

-BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

**In the Matter of the Petition by AUTOTEL)
for Arbitration of an Interconnection)
Agreement with QWEST CORPORATION) **DOCKET NO. 03-049-19**
pursuant to Section 252(b) of the)
Telecommunications Act)**

**DIRECT TESTIMONY
OF
RACHEL TORRENCE
FOR
QWEST CORPORATION**

MAY 30, 2003

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I. IDENTIFICATION OF WITNESS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION WITH QWEST CORPORATION.

A. I am Rachel Torrence. My business address is 700 W. Mineral Ave., Littleton Colorado. I am employed as a Director within the Technical and Regulatory Group of the Local Networks Organization of Qwest Corporation (Qwest). I am testifying on behalf of Qwest.

Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE, TECHNICAL TRAINING, AND PRESENT RESPONSIBILITIES.

A. I have been employed in the telecommunications industry for over 29 years. I began my career in 1973 with Qwest's predecessor The Mountain States Telephone and Telegraph Company, Mountain Bell, which later became part of U S WEST Communications, Inc. With the exception of my first three years, I have been employed within network operations, currently known as the Local Network Organization. As an employee of the Local Network Organization, I have held engineering positions in the Long Range Planning, Capacity Provisioning and Tactical Planning organizations and have had responsibility for projects that were designed to ensure and maintain adequate levels of network capacity. My Local Network Organization responsibilities have provided me with an extensive background and in-depth experience in all aspects of the public switched telephone network (PSTN).

In 1997, I accepted a position within the Technical, Regulatory and Interconnection Planning Group. My responsibilities as a member of an Interconnection Negotiations Team was maintaining the network integrity of the PSTN and the technical feasibility of

1 interconnection arrangements with wireline and wireless co-providers with an emphasis on
2 emerging technologies.

3 In 2001, I accepted my current position as a Director within the Technical & Regulatory
4 Group, where I am responsible for ensuring compliance with the Telecommunications Act
5 and state regulations. My responsibilities include providing litigation support before the
6 Federal Communications Commission (FCC) and state commissions on issues relating to
7 the network elements and architectures for both wireline and wireless networks. In
8 addition, I have represented Qwest in the Network Reliability and Interoperability Council
9 (NRIC), a body created by the FCC, on committees addressing the reliability and
10 interoperability of wireline networks, wireless networks and emerging cyber-networks. I
11 currently serve on an NRIC committee addressing commercial communications
12 applications for Public Safety as part of the Homeland Security initiative.

13 In addition, I have over 3200 hours of continuing education in the telecommunications field
14 and hold various telecommunications certifications in both wireline and wireless
15 disciplines.

16 **II. PURPOSE OF DIRECT TESTIMONY**

17 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

18 **A.** The purpose of my testimony is to explain Qwest's positions, and the network and
19 technical assumptions underlying those positions as they relate to several of the issues
20 raised in this arbitration proceeding. My testimony will show that Qwest's network

1 architectures as proposed are appropriate, technically sound, and non-discriminatory. My
2 testimony will address the following issues:

3 ISSUE 1 (Autotel Issue 1): Inter-Tandem Trunking

4 ISSUE 2 (Autotel Issue 6): Single Point of Presence (SPOP) in Association
5 with Type 1 Interconnection

6 ISSUE 8 (Autotel Issue 5): Mid-Span Meet POI

7 ISSUE 9 (Autotel Issue 7): MF Signaling Options

8 **III. ISSUE NO. 1 – INTER-TANDEM TRUNKING**

9 **Q. WHAT IS THE NATURE OF THE DISPUTE BETWEEN THE PARTIES IN ISSUE**
10 **NO.1?**

11 A. Issue 1 addresses Qwest's current network configuration regarding its tandems and
12 transport of traffic between tandems. Qwest does not need nor does it utilize inter-tandem
13 trunks between its Local Tandems and its Access Tandems for the transport of its own
14 local calls or those of its affiliates. Autotel believes Qwest should reconfigure its network
15 in order to provide inter-tandem trunking between its Local and Access Tandems for
16 Autotel's use.

17 Generally speaking, Qwest's network architecture was deployed using Local Tandems for
18 the delivery of EAS/local traffic and Access Tandems for the delivery of IntraLATA Toll
19 and Jointly Provided Switched Access traffic, which is essentially toll traffic.¹ Local
20 Tandem and Access Tandem architectures are separate but inter-twined networks for the

¹ Because of the FCC's access charge exemption for enhanced services providers such as Internet Service Providers, Qwest also routes enhanced services traffic through the Local Tandem even though it is not local traffic.

1 delivery of two distinct types of traffic engineered to meet distinct performance criteria. As
2 such, Qwest has not had a need to establish inter-tandem trunks between these separate
3 networks. In addition, Qwest believes there is no technical nor logical need to establish
4 inter-tandem trunks between Qwest's Local and Access Tandems for use by Autotel
5 whether Autotel interconnects via Type 1 or Type 2 facilities.

6 **Q. WHAT IS QWEST'S POSITION REGARDING ISSUE NO. 1 AND INTER-**
7 **TANDEM TRUNKING?**

8 A. It is Qwest's position that traffic may not be exchanged between Local Tandems and
9 Access Tandems since no inter-tandem trunking currently exists between Local Tandems
10 and Access Tandems. With Qwest's current network architecture, Qwest has had no need
11 to build this type of inter-tandem trunking with Type 1 or Type 2 interconnection
12 arrangements since its network can efficiently exchange traffic with Autotel without
13 establishing these trunks. Inter-tandem trunking between the Local and Access tandems is
14 simply not needed in Qwest's network.

15 Access Tandem to Access Tandem connections exist for the delivery of Inter-LATA Toll
16 and Jointly Provided Switched Access traffic. However, they are generally not used, nor
17 have they been used historically for the transport of Local Traffic by Qwest.

18 **Q. HOW DOES QWEST'S LOCAL TANDEM ARCHITECTURE FUNCTION?**

19 A. Qwest has deployed a Local Tandem architecture in which End Office switches subtend a
20 Local Tandem. This architecture allows for the origination, transport and termination of
21 local calls between the End Offices within a single local calling area without the need for

1 direct trucking between End Offices. Exhibit RT-1 is an illustration of a typical Local
2 Tandem network architecture and a typical call flow.

3 As is illustrated in Exhibit RT-1, a local call, a call within a single local calling area, can
4 route from any End Office to any other End Office that subtends the Local Tandem. The
5 subscriber need only dial the telephone number and the Local Tandem will route it to the
6 appropriate destination within the local calling area. Under this arrangement, it is not
7 necessary to route a call to the Access Tandem from the Local Tandem, for Autotel or any
8 other carrier, be it a CLEC or a Wireless Service Provider (“WSP”).

9 The Local Tandem network architecture consists of the Local Tandem, multiple End
10 Offices, and common, behind the tandem, Local trunk groups between the End Offices and
11 the Local Tandem all within a single local calling area.

12 **Q. HOW DOES QWEST’S ACCESS TANDEM ARCHITECTURE FUNCTION?**

13 A. Qwest has deployed an Access Tandem network architecture in which all End Office
14 switches within a LATA subtend an Access Tandem or one of multiple Access Tandems in
15 LATAs with more than one Access Tandem. This architecture allows for the origination,
16 transport and termination of toll traffic. Exhibit RT-2 is an illustration of a typical Access
17 Tandem network architecture and a typical intra-LATA toll call flow. Exhibit RT-3
18 illustrates a typical Access Tandem network architecture and a typical Jointly Provided
19 Switched Access toll call flow.

20 As is illustrated in both Exhibits RT-2 and RT-3, a toll call, be it Intra-LATA or Jointly
21 Provided Switched Access, bypasses the Local Tandem network altogether and uses only

1 the Access Tandem network. The call is transported across Toll trunks from the End
2 Office to the Access Tandem where it is routed to a distant local calling area also across
3 Toll Trunks. At no point is there a logical or technical reason why a call would need to be
4 transported between a Qwest Local Tandem and Access Tandem to ensure delivery of toll
5 traffic.

6 The Access Tandem network architecture consists of a minimum of one Access Tandem
7 within a given LATA, all End Offices within that LATA, and common, behind the tandem,
8 toll trunk groups between the End Offices and the Access Tandem(s) all within a given
9 LATA.

10 **Q. IN A TYPICAL TYPE 1 INTERCONNECTION ARRANGEMENT, WOULD**
11 **AUTOTEL REQUIRE AN INTER-TANDEM CONNECTION?**

12 A. No. By definition, a Type 1 Interconnection Facility would extend from Autotel's point of
13 presence within a given local calling area to one or more End Offices also within that local
14 calling area (see Exhibit RT-4 illustration of a Type 1 interconnection). Under a Type 1
15 interconnection arrangement, Autotel would not connect to a Local Tandem nor would it
16 connect to an Access Tandem for the delivery of Local Traffic. Rather, Autotel's Mobile
17 Switching Center would be connected to a Qwest Serving Wire Center and calls made by
18 Autotel customers would be routed using the existing Local Tandem network for the
19 delivery of local calls or the Access Tandem network for the delivery of 1+ dialed calls.
20 Consequently, if Autotel is not connected to either the Local Tandem nor the Access

1 Tandem, Autotel has no technical or logical reason for requesting an inter-tandem trunk
2 group between Qwest's Local and Access Tandems.

3 **Q. IN A TYPICAL TYPE 2 INTERCONNECTION ARRANGEMENT WOULD**
4 **AUTOTEL REQUIRE AN INTER-TANDEM TRUNK?**

5 A. No. Under a typical Type 2 interconnection architecture, there is no technical or logical
6 need to route calls from a Qwest Local Tandem to a Qwest Access Tandem or from a
7 Qwest Access Tandem to a Qwest Local Tandem.

8 Under a typical Type 2 interconnection arrangement, Autotel would have interconnection
9 facilities at the Local Tandem where it would have access to all End Offices subtending
10 that Local Tandem using Qwest's "behind the tandem" local interoffice trunking. As a
11 result local calls could be made to and from any number associated with that local calling
12 area. Also in a typical Type 2 interconnection, Autotel would have an interconnection
13 facility to a minimum of one Access Tandem which would facilitate origination and
14 termination of traffic to and from callers outside the local calling area, including Toll and
15 Jointly Provided Switched Access traffic. (See Exhibit RT-5 for illustration of Type 2
16 Interconnection.)

17 Under a Type 2 SPOP (Single Point of Presence) interconnection arrangement, Autotel
18 could have a single point of interconnection at the Access Tandem that would allow for
19 access to all End Offices subtending that Access Tandem using Qwest's "behind the
20 tandem" toll trunking infrastructure. In essence, this arrangement allows access to all End
21 Offices within a LATA with connection to that Access Tandem. In situations where a

1 LATA has more than one Access Tandem, connections would be made to both Access
2 Tandems or the WSP must agree to sign an Access Tandem SPOP Waiver. (See Exhibit
3 RT-6 for illustration of Type 2 Interconnection with SPOP.)

4 At no point under a Type 2 interconnection is there a need to route traffic from the Qwest
5 Local Tandem to the Qwest Access Tandem or vice-a-versa. As illustrated in both Exhibits
6 RT-5 and RT-6, local traffic is routed through either the Local Tandem exclusively, or as is
7 the case with SPOP, local traffic is routed exclusively over the Access Tandem. This
8 negates any need for inter-tandem trunking.

9 **Q. DO OTHER WIRELESS SERVICE PROVIDERS REQUIRE QWEST TO**
10 **PROVIDE INTER-TANDEM TRUNKING?**

11 A. No. Qwest has interconnection agreements with 25 WSPs in Utah. It does not provide
12 inter-tandem trunking to any of them. 3 paging providers use Type 1 interconnection, 7
13 paging providers and 15 wireless providers use Type 2 interconnection with only 1 wireless
14 provider is using Type 2 interconnection with SPOP. None of these other carriers requires
15 inter-tandem trunking.

16 **Q. WHAT IS YOUR CONCLUSION WITH RESPECT TO INTER-TANDEM**
17 **TRUNKING?**

18 A. Inter-tandem trunking between Qwest's Local and Access Tandems is completely
19 unnecessary with either Type 1 or Type 2 interconnection. As such, there is no technical or
20 logical need for Qwest to reconfigure its network.

1 **IV. ISSUE NO. 2 – SPOP IN ASSOCIATION WITH TYPE 1 INTERCONNECTION**

2 **Q. PLEASE DESCRIBE THE PARTIES' DISAGREEMENT WITH REGARD TO**
3 **TYPE 1 INTERCONNECTION?**

4 A. In its petition for arbitration, Autotel states that Issue 2 (Autotel Issue 6) relates to a
5 requirement to interconnect to at least one Qwest End Office in each of Qwest's local
6 calling areas. However, in stating its position, Autotel is confusing interconnection
7 architectures and requirements with requirements for Local Number Portability. It also
8 misstates Qwest's position on both positions completely.

9 **Q. FOR TYPE 1 INTERCONNECTION, IS AUTOTEL REQUIRED TO**
10 **INTERCONNECT TO A QWEST END OFFICE IN EACH OF QWEST'S LOCAL**
11 **CALLING AREAS?**

12 A. By definition, a Type 1 interconnection facility extends from a WSP's Point of Interface to
13 a LEC's End Office Switch (see Exhibit RT-4) where it "sublets" a portion of an NXX
14 from Qwest for the use by Autotel customers. The End Office is sometimes referred to as
15 the Dial Tone Office. Under a Type 1 interconnection arrangement, Autotel would
16 establish Type 1 interconnection trunks to a minimum of one Qwest End Office within a
17 local calling area where it is planning on providing wireless services, exchanging calls with
18 Landline customers and porting local numbers. Under a Type 1 interconnection
19 architecture, Autotel would acquire line numbers that will be associated with the End
20 Office (Dial Tone Office) to which it is interconnected. Autotel's customers will then be
21 assigned those numbers for their wireless service. All calls placed from those line numbers

1 will be treated the same way as any landline calls originating from that same End Office.

2 Autotel customers can make local, Intra-LATA and InterLATA calls.

3 Speaking from a technical and network perspective, without a Type 1 interconnection
4 facility to at least one End Office within a local calling area, Autotel cannot port numbers
5 within that local calling area and Qwest customers, as well as other interconnected carriers'
6 customers, within that local calling area will not be able to make local calls to Autotel
7 customers.

8 **Q. HOW DOES LOCAL NUMBER PORTABILITY IMPACT TYPE 1**
9 **INTERCONNECTION?**

10 A. Local Number Portability can only occur within a Rate Center, the Rate Center roughly
11 being the equivalent of a local calling area. As a result, if a number is to be ported it can
12 only be ported within a rate center's boundaries. In conjunction with Type 1
13 interconnection, a WSP must have interconnection within that Rate Center in order to port
14 numbers. Hence the term **Local** Number Portability. It cannot port numbers from one rate
15 center to another.² Without a Type 1 Interconnection facility to at least one End Office
16 within the local calling area/Rate Center, Autotel cannot acquire line numbers associated
17 with that local calling area/Rate Center. Without assigned line numbers within a local
18 calling area/ Rate Center, Autotel cannot port numbers within that local calling area/Rate
19 Center.

² North American Numbering Council, Architecture & Administrative Plan for Local Number Portability. NANC-LNP Architecture Task Force Issue 1, Revision 3 (available at www.fcc.gov/wcb/tapd/Nanc/nancalr3.doc) at 7.3 LNP Portability Boundary

1 **Q. DID AUTOTEL MISSTATE QWEST'S POSITION ON ISSUE 2 IN ITS PETITION**
2 **FOR ARBITRATION?**

3 A. Yes. Autotel states that it is being required to interconnect in each local calling area where
4 it plans to offer its services because Qwest requires such as a condition for the
5 implementation of Local Number Portability. As stated in the previous Q & A, Local
6 Number Portability can only occur within a Rate Center. By whatever means it may chose
7 to interconnect, Autotel must have access to the Rate Center, and by extension at least one
8 End Office within that Rate Center, in order to port numbers. With Type 1
9 Interconnection, number porting can only be accomplished through interconnection with at
10 least the one End Office within the rate center where numbers will be ported. If Autotel
11 wishes to port numbers it must satisfy the requirements for Local Number Portability that
12 were set forth by the FCC, the North American Numbering Council and the North
13 American Numbering Plan.

14 **Q. IS IT TECHNICALLY FEASIBLE, AS AUTOTEL IS CLAIMING, TO**
15 **INTERCONNECT AT ONLY ONE END OFFICE AND HAVE QWEST**
16 **TRANSPORT AND TERMINATE CALLS TO AN END OFFICE IN A**
17 **DIFFERENT LOCAL CALLING AREA?**

18 A. While Type 1 interconnection would allow an Autotel customer to make calls within its
19 local calling area as well as calls to a different local calling area, it is done within the
20 framework of the Local Tandem and Access Tandem Networks as previously discussed.
21 Technical feasibility at this level is not in question. Exhibits RT 7 and RT 8 illustrate call

1 flows for calls within the same local calling area as the Type 1 interconnection and for calls
2 that terminate in a distant local calling area respectively.

3 However, End Office switches within the Qwest network do not typically route calls
4 directly to other End Offices, and Qwest End Offices definitely do not have the capability
5 to route calls directly to other End Offices in a different local calling area. In short, Qwest
6 End Offices do not have the routing functionality that Autotel describes in its petition.

7 In addition, with Type 1 Interconnection, Autotel can only obtain line numbers from the
8 Qwest End Office to which it is interconnected. This association of the line numbers with
9 the local calling area dictates the rating and routing of calls originating from those line
10 numbers per NANC and NANPA guidelines.

11 If Autotel is requesting interconnection at a single end office with the capability of routing
12 directly from one End Office to End Offices in other local calling areas using line numbers
13 from a portion of an NXX, it is describing the functionality of an Access Tandem and the
14 capability of a Type 2 interconnection with SPOP architecture. This cannot be
15 accomplished with a Type 1 interconnection.

16 **Q. IS THERE ANOTHER MISSTATEMENT MADE BY AUTOTEL REGARDING**
17 **ISSUE 2?**

18 A. Yes. Autotel states in its petition that Qwest has not been “specific on how issuing
19 multiple numbers to a(n) Autotel customer will implement LNP better than issuing only
20 one number.” For the implementation of LNP, Qwest does not require that a carrier issue

1 multiple numbers to its customers. It is not a regulatory or a technical necessity, and Qwest
2 does not impose such a requirement. Qwest is unsure what Autotel was referencing with
3 that statement.

4 **V. ISSUE NO. 8 – MID-SPAN MEET POI**

5 **Q. WHAT IS THE NATURE OF THE DISPUTE BETWEEN THE PARTIES IN ISSUE**
6 **NO. 8 (AUTOTEL ISSUE 5)?**

7 A. Qwest believes that the mid-span meet point of interface (POI) should be a negotiated point
8 that is of mutual benefit to both parties. Autotel believes that it is inappropriate to
9 negotiate a mid point location.

10 **Q. WHAT IS QWEST’S POSITION REGARDING A NEGOTIATED MID-SPAN**
11 **MEET POI?**

12 A. Qwest’s position (with my emphasis) is stated quite clearly in the language it has proposed:

13 A Mid-Span Meet POI is a **negotiated** Point of Interface, limited
14 to the Interconnection of facilities between one Party’s Switch and
15 the other Party’s Switch. **The actual physical Point of Interface**
16 **and facilities used will be subject to negotiations between the**
17 **Parties.** Each Party will be responsible for its portion of the build
18 to the Mid-Span Meet POI. These Mid Span Meet POIs will
19 consist of facilities used for the Provisioning of one or two way
20 Type 2 and Jointly Provided Switched Access Interconnection
21 trunks, as well as Ancillary trunks such as, OS, DA, and 911 trunk
22 groups.

23 Without question it is an industry-wide practice for carriers to negotiate this type of
24 interconnection. Negotiations allow for interaction by interconnecting parties where they
25 can agree not only on the most advantageous location for interconnection facilities, but also

1 on technical and network specifications to ensure efficient and trouble-free interconnection
2 between their respective networks. It is a recognized benefit to all parties concerned.

3 Generally, negotiation of a mid-span meet yields a location that is approximately “half
4 way” between the two carriers. During negotiations, all physical aspects of the existing
5 demography are examined, giving both carriers the benefit of a “complete picture” of what
6 is possible. This allows for selection of a location that is efficient, accessible and mutually
7 beneficial. In addition, since each party is responsible for its portion of the build to the Mid
8 Span Meet, negotiations ensure that no undue technical or financial burden is placed on
9 either party.

10 **Q. AUTOTEL ASSERTS THAT QWEST WOULD BE PROVIDING “THE SAME**
11 **INTERCONNECTION FACILITY WITH THE SAME NID TO A LOCATION**
12 **WHETHER IT IS A PLACE FOR AN AUTOTEL SWITCH OR A MID-SPAN**
13 **MEET.” HOW DOES QWEST RESPOND?**

14 A. From a network and technical perspective, the logistics of building to a switch within a
15 predetermined building location with built-in access, environmental controls and generally
16 available plant is far less difficult than building to a mid-span meet location that is remote,
17 if not isolated, with limited facilities within reach. Weather becomes an issue. Acquisition
18 of rights-of-way and easements becomes an issue. Engineering, design and construction
19 are much more involved, not to mention more costly. In addition, requiring Qwest to build
20 the entire facility to an Autotel location regardless of it’s proximity to the interconnection
21 site places undue technical, network and financial burdens on Qwest alone, while ignoring

1 the responsibilities of the cost causer, which in this instance would be Autotel. A
2 negotiated Mid-Span Meet ensures an equitable division of responsibility. It has long been
3 recognized by the industry that negotiating a mid-span meet location is the preferred
4 process for proactively handling the complexities that arise when implementing this type of
5 interconnection.

6 **VI. ISSUE NO. 9 – MF SIGNALING OPTIONS**

7 **Q. WHAT IS THE NATURE OF THE DISPUTE BETWEEN THE PARTIES ON**
8 **ISSUE NO. 9 (AUTOTEL ISSUE 7)?**

9 A. Qwest currently offers Multi-Frequency (“MF”) Wink Start signaling in conjunction with
10 Type 1 interconnection. Autotel believes Qwest should provide Type 1 interconnection
11 with Dual Tone Multi-Frequency (“DTMF”) signaling and Pulse signaling as well.

12 **Q. WHY DOES QWEST ONLY OFFER MF SIGNALING?**

13 A. As a whole, the industry has moved away from any type of MF in-band signaling in favor
14 of out-of-band signaling and Signaling System 7 (“SS7”) in particular. Because of the
15 archaic nature of network architectures associated with Type 1 interconnection, Qwest
16 continues to provide limited in-band signaling. In support of Type 1 interconnection,
17 Qwest offers MF Wink Start signaling. In general, other forms of MF signaling are
18 associated with obsolete technology that is not applicable in today’s environment and
19 generally not used by Qwest.

20 Contrary to Autotel’s assertion, Qwest is not offering DTMF or Pulse to provide signaling
21 to its own end users. In rare and isolated cases Qwest customers have had DTMF signaling
22 “grandfathered” until such time as it can be phased out in favor of newer more efficient

1 technologies. These types of signaling are not being actively offered by Qwest nor are they
2 being actively deployed as anything other than an exception to the rule and in isolated
3 instances. While state tariffs do allow for MF, DTMF and Dial Pulse signaling, they
4 clearly specify that it is subject to availability. However, due to Qwest's technological
5 evolution, MF, DTMF and Dial Pulse signaling are no longer generally available.
6 Therefore, although they are still included in Qwest's tariffs, they are not generally
7 available and are provided only to customers that continue to have these outdated
8 technologies. They would generally not be available to new customers.

9 **Q. FROM A TECHNICAL PERSPECTIVE WHY ARE OTHER FORMS OF INBAND**
10 **SIGNALING NOT NECESSARY IN CONJUNCTION WITH A TYPE 1**
11 **INTERCONNECTION?**

12 A. Autotel is requesting DTMF and Pulse signaling. DTMF is a throwback to the introduction
13 of analog touch-tone phones. At that time, signaling was initiated by the tones sent when a
14 customer dialed the phone number. The switch responded by listening to the tones and
15 routing the call accordingly. Pulse signaling is associated with rotary dialing equipment,
16 which to my knowledge is not being used with current wireless technologies. In either
17 case, standard MF signaling would be more than adequate. Also, contrary to statements
18 made by Autotel in its Petition for Arbitration claiming that most CMRS Type 1 switches
19 are using DTMF or Pulse signaling, most if not all of the WSPs currently interconnecting
20 with Qwest via Type 1 Interconnection are using MF and not DTMF or Pulse signaling.

1 **Q. DOES THE FACT THAT QWEST OFFERS ONLY MF SIGNALING PRECLUDE**
2 **AUTOTEL FROM USING TYPE 1 INTERCONNECTION?**

3 A. Based on past experience with other WSP's interconnected with Qwest via Type 1
4 Interconnection, I take issue with Autotel's assertion that most Type 1 switches are not
5 capable of using MF signaling. Again, the fact that most, if not all, WSPs that are currently
6 interconnected with Qwest via Type 1 facilities and are using MF completely contradicts
7 Autotel's assertion.

8 However, if for some unusual technical reason Autotel needs other forms of in- band
9 signaling, Autotel can purchase these types of signaling out of the state tariffs (if and where
10 available) or may approach Qwest through the Special Request Process or the Bona Fide
11 Request Process where implementation of non-standard methods can be addressed.

12 **Q. DOES QWEST CHALLENGE AUTOTEL'S CLAIM THAT DTMF AND PULSE**
13 **SIGNALING IS TECHNICALLY FEASIBLE?**

14 A. Not entirely. It is Qwest's position that DTMF and Pulse signaling are industry non-
15 standard, obsolete and inappropriate technologies and that Qwest's network has evolved
16 away from these technologies to more efficient technologies. That they were once widely
17 implemented and may still exist in rare and isolated instances does speak to the issue of
18 technical feasibility. However, each proposed implementation of DTMF or Pulse signaling
19 must be evaluated on its own merits since some existing Qwest switches may not be
20 capable of providing DTMF or Pulse signaling. In these cases, technical feasibility would
21 still be questionable. Again, if Autotel insists on implementation of these types of
22 technologies, it is free to approach Qwest via the existing Bona Fide Request Process

