



King County

E-911 Program Office
Office of Emergency Management
Department of Executive Services
7300 Perimeter Road South, Room 128
Seattle, WA 98108-3825
206-296-3910

June 15, 2014

VIA ELECTRONIC DELIVERY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

RE: Inquiry into Circumstances of Major 911 Outage Centered in Washington State on April 9-10, 2014, *PS Docket No. 14-72*

Dear Ms. Dortch:

The King County E911 Program submits these comments to provide information on our experience related to the Washington State 911 outage on April 9-10, 2014.

King County is the largest county in Washington State with a population of over 1.9 million people, which is 29% of the State's population, and also makes it the 14th most populous county in the nation. E911 service was implemented in 1985, and is provided to the public through 12 Public Safety Answering Points (PSAPs). The implementation of wireless Phase II service was completed in 2003, and 75% of 911 calls now come from wireless phones.

On April 10, 2014, between approximately midnight – 8:00 AM, the Washington State Emergency Services Internet Protocol Network (ESInet) experienced a 911 outage that was caused by a technical error in a call router which prevented the system from processing calls. During the outage period, 224 911 calls were delivered to the PSAPs in King County and 666 911 calls failed. CenturyLink, with Intrado as their sub-contractor, is the provider of the ESInet services in throughout Washington State.

There were several circumstances related to this 911 outage that the Commission should be aware of:

1. None of the PSAPs in King County were notified by CenturyLink or Intrado that there was a problem impacting the delivery of 911 calls. Individual PSAPs in King County

were informed of the outage by the public reporting that their 911 call did not go through or by noticing the reduction in 911 call volumes. The PSAPs notified the County 911 Coordinator, who then initiated contact with the local CenturyLink 911 Service Manager to coordinate the outage and service restoral.

2. The CenturyLink 911 Repair Center was quickly overloaded. 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. 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. In King County, the ten-digit emergency numbers for the PSAPs were provided to the public, and people were instructed to call 911 and if their call did not go through, to call the ten-digit number for their PSAP.
4. The majority of 911 trunks from service providers are connected to one of the four Legacy Network Gateways (LNGs) in the system, but the trunks are not balanced between the LNGs and the LNGs are set up as primary and alternate, so in reality most traffic only goes to two of the four LNGs. In addition, each LNG sends calls to a primary Call Router, and doesn't send calls to a secondary Router unless the primary router is unavailable, so there is no balancing of calls between the Routers. One of the impacts of this is that the King County PSAPs received some of the 911 calls from two of the major wireless carriers, but did not receive any 911 calls from the other two carriers during the outage.
5. The alarm generated by the Call Router at the Network Operations Center (NOC) was of such a low level that no automated failover to the other Call Router that was still operational occurred. Since the alarm was not discernible as a Call Router failure, the significance of the problem was not recognized. In addition, the device that failed sent 4,500 alarms to the NOC, but they were grouped together into a summary, so again, the significance of the problem was not recognized.
6. Once Intrado realized that there was a problem, they had to call in technicians and engineers from home to identify the cause and scope of the problem, which delayed the rerouting of 911 calls by several hours.
7. King County is concerned that Intrado uses only one ESInet with only two Call Routers to provide 911 service to all states nationwide. This leaves the nationwide Next Generation 911 network with no redundancy. King County agrees with Washington State that each state should have its own ESInet with two Call Routers, and is considering whether there should be regional ESInets within the state.
8. King County has established a standard for having a back-up for each PSAP at another E911-equipped PSAP, and has built additional capacity at the larger PSAPs so they can provide back-up service for each other. This ensures that 911 calls have full E911 service even in a back-up scenario. In this 911 outage, since all PSAPs were without E911 service, it was not possible to use any of our back-ups. King County is reviewing whether we need to re-establish non-E911 back-ups in which 911 calls are forwarded to

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ten-digit phone lines, which would have allowed 911 calls to be answered in this outage.

9. King County is reviewing the information provided to the public during the 911 outage. Ten-digit emergency phone numbers for all 12 PSAPs were provided, but this was too confusing for the public. The media responded by simply giving out the phone number for the King County Sheriff's Office, and not giving out the phone numbers for the other PSAPs. King County is working with the PSAPs to develop a simplified plan that is easy for the media to broadcast and easy for the public to determine which number to call in an emergency.

There is much work to be done by King County and throughout Washington State, and by the E911 service providers, to address the issues raised by this 911 outage. Our goal is to prevent another 911 outage from occurring, but in the event there is another outage, to be better prepared to mitigate the situation and continue to provide emergency communications service to the public.

Thank you for the opportunity to provide input on this important issue, and for your continued support of E911 service. If you have questions or if you would like additional information, please feel free to contact me at 206-296-3911 or marlys.davis@kingcounty.gov.

Sincerely,



Marlys R. Davis
E911 Program Manager