thus is a party to, this proceeding.

18 **Q4. What is the purpose of your testimony?**

1 A4. The purpose of this testimony is to set forth some basic facts about the interconnected
2 VoIP services offered in New Hampshire by TWCDP. We understand that this evidence
3 ultimately will be used to support TWCDP's arguments concerning the primary issue
4 presented in this proceeding—specifically, the proper regulatory treatment of
5 interconnected VoIP services. We do not address any legal issues in this testimony, but
6 we understand that TWCDP will present legal arguments in subsequent briefs.

7 **DESCRIPTION OF TWCDP'S INTERCONNECTED VOIP SERVICE**

8 **Q5. Please describe the interconnected VoIP services offered by TWCDP in New**
9 **Hampshire.**

10 A5. TWCDP offers two interconnected VoIP services in New Hampshire—Digital Phone for
11 residential customers and Business Class Phone for business customers. In this
12 testimony, we refer to these functionally comparable services together as “TWCDP's
13 interconnected VoIP service.” TWCDP's interconnected VoIP service provides
14 customers with the ability to engage in real-time, two-way voice communications with
15 any other person who is assigned a standard telephone number. It permits users to
16 receive calls that originate on the public switched telephone network (“PSTN”) and to
17 terminate calls to the PSTN. TWCDP's interconnected VoIP service offers a
18 competitive, facilities-based alternative to the traditional landline telephone services that
19 for many years represented the only service option for consumers.

20 **Q6. Does TWCDP provide interconnected VoIP service throughout the entire state of**
21 **New Hampshire?**

1 A6. No. TWCDP began providing interconnected VoIP service in New Hampshire in 2005,
2 but it does not serve customers everywhere in the state. TWCDP provides interconnected
3 VoIP service throughout the areas where its affiliated companies offer cable television
4 and broadband Internet access services. TWCDP does not currently serve any customers
5 in the markets served by the incumbent rural carrier members of the New Hampshire
6 Telephone Association, who we understand are the petitioners in this proceeding.

7 **Q7. What devices or technology does a customer require in order to use TWCDP's**
8 **interconnected VoIP service?**

9 A7. The key piece of equipment that a customer must have in order to use TWCDP's
10 interconnected VoIP service is specialized IP-compatible customer premises equipment
11 referred to as an embedded multimedia terminal adapter or "eMTA." The eMTA is
12 installed by a TWCDP technician at the customer premises. In addition to the eMTA, a
13 TWCDP customer must have a broadband connection at the location of his or her
14 premises with a minimum upload/download speed of 200 kilobits per second ("kbps").

15 **Q8. What is the primary function of the eMTA?**

16 A8. The eMTA is used to reformat the customer's outgoing voice communications from an
17 analog signal to IP packets (or vice versa, for incoming voice communications). When
18 those voice communications are in IP format, they are transmitted over Time Warner
19 Cable's hybrid fiber-coaxial ("HFC") network—that is, the plant between the customer

1 premises and the cable headend—and then over managed IP transport facilities that are
2 owned or leased by TWCDP’s affiliates.

3 **Q9. With respect to the requirement that a TWCDP interconnected VoIP customer have**
4 **a broadband connection, does the customer also need to subscribe to a broadband**
5 **Internet access service?**

6 A9. No. A customer of TWCDP’s interconnected VoIP service need not separately subscribe
7 to any broadband Internet access service, such as Road Runner, the broadband Internet
8 access service offered by a TWCDP affiliate. The customer is just required to have a
9 physical broadband connection at his or her premises, as described above.

10 **Q10. Would a customer be provided with an eMTA in order to access services other than**
11 **TWCDP’s interconnected VoIP service?**

12 A10. No. A customer will be provided with an eMTA only if he or she subscribes to
13 TWCDP’s interconnected VoIP service. If a customer subscribed only to a TWCDP
14 affiliate’s broadband Internet access service, he or she would use a distinct cable modem
15 and would not be provided with an eMTA.

16 **Q11. Can the broadband connection used with TWCDP’s interconnected VoIP service be**
17 **used to access other services as well?**

1 A11. Yes. A customer of TWCDP’s interconnected VoIP service can use a single broadband
2 connection to access voice, Internet, and video services simultaneously. For example,
3 where a customer subscribes to TWCDP’s interconnected VoIP service and Road Runner
4 or another broadband Internet access service, his or her voice communications and data
5 communications (*e.g.*, sending and receiving email, accessing online content, etc.) will be
6 transmitted through the eMTA and the same broadband connection.

7 **Q12. Does the broadband connection used in connection with TWCDP’s interconnected**
8 **VoIP service enable customers to maintain multiple voice sessions simultaneously?**

9 A12. Yes, a customer can use a single broadband connection to maintain multiple voice
10 sessions simultaneously. For example, if a customer requests an additional telephone
11 number to obtain the equivalent of a second “line,” that secondary “line” can be used at
12 the same time as the primary “line” over a single broadband connection. These
13 simultaneous voice sessions, just like the simultaneous use of voice and data services, are
14 made possible by IP technology. In each case, the communication (whether it is a voice
15 call or a data communication) is packetized and then transmitted over the same types of
16 facilities, with the packets being commingled.

17 **Q13. How does TWCDP interconnect with the PSTN?**

18 A13. In order to transmit interconnected VoIP service communications to the PSTN, TWCDP
19 must obtain wholesale telecommunications services from a telecommunications carrier.

1 In New Hampshire, TWCDP obtains those wholesale telecommunications services from
2 CRC Communications of Maine, Inc. (“CRC”). In addition to providing transport to and
3 from the PSTN and transporting and terminating local calls on behalf of TWCDP, CRC
4 assists TWCDP in establishing E911-related connectivity and providing E911 services;
5 performing local number portability; administering, paying, and collecting intercarrier
6 compensation; transporting and terminating long-distance traffic; obtaining and
7 administering numbering resources; and providing operator services, directory assistance,
8 and directory listings.

9 **Q14. Does TWCDP’s interconnected VoIP service include other features or capabilities in**
10 **addition to enabling customers to engage in two-way, real-time voice**
11 **communications as you described above?**

12 A14. Yes. Customers of TWCDP’s interconnected VoIP service can or soon will be able to
13 access and use additional calling features and capabilities that can be invoked
14 sequentially or simultaneously to allow those customers to manage their personal
15 communications dynamically. These integrated features and capabilities include: (i)
16 accessing voicemail and forwarding digitized voice messages to any e-mail; (ii) routing
17 Caller ID information through their personal computer or television, and receiving
18 notifications of incoming calls through Instant Messages or on television screens; (iii)
19 enabling, disabling, and customizing voice and video features over the Internet; (iv)
20 enabling distinctive rings for different callers; and (v) establishing “rules” for the
21 selective handling of incoming calls. More specifically, TWCDP customers can or soon

1 will be able to use a residential web portal to manage their voicemails as well as call
2 features, and to receive call notifications through Instant Messages. In addition,
3 TWCDP's CallerID 1.0 allows customers to receive call notifications through their
4 television, while CallerID 2.0 will provide them with the ability to initiate calls from the
5 television, manage and listen to voicemails via the television, and forward incoming calls
6 to voicemail via the television.

7 Such features and capabilities are made possible by IP technology, which allows a
8 TWCDP interconnected VoIP customer to perform different types of communications
9 and access multiple IP addresses (for example, the IP address associated with the eMTA,
10 a personal computer, a server that stores information being accessed, etc.) simultaneously
11 during a single communications session.

12 **Q15. In this proceeding, the petitioners have suggested (at paragraph 8 of their petition)**
13 **that the interconnected VoIP services offered by cable operators are "identical" to**
14 **the telephone services provided by traditional telephone companies. Do you agree**
15 **with this statement?**

16 **A15.** No. While TWCDP's interconnected VoIP service does provide two-way voice
17 functionality, it differs from traditional telephone service in various ways.
18 Fundamentally, as described above, TWCDP's interconnected VoIP service requires that
19 a customer have specialized IP-compatible customer premises equipment and a
20 broadband connection at the customer's premises. Also, the interconnected VoIP service

1 may include the various additional features or capabilities listed above that permit the
2 customer to manage his or her communications dynamically. In addition, unlike
3 traditional telephone services, TWCDP's interconnected VoIP service is generally
4 offered at a fixed price that does not vary based on the distance that a call travels from
5 end to end.

6 **Q16. Are there other differences between TWCDP's interconnected VoIP service and**
7 **traditional telephone services in addition to these attributes experienced by the**
8 **customer?**

9 A16. Yes, there are other differences between the two types of services that may not be
10 apparent to the customer. For example, in contrast to traditional telephone service,
11 TWCDP's interconnected VoIP service does not require the customer to maintain a
12 dedicated communications channel during the course of a communications session. In
13 addition, whereas a TWCDP customer can engage in simultaneous voice sessions over a
14 single broadband connection as described above, in the traditional landline environment it
15 would be necessary to dedicate capacity to maintain two open circuits at the same time.

16 **Q17. Are there any differences in the geographic routing of a voice communication made**
17 **using TWCDP's interconnected VoIP service as opposed to a call made using a**
18 **traditional telephone service?**

1 A17. Yes. The network architecture on which TWCDP relies means that voice
2 communications are likely to traverse state boundaries even when the called and calling
3 parties are both in New Hampshire, which typically would not occur in connection with a
4 traditional telephone call based on our understanding of the traditional landline network.
5 For example, TWCDP customers in New Hampshire are served by two Media Gateway
6 Devices located in Portland, Maine; the Media Gateway Device is used to convert IP
7 voice packets into traditional TDM/circuit-switched voice signals for delivery to a
8 wholesale carrier for subsequent transmittal over the PSTN, when such conversion is
9 necessary.

10 In addition, TWCDP relies on Call Management Servers (often referred to as soft
11 switches) that are deployed on a regional basis—TWCDP customers in New Hampshire
12 typically are served by a soft switch located in Syracuse, New York, which provides
13 signaling and routing functions, and features such as call waiting.

14 Finally, communications made using TWCDP's interconnected VoIP service may
15 involve the retrieval of information stored on servers located outside of the state (for
16 example, the retrieval of a voicemail).

17 As a result of this network architecture, a call from a TWCDP customer in New
18 Hampshire to, for example, a customer of an incumbent local exchange carrier in New
19 Hampshire, could involve communications across state boundaries to several other states.
20 For example, because such a call would require a conversion of IP voice packets into

1 traditional TDM/circuit-switched signals, it would need to go out of state to the Media
2 Gateway Device in Maine before heading to its ultimate destination elsewhere in New
3 Hampshire; the same call may also implicate communications with the soft switch in
4 New York, which as noted provides signaling and routing information and certain
5 features.

6 **Q18. Regarding any similarities between TWCDP's interconnected VoIP service and**
7 **traditional telephone services from the customer's perspective, are such similarities**
8 **necessary as a technical matter?**

9 A18. No. In some respects, TWCDP has deliberately designed its interconnected VoIP service
10 to replicate certain aspects of traditional telephone service solely for the benefit of the
11 customer—not because this is necessary as a technical matter, but instead to
12 accommodate customers' expectations based on their experience with traditional
13 telephone services. For example, a TWCDP interconnected VoIP customer can use a
14 conventional analog handset to access the service; he or she also can use any operational
15 telephone jack, provided that the eMTA is connected to the inside wiring at the premises.
16 In addition, TWCDP interconnected VoIP customers hear a standard dial tone when
17 lifting the receiver, but that dial tone is generated by the eMTA rather than by the
18 telephone company switch in a central office.

1 **Q19. Ms. Laine, does TWCDP provide its interconnected VoIP service on an**
2 **“unregulated basis,” as the petitioners have suggested (at paragraph 14 of their**
3 **petition)?**

4 A19. No. TWCDP is required to comply with various requirements under federal law and also
5 operates in a manner consistent with New Hampshire requirements applicable to
6 competitive local exchange carriers.

7
8 With respect to federal requirements, as a provider of interconnected VoIP
9 service, TWCDP operates subject to significant regulation by the Federal
10 Communications Commission (“FCC”). Among other things, TWCDP must (and does)
11 provide E911 service; comply with the Communications Assistance for Law Enforcement
12 Act (“CALEA”); contribute to the federal universal service support mechanisms; comply
13 with regulations governing carrier proprietary network information; provide access to
14 telecommunications relay services (“TRS”) and contribute to the TRS fund; comply with
15 local number portability requirements; and pay annual regulatory fees. Even before the
16 FCC imposed these obligations over the last few years, TWCDP complied with relevant
17 regulations.

18 On the state side, TWCDP operates in a manner consistent with state regulations
19 applicable to competitive local exchange carriers. For example, TWCDP collects and
20 remits the communications services tax under New Hampshire R.S.A. 82-A. In addition,
21 TWCDP’s affiliate, Time Warner Cable Information Services (New Hampshire), LLC

1 ("TWCIS") pays the utility assessment under New Hampshire R.S.A. 363-A based on the
2 retail revenue of TWCDP and on any revenues that TWCIS itself may have. TWCDP
3 also contributes to the New Hampshire TRS fund. Finally, TWCDP complies with state
4 and federal consumer protection requirements relating to slamming, billing, and customer
5 complaints, among other things.

6 Q20. **Does this conclude your testimony?**

7 A20. Yes.