

EXH. SJH-2  
Docket UT-181051  
Witness: Stacy J. Hartman  
WUTC DOCKET: UT-181051  
EXHIBIT: SJH-2  
ADMIT  W/D  REJECT

**BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**CENTURYLINK COMMUNICATIONS,  
LLC,**

**Respondent.**

**DOCKET UT- 181051**

**EXHIBIT TO  
TESTIMONY OF**

**STACY J. HARTMAN**

**ON BEHALF OF  
CENTURYLINK COMMUNICATIONS, LLC**

*PUBLIC COUNSEL RESPONSES TO DATA REQUESTS CLC 1-16*

**March 31, 2022**

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 1**

Request No: 1  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Stephanie Chase  
Witnesses: Stephanie Chase

**DATA REQUEST NO. 1.**

At pages 1-3 of her Direct Testimony (Exhibit SKC-1T), Ms. Chase summarizes her credentials and experience.

- a. Please produce a current copy of Ms. Chase's resume or curriculum vitae.
- b. Please identify each matter, case or project Ms. Chase has worked on (prior to this case) that involves the following. For each, please identify and fully describe the matter, case or project.
  - (1) telecommunications;
  - (2) 911 systems or services;
  - (3) network engineering
- c. Please identify and fully describe Ms. Chase's education, experience and credentials that qualifies her to testify and opine on network engineering issues.

**RESPONSE:**

The response in each subpart below is in answer to the corresponding subpart in CenturyLink's Data Request 1 above.

- a. Please see attached for Stephanie Chase's resume.
- b. Stephanie Chase is testifying as a policy expert on behalf of Public Counsel in this case. Prior to this case, Chase has not worked on a matter, case, or project involving telecommunications, 9-1-1 systems or services, or network engineering.
- c. Stephanie Chase is testifying as a policy expert on behalf of Public Counsel in this case.

# STEPHANIE K. CHASE

800 5<sup>th</sup> Avenue, Suite 2000 • Seattle, Washington 98104 • 206.521.3212 • stephanie.chase@atg.wa.gov

## EDUCATION

**University of Wisconsin Law School**  
*Juris Doctor*

**Madison, WI**  
*May 2012*

**University of Wisconsin La Follette School of Public Affairs**  
*Master of Public Affairs, Concentration in Energy and Environmental Policy*

**Madison, WI**  
*May 2012*

**South Dakota State University**  
*Bachelor of Science, Political Science; Minor in Biology; Summa cum laude*

**Brookings, SD**  
*May 2007*

## EXPERIENCE

**Washington State Office of the Attorney General, Public Counsel Unit**  
**Seattle, WA**

*Regulatory Analyst*

*January 2020 – Present*

- Worked with team to develop and present Public Counsel’s position in a variety of transportation, electric, natural gas, water, and telecommunications utility cases, including presenting policy expert testimony
- Represent Public Counsel on a variety of electric and natural gas utility advisory groups on issues relating to energy efficiency, conservation, low-income customers, integrated resource planning, and equity issues
- Participate in policy rulemakings and developing legislative analysis on behalf of Public Counsel

**Scribbr**

*Independent Editor*

**‘s-Hertogenbosch, Netherlands**

*September 2015 – December 2017*

- Edited theses and other academic manuscripts, including legal, scientific, and technical manuscripts for graduate and undergraduate students at European universities

**Environmental Law & Policy Center**

*Associate Attorney*

**Madison, WI**

*October 2013 – May 2015*

- Represented the Center in various matters before the Public Service Commission of Wisconsin, working with senior attorneys to conduct discovery, present expert witness testimony, participate in technical hearings, and submit legal briefs in utility rate and transmission siting cases
- Independently researched and developed technical expertise on the impacts of oil and natural gas development in North Dakota, opportunities to reduce greenhouse gas emissions and other climate impacts across the Midwest, and strategies for clean energy and environmental advocacy in South Dakota
- Collaborated with stakeholders including nonprofits, foundations, government and tribal officials on efforts to urge local, state, and federal action on climate change and energy efficiency programs

**Justice Glen A. Severson, South Dakota Supreme Court**

*Clerk*

**Sioux Falls, SD**

*August 2012 – July 2013*

- Conducted legal research, reviewed court records, and assisted Justice Severson with opinion drafts

**Wisconsin Department of Transportation Office of General Counsel**  
*Legal Intern*

**Madison, WI**  
*May 2011 – May 2012*

- Drafted various contracts and documents for the Department
- Worked on various administrative appeal cases, including drafting stipulated facts and response briefs, conducting discovery, and participating in administrative hearings

**University of Wisconsin School of Human Ecology**  
*Project Assistant to Professor J. Michael Collins*

**Madison, WI**  
*February 2010 – May 2011*

- Developed strong quantitative and analytical skills conducting research and literature reviews on consumer financial literacy, payday lending, and related topics
- Worked with Professor Collins and other colleagues to write and edit for submission to publications

**Environmental Law & Policy Center**  
*Policy Associate*

**Madison, WI**  
*July 2007 – August 2009*

- Assisted expanding the Center's Great Plains work, including hiring staff and managing office logistics
- Tracked news and opinions, conducted research, developed materials, and reported findings to public officials on various environmental, energy, and public policy issues impacting North and South Dakota

**BAR ADMISSIONS:** State of South Dakota, 2012-2020 (active), 2021-present (inactive); State of Wisconsin, 2012-2019

**PUBLICATION:** *There Must Be Something in the Water: An Exploration of the Rhine and Mississippi Rivers' Governing Differences and an Argument for Change*, 29 WIS. INT'L L.J. 609 (2011)

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 2**

Request No: 2  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Stephanie Chase; Nina Suetake  
Witnesses: Stephanie Chase

**DATA REQUEST NO. 2.**

At page 9 of her Direct Testimony (Exhibit SKC-1T), Ms. Chase states “Public Counsel believes that CenturyLink should be held accountable for its involvement in the 9-1-1 outage and recommends that the Commission impose the full statutory penalty of \$26,865,000.”

- a. Does Public Counsel believe that Comtech should be held accountable for its involvement in the December 2018 9-1-1 outage in Washington? Fully explain why or why not.
- b. Does Public Counsel believe that Commission Staff should have named Comtech as a defendant in this complaint or in a parallel complaint? Fully explain Public Counsel’s position. Produce any communications between Public Counsel and Commission Staff concerning the decision to include (or not include) Comtech as a defendant.
- c. What steps has Public Counsel taken to ensure that Comtech is held accountable for its involvement in the December 2018 9-1-1 outage in Washington? What steps does Public Counsel intend to take?

**RESPONSE:**

**Objection. The request seeks information that calls for a legal conclusion and is irrelevant to the proceeding. The request may also seek information that is protected by the attorney work product doctrine. Without waiving these objections, Public Counsel provides the following response.**

The response in each subpart below is in answer to the corresponding subpart in CenturyLink’s Data Request 2 above.

- a. Public Counsel believes that the scope of this docket is limited to “whether CenturyLink violated any statutes or Commission rules resulting in the December 2018 network outage,” per paragraph 15 of the Commission’s Order 03 granting

To: Adam Sherr, CenturyLink Communications, LLC  
Re: Docket UT-181051  
Public Counsel Response to CenturyLink DR 2  
January 27, 2022

- the petition to intervene (August 9, 2021). The Commission's Order 03 further states that Comtech's participation "will not broaden the scope of the proceeding to address [Comtech's] or any other nonregulated entity's liability or contractual obligations." Whether Comtech "should be held accountable" is beyond the scope of the proceeding, and Public Counsel has not addressed whether Comtech should bear any responsibility.
- b. Commission Staff possesses prosecutorial discretion with respect to complaint proceedings. The Commission brought a complaint against CenturyLink and identified the scope of the proceeding as "whether CenturyLink violated any statutes or Commission rules resulting in the December 2018 network outage," per paragraph 15 of the Commission's Order 03 granting the petition to intervene (August 9, 2021). Public Counsel has no communications between itself and Commission Staff related to the decision to include or not include Comtech as a defendant.
  - c. Public Counsel is a statutory party to Commission proceedings, meaning we "represent and appear for the people of the state of Washington" (RCW 80.01.100). We do not bear the burden of proof. In this case, we are responding to the complaint. Public Counsel has sought extensive discovery from all parties, including CenturyLink and Comtech, to understand the events leading up to and through the 9-1-1 outage. We have presented evidence, based on our analysis of the circumstances in this case, via Brian Rosen's testimony, my testimony, and that of our customer witnesses.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 3**

Request No: 3  
 Directed to: Public Counsel  
 Date Received: January 12, 2022  
 Date Produced: January 27, 2022; March 1, 2022 (1<sup>st</sup> Supplemental)  
 Prepared by: Stephanie Chase  
 Witnesses: Stephanie Chase, Brian Rosen

**DATA REQUEST NO. 3.**

At page 13 of her Direct Testimony (Exhibit SKC-1T), Ms. Chase states “Moreover, CenturyLink deployed only a single person to attend WMD’s conference call line addressing the outage and not mobilize its 9-1-1 Network and Center Operations team. Because CenturyLink did not use the ‘all hands on deck’ approach that is industry practice, resolution was likely delayed.”

- a. Please describe what is meant by an “all hands on deck” approach, and identify all literature or standards of which you are aware that recommend and define this approach.
- b. Identify and produce all documents supporting Ms. Chase’s assertion that CenturyLink did not use an “all hands on deck” approach.
- c. Does Public Counsel contend that the “single person” referenced in the quote above was the only CenturyLink employee working to investigate and resolve the network event? Fully explain your answer and produce all documents supporting it.
- d. Identify and produce all documents supporting Ms. Chase’s assertion that resolution was likely delayed by CenturyLink’s staffing actions.

**RESPONSE:**

The response in each subpart below, is in answer to the corresponding subparts in CenturyLink’s Data Request 3, above.

- a. Brian Rosen’s testimony describes an “all hands on deck” approach at page 17. According to Rosen, it is “industry practice” that companies and 9-1-1 officials bring “their best people to hunt the problem wherever it may be without regard to blame.” Rosen, Exh. BR-1CTr at 17.
- b. Rosen’s testimony, supported by his review of data request responses and the UTC Staff Investigation report, states that CenturyLink did not “indicate it mobilized its 9-1-1 Network and Center Operations team.” Rosen, Exh. BR-1CTr at 18.

To: Adam Sherr, CenturyLink Communications, LLC  
Re: Docket UT-181051  
Public Counsel Response to CenturyLink DR 3  
March 1, 2022 (1<sup>st</sup> Supplemental)

- c. No. Public Counsel does not contend that there was only one CenturyLink employee working to address the network event. Public Counsel contends that CenturyLink did not “indicate it mobilized its 9-1-1 Network and Center Operations team.” Rosen, Exh-BR-1CTr at 18.
- d. Stephanie Chase’s assertion that the resolution of the outage was likely delayed is supported by Rosen’s assessment that if CenturyLink had “applied additional resources, it is possible that they could have restore 9-1-1 services sooner than 49 hours and 32 minutes.” Rosen, Exh. BR-1CTr at 18.

### **1<sup>ST</sup> SUPPLEMENTAL RESPONSE (3/1/2022):**

Public Counsel’s expert Brian Rosen addressed the “all hands on deck” concept in his testimony. Mr. Rosen’s knowledge and expertise of 9-1-1 systems and system deployment has been developed over 15 years of directly working on and consulting on 9-1-1 and other public safety efforts as well as working extensively with the National Emergency Number Association and the Internet Engineering Task Force.

In Mr. Rosen’s experience, whenever there is a serious outage of any system deemed critical, a bridge is opened by the support staff and management is notified. Normal practice is for all relevant organizations, including engineering, operations, and customer support, to have representatives on the bridge. As more information is obtained on the problem, other experts are brought on, sometimes including vendors. There is an incident owner who manages this incident. The customer reporting the incident has a representative on the bridge in most cases. When incidents last more than an hour or so, unless there is a clear understanding of what the problem is, and how it will be mitigated, some effort is usually made to determine if it is possible to work around the problem rather than solve it, avoid using the failing parts. Solving the problem is always the primary goal, but in high availability systems, work-arounds are very important to maintain service level agreements.

In this situation, an “all hands on deck” approach should have included CenturyLink’s dedicated 9-1-1 support center. Though the issue was in a system 9-1-1 used, but did not manage, CenturyLink’s 9-1-1 support team should have been activated, because the 9-1-1 system was significantly impaired. The 9-1-1 support team should have been asked to see if it was possible to work around the problem. They had the expertise and the tools to attempt to do that. The vendors (Intrado and Comtech) could have been directly engaged to see if it was possible to work around the failure. TNS could have also been engaged to see what might be possible.



**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 4**

Request No: 4  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Stephanie Chase; Brian Rosen  
Witnesses: Stephanie Chase; Brian Rosen

**DATA REQUEST NO. 4.**

Were Ms. Chase or Mr. Rosen involved, directly or indirectly, with the transition of 9-1-1 services from CenturyLink to Comtech? If your answer is anything other than no, please fully describe such involvement.

**RESPONSE:**  
No.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 5**

Request No: 5  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 5.**

Does Public Counsel contend that, during the December 2018 outage, CenturyLink failed to properly identify which calls should be routed to Comtech PSAPs and which calls should be routed to CenturyLink PSAPs? If your answer is anything other than no, please fully describe your contention and identify all information and produce all documents supporting your response.

**RESPONSE:**

No.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 6**

Request No: 6  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 6.**

Does Public Counsel contend that, during the December 2018 outage, there were any errors or failures within the Intrado gateway? If your answer is anything other than no, please fully describe your contention and identify all information and produce all documents supporting your response.

**RESPONSE:**

No.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 7**

Request No: 7  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 7.**

Does Public Counsel contend that, during the December 2018 outage, there were any errors or failures within the Intrado/TNS SS7 signaling transfer point (“STP”)? If your answer is anything other than no, please fully describe your contention and identify all information and produce all documents supporting your response.

**RESPONSE:**

No, we have no data to support such a contention.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 8**

Request No: 8  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022; March 1, 2022 (1<sup>st</sup> Supplemental)  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 8.**

Does Public Counsel contend that, during the December 2018 outage, there were any errors or failures other than those affecting the links connecting the Comtech STP and the Comtech gateway? If your answer is anything other than no, please fully describe your contention and identify all information and produce all documents supporting your response.

**RESPONSE:**

We are unable to determine if all of the problems reported by Washington PSAPs are attributable to the failure of the links connecting the TNS STP and the Comtech gateway.

**1<sup>ST</sup> SUPPLEMENTAL RESPONSE (3/1/2022):**

No, Public Counsel does not contend in its testimony that there were any errors or failures other than those affecting the links connecting the Comtech STP and Comtech gateway. CenturyLink did not provide log information in response to Public Counsel’s data requests that would allow our expert, Brian Rosen, to ascertain whether or not there were any errors or failures other than those which affected the links between the TNS STP and Comtech gateway. Thus, we could not determine if there were other errors or failures impacting the Washington PSAPs with the information we had.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 9**

Request No: 9  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 9.**

Does Public Counsel contend that, during the December 2018 outage, there were any errors or failures directly affecting or caused by the CAMA trunks described at page 24 of Mr. Rosen's Direct Testimony? If your answer is anything other than no, please fully describe your contention and identify all information and produce all documents supporting your response.

**RESPONSE:**

No.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 10**

Request No: 10  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022; February 28, 2022 (1<sup>st</sup> Supplemental)  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 10.**

Throughout his Direct Testimony, Mr. Rosen is critical of SS7 technology, referring to it repeatedly as “older technology” and having “well known failures.” Identify all industry best practices and other guidelines that support the notion that SS7 is outdated, high risk or otherwise inappropriate in conjunction with the operation of 911 networks.

**RESPONSE:**

The well-known failures of SS7 are well documented in John W. Seaholtz’ “*Signaling Network Systems Committee Technical Paper*”<sup>1</sup>. The current most concerning issues are security related, as described in the following examples:

Financial Inclusion Global Initiative’s “*Security, Infrastructure and Trust Working Group, Technical report on SS7 vulnerabilities and mitigation measures for digital financial services transactions*”<sup>2</sup>

and

Positive Technologies’ “*SS7 Vulnerabilities and Attack Exposure Report, 2018*”.<sup>3</sup>

Brian Rosen’s criticism of SS7 technology is also based on his professional opinion.

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<sup>1</sup> John W. Seaholtz, *Signaling Network Systems Committee Technical Paper*, NETWORK RELIABILITY: A REP. TO THE NATION, Jan. 1992–Jan. 1994, <https://transition.fcc.gov/nric/nric-1/bbody.pdf>.

<sup>2</sup>Fin. Inclusion Glob. Initiative, SECURITY, INFRASTRUCTURE AND TRUST WORKING GROUP, TECHNICAL REPORT ON SS7 VULNERABILITIES AND MITIGATION MEASURES FOR DIGITAL FINANCIAL SERVICES TRANSACTIONS (2020), [https://figi.itu.int/wp-content/uploads/2021/04/Technical-report-on-the-SS7-vulnerabilities-and-their-impact-on-DFS-transactions\\_f-1-1.pdf](https://figi.itu.int/wp-content/uploads/2021/04/Technical-report-on-the-SS7-vulnerabilities-and-their-impact-on-DFS-transactions_f-1-1.pdf).

<sup>3</sup>Positive Tech., SS7 VULNERABILITIES AND ATTACK EXPOSURE REPORT (2018), [https://www.gsma.com/membership/wp-content/uploads/2018/07/SS7\\_Vulnerability\\_2017\\_A4\\_ENG\\_.0003.03.pdf](https://www.gsma.com/membership/wp-content/uploads/2018/07/SS7_Vulnerability_2017_A4_ENG_.0003.03.pdf).

To: Adam Sherr, CenturyLink Communications, LLC  
Re: Docket UT-181051  
Public Counsel Response to CenturyLink DR 10  
March 1, 2022 (1<sup>st</sup> Supplemental)

Rosen's knowledge and expertise of 9-1-1 systems has been developed over 15 years of directly working on and consulting on 9-1-1 and other public safety efforts as well as his extensive work with the National Emergency Number Association and the Internet Engineering Task Force. It is Rosen's professional opinion that SS7 is obsolete for 9-1-1 systems, and he would never recommend the SS7 configuration CenturyLink used during the transition to his own consulting clients. In Rosen's experience, no new SS7 networks are being deployed other than where required to connect to existing systems. Most of the primary vendors of the technology, like the STP, have end-of-lifed their products and the equipment replacing them only supports SS7 over IP ("SIGTRAN"), which is used to get backwards compatibility, with some part of the increase in availability that offers. In Rosen's opinion, no state 9-1-1 authority would tolerate SS7 in any new 9-1-1 networks except to connect to existing originating service providers and selective routers.

**1<sup>ST</sup> SUPPLEMENTAL RESPONSE (3/1/2022):**

Please find the PDFs for the cited articles attached as Attachments A, B, and C.



**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

***Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC***

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK**

**DATA REQUEST NO. 11**

Request No: 11  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022; March 1, 2022 (1<sup>st</sup> Supplemental)  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 11.**

On page 17 of his Direct Testimony, Mr. Rosen states that CenturyLink “should have also notified every originating service provider that their calls might not go through during the incident.” Provide all literature, standards, statutes, regulations or decisional law of which you are aware that requires or even encourages such disclosure.

**RESPONSE:**

Brian Rosen’s statement that CenturyLink “should have also notified every originating service provider” is based on his expert opinion on best practices during a 9-1-1 outage.

**1<sup>ST</sup> SUPPLEMENETAL (3/1/2022):**

Brian Rosen’s statement is based on his expert opinion on best practices during a 9-1-1 outage. Rosen’s knowledge and expertise of 9-1-1 systems and system deployment has been developed over 15 years of directly working on and consulting on 9-1-1 and other public safety efforts as well as his extensive work with the National Emergency Number Association and the Internet Engineering Task Force.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

***Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC***

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 12**

Request No: 12  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022; March 1, 2022 (1<sup>st</sup> Supplemental)  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 12.**

On page 13 of his Direct Testimony, Mr. Rosen states that CenturyLink “has explicit requirements for logging in specific data formats that would clearly show us what happened to any call attempt that reached the edge of the ESInet during the outage. Provide all literature or standards of which you are aware that identify this “requirement.”

**RESPONSE:**

The specifications for and definitions of a Next Generation 9-1-1 system include the logging standard. The standard was detailed by the National Emergency Number Association (NENA) in 2011 in the following document: NENA-08-003, Detailed Functional and Interface Specification for the NENA i3 Solution – Stage 3, Section 5.12 Logging Service.<sup>4</sup>

The standard was updated in 2016 to NENA-STA-010.2-2016.<sup>5</sup>

**1<sup>st</sup> SUPPLEMENTAL RESPONSE (3/1/2022):**

Please find the PDFs for the cited articles attached as Attachments A and B.

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<sup>4</sup> NENA, *Understanding NENA’s i3 Architectural Standard for NG9-1-1* (2011), [https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards-archived/08-003\\_detailed\\_functional\\_a.pdf](https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards-archived/08-003_detailed_functional_a.pdf).

<sup>5</sup> NENA, *NENA Detailed Functional and Interface Standards for the NENA i3 Solution* (2016), [https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards-archived/nena-sta-010.2\\_i3\\_architectu.pdf](https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards-archived/nena-sta-010.2_i3_architectu.pdf).

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 13**

Request No: 13  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 13.**

On page 13 of his Direct Testimony, Mr. Rosen states that “generally advise[s] that supplier diversity be used to guard against the kind of failure that occurred here.” Provide all literature, standards, statutes, regulations or decisional law of which you are aware that make a similar suggestion.

**RESPONSE:**

Brian Rosen was careful to qualify his testimony with “generally advises” so as not to imply there were standards, regulations, or decisional law on the subject. In his professional opinion, carrier diversity is vital to avoid system failure when events like this one occur. Rosen is aware of several examples of failures like the one in question that have taken out an entire network for one carrier, and this is not the only event where all instances of a switch or other component failed due to configuration or software errors. As such, Rosen always strongly advises his clients to insist on carrier diversity in any 9-1-1 deployment.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 14**

Request No: 14  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 14.**

Did Comtech err by not creating a signaling network to support its 911 network using supplier diversity? If your answer is anything other than yes, please fully describe the basis for your answer.

**RESPONSE:**

Yes. They were aware of the issue and were engaged in bringing on another supplier at the time of the incident.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 15**

Request No: 15  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 15.**

Citing WMD’s response to Public Counsel data requests, at page 28 of his Direct Testimony, Mr. Rosen states “It appears to me that the call failures remain CenturyLink’s responsibility.”

- a. Does Mr. Rosen claim to be qualified to provide a legal opinion as to which company was responsible, either as a matter of contract or as a matter of regulatory mandate, for the failed calls? Please fully explain your response.
- b. Is it Public Counsel’s contention that CenturyLink would have been responsible for 911 call failures during the December 2018 outage had Comtech’s SS7 links functioned properly, but instead Comtech experienced a malfunction within its gateway? Please fully explain your response.
- c. Is it Public Counsel’s contention that CenturyLink would have been responsible for 911 call failures during the December 2018 had Comtech obtained SS7 links from a third party (e.g., AT&T), and that third party’s links malfunctioned? Please fully explain your response.

**RESPONSE:**

- a. No. Rosen is not a lawyer and cannot provide a legal opinion. While Rosen does not provide a legal opinion here, he bases his professional and technical opinion on years of working with 9-1-1 systems and other public safety efforts as well as advising clients regarding the deployment of Next Generation 9-1-1 systems, selection of vendors, and technical evaluations of failures.
- b. Yes. The contract, with its amendments, only releases CenturyLink from the responsibilities of routing and being the Covered 9-1-1 Service provider as well as providing the PSAP side of the ALI interface. A gateway malfunction is not a routing failure. The definition of “Covered 911 Service Provider” is (in part) “Provides 911, E911, or NG911 capabilities such as call routing, automatic location information (ALI), automatic number identification (ANI), or the

To: Adam Sherr, CenturyLink Communications, LLC  
Re: Docket UT-181051  
Public Counsel Response to CenturyLink DR 15  
January 27, 2022

functional equivalent of those capabilities, directly to a public safety answering point (PSAP), statewide default answering point, or appropriate local emergency authority as defined ...”<sup>6</sup> The definition does not include network or transport.

The contract required CenturyLink to provide “network, transport, PSAP interfaces, 911 trunk support, selective routing and ALI interfaces. The system must be scalable, affordable, reliable, redundant, and capable of resolving the limitations of the current legacy system.”<sup>7</sup>

The amendments relieved CenturyLink from selective routing and ALI interfaces, but by contract, it appears that CenturyLink is still responsible for network and transport. While Comtech has some responsibility for network and transport as well, there is no relief from CenturyLink’s responsibility.

- c. Yes. As above, CenturyLink is still responsible for network and transport per the contract.

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<sup>6</sup> 47 CFR § 9.19(4)(i)(A) (formerly 47 CFR § 12.4(a)(i)).

<sup>7</sup> Rosen, Exh. BR-4C at 15 (WMD Response to Public Counsel Data Request No. 3, Attachment Washington State Military Department Contract E09-196 at 14).

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 16**

Request No: 16  
Directed to: Public Counsel  
Date Received: January 12, 2022  
Date Produced: January 27, 2022  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 16.**

At page 31 of his Direct Testimony, Mr. Rosen states “Had the system used IP for its interconnect as it did with ALI, few calls would have been lost during the outage.”

- a. Does Public Counsel purport to know that IP-based interconnection would not have utilized circuits sitting on the Infinera network affected by the packet storm beginning on December 27, 2018? Please fully explain your response, and produce all documents supporting your response.
- b. Produce all data, documents and other information supporting Mr. Rosen’s conclusion that “[h]ad the system used IP for its interconnect as it did with ALI, few calls would have been lost during the outage.”

**RESPONSE:**

- a. It is Rosen’s understanding that the ALI connections between Intrado/CenturyLink and Comtech were not significantly impacted by the incident. It is Rosen’s professional opinion that if IP were used, while some connections may have used the Infinera network, there would have been other paths available, and in fact it is likely that most of the paths that were used to maintain ALI traffic would have been available for call traffic.
- b. See Public Counsel’s response to CenturyLink Data Request 16, subpart ‘a’. A defining characteristic of IP networks is that if any path is available, it will be used for traffic, and routing (that is, finding a path) is packet by packet. The ALI IP traffic had paths between Intrado/CenturyLink and Comtech. While it is possible to build IP networks that have very limited paths, it appears that Intrado/CenturyLink and Comtech made choices that resulted in many different paths, most of which did not traverse the Infinera network.

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UT-181051**

*Washington Utilities & Transportation Commission v. CenturyLink Communications, LLC*

**RESPONSE OF PUBLIC COUNSEL TO CENTURYLINK  
DATA REQUEST NO. 18**

Request No: 18  
Directed to: Public Counsel  
Date Received: February 18, 2022  
Date Produced: March 7, 2022  
Prepared by: Brian Rosen  
Witnesses: Brian Rosen

**DATA REQUEST NO. 18.**

In response to CTL-15(b)-(c), you interpreted the contract as holding CenturyLink responsible for providing certain 911 functionality in the state of Washington. Identify each and every provision of the contract and/or contract amendments that you believe support your response to CTL-15(b)-(c).

**RESPONSE:**

As cited in Public Counsel's response to CenturyLink's Data Request 15(b) and (c), Public Counsel relied on the Washington State Military Department Contract E09-196 at page 14, requiring CenturyLink to provide "network, transport, PSAP interfaces, 911 trunk support, selective routing and ALI interfaces. The system must be scalable, affordable, reliable, redundant, and capable of resolving the limitations of the current legacy system." Amendment M to the contract relieved CenturyLink from selective routing and ALI interfaces.