Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Improving 911 Reliability	)	PS Docket No. 13-75
	)	
Reliability and Continuity of Communications Networks, Including Broadband Technologies	)	PS Docket No. 11-60
	)	

COMMENTS OF THE WASHINGTON STATE E9-1-1 ADVISORY COMMITTEE AND E9-1-1 COORDINATOR'S OFFICE

The Washington State E9-1-1 Advisory Committee and the State E9-1-1 Coordinator's Office submit these comments for consideration in the Workshop on 911 Reliability Certification Process to be held at the Commission's headquarters on June 2, 2014. Given the recent complex 9-1-1 system outage that occurred on April 10, 2014, we thought it was important for Washington State to share our experience for the Workshop.

On April 10, 2014, between approximately midnight – 8:00 AM, the Washington State Emergency Services Internet Protocol Network (ESInet) experienced a complex outage that was caused by a technical error in a call router which prevented the system from properly processing calls. During the outage period, approximately 770 9-1-1 calls were delivered to the Public Safety Answering Points (PSAPs) and approximately 4,500 9-1-1 calls failed. CenturyLink, with Intrado as their Sub-Contractor, is the provider of the ESInet services in Washington State. We have been informed that this outage impacted five other states in addition to Washington.

There were several problems regarding the handling of this ESInet outage that should be considered by the Commission in the establishment of an annual certification process under the Commission's 9-1-1 Reliability Rules:

1. None of the PSAPs in Washington State were notified by CenturyLink or Intrado that there was a problem impacting the delivery of 9-1-1 calls. Individual PSAPs were informed by the public reporting that their 9-1-1 call did not go through or by noticing the reduction in 9-1-1 call volumes. Those PSAPs notified their neighboring PSAPs and eventually, word spread amongst most of the 63 PSAPs in the state. The State E9-1-1 Coordinator's Office and the County 9-1-1 Coordinators then initiated contact with the local CenturyLink 9-1-1 Service Manager for communication regarding the outage and service restoral.
2. The CenturyLink 9-1-1 Repair Center was quickly overloaded. This meant that the majority of the calls from PSAPs to the Repair Center to report the problem went unanswered or were put on hold for extended periods, some as long as two hours. In addition, there was no screening of calls prior to putting PSAPs on hold, so this delayed the recognition by the Repair Center that a statewide outage was occurring.
3. Neither CenturyLink nor Intrado provided any instructions to PSAPs on what they could do to mitigate the outage. The PSAPs were left on their own to try to figure out how to provide some level of service to the public. There were many strange anomalies during this outage, and something that worked successfully for one PSAP, such as going to their back-up, did not work for other PSAPs. In addition, processes that were put in place with CenturyLink and Intrado prior to the outage (Condition 4

Routing) for the purpose of continuing to provide service to the public during an outage were not available to the PSAPs.

4. The majority of 9-1-1 trunks from service providers are connected to one of the four Legacy Network Gateways (LNGs) in the system but these are not balanced between the LNGs and the LNGs utilize a "primary/alternate" connectivity methodology for redundancy, so consequentially most traffic effectively only goes to two of the four LNGs. In addition, each LNG sends calls to a "preferred" Call Router, and doesn't send calls to a Secondary Router unless the "preferred" router is unavailable, so there is no balancing of calls between the Routers.
5. While the Call Router that was no longer able to process 9-1-1 calls knew it was having a problem and informed the Network Operations Center (NOC), the alarm generated was of such a low level no automated corrective actions to failover to the remaining functional Call Router occurred.
6. The failure did generate a general alarm, but since the alarm was not distinguishable as a Call Router failure at the Network Operations Center (NOC), the significance of the problem was not recognized. In addition, even though the device that failed sent 4,500 alarms to the NOC, they were grouped together into a summary, so again, the significance of the problem was not recognized by the NOC.
7. Once Intrado was informed of the issue, it required bringing in additional technicians and engineers before the cause and scope of the problem could be identified. This caused a delay of several hours in the rerouting of 9-1-1 calls.
8. Washington State is concerned that Intrado's 9-1-1 service utilizes one ESInet that includes only two Call Routers to serve all states nationwide. At a minimum, each

state should have its own statewide ESInet and be served by a pair of Call Routers so the nationwide Next Generation 9-1-1 network has some redundancy.

In addition to this more recent 9-1-1 outage, Washington State has experienced numerous occasions in which telephone service outages have occurred, which means that the public cannot call 9-1-1. On November 5, 2013, the San Juan Islands (San Juan County) experienced a 10-day telephone outage due to a CenturyLink underwater fiber-optic cable, which provides all voice service (including ESInet, FAA, and other critical infrastructure voice/data services), being severed between the islands and the mainland. A windstorm in 2006 and an ice/snowstorm in 2008 both caused area-wide telephone outages lasting several days in the heavily populated Puget Sound region.

Washington State strongly supports the Commission's rules on improving 9-1-1 Reliability and the Reliability and Continuity of Communications Networks, and the establishment of an annual certification process for 9-1-1 communications providers. If such a process had been in place prior to our statewide 9-1-1 outage, many of the problems identified above might not have occurred or might not have been as significant, so that 9-1-1 service to the public could have been restored more quickly. In addition, requiring all communications service providers to meet Reliability requirements would reduce outages of telephone networks that enable the public to make a 9-1-1 call.

We would like to thank the Commission for your continued support of 9-1-1 service, as demonstrated by this Workshop to establish an annual certification process. Your work on 9-1-1 Reliability will result in an improved level of service in Washington State and throughout the nation. We respectfully encourage the Commission to consider our comments in the Workshop.

Respectfully submitted,

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