Midstate Communications, Inc.

Functionality in Emergency Situations

Back-Up Power

With our current infrastructure there are three locations within our network, where backup battery is a concern; central offices, remote cabinets and ONT's locations at the customer premise. Each are addressed below:

CO

Midstate Communications has 10 Central Offices which serve 100% of our customer base. The switching and transport systems inside theses CO's are powered by DC power with current draws ranging from approx 20 amps to 250 amps. The runtime of each battery system is slightly different based on current draw and geographical location but they range from approx 12 hours to approx 40 hours. Every Central Office is equipped with an on-site generator and an automatic transfer switch; thus we expect the **required** run time of these battery systems to be only a few seconds but have designed them to support our network for significantly longer runtimes in cased of a generator failure. We also possess a 60KW portable generator for deployment ensuring Central Office operation throughout an on-site generator failure.

Remote Cabinets

Approximate 5% of our current customer base is served by these remote cabinets located in the field within 3 miles of the subscriber premises served. Each DC system inside these cabinets is designed to support 8 hours of runtime in case of a power failure. We possess 22 portable generators in all, with several of them being staged in strategic geographical locations for easy deployment in the event of a power failure.

ONT

The ONT's are located at the customer premise in our Fiber-To-The-Home network configurations. We have approximately 2000 deployed ONT's delivering service to 30 - 35% of our subscribers. Any ONTs located with the city limits are equipped with 7.2 Amp-hour batteries and provide an expected runtime of 8 hours. Knowing the power failures outside the city limits can be longer, we deploy a larger battery providing additional runt time. These batteries are 20AH and deliver an expected run-time of greater than 16 hours.

Rerouting of Traffic around Damaged Facilities

All core networks connections are ring protected and any established traffic is automatically rerouted without impact to these customers. Any call not yet established or in a "Setup" state during a reroute situation (fiber cut, central Office failure, etc.) would fail and these callers would need to reacquire dial tone and re-place the call. The routes would be available is less than 1 second, thus any subsequent call attempts would be successful.

Our connection to the outside world is via our centralized equal access provider: South Dakota Network. The Kimball office is positioned in the logical center of our network and houses a node on the above mentioned statewide DWDM MPLS network. This network utilizes alternate fiber routes throughout the state of South Dakota functioning in a mesh environment to deliver our traffic to the SDN location in Sioux Falls, South Dakota. As for our Intra-company Inter-exchange facilities; they include: 3- EPS rings (Calix), 1- OC 48 ring (Fujitsu), and 1- MPLS ring (Brocade) functioning in a mesh environment.

Traffic Spikes

Currently Midstate provides dial tone to approximately 4200 subscribers. The softswitch we utilize is manufactured by MetaSwitch and can support 250,000 subscribers before any expansion or upgrade is required. Our customer connections to this switch are either GR303 or MGCP and in this configuration the switch can support 1.3M Busy Hour Call Attempts. As for the trunking, we have toll and 911 routes to South Dakota Network and CenturyLink. These routes are actively monitored for overflow and near overflow states. Any near overflow or overflow situations are address immediately after receiving any alarm.