E9-1-1 Service

In this document:

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Overview

Enhanced 9-1-1 (E9-1-1) systems connect 9-1-1 callers to Public Safety Answering Points (PSAP's) for access to police, fire and ambulance services. Carriers that provide service within Ziply Fiber territories interconnect with 9-1-1 tandems in order to route 9-1-1 calls from their subscribers to the appropriate PSAP.

Description

In an E9-1-1 environment, a process called selective routing ensures that 9-1-1 callers are connected to the PSAP that serves their jurisdiction. Through automatic number identification (ANI), the telephone number of the 9-1-1 caller is received by the PSAP equipment and is used for automatic location identification (ALI), which provides the name and street address associated with the telephone number of the 9-1-1 caller. Call-takers view the ANI and ALI information on a display and have single-button access to the emergency response agencies responsible for the 9-1-1 caller's location. PSAP's that are appropriately equipped can pinpoint the location of wireless 9-1-1 callers on a map display based on x,y coordinates.

There are different network arrangements for a carrier to connect to a 9-1-1 tandem. Carriers require dedicated connections from their switch to the 9-1-1 tandem utilizing access transport pursuant to tariffs. Carriers that choose to collocate at the 9-1-1 tandem can purchase a dedicated trunk port. Carriers that choose to interconnect to the 9-1-1 tandem purchase a dedicated 9-1-1 trunk port and interconnection transport to the 9-1-1 tandem. Carriers that choose to purchase switch ports at a Ziply Fiber end office access the 9-1-1 tandem by utilizing a dedicated E9-1-1 network.

E9-1-1 Database Requirements

Automatic location identification (ALI) as described above is provided through the E9-1-1 database. Carriers that route 9-1-1 calls from their subscribers through Ziply Fiber's network must ensure that their subscribers' telephone number, name and street address information gets into the E9-1-1 database.

Responsibility for inputting the data generally rests with the carrier that owns the local subscriber switch. If a carrier other than Ziply Fiber owns the local switch, then that carrier is responsible for directly inputting and updating information in the E9-1-1 database.

E9-1-1 Database Guide

Carriers may use the E9-1-1 Database document as a guide to getting set up to directly manage their telephone subscriber data and street address information in Ziply Fiber' E91-1-1 database.

If Ziply Fiber owns the switch, then Ziply Fiber inputs and updates the information in the E9-1-1 database based on information received from the carrier.

Pricing

Based on local jurisdiction, a 9-1-1 surcharge may apply to each access line. For additional details on 9-1-1 surcharge/payment information, the CLEC should contact the appropriate state/local agencies.

The 9-1-1 surcharge is not the same as the E9-1-1 infrastructure charge which Ziply Fiber charges the CLEC in order to meet the cost of supporting 9-1-1 service. This infrastructure charge is based on the number of facilities and ports utilized.

Pricing and regulations vary by state jurisdiction and pursuant to individual carrier interconnection agreements. See your federal and state tariffs for detailed information here.

E9-1-1 is available nationwide.

Basic Network Elements

The 9-1-1 tandem has direct incoming trunks from all of its subtending central offices. These trunks are multi-frequency (MF) or Signaling System 7 (SS7). Incoming calls to the PSAP are switched from the originating central office to the 9-1-1 tandem and the 9-1-1 tandem routes the caller to the PSAP.

PSAP Call Takers can originate calls to end users via administrative lines that originate from the serving wire center of the PSAP. These calls receive the same LNP treatment as any other call from the serving wire center.

The basic network elements involved in establishing connectivity to Ziply Fiber's 9-1-1 are as follows:

IOF Transport

The Interoffice Facility provides transport between two central offices. The carrier may secure dedicated transport from its local switch to the Ziply Fiber 9-1-1 Tandem central office in the following manner:

Carrier provided transport facility

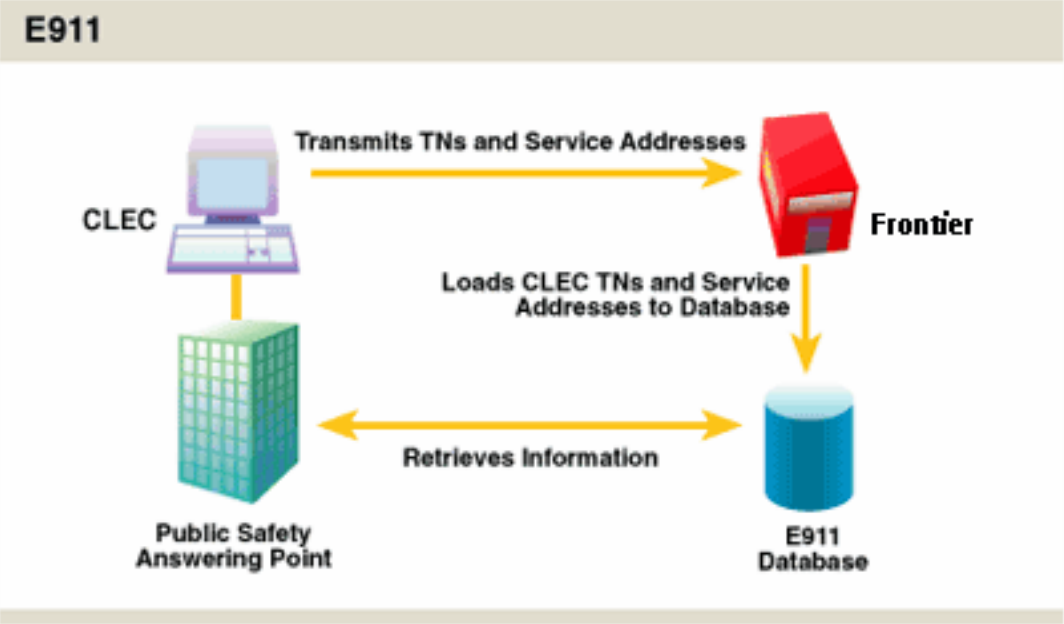
Third party provided transport facility

Interconnection transport from Ziply Fiber

Interconnection Dedicated 9-1-1 Trunk Port

The point of interconnection is at the Ziply Fiber 9-1-1 Tandem. Within the Ziply Fiber 9-1-1 Tandem central office, the carrier requires a dedicated 9-1-1 trunk port. The carrier may access the dedicated 9-1-1 trunk port via either its collocation arrangement or through interconnection transport.

Diagram


E911
Transmits TNs and Service Addresses
CLEC
Frontier
Loads CLEC TNs and Service Addresses to Database
Retrieves Information
Public Safety Answering Point
E911 Database

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