EXHIBIT NO. _____ (RT-1T)

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Petition of Qwest Corporation to Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order	**Docket No. UT-033044**

DIRECT TESTIMONY OF

RACHEL TORRENCE

ON BEHALF OF

QWEST CORPORATION

DECEMBER 22, 2003

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I. EXECUTIVE SUMMARY

In its Triennial Review Order ("TRO"), the FCC established that a state commission must find that competing carriers are not impaired without access to Qwest's unbundled dedicated interoffice transmission facilities, also referred to as dedicated transport facilities, if Qwest meets either of two objective "triggers." First, a CLEC is not impaired on any route connecting a pair of Qwest switches or wire centers that has at least three competing carriers (or two competing carriers and a wholesale provider), with operational, fiber-based collocation arrangements with deployed DS3 level or dark fiber transport facilities. The FCC titles this first trigger as the "self-provisioning trigger." Second, a CLEC is not impaired on any route connecting a pair of Qwest switches or wire centers that have at least two wholesale facilities providers with operational, fiber-based collocations arrangements offering dark fiber, DS1, and/or DS3 level transport facilities to other carriers. The FCC titles this second trigger as the "wholesale trigger."

The principal purpose of my direct testimony is to present the results of the application of those dedicated interoffice transport triggers to routes in the Seattle Metropolitan Statistical Area ("MSA"). However, because of the scope of this undertaking, and the time constraints of this proceeding, Qwest has decided to narrow the focus to only a portion of the Seattle MSA. Qwest plans to pursue relief in other routes in future proceedings.

I present evidence that demonstrates that 25 routes satisfy one or both of the TRO's objective triggers. Thus, this Commission must make a finding of non-impairment on

those routes, and enter an order that Qwest is no longer required to provide unbundled dedicated transport along those routes.

II. IDENTIFICATION OF WITNESS

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

A. My name is 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 30 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 expand 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 were to support negotiations positions that preserved the network integrity of the PSTN and to advise the team on the technical feasibility of interconnection arrangements with wireline and wireless co-providers with an emphasis on emerging technologies.

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

I have over 3200 hours of continuing education in the telecommunications field and hold various telecommunications certifications in both wireline and wireless technologies.

III. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. In the TRO, the FCC established that a state commission must find that competing carriers are not impaired without access to Qwest's unbundled dedicated interoffice transmission facilities, also referred to as transport facilities, if Qwest meets either of two objective "triggers." The principal purpose of my testimony is to present the results of applying those dedicated interoffice transport triggers to a number of routes in the Seattle MSA. In Section IV of my testimony I describe the FCC's transport triggers and explain how they are to be applied. In Section V I present evidence, drawn from internal and public sources, that other carriers have deployed fiber transport routes in the Seattle MSA meeting one or both of the FCC's triggers and I describe the process by which that evidence was gathered and evaluated.

IV. TRANSPORT TRIGGER REQUIREMENTS

Q. HOW DOES THE TRO DEFINE DEDICATED INTEROFFICE TRANSPORT FACILITIES?

A. The FCC has redefined transport facilities as follows: "Dedicated interoffice transmission facilities (transport) are facilities dedicated to a particular customer or competitive carrier that it uses for transmission among incumbent LEC central offices or tandem offices."[1] In the TRO, the FCC recognized transport facilities as including "only

[1] TRO at ¶ 361

those transmission facilities within an incumbent LEC's transport network, that is, the transmission facilities between incumbent LEC's switches."[2]

Q. THE FCC ADOPTED TWO OBJECTIVE TRIGGERS AS A MECHANISM FOR DETERMINING IMPAIRMENT TO COMPETING CARRIERS WITHOUT ACCESS TO QWEST'S FACILITIES. PLEASE DESCRIBE THESE TWO TRIGGERS.

A. In the TRO, the FCC opined that requesting carriers are impaired on a nationwide basis without access to unbundled dark fiber, DS1 and DS3 dedicated transport facilities.[3] However, the FCC recognized that competing carriers often self-provision dedicated transport facilities or obtain them on a wholesale basis from carriers other than the incumbent LEC. As such, the FCC authorized state commissions to determine specific routes that meet one of two objective triggers: 1) facilities are self-provisioned; or 2) facilities are available on a wholesale basis from a carrier other that the incumbent LEC. If a state commission finds that either trigger is met for a given route, the state commission must make a finding of non-impairment, and that the "incumbent LEC will no longer be required to unbundle[d]…transport along that route[.]"[4] When a transport route meets one or both of the FCC's triggers, the state commission conducting the route specific review *must* find that the FCC's finding of impairment has been rebutted.

Q. PLEASE DESCRIBE THE SELF-PROVISIONING TRIGGER IN MORE DETAIL.

[2] TRO at ¶ 366

[3] TRO at ¶ 359

A. The self-provisioning trigger looks at whether competing carriers have self-deployed or self-provisioned dark fiber and/or DS3 capable transport facilities. In other words, the trigger seeks to identify carriers that have constructed fiber transport facilities for their own use. Under the self-provisioning trigger, a state commission must find no impairment if three or more unaffiliated competing carriers have deployed their own dark fiber or DS3 transport facilities along a given route.[5] The FCC has also determined that the self-provisioning trigger for DS3 and dark fiber capacities is satisfied if, on a given route, there are at least three unaffiliated competing carriers using their own interoffice transport facilities. The self-provisioning trigger may be satisfied on a route "by a combination of carrier's facilities that were self-deployed to provide wholesale transport to other carriers and facilities self-deployed by carrier's to serve their own needs.[6] Leased dark fiber obtained from another carrier is considered to be that carrier's own fiber for purpose of applying the self-provisioning trigger.

Q. PLEASE DESCRIBE THE WHOLESALE TRIGGER IN MORE DETAIL.

A. The wholesale trigger looks at whether dark fiber, DS1, and DS3 interoffice transport facilities are available from wholesale carriers on a route specific basis. Under this test, competing carriers are not impaired without access to Qwest's transport facilities if there are "two or more alternative transport providers, not affiliated with each other or the incumbent LEC, immediately capable and willing to provide transport at a specific

[4] TRO at ¶¶ 400, 405 and 411

[5] TRO at ¶¶ 405 to 411

[6] TRO at ¶ 408, n. 1264.

capacity along a given route."[7] These carriers may offer facilities that have been self-provisioned, or facilities that have been leased from other carriers. It was recognized by the FCC in the TRO that when a carrier attaches its own electronics to activate the dark fiber leased from other carriers (even dark fiber leased from the incumbent LEC) at a DS3 transmission level, the activated fiber is also considered as a separate, unaffiliated facility.[8]

Q. HOW IS A ROUTE DEFINED IN THE TRO?

A. A route is any direct or indirect connection between two Qwest wire centers or switches. In other words, a route may connect Qwest wire centers or switches that are not directly connected to each other.[9] For example, Qwest meets the triggers for a direct route from Seattle Main to Seattle East and a direct route from Seattle East to Seattle Campus. No direct connection exists between the Seattle Main wire center and Seattle Campus. However, Qwest has proven the existence of an indirect route from Seattle Main to Seattle Campus through the Seattle East wire center.

Q. DOES THE FCC IMPOSE ANY OTHER REQUIREMENTS IN SATISFYING THE TRIGGERS?

A. In order to satisfy the triggers, the FCC requires the transmission facility to be operationally ready to provide transport between Qwest wire centers. This condition is satisfied if a carrier has an operational collocation arrangement and has pulled fiber into

[7] TRO at ¶ 400

[8] TRO at ¶ 414

[9] TRO at ¶ 402, n.1246

that arrangement ("fiber-based collocation"). The FCC made clear in the TRO that "[c]ollocation may be in a more traditional collocation space or fiber can be terminated on a fiber distribution frame…."[10]

Q. REGARDING DEDICATED INTEROFFICE TRANSPORT, PLEASE SUMMARIZE THE RULES CONCERNING THE TWO OBJECTIVE TRIGGERS.

A. The TRO establishes two triggers which when satisfied will demonstrate that any findings of impairment have been overcome. The triggers are:

- The self-provisioning trigger requires that a route connecting a pair of Qwest switches or wire centers have at least three competing carriers (or two competing carriers and a wholesale provider), with operational, fiber-based collocation arrangements with deployed DS3 level or dark fiber transport facilities.
- The wholesale trigger requires that a route connecting a pair of Qwest switches or wire centers have at least two wholesale facilities providers with operational, fiber-based collocations arrangements offering dark fiber, DS1, and DS3 level transport facilities to other carriers.

When either trigger is met between a given pair of switches or wire centers, Qwest will no longer be required to make available unbundled dedicated transport on any Qwest transmission routes that directly or indirectly connect that pair of Qwest switches or wire centers.

[10] TRO at ¶ 406, n.1257

V. QWEST EVIDENCE OF ROUTES SATISFYING TRIGGERS

A. Routes Identified As Satisfying Triggers

Q. HOW MANY INTEROFFICE TRANSPORT ROUTES IN THE SEATTLE MSA HAVE BEEN IDENTIFIED AS HAVING MET THE FCC'S TRANSPORT TRIGGERS?

A. At this point in time, Qwest has investigated 11 of the 39 wire centers in the Seattle MSA. From those 11 wire centers Qwest has gathered evidence of 25 routes between those wire centers that meet one or both of the FCC's triggers. The table in Figure 1 below is a breakdown of the routes and the triggers as met.

Figure 1

Route No.	QWEST WIRE CENTER	Wholesale	Self-Provisioned
Direct 1	Bellevue Glen Court to Belleview Sherwood		
	TOTAL	**4**	**1**
Direct 2	Bellevue Sherwood to Renton		
	TOTAL	**5**	**3**
Direct 3	Renton to Kent O'Brien		
	TOTAL	**0**	**3**
Direct 4	Kent O'Brien to Seattle Cherry		
	TOTAL	**1**	**2**
Direct 5	Seattle Cherry to Seattle Duwamish		
	TOTAL	**3**	**1**
Direct 6	Seattle Duwamish to Seattle Main		
	TOTAL	**4**	**1**
Direct 7	Seattle Main to Seattle East		
	TOTAL	**10**	**5**
In-direct 8	Seattle East to Seattle Elliot		
	(via Seattle Main)		
	TOTAL	**5**	**4**
Direct 9	Seattle Elliott to Seattle Atwater		
	TOTAL	**5**	**2**
Route No.	QWEST WIRE CENTER	Wholesale	Self-Provisioned
Direct 10	Seattle Atwater to Seattle Campus		
	TOTAL	**6**	**1**

Direct 11	Seattle Duwamish to Seattle East		
	TOTAL	**4**	**1**
Direct 12	Renton to Seatlle Cherry		
	TOTAL	**0**	**2**
Direct 13	Renton to Seattle Duwamish		
	TOTAL	**1**	**1**
Direct 14	Seattle Main to Seattle Elliot		
	TOTAL	**6**	**5**
Direct 15	Seattle East to Seattle Campus		
	TOTAL	**3**	**2**
Direct 16	Belleview Sherwood to Kent o Brien		
	(express thru Renton)		
	TOTAL	**3**	**2**
Direct 17	Belleview Sherwood to Seattle Cherry		
	(express thru Renton)		
	TOTAL	**2**	**2**
Direct 18	Belleview Sherwood to Seattle Duwamish		
	(express thru Renton)		
	TOTAL	**3**	**1**
Indirect 19	Kent O Brien to Seattle Duwamish		
	(via Seattle Cherry)		
	TOTAL	**2**	**1**
Indirect 20	Seattle Duwamish to Seattle Elliot		
	(via Seattle Main)		
	TOTAL	**2**	**1**
Indirect 21	Seattle Duwamish to Seattle Campus		
	(via Seattle East)		
	TOTAL	**2**	**1**
Indirect 22	Seattle Main to Seattle Atwater		
	(via Seattle Elliot)		
	TOTAL	**5**	**2**
Indirect 23	Seattle Main to Seattle Campus		
	(via Seattle East)		
	TOTAL	**3**	**1**
Indirect 24	Seattle Elliot to Seattle Campus		
	(via Seattle Atwater)		
	TOTAL	**3**	**1**
Indirect 25	Seattle East to Seattle Atwater		
	(via Seattle Campus)		
	TOTAL	**3**	**1**

See Highly Confidential Exhibit RT-9HC for a more complete table identifying routes.

Q. WHY DID QWEST NOT INVESTIGATE ALL 39 WIRECENTERS IN THE SEATTLE MSA?

A. The Seattle MSA encompasses 39 wire centers and covers a rather large geographic area. As Qwest gathered data on the existence of competing carriers' facilities within the MSA, it quickly became evident that to fully investigate all wire centers within the time constraints of this proceeding would not be possible. Exhibit RT-2C is two maps of the Seattle MSA upon which known competing carriers' facilities have been overlaid. These maps illustrate the magnitude of the number of routes that could be impacted.

Based on this and other preliminary data, it was determined that the focus would be narrowed to a manageable number of wire centers that had the greatest potential for proving a competitive presence. Those offices, which are highlighted in yellow on Exhibit RT-2C, are:

- Bellevue Glencourt
- Bellevue Sherwood
- Renton
- Kent O'Brien
- Seattle Cherry
- Seattle Duwamish
- Seattle Main
- Seattle East
- Seattle Elliott
- Seattle Atwater
- Seattle Campus

A more detailed explanation of the process for identifying the wire centers and subsequently the routes is given later in this testimony (Section V, Subsection B).

Q. WILL QWEST BE PURSUING ROUTES IN ANY OTHER OF THE REMAINING WIRE CENTERS?

A. Absolutely. The wire centers and routes being presented in the docket constitute only the first phase of Qwest's efforts. Qwest intends to fully investigate all wire centers in the Seattle MSA and will present evidence of more routes that meet the triggers in future proceedings.

Q. IS IT QWEST'S BELIEF THAT THE FIBER TRANSPORT ROUTES DEPLOYED BY COMPETING CARRIERS ARE USED FOR NOT ONLY OCN AND DS3 TRANSPORT, BUT DS1 TRANSPORT AS WELL?

A. Yes. In identifying the routes that meet the FCC triggers, Qwest proceeded under the assumption that when carriers deploy fiber facilities with attached OCn electronics, (e.g. OC48 multiplexors), they have the ability to channelize, i.e. subdivide, the OCn system into lower transport levels as required by their customers, including not only DS3s, but DS1s as well. This is a common, almost ubiquitous practice among telecommunications carriers.

There is no question that fiber transport facilities are capable of operating at various levels of capacity. In fact, the capacity of the fiber is as much a function of the attached optronics as it is a function of the fiber itself. Once the fiber is deployed, it can operate at a DS1, DS3, OC48 or higher level, or can operate at all these levels simultaneously depending on the optronics that have been deployed. Qwest's assumption that competing carriers who deploy fiber facilities generally build OCn level transport facilities, capable of channelization to DS1 and/or DS3 is consistent with standard industry architectures and practices. Few if any carriers deploy transport facilities to accommodate a single transport level, only a DS1 or only a DS3. In fact as stated in the TRO, the FCC found

that "when competing carriers self-deploy transport facilities, they often deploy fiber optic facilities at OCn levels."[11]

It is also beyond dispute that the optronics used to channelize the OCn systems being described into DS1 and/or DS3 transport levels are easily procured and are relatively inexpensive.

Q. IS IT QWEST'S POSITION THAT IF THE SELF-PROVISIONING TRIGGERS HAVE BEEN MET FOR FIBER TRANSPORT AT THE OCN OR DS3 LEVELS, IT HAS MET THE TRIGGERS AT THE DS1 LEVEL AS WELL?

A. Absolutely. As stated above, once a fiber is deployed, it can operate at a DS1, DS3, OC48 or higher level, and it is common industry practice for a carrier to operate at all these levels simultaneously. An operational fiber facility offering DS3 or OCn level service is capable of offering DS1 level service easily and economically.

Q. IS IT QWEST'S POSITION THAT THE FIBER TRANSPORT FACILITIES IN QUESTION CONTAIN DARK FIBER?

A. As a matter of basic network engineering and sound economics, the vast majority of self-provisioned fiber transport facilities will have spare fibers. It is simply inconceivable that a carrier would incur the "large fixed and sunk costs required to self-provision fiber transport facilities," including the costs of obtaining rights-of-way, digging up and restoring streets and/or sidewalks, and labor and material costs of deploying fiber, without placing a little something extra for the future – in other words, dark fiber. Fiber

[11] TRO at ¶ 382

transport facilities are always installed with not only enough fiber to meet the immediate need, but with enough fiber to meet projected future demand. Sound engineering and economic judgment dictates that even though the fiber has been deployed, the optronics are deployed only when there is actual demand. In other words, spare fiber is routinely left "dark," until placement of the optronics is actually needed.

Further, fiber cables are commonly manufactured and deployed in set increments of 12 fiber strands (i.e., 12, 24, 48, etc. fiber per cable). OCn optronics generally require only four fibers for activation. If a competing carrier collocated in a Qwest office self-deploying an OC48, and deployed the smallest fiber cable, 12 fibers, it would connect only four fibers to complete the deployment. Of the 12 fiber, only four would be "lit", leaving the remaining eight fibers "dark." As such, the difference between the larger number of fibers competing carriers are generally pulling into their collocation arrangements and the smaller number of fibers required for the activation of electronics needed for dedicated transport facilities strongly suggests the existence of spare or dark fiber. And if there unlit fiber exists in a self-deployed transport facility, the facility meets the FCC's self-deployment trigger for dark fiber.

B. Process Used In Gathering Evidence

Q. WHAT WAS THE PROCESS BY WHICH WIRE CENTERS AND ROUTES WERE IDENTIFIED AND INVESTIGATED?

A. Qwest used a three pronged approach in gathering evidence for presentation in the proceeding: 1) Identification of candidate Qwest wire centers; 2) Compilation and

verification of data on existing carrier routes; and 3) Cross referencing and correlation of all data.

A combination of internal and external data sources were used in gathering evidence. Internal data sources included Qwest facility tracking databases, as well as field verification of facilities. External sources included outside consultants that specialize on compiling data on telecommunications facilities, on-line research and Locating Inc. facility locates.

Q. PLEASE EXPLAIN THE METHODOLGY BY WHICH QWEST IDENTIFIED CANDIDATE WIRE CENTERS.

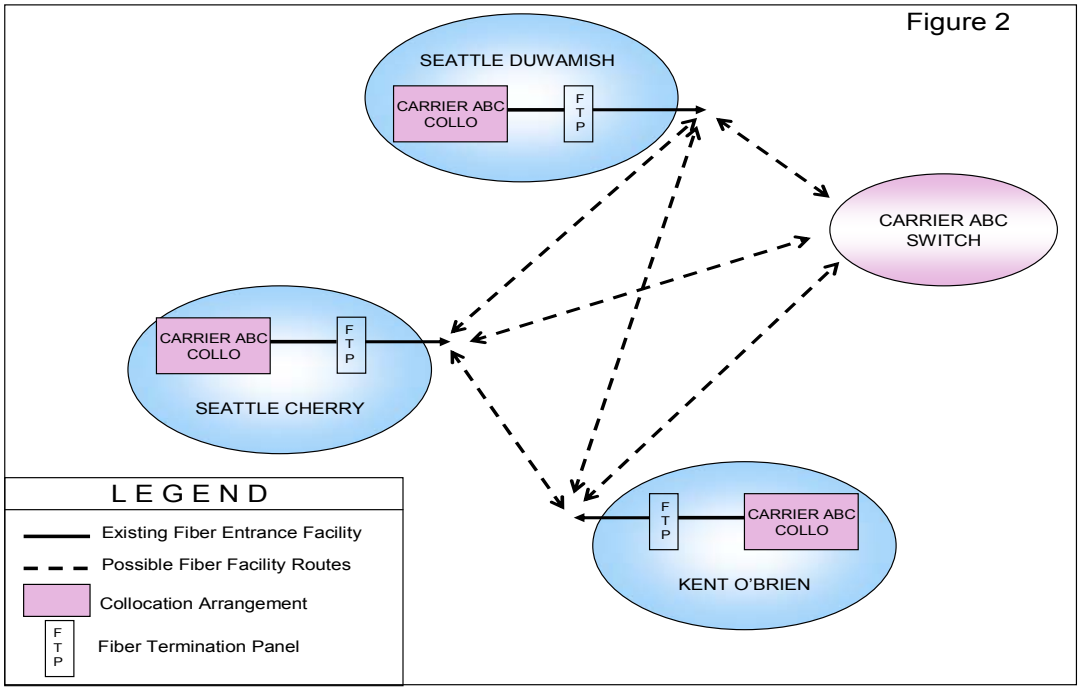
A. Qwest evaluated wire centers by first compiling information on multiple competing carriers with matching collocations. A matching collocation is a collocated presence by a competing carrier in multiple Qwest offices. Matching collocation information was then correlated with information on existing fiber transport entrance facilities between Qwest offices, establishing fiber-based collocation. These existing fiber transport entrance facilities are fiber facilities that enter a Qwest wire center and terminate on some type of Qwest equipment, such as a fiber termination panel. This data on fiber-based collocations was gathered from internal sources that track facilities and equipment on the Qwest network.

The existence of carriers with matching collocations in multiple wire centers was seen as an indicator of potential for facilities existing between those collocations. The existence of fiber transport between these same wire centers was seen as an indicator that these

routes were capable of meeting one or both of the triggers. Not surprisingly, the wire centers with matching multiple fiber-based collocations tend to service highly populated urban areas or concentrations of commercial developments.

For example, carrier ABC has a fiber based collocation arrangement in each of three Qwest wire centers: Kent O'Brien; Seattle Cherry; and, Seattle Duwamish. Qwest's investigation also showed that there appeared to be existing fiber facilities between all three of these central offices. An assumption could safely be made that fiber facilities, other than those belonging to Qwest, could be connecting carrier ABC's collocation arrangements and corresponding fiber entrance facilities in some manner. Figure 2 below illustrates that assumption.

Figure 2



Based on the existence of matching fiber-based collocations in multiple wire centers, Qwest compiled a list of 26 qualifying wire centers with in the Seattle MSA. These

candidate wire centers showed the potential for routes that could meet one or both of the objective triggers as set forth by the FCC.

Q. PLEASE EXPLAIN HOW DATA WAS COMPILED ON COMPETITIVE CARRIERS' EXISTING FIBER TRANSPORT FACILITIES?

A. While Qwest was compiling data on candidate wire centers, data was also being compiled on the existence of fiber facilities deployed by carriers and service providers other than Qwest. The existence of these facilities has never been in question, only their location. Gathering information on the location of these facilities presented a challenge since Qwest has no first hand knowledge from which it can draw this information and was forced to rely for the most part on external information sources. As such, Qwest used data obtained from two outside consulting firms that research and track this type of information. The two firms were Power Engineering Inc. ("PEI") and Geo-Tel.

Both PEI and Geo-Tel used the same basic methodology to obtain data on the existence and location of facilities deployed by telecommunications carriers. They gathered fiber route information from public sources and from information provided to the public by the carriers. In addition, in many instances, field verification was conducted by personnel with expertise in fiber optic cable systems.

Municipal governments were contacted and asked for lists of carriers franchised or otherwise permitted to place fiber facilities within their jurisdictions. Public information, such as street use permit records and public rights-of-way applications indicating route locations was researched and compiled. Carriers were contacted as they were identified

in any given area and direct information was solicited and in limited instances obtained. (In general, most carriers declined direct participation.) Personnel examined the Web sites of all identified carriers, which in many instances not only confirmed data already compiled but provided additional data.

Fiber route maps were generated and provided via geographic information systems ("GIS") for the Seattle MSA. The route information gathered was then entered into a digital map database, and provided to Qwest.

A critical point to mention is that while Geo-Tel was contracted for the sole purpose of obtaining fiber route location data for pending TRO proceedings, PEI was contracted around the 2000 timeframe for purposes totally unrelated to this proceeding and provided not only fiber route location data, but an analysis of competing carrier presence in the Seattle metropolitan area.. Despite the differing timeframes, the similarities were striking, and speak to the early and continuing presence of competing carriers in the Seattle MSA. Page 1 of Confidential Exhibit RT-2C is the fiber route location information obtained from Geo-Tel. Page 2 of Confidential Exhibit RT-2C is the fiber route location information obtained from PEI. Highly Confidential Exhibit RT-3HC is a copy of the Competitive Fiber-Optic Cable Report that was provided to Qwest (U S WEST) by PEI.

In addition, Qwest independently researched publicly available information on carriers' service offerings. Qwest also relied on facility locates done by "Locating Inc."[12]

The fiber facility route location data that was obtained from Geo-Tel and PEI was supported by Global Positioning System ("GPS") latitude and longitude information. This GPS position data accurately locates and ties the fiber facilities in question to Qwest wire centers and entrances into Qwest wire centers

If we again refer to Confidential Exhibit RT-2C showing the location of fiber facilities belonging to carriers other than Qwest, Qwest wire center/central offices, and other carriers switch locations, it is readily apparent that a substantial number of telecommunications carriers, have deployed fiber facilities (and switches) in the Seattle metropolitan area. Much of that fiber is connected to or in very close proximity to Qwest wire centers. In many cases the routes taken by the fiber facilities of other carriers closely mirrored Qwest's fiber facility routes between its wire centers.

Q. PLEASE EXPLAIN THE METHODOLGY BY WHICH QWEST CROSS REFERENCED AND CORRELLATED THE DATA IT HAD COLLECTED.

A. It was clear at this point in Qwest's research that given the time constraints of this proceeding, the intensive research that still needed to be done, and the need to substantiate external data, that it would not be possible to conduct a full and conclusive investigation of all 26 wire centers that had been identified as candidates. The decision

[12] Locating Inc. is a service used by any entity that will be constructing facilities in close proximity to the buried facilities of utilities such as power, gas, and telecommunications. Locating Inc. locates the existing buried facilities and marks them with temporary spray paint on public and private property, sidewalks, streets, driveways, etc., minimizing the potential for construction damaging the facilities in place.

was made to proceed with a more manageable number of wire centers and routes that presented the best opportunity for proving that multiple alternative providers do indeed exist.

The locations of the 26 Qwest wire centers with the multiple matching fiber–based collocations were correlated with the locations of competing carriers' existing fiber facilities as seen in Confidential Exhibit RT-2C. Qwest focused on the wire centers with the most matching collocations and with the greatest concentration of competing carriers' fiber facilities. This produced a list of 11 wire centers with a high potential for routes that would meet the triggers. As stated earlier, these 11 wire centers are highlighted in yellow on Confidential Exhibit RT-2C.

With this pared-down list of wire centers and potential routes, I personally conducted an on-site verification of the fiber entrance facilities at each of the targeted wire centers to ensure that the data we had collected on collocations and fiber entrance facilities was indeed correct. I then conducted an onsite verification of the existing fiber facilities belonging to carriers other than Qwest that either connects directly to the Qwest network or pass in close proximity[13] to a Qwest wire center, again with the aid of GPS equipment.

Q. YOU MAKE THE POINT THAT YOU PERSONALLY CONDUCTED THE ONSITE VERIFICATION OF DATA. WERE YOU INVOLVED IN THE COLLECTION OF OTHER DATA?

[13] Qwest defined "close proximity" as within 300' of a Qwest central office location. From an engineering perspective, 300' is considered a reasonable distance that allows for economical access to the Qwest central office.

A. The collection of all data and verification of that data was done either by me personally or under my immediate direction.

Q. HOW DID QWEST ESTABLISH THAT CARRIERS WITH FACILITIES IN A CANDIDATE ROUTE ARE OFFERING THEIR FACILITIES ON A WHOLESALE BASIS AS OPPOSED TO SELF-PROVISIONING FOR THEIR OWN USE?

A. The TRO specifies a "wholesale" trigger for transport. Given the number of companies in the Seattle area, an in-depth review of each company's web site was performed. Qwest also contacted Universal Access, a telecommunications provisioner that bundles products and services from different carriers and resells those services to customers. Qwest was unable to obtain information from Universal Access, so instead used the data from their website listed under "partners" and made some assumptions to help substantiate data regarding carriers Qwest already verified as wholesale providers. Figure 5 below contains a list of carriers Qwest believes to be wholesale providers in the Seattle area, based on publicly available information.

Figure 5

Carrier	URL
Allegiance	http://www.algx.com/wholesale/wholesale.jsp
AT&T(TCG)	http://www.business.att.com/content/productbrochures/ets.pdf
ELI	http://www.eli.net/carriers.html
Level 3	http://www.level3.com/561.html
MCI	http://global.mci.com/wholesale/services4U/carrier/
MCI Metro (MCI)	http://global.mci.com/wholesale/services4U/carrier/
MCI World Com (MCI)	http://global.mci.com/wholesale/services4U/carrier/
McLeod	http://www.mcleodusa.com/ProductCategory
MFS (MCI)	http://global.mci.com/wholesale/services4U/carrier/
Sprint	https://www.sprintbmo.com/bizpark/localwholesale/html/p_dark_fiber.html

Williams	http://www.wiltel.com/services/transport/metroaccess/index.html
XO Comm (Next Link)	http://www.xo.com/products/carrier/telcocollocation/index.html: http://www.xo.com/about/network/index.html

C. Summary of Evidence

Q. PLEASE DESCRIBE QWEST'S EVIDENCE PERTAINING TO THE MULTIPLE MATCHING FIBER-BASED COLLOCATIONS.

A. Qwest evaluated wire centers by compiling information on competing carriers with matching collocations. This information was gathered using internal data sources for tracking of facilities that interconnect with the Qwest network. Matching collocation information was later correlated with information on existing fiber transport between Qwest offices. As I have previously stated, the collocations and the corresponding fiber entrance facilities in the final 11 wire centers were physically verified by myself.

Highly Confidential Exhibit RT-4HC is a spreadsheet detailing the matching fiber-based collocation.

Q. YOU ALSO STATED PREVIOUSLY THAT YOU FIELD VERIFIED THE PRESENCE OF FIBER FACILITIES BELONGING TO CARRIERS OTHER THAN QWEST. PLEASE DESCRIBE THAT EVIDENCE IN MORE DETAIL.

A. I conducted a physical verification of the existing fiber facilities belonging to carriers other than Qwest that either connect directly to the Qwest network or pass in close proximity to the 11 Qwest wire centers in question. To locate these facilities a physical search was done of the area immediately surrounding the Qwest wire center, aided by data provided by Geo-Tel and PEI. In every instance we found facilities labeled as

belonging to various competing carriers and in many instances even identifying the facilities as fiber optics. Once competing carriers' fiber facilities had been located in close proximity of a given Qwest wire center, the exact location was documented with the aid of GPS equipment. Photographs of the facilities, usually manholes, were also taken. Pages 1 to 8 of Confidential Exhibit RT-5C provides maps, for seven of the 11 candidate wire centers, detailing the location of the facilities, information as to the distance to the Qwest wire center, and include the photographs of the facilities, labeled and clearly stating ownership.

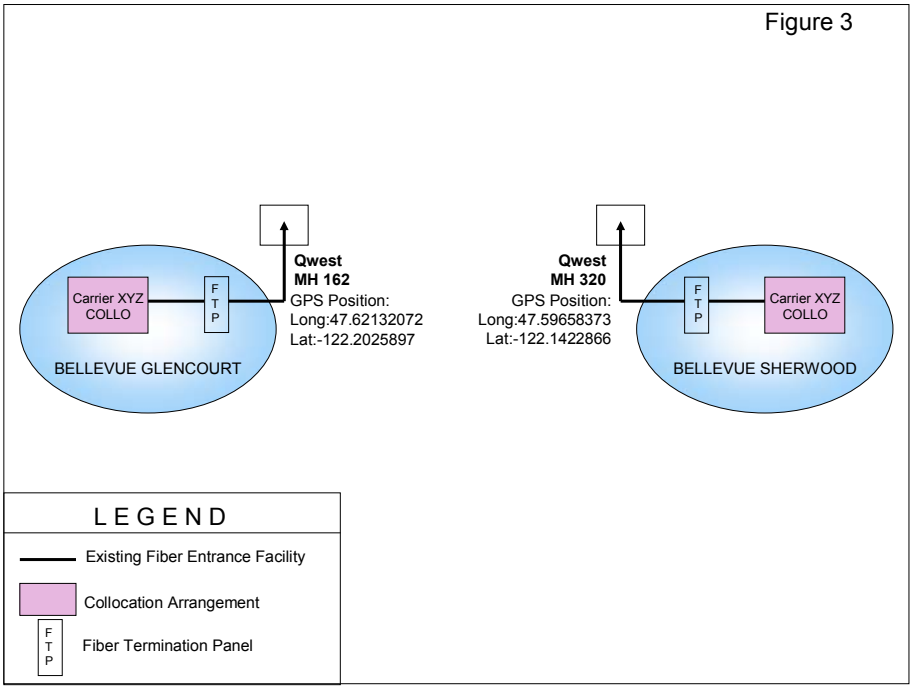
Q. WERE ALL COMPETING CARRIERS' FIBER FACILITIES DOCUMENTED USING GPS EQUIPMENT?

A. Due to unfavorable conditions (tall buildings and below the horizon position of the positioning satellites) in downtown Seattle, an accurate position could not be obtained using GPS for all carriers and locations. However, Locating Inc. cable locates surrounding the city block that houses the Qwest wire center clearly showed the presence of fiber facilities belonging to carriers other than Qwest. Exhibit RT-6 is an example photograph of the sidewalk at the corner of 2nd Ave. and Blanchard in downtown Seattle that clearly shows the presence of multiple providers with fiber optic facilities.

Q. ONCE ALL FIBER-BASED COLLOCATION DATA AND INFORMATION AS TO THE LOCATION OF COMPETING CARRIERS' FIBER FACILITIES WAS COMPILED AND CORRELATED, HOW WAS IT DETERMINED THAT THE ROUTES MET ONE OR BOTH OF THE TRIGGERS?

A. The collocation and fiber entrance facility data illustrates the fact that a competing carrier is located within a Qwest wire center and is supporting fiber transport. In a nutshell, we have a carrier collocation arrangement with fiber facilities to a fiber termination panel ("FTP") and fiber facilities from the FTP to a Point of Interface ("POI"), usually a manhole. This was physically verified at each of the 11 candidate Qwest wire centers. Figure 3 is an illustration of an actual arrangement using one competing carrier with matching fiber-based collocation in both the Bellevue Glencourt and Bellevue Sherwood wire centers.

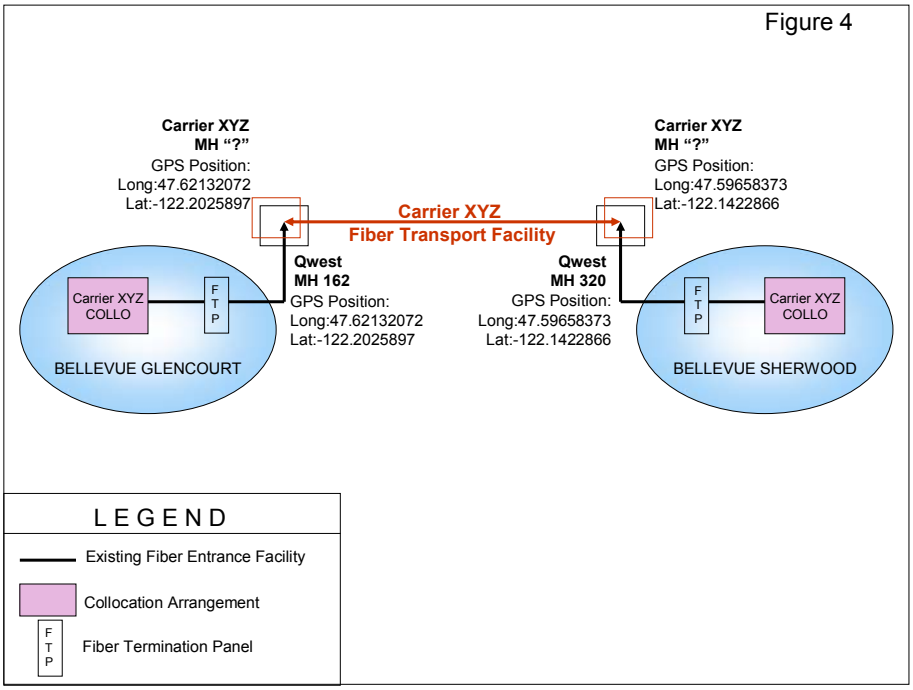
Figure 3



This information established the physical presence by a competing carrier, carrier XYZ, in both Qwest Wire centers and satisfied the condition of operational readiness. Next we took information on the known location of carrier XYZ fiber facilities by manhole, in longitude and latitude positioning (provided via GPS), and compared it to the longitude

and latitude positioning (also provided via GPS) of the POI manholes as previously identified. As can be seen, the positions were identical, and since the GPS equipment that is being used is accurate to within 24 inches, they are the same manhole. Figure 4 illustrates this connectivity.

Figure 4



This is compelling evidence that we indeed have an operational "A", Bellevue Glencourt, to "Z", Bellevue Sherwood, route that was self-provisioned by carrier XYZ.

Highly Confidential Exhibit RT-7HC provides the name of the CLEC (via masked code) in the examples shown in Figures 3 and 4.

Q. PLEASE PROVIDE AN EXPLANATION OF THE INFORMATION CONTAINED IN THE SPEADSHEET THAT IS HIGHLY CONFIDENTIAL EXHIBIT RT-8HC.

A. The TRO stated that "the competitive transport facilities counted to satisfy this trigger must terminate in a collocation arrangement." This means that any A location and Z location that share three or more collocations by matching CLECs preliminarily qualifies to meet the trigger. This information indicates a qualifying route that should be considered for further validation and verification by the state. In order to conduct an extensive analysis of the collocation information, three sets of data were collected. The data included a list of Qwest central offices in each MSA, a report of all collocations by central office, and a list of higher OCn rates in the Interoffice Facility (IOF). The data was sorted into tables where columns and rows were matched to each central office within the MSA. The collocation data was then scrubbed and aggregated to help identify each route where three or more collocations existed with matching CLECs as candidates. The next level of validation compared competitive fiber with the collocation data. Qwest then compared data collected in 2000 by Power Engineering to provide an inventory of the competitive fiber in Washington. This data was mapped, using the ArcInfo GIS application, along with the collocation data. Qwest completed an industry search for another outside competitive fiber data company and identified Geo-Tel as a probable source for this data. The data from Power Engineering in 2000 was compared with the data collected from Geo-Tel where a majority of fiber routes matched. Mismatches and inconsistencies between the two sets of data were identified and validated by either adding or deleting the information to complete a comprehensive report.

Once the analysis was completed we labeled each central office with a route identifier for reference purposes and added status of the collocation (In Effect, Pending, etc.). The

type of collocation – physical, virtual, or express fiber - was identified on the spreadsheet for further clarification of the amount of CLEC facilities that exist in the central office. Lastly, the carriers were added and identified as to whether or not the company is acknowledged as a wholesaler.

Highly Confidential Exhibit RT-8HC is a compilation of the evidence used in determining the routes meeting the FCC trigger criteria.

Example of Highly Confidential Exhibit RT-8HC

Route No.	QWEST WIRE CENTER	STATUS	Type Collocation	Carrier	Wholesaler
1	Bellevue Glen Court	In Effect	Virtual Collocation Name at Glen Court MH 162	Name	YES

VI. SUMMARY AND CONCLUSION

Q. PLEASE SUMMARIZE THE CONCLUSIONS THAT ARE DRAWN FOR THE EVIDENCE PRESENTED IN YOUR TESTIMONY.

A. I present evidence that demonstrates that 25 routes between 11 wire centers within the Seattle MSA satisfy one or both of the objective triggers as set forth by the FCC and as such that this state commission must make a finding of non-impairment, and find that Qwest no longer be required to unbundled that transport along those routes. Highly Confidential Exhibit RT-9HC is a table summarizing all routes, direct or indirect, that meet one or both of the triggers as set forth by the FCC in its Triennial Review Order.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.