BEFORE THE WASHINGTON

UTILITIES & TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

CENTURYLINK COMMUNICATIONS, LLC,

Respondent.

DOCKET UT-181051

BRIAN ROSEN

ON BEHALF OF THE
WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL
PUBLIC COUNSEL UNIT

Exhibit BR-2

Resume of Brian Rosen

December 15, 2021

Brian Rosen
470 Conrad Dr
Mars, PA 16046
br@brianrosen.net
(724) 382-1051

Background Summary

Consultant in deployment of Next Generation 9-1-1. Primary standards author, system architecture and leadership of Next Generation 9-1-1 project. Forty-year history of bringing groundbreaking technology advances to market. Seasoned entrepreneur and systems architect in computer systems, networking, medical imaging and other disciplines. Aggressive new technology thought leader. Able to rapidly master complex new problems and lead teams to achieve aggressive goals. Subject Matter expert in public safety systems, concentrating on the 9-1-1 system. Experienced standards participant with strong leadership credentials.

Work History

2018 – Present Brian Rosen Technologies LLC, Principal. Consultant to states and local governments on deployment of Next Generation 9-1-1. Assist in creating Request For Proposals, evaluation of responses, selection of vendors and monitoring progress. Technical evaluations of failures. Currently co-chair of the sipcore and rum working groups in IETF, and the i3 architecture working group in NENA.

2005 – 2018. Neustar Inc, Sterling VA. Various Positions, most recently Fellow. Subject Matter Expert for 9-1-1 and other public safety efforts as well as Neustar's participation in Deaf/Hard of Hearing services. Systems Architect for a number of ENUM based services including the iTRS Directory, a highly reliable/redundant call routing database provided under contract to the FCC for the deaf community.   Direct contact with FCC staff for deaf communications services. Ran a team building external tests to assure Neustar services remain available to customers. Assisted other teams in architecture, technology direction and standards compliance. Active participant in standards activities in IETF and the National Emergency Number Association.
2004 – 2005 Founder and President, Emergicom, Mars, PA
This was a new startup working on upgrading public safety communications systems including the 9-1-1 system and responder communications networks which was never funded.

1999 – 2004. Marconi (formerly FORE Systems), Warrendale, PA. Various positions, most recently Vice President, Technology Introduction. Reported to Tim Dwight, Chief Technology Officer, Broadband Routing and Switching Division. Marconi was an international leader in telecommunications networking products, with particular strengths in optical, access and broadband routing/switching.   Duties include Voice/Video Over IP product direction, architecture, new product innovation and standards activities. I also worked on emergency call (9-1-1) for VoIP. Was a significant contributor to the VoIP

efforts at the Internet Engineering Task Force (IETF, the Internet standards body) and NENA, the National Emergency Number Association.

I was the leader of a small team that developed an entirely new telepresence product line for Marconi. Called "ViPr" (for "Virtual Presence"), this product is generally acknowledged as a breakthrough communications tool for geographically dispersed teams. I conceived the product, defined its architecture, recruited the team, and lead the engineering effort through general release to customers.

As an individual contributor, I worked on the area of multimedia communications on data networks as well as security for data networks. I did architecture work on several of Marconi's telecom products, and was frequently called upon to make presentations to customers on our work in these areas, as well as speak in many industry events.

1994-1998, NOMOS Corporation, Sewickly, PA. Various positions, including Director of Technology Assessment and Vice President of Product Implementation. Reported to Mark Carol, President and Founder, or Gil Peterson, COO. NOMOS manufactures complex computer based systems for treatment planning and delivery of radiation therapy. The products I was involved in are presently the standard of care for certain forms of cancers of the brain and other organs, using Intensity Modulation Radiation Therapy, pioneered by NOMOS. I recruited and lead the initial development team that developed a planning tool as well as the electronics and software for the delivery device and served as the architect of it's main product from its inception through initial customer release. I later started a project that became the company's second product line that uses ultrasound to do very accurate soft tissue localization. At NOMOS I created the initial software development process and documentation systems that easily achieved FDA clearance. I managed and staffed most of the company's administrative, manufacturing and technical support teams from 1994-5. During that time I was also responsible for creating the company's quality and safety programs.

1992- 1994, Cognos-centi Corporation, Pittsburgh, PA. President. Founded this consulting company which did the initial research and conceptualization for radiation oncology systems under contract to Medical Equipment Development Corporation. In early 1994, MEDCO acquired Cognos-centi and became NOMOS Corporation.

1989-1992, Mars Microsystems, Wexford, PA. President and Founder. Mars designed Sun compatible workstations for far-east manufacturers. Its major product was the Mariner 4i, an innovative workstation that had both SPARC and x86 processors and was 100% compatible with all Solaris and Windows applications. All functions except marketing and sales reported to me. I directed cross-functional teams with Mars engineers, on-site Taiwanese nationals and engineers in Taiwan, with support functions provided by the corporate headquarters staff. I served as the systems architect for the product.

1985-1989, MegaScan Corporation, President and Founder. MegaScan was a venture capital funded startup that developed ultra-high resolution monitors and display

controllers. MegaScan's initial product was a 4096 x 3300 resolution, CRT based, 300 dpi, black-and-white display system, used for pre-press automation/page layout. Its major success was a 2560x2048, 12 bit grayscale system which was the first display acceptable by radiologists for diagnosis of chest X-Rays. These products, with nearly identical specifications, are still in production for radiology PACS (Picture Archiving and Communications Systems) in use hospitals worldwide.

1978-1995, Perq Systems (originally, Three Rivers Computer Corp), Founder, Vice President, Engineering and Vice President, Advanced Development. Perq delivered the first engineering workstation, predating Sun Microsystems and all competitors. I was the systems architect and engineering manager for the entire product line that was based on my work at Xerox PARC.

1976-1978, Xerox Palo Alto Development Center, Palo Alto, CA, Member of Technical Staff. Design engineer on the "Dolphin" the middle range processor that was part of Xerox's STAR workstation effort. I also designed the memory system for the "Dorado", the high-end workstation.

1970-1976, Carnegie-Mellon University, Computer Science Department Engineering Laboratory, Staff Engineer. Designed research equipment for artificial intelligence. My major project was a calligraphic computer graphics system.

Industry Organizations

2003-present co-chair of National Emergency Number Association (NENA) i3 Architecture working group and active contributor to 5 other work groups. Technical Editor of NENA STA-010.2, the base NG9-1-1 technical standard. Major contributor to APCO/NENA Emergency Incident Data Document work. Also significant contributor to NG GIS, NG PSAP and other NG9-1-1 standards work.
2017-present co-chair of Internet Engineering Task Force (IETF) sipcore working group
2005-2016 co-chair of Internet Engineering Task Force (IETF) p2psip, siprec and paws working groups. Author/Co-Author of ~17 RFCs
2011-2012 editor of Database-to-Database Synchronization Interoperability Specification, Whitespace Database Administrator's Group
2010-2013 Committee member of various CSRIC groups. Co-chair of WG2, SG2
2004-2009, co-editor of NRIC VII Focus Groups 1b and 1d reports
2001-2003, co-chair of Internet Engineering Task Force SIP Working Group.
2000-2002, organizer of Megaco Interop Events, held at the University of New Hampshire
2000-2002, co-chair of Technical Advisory Committee (TAC) of the International Softswitch Consortium
2000-2001, interim chair, Interoperability Working Group, Multiservice Switching Forum
1999-2002, co-author and IETF editor of RFC3015, Megaco Protocol
1998-2000, contributor to VoATM and Security working groups of the ATM Forum

Volunteer Activities

1997-Present, National Armorer, USA Fencing
1993-2005, Board Member, Pine Township Zoning Hearing Board
1992-1995, Assistant Scoutmaster, Troop 344, Wexford

Personal

Married, 4 children 2 grandchildren.
Leisure activities include gardening, woodworking, most water sports and travel.