Network Fact Sheet: NetOps Workshop 2006

Name: University of Memphis, CERI

Cooperative Central and Southeast U.S. Seismic Network, CERI, SLU, VPI, USC, UK, NEIC

Authoritative Monitoring Region:

NM: New Madrid Seismic Network
   (37.6270, -86.6797) (36.6270, -88.6203) (34.0273, -88.4165) (34.0000, -93.5000) (38.0000, -93.5000)
   (40.0000, -91.5000) (40.0000, -85.0000) (38.8000, -85.0000) (37.6270, -86.6797)

SE: Southeast US Seismic Network
   (36.6270, -88.6203) (37.6702, -86.6797) (37.2553, -82.1907) (39.0000 ,-81.0000) (39.0000, -77.2500)
   (38.3500, -77.2500) (38.0000, -76.3000) (38.0000, -75.4000) (35.9530, -75.5817) (32.2235, -79.6552)
   (30.7383, -81.0937) (26.9808, -79.8295) (24.7603, -80.2632) (24.9113, -81.4730) (30.0472, -85.2255)
   (33.4813, -85.8910) (34.0273, -88.4165) (36.6270, -88.6203)

Station Statistics: (Includes only stations operated by CERI)
   86 3-comp short period
   14 Broadband
   25 Free field strong motion
   2 Strong motion structural sites

Telemetry:
   Analog: 220MHz FM
   Digital: 220MHz simplex, 802.11b (2.4GHz spread spectrum, Cisco Aironet),
                 (900MHz spread spectrum, Freewave), DSL, Public Internet

Data Acquisition & Recording Systems: Both analog and digital telemetry data are acquired and processed by Earthworm based systems running on both windows and solaris platforms. A combination of analog and digital telemetered data are acquired at a total of 11 locations, including CERI. A subset of all data are brought back to CERI in realtime via a combination of 802.11b wireless, DSL, and public internet. Individual nodes record both triggered (Carl(sta-sub)trig and continuous (Waveserver) data. Automatic locations and magnitudes are produced by the earthworm system, at CERI. A shakemap system has been implemented but is not yet in production.

Routine Data Processing: A modified version of the Xpick program is used to pick arrival time and coda duration data from SAC trace files. The hypoellipse program is used to determine locations and coda magnitudes. Events are identified from both triggers, and review of web based helicorder displays, produced by earthworm.

Emergency Data Processing: The same Xpick / hypoellipse system is used for after hours/emergency processing via off site broadband internet access.

Data Archive & Distribution: A subset of continuous data are retrieved by IRIS DMC via public earthworm waveservers. Trace data sets from identified events are compiled manually from the various data collection "nodes", and archived at CERI