



PUBLIC NOTICE

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FCC'S PUBLIC SAFETY AND HOMELAND SECURITY BUREAU REMINDS TELECOMMUNICATIONS SERVICE PROVIDERS OF IMPORTANCE OF IMPLEMENTING ESTABLISHED 9-1-1 AND ENHANCED 9-1-1 SERVICES BEST PRACTICES

The Federal Communications Commission's (FCC's) Public Safety and Homeland Security Bureau (Bureau) encourages telecommunications service providers to adhere to 9-1-1/Enhanced 9-1-1 (9-1-1/E9-1-1) service best practices developed by the former Network Reliability and Interoperability Council (NRIC)¹ and by its replacement the Communications Security, Reliability and Interoperability Council.² Specifically, the Bureau reminds telecommunications service providers of the importance of providing diversity and redundancy in the provisioning of 9-1-1/E9-1-1 services. The need to maintain diversity and relevant best practices were addressed also in a March 2010 Bureau public notice,³ and the Bureau reiterates the importance of these practices to reliable and continuous 9-1-1/E9-1-1 service.

Based on submissions in the Commission's Network Outage Reporting System (NORS)⁴ and publicly available data, the Bureau has observed a number of major 9-1-1/E9-1-1 service outages caused by inadequate diversity and/or the failure to maintain diversity. Most of these major outages could have been prevented if existing NRIC best practices had been followed. In one recent case, the location information for wireless 9-1-1 calls from a 9-1-1 service provider entered a wireline carrier's network at two diverse entry points. The wireline carrier had two diverse Automatic Location Identification (ALI)⁵ databases to send the location information on wireless 9-1-1. However, all physical paths from the two diverse entry points had a single point of failure, resulting in an outage that impacted service to a significant number of PSAPs covering a large geographic region.

¹ The Network Reliability and Interoperability Council (NRIC) was a Federal Advisory Committee to advise the Commission regarding network reliability and interoperability. Many telecommunications service providers participated in NRIC and the process of developing and recommending best practices.

² Communications Security, Reliability and Interoperability Council (CSRIC), a Federal Advisory Committee on which many 9-1-1/E9-1-1 service providers are represented, is currently tasked with recommending best practices and other actions the Commission can take to enhance the security, reliability and operability of communications systems, including 9-1-1/E9-1-1. CSRIC II Working Group 4A recently recommended additional best practices for 9-1-1 and E9-1-1, available at <http://transition.fcc.gov/pshs/advisory/csrlic/>.

³ *FCC'S Public Safety And Homeland Security Bureau Reminds Telecommunications Service Providers Of Importance Of Implementing Advisory Committee 9-1-1 And Enhanced 9-1-1 Services Best Practices*, Public Notice, DA10-494, released March 24, 2010.

⁴ The Network Outage Reporting System (NORS) is the Internet-based filing system through which communications providers submit reports of service disruptions to the FCC. See 47 C.F.R. Part 4.

⁵ The Automatic Line Identification feature automatically provides the location of the E9-1-1 caller to the PSAP.

NRIC best practice 7-7-0566 addresses 9-1-1/E9-1-1 communications services and specifically identifies the need for diversity in equipment and lines used to provide 9-1-1/E9-1-1 communications services. The Bureau reminds service providers of this best practice and two others that could help prevent the type of major 9-1-1/E9-1-1 outages we have recently observed.

8-7-0566: Network Operators and Service Providers should consider placing and *maintaining* 9-1-1 circuits over diverse interoffice transport facilities (e.g., geographically diverse facility routes, automatically invoked standby routing, diverse digital cross-connect system services, self-healing fiber ring topologies, or any combination thereof).⁶ (Emphasis added.)

8-8-0575: Network Operators and Service Providers should deploy Diverse Automatic Location Identification systems used in Public Safety (e.g., Automatic Location Identification and Mobile Positioning Center systems) in a redundant, geographically diverse fashion (i.e., two identical ALI/MPC data base systems with mirrored data located in geographically diverse locations).⁷

8-7-0532: Diversity Audit - Network Operators should periodically audit the physical and logical diversity called for by network design and take appropriate measures as needed.⁸

The need to maintain diversity in 9-1-1/E9-1-1 service connections was also recognized by the Alliance for Telecommunications Industry Solutions (ATIS) in its National Diversity Assurance Initiative,⁹ which found that maintaining physical diversity requires periodic audits. In arriving at this conclusion, ATIS established ten diverse pairs of circuits and found that only four were still physically diverse one year later.

All NRIC best practices are available on the Commission's website in a searchable database at <https://www.fcc.gov/nors/outage/bestpractice/BestPractice.cfm>.

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⁶ Available at <https://www.fcc.gov/nors/outage/bestpractice/ProcessBestPractice.cfm?RequestTimeout=500> (last visited May 31, 2012).

⁷ *Id.*

⁸ *Id.*

⁹ Alliance for Telecommunications Solutions (ATIS), National Diversity Assurance Initiative Final Report, February 2006, available at http://transition.fcc.gov/bureaus/pshs/docs/clearinghouse/ATIS_NDAI_Final_Report_2006.pdf (last visited May 31, 2012).