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XO Washington Disaster Plan

Recovery procedures related to localized outages affecting customers in the state of Washington follow defined maintenance and support procedures. The West Region Regional Maintenance Center, located in Denver, Colorado provides initial test and resolution of all reported customer outages. In the event this center is unavailable a second RMC, located in Paramus, New Jersey will respond with trouble isolation and support activities. The National Operations Center, Located in St. Louis Missouri, monitors the network on a 24 X 7 X 365 basis. XO maintains a rotational on-call list for technical support on the switching and transport systems as well as field deployed equipment. Local Operations Managers provide second level support in the event the outages require support beyond the individual on-call capability. The Sr. Manager staff, Directors and Regional V.Ps of Operations provides additional depth to the support process.

Customer Escalation Paths

Tier 1 Customers are provided an escalation list for support in the event of a major problem requiring immediate attention. The escalation document will provide names and numbers of personnel responsible for the following areas:

Customer Service Supervisor
Customer Service Manager
Installation & Repair Manager
Director of Operations
General Manager

The list includes office and cell phone numbers.

Switching systems

XO services Washington with a basic platform of a fully digital state of the art DMS-500 SuperNode Switch. This digital switch is one of the most advanced digital switching platforms available to the telephone industry. The DMS-500 consists of two integrated switches: the DMS-100 for the local switching service and the DMS250 that services toll traffic.

The switch is fully redundant providing protection in the case of internal fault in the switching equipment. From the central processing functions of the ENET (Enhanced Network: Northern Telecom's product developed for exclusive use in the DMS SuperNode architecture) to the linked peripheral processors, all systems are fully duplicated to provide uninterrupted service. Simultaneous processing of calls is real time on both the 00 and 01 platforms. In the event of a fault on a specific platform, the redundant side will provide service with no interruption to the customer.

Power back-up

Power to the equipment is supplied through distinctly separate D.C. gel cell technology battery plants. Each of these battery strings working alone is capable of sustaining service to the switch in the event of a failure on a single plane. The battery plant power is provided through a series of rectifiers on commercial power. The system is capable of sustaining a full charge to the battery plant while suffering the loss of several of the rectifiers. Backing up the battery and commercial

power systems is an in-house generator with an on site fuel tank sized to provide adequate run times in the event of an extended outage. The generator system is run weekly and serviced quarterly to insure peak operating reliability. Power to support systems is supplied through a UPS that will supply the test equipment, PCs and peripheral support equipment for the switch technicians.

Real Time Circuit Monitoring

Circuits are monitored in the Central Office utilizing a T-Mon monitoring system and a HP OEMF (Hewlett Packard Operational Equipment Maintenance Framework). These systems allow real time local and remote monitoring of designated circuits. The systems are monitored locally by on-site switch technicians and remotely by the Network Operations Center located in the St. Louis Mo. The NOC site is manned 24 X 7 X 365.

XO's Network Maintenance Center receives notification from these systems in the event a fault is detected. All on-call technicians to the switch utilize laptop PCs for remote access to the DMS-500 for after hours support in problem resolution. Repairs that cannot be affected by the technician are referred to the appropriate department for dispatch on a call out basis. Our Customer Care Center located in Salt Lake City, provides customer support 24 X 7 X 365.

With a defined 24x7 monitoring system, Lab, NOC, and on call technician support combined with defined internal and external escalation paths, XO is prepared to provide service recovery in the event of interruptions regardless of the severity. Fully redundant switching systems backed by redundant power feeds provide a solid and safe platform for the communication requirements of our customers. The local technical staff availability insures knowledgeable personnel familiar with specific customer service configurations are available to respond to any switching or network related trouble.

Catastrophic Recovery

Catastrophic disasters may result from fire, flood, earthquake, ice storms, hurricanes, tornados, and acts of terrorism or war. In the event of a catastrophic disaster that physically damages the switch-room beyond the capability of the redundant systems, remote switch facilities will be used to service the Washington service areas until the local switch can be restored. Traffic will be rerouted via inter-machine trunks (IMT) to the closest available switch in order to restore critical services on a timely basis. Switching centers in Spokane, Seattle, Salt Lake, and Northern California may be utilized in support of regional outage where the circumstances and capacity permit. Defined critical and high priority users will have service restored on a priority basis on the remote platforms.

In the event of major physical damage to the switching facilities or infrastructure, salvage operations will be initiated as soon as possible and deemed safe by the local management team. Working in conjunction with civil authorities a site assessment will be performed to determine when access may be granted to authorized personnel. An XO technical team consisting of central office personnel, engineering, and technical management will make the initial assessment to determine the damage define the extent of the recovery procedure. Working in conjunction with equipment suppliers, install vendors, and in-house engineering team and installation teams, the switch will be rebuilt as quickly as possible to restore services. This may involve utilization of off site equipment that will need to be redeployed as defined in the recovery plan from the Disaster Response Team.

The facilities located at the XO Lab may also be used to restore service as required. XO's lab is a research, development and operational support center located in Plano, Texas. This facility

houses a fully operational DMS-500 switch with no provisioned traffic. The Lab's role is to support network operations, insure network integrity, provide an escalation point for problem resolution, and provide support for outages and disasters. If the need arises due to catastrophic damage to local switching equipment, equipment from the Lab may be deployed in remote markets to provide service while the local switch system and networks are rebuilt.

Priority response

In the event of a natural disaster, catastrophic disaster, act of war or terrorism, that severely impacts the daily operations of the community, threatens life and property, and impacts the telecommunication services provided to our critical customers, XO will attempt to restore service to agencies in the following order of priority. This is dependant on the nature of the event and the severity of the services affected.

1. Act of war or terrorism
 - a. Federal defense agencies
 - i. Local military bases
 - ii. FEMA
 - b. Local civic agencies
 - i. Fire department
 - ii. Sheriff office (CLEO)
 - iii. FAA
 - iv. Hospitals
 - v. Natural gas companies
 - vi. Police department
 - vii. Civil defense agencies
 - c. Utilities providers
 - i. Electric utilities
 - ii. Other telephone service companies (LEC)
 - d. Other government agencies
 - i. FBI
 - ii. CIA
 - iii. Secret service
 - iv. City and county government offices
 - v. Other federal government agencies
 - e. Customers
 - i. Major communications channels
 - ii. Customer who provide specific critical support service required by the disaster
 - iii. Business customers
 - iv. Residential customer

2. Natural Disasters
 - a. Local civic agencies
 - i. Fire department
 - ii. Sheriff office (CLEO)
 - iii. Hospitals
 - iv. FAA
 - v. FEMA
 - vi. Natural gas companies
 - vii. Police department

- viii. Civil defense agencies
- b. Utilities providers
 - i. Electric utilities
 - ii. Other telephone service companies (LEC)
- c. Other government agencies
 - i. FBI
 - ii. CIA
 - iii. Secret service
 - iv. City and county government offices
- d. Customers
 - i. Major communications channels
 - ii. Customer who provide specific critical support service required by the disaster
 - iii. Business customers
 - iv. Residential customer

Service restoration following the defined events above will be coordinated with the local federal, state, county and city governments in that order. We will remain flexible as to the needs of the situation and work within defined plans developed by local authorities regarding the best approach to restore normal operations to critical service entities.

XO Disaster Response Team.

The XO Washington disaster response team consists of members from the local and regional technical management team. These members will, as soon as possible following the incident, establish a link via conference bridge to communicate and ascertain the appropriate response to event. In cases where safety is of consideration, all reasonable efforts will be undertaken to first insure the safety of the employees prior to addressing the equipment damage and recovery.

The response team will assign the closest available management personnel to travel to the site to provide the first visual inspection coordinate the site assessment team. A site assessment team will consist of a site manager named by the response team as the lead person in the initial damage assessment efforts, and several available technical staff as requested by the response team. This site assessment team will be responsible to insure first the safety of the affected employees followed by a preliminary determination of the extent of the damage. In the case where the local management team is unavailable due to death or serious injury that was a result of the event, an alternate management person will be assigned based on the required skill set and logistical travel realities.

Once the site the initial assessment of the site is complete, the response team will formulate an appropriate plan to deal with the extent of the disaster. The team will define the type and quantity of equipment requiring replacement and repair, as well as general assessment of the switching site, and the physical requirements of continued operations in the affected center. The response team will work in conjunction with engineering and logistical operations team to establish a schedule and acquire the necessary equipment to restore service. In the event that a switching center has been completely destroyed, we will attempt to arrange for a temporary location based on available nearby facilities and the ability to interconnect with the network.

The Response Team will continually assess the progress of the restoration and provide a situation report at regular intervals to the XO executive management team. Xo may decide to redeploy personnel from remote locations to assist in the rebuilding efforts. The Response Team will

coordinate redeployment of remote personnel with the Vice President of Operations or higher level of management. The response team will remain active until released by the Vice President of Operations or Sr. Vice president of operations.

Disaster response coordination team members

Name	Title	Office	Cell	Role
Richard Yahne	Director – Operations Mountain District	509-444-8513	509-951-5125	District Disaster coordinator
Mike Lang	Sr. Manager Spokane, Coeur d'Alene, Lewiston, Minneapolis	509-444-8575	509-370-4989	Alternate Disaster Coordinator 1
David Contreras	Sr. Manager Seattle & Portland	206-315-6339	206-423-2834	Alternate Disaster Coordinator 2
Doug Poindexter	Operations Manager Seattle	206-315-6443	206-793-2260	Disaster response management team member
Jessie Taylor	Operations Manager Spokane	509-444-8568	509-370-1059	Disaster response management team member
Todd Jensen	Director – West region RMC	303-539-7868	801-983-2840	RMC Director – Remote support