
SYSTEM INTEGRATION

System integration is very important for a 911 system as large and complex as the one in the seven county metropolitan area. CenturyLink (formerly known as Qwest, Northwestern Bell) has been the system integrator for the metro area's 911 system since its installation. The Metropolitan Emergency Services Board staff and the Technical Operations Committee negotiated the following language as a means to define, to great extent, the expectations of a system integrator.

The following system integration responsibilities have been agreed to by CenturyLink and are included in their unbundled 911 tariff filed with the Public Utilities Commission. Board staff and the Technical Operations Committee monitor CenturyLink's performance of the responsibilities. Because CENTURYLINK plays a key role as system integrator in coordinating among all telephone companies in the metro area, CenturyLink's responsibilities have also been shared with the five other local exchange carriers.

As system integrator for the 911 system in the nine county metro area, CenturyLink has the following responsibilities:

General CenturyLink Responsibilities:

- (1) Furnishing the technical compatibility requirements for system features to be delivered, when the 911 customer requests such requirements.
- (2) Installing 911 service as offered under the rates, charges, terms and conditions of Company's Tariffs, Price Lists or Catalogs.
- (3) Providing equipment, labor, materials and oversight necessary to maintain the Company tariffed 911 system.
- (4) Providing status reports to the 911 customer when malfunctions occur that affect the tariffed 911 system operation.
- (5) Designing, operating and maintaining any 911 system installed under the conditions of the tariff to meet Minnesota Standards.
- (6) Providing design recommendations to the 911 customer for the trunk quantities necessary to meet P.01 grade of service.
- (7) The Company will monitor 911 circuits which originate or terminate in Company facilities. The Company will monitor the circuits to the individual circuit level.
- (8) Cooperating with any entity designated as the system integrator by the 911 customer in their approved county 911 plan.
- (9) Designing, implementing and maintaining a disaster recovery process for 911 network and database systems.
- (10) The Company will be the system integrator for a 911 system when the Company is designated to be the system integrator by the 911 customer in their approved county 911 plan and the Company provides any E911 features for an E911 system or the majority of Basic 911 lines or trunks for a Basic 911 system. In all other instances the Company may, at their discretion, act as system integrator and may require the 911 customer to pay additional charges calculated on an individual case basis. As system integrator, the Company's responsibilities include:
 - Providing a single point of contact to 911 customer for 911 system questions, issues and problems.
 - Overseeing the integrity of the 911 system.
 - Overseeing the design of the 911 network to ensure that the network meets a P.01 grade of service.
 - Overseeing the design of the 911 network installation to utilize the carrier system and facility route diversity currently available in the network.
 - Overseeing the 911 system to meet the design standards set forth in Minnesota statutes.

- Coordinating trouble reporting and resolution for the 911 system. Repair service will commence within 2 hours of identification of a problem. Repair service as used in this section includes testing and diagnostic service from a remote location, dispatch of Company personnel or in person visit(s) by Company personnel. When testing and diagnostic service detects a problem that requires technician services at the PSAP or Company facility a technician will be dispatched without delay.
- Coordinating system testing as required to resolve identified problems.
- Coordinating repair for equipment malfunctions when such equipment or maintenance is provided by the Company.
- Establishing resolution time frames with the 911 customer.
- Coordinating network and database installation and maintenance activities with all service and data providers.
- Establishing escalation processes with all service and data providers and invoking those processes as required to solve problems.
- Rates and charges for options and features indicating a “per 100 main line” charge are based upon a count which determines the number of Main Lines in service in the E911 service area. This count is obtained at the time service is established and annually (each May) thereafter to update the Company’s billing. Main Line counts will be rounded to the nearest 100 Main Lines for billing purposes.
- Mileage charged the 911 customer for trunks between the Control Office (aka: 911 Tandem) and PSAP or the ALI Data Node and PSAP will be the mileage to the closest Control Office or ALI Data Node regardless where the Company chooses to provide service.

Automatic Location Identification CenturyLink Responsibilities:

- (1) Creating, loading and maintaining an ALI database of telephone number record information for the entire 911 service area.
- (2) Providing Company data records for Company exchanges, initially and as changes to Company service occur.
- (3) Processing of service order updates in the DMS (Data Management System) database and updating the ALI database within one business day of receipt of records from Company or other data provider source databases. Data will be processed Monday through Saturday, excluding holidays.
- (4) Performing daily error correction on other data providers error records until other data provider has assumed the responsibilities.
- (5) Performing daily error correction activities on Company records within 48 hours of error detection.
- (6) Providing update records which do not pass MSAG or DMS edits to the creator of errors within 12 hours of identification of the error. Data will be processed Monday through Saturday, excluding holidays.
- (7) Promptly investigating and resolving update record errors resulting from processing of updates to the 911 database. Known error records (e.g., specific address unknown) temporarily placed into the ALI database during investigation are considered error records.
- (8) Monitoring DMS and ALI database quality for the entire 911 system and each data provider and initiating corrective actions with affected data providers. Activities include, but are not limited to, monitoring the timeliness of updates, and error corrections, error levels and error types.
- (9) Loading and maintaining the MSAG for the entire 911 service area.
- (10) Processing MSAG changes on the DMS within one business day from the time of receipt. Special large volume changes resulting from annexations or re-addressing projects producing more than 75 MSAG ledgers from one 911 customer requested to be completed in one day may result in additional ICB charges.
- (11) Maintaining the MSAG to assure conformance of addressing information to MSAG standards jointly established between the Company and 911 customer.

- (12) Analyzing audit trail and other 911 system information for system problems.
- (13) Providing documentation and training to 911 customers and data providers on the procedures and forms required by the Company for ALI.
- (14) Resolving ANI/ALI inquiries within five business days of receipt. Quantities of over 60 ANI/ALI inquiries received in one day from one 911 customer will be considered other than normal workload. When quantities above normal workload are received, the Company will contact the 911 customer to negotiate a completion timeline.
- (15) Providing ANI/ALI inquiries to the affected data providers within one business day of receipt by Company.
- (16) Distributing the Company's Street Address Guide (SAG) in MSAG format to the 911 customers to facilitate the build of the MSAG.
- (17) Acting as single point of contact for MSAG information between the 911 customer and all data providers.
- (18) Providing a complete written copy of the MSAG on a quarterly basis to the 911 customer and data providers for use in verifying the accuracy of the data. In addition upon request, the Company will provide, without charge, the MSAG on computer disk or tape in a mutually agreed upon format that can be used by the 911 customer or data provider.
- (19) Providing written verification to the 911 customer and affected data providers within one business day of each addition, change, or deletion of information in the MSAG as made by the Company.
- (20) Providing no record found data to the affected data provider within one business day of identification of the no record found.
- (21) Distributing annual copies of the ALI data to data providers. A data provider will receive one copy of the data submitted to the Company.
- (22) Providing data providers access to verify the DMS and ALI data of their subscribers as submitted to the Company.
- (23) Creating and delivering SR initial and update files to the Company Control Office or other SR switch as designated by the 911 customer in a format mutually agreed to by the 911 customer and the Company. The SR data files will include data provided by all data providers.
- (24) Delivery of the initial and update SR data files within 9 hours of posting to the ALI database. Data will be delivered or made available to be retrieved by the Company Control Office or other SR switch Monday through Saturday, excluding holidays.
- (25) Providing a monthly report showing the number of updates received on a daily basis, to the 911 customer and/or Department of Administration identifying the volume of ALI update records the Company received from each local exchange carrier and alternate exchange carrier.

Selective Routing CenturyLink Responsibilities:

- (1) Creating, loading and maintaining DMS and SR databases. The DMS and SR databases will include data as provided by all data providers.
- (2) Coordinating the SR plan for the 911 network, which includes default and alternate routing options for delivering calls to the designated PSAP(s).
- (3) Creating, loading and maintaining a DMS database of telephone number record information for the entire area.
- (4) Updating the SR database within 18 hours of posting to the DMS database. Data will be processed Monday through Friday, excluding holidays.
- (5) Delivering the routing files to the SR database used by the Company Control Office.
- (6) Acting as single point of contact for MSAG information between the 911 customer and all data providers.
- (7) Loading and maintaining the MSAG for the entire 911 service area.
- (8) Maintaining the MSAG to assure conformance of addressing information to MSAG standards jointly established between the Company and 911 customer.

- (9) Resolving ANI/ALI inquiries within five business days of receipt. Quantities of over 60 ANI/ALI inquiries received in one day from one 911 customer will be considered other than normal workload. When quantities above normal workload are received, the Company will contact the 911 customer to negotiate a completion timeline.
- (10) Providing ANI/ALI inquiries to the affected data providers within one business day of receipt by Company.
- (11) Processing MSAG changes on the DMS within one business day from the time of receipt. Special large volume changes resulting from annexations or re-addressing projects producing more than 75 MSAG ledgers from one 911 customer requested to be completed in one day may result in additional ICB charges.
- (12) Promptly investigating and resolving update record errors resulting from processing of updates to the 911 database. Known error records (e.g., specific address unknown) temporarily placed into the ALI database during investigation are considered error records.
- (13) Providing update records which do not pass MSAG or DMS edits to the source of errors within 12 hours of identification of the error. Data will be processed Monday through Saturday, excluding holidays.
- (14) Providing a complete written copy of the MSAG on a quarterly basis to the 911 customer and data providers for use in verifying the accuracy of the data. In addition upon request, the Company will provide, without charge, the MSAG on computer disk or tape in a mutually agreed upon format that can be used by the 911 customer or data provider.
- (15) Providing written verification to the 911 customer and affected data providers within one business day of each addition, change, or deletion of information in the MSAG as made by the Company.
- (16) Distributing the Company's Street Address Guide (SAG) in MSAG format to the 911 customers to facilitate the build of the MSAG.
- (17) Providing documentation and training to 911 customers and data providers on the procedures and forms required by the Company for ALI.
- (18) Monitoring SR database quality and initiating corrective actions.
- (19) Ensuring the accuracy of SR files delivered to the Company Control Office.
- (20) Providing Company data records for Company exchanges, initially and as changes to Company service occur.
- (21) Analyzing 911 system information for problems and trends.
- (22) Processing of service order updates in the DMS database and updating the ALI database within one business day of receipt of records from Company or other data provider source databases. Data will be processed Monday through Saturday, excluding holidays.
- (23) Performing daily error correction activities on Company records.
- (24) Monitoring DMS and SR database quality and initiating corrective actions with affected data providers. Activities include, but are not limited to, monitoring the timeliness of updates, and error corrections, error levels and error types.
- (25) Providing data providers access to verify the DMS data of their subscribers as submitted to the Company.
- (26) Distributing annual copies of the ALI data to data providers. A data provider will receive one copy of the data submitted to the Company.

Non-Selective Routing CenturyLink Responsibilities:

- (1) Coordinating the Non-SR plan for the 911 network, which includes default and alternate routing options for delivering calls to the designated PSAP(s).
- (2) Investigating and resolving identified call routing problems related to the Non-SR database.

911 Transport Diversity CenturyLink Responsibilities:

- (1) Dedicated 911 circuits will be assigned and installed in diverse paths, using 911 interoffice, loop and carrier system diversity when such 911 Transport Diversity can be achieved using

existing facilities. If there is more than one carrier system, the circuits will be assigned in such a way as to divide the circuit quantities as equally as possible across the available carrier systems. The 911 Transport Diversity as described in this paragraph is provided by the Company at no charge to the 911 customer with newly installed or rearranged circuits. In all instances, 911 carrier system diversity is provided by the Company at no charge to the 911 customer as long as the diversity can be achieved with existing facilities.

- (2) With the 911 customer's concurrence, the Company will maintain on an ongoing basis the 911 Transport Diversity achieved at the time of circuit installation, network realignment or purchase of 911 Transport Diversity and will bill the 911 customer at the rates and charges specified in the tariff in effect at that time. When the existing network configuration changes, the Company will maintain or upgrade the 911 Transport Diversity on circuits to utilize the highest level of 911 Transport Diversity available in the network. The Company will notify the 911 customer of planned network changes 120 days prior to the change becoming effective. The Company will perform an annual audit verifying the optimum use of 911 Transport Diversity on circuits and give the 911 customer documentation of the 911 Transport Diversity and confirmation that the 911 Transport Diversity is of optimum level available in the existing network.