ANSS NetOpsII Workshop Summary
April 11, 2008
Mitch Withers and Glenn Biasi

The ANSS sponsored a second workshop on February 27 and 28, 2008 in Pasadena, CA, for seismic network technical staff. Facilities and hosting support, led by Rayo Bhadha, Sarah Gordon, and Egill Hauksson, was exceptional. Unlike the first NetOps workshop which included engineers, technicians, data analysts, computer professionals, and a few seismologists, NetOpsII was geared nearly exclusively toward engineers and technicians. This focus was a result of recommendations from the first NetOps workshop to have an additional, separate workshop for data analysts and computer professionals. There were 58 registered participants from 25 organizations but 6 people from the University of Nevada Reno and the University of Utah were unable to attend due to monitoring activities after the M6.0 Wells Earthquake of February 21, 2008. The list of workshop participants is available at
http://www.ceri.memphis.edu/people/mwithers/NetOpsII/.
The workshop agenda (
http://www.ceri.memphis.edu/people/mwithers/NetOpsII/agenda_v4.2.pdf)
covered two very full days (9:00AM-6:30PM on the first day and 8:00AM to 5:00PM on the second day). There were a wide variety of presentations and discussions including telemetry, vaults and power, remote nodes, the ASL Depot, training, etc., along with a tour of Caltech and USGS seismic network facilities. The poster/display area was [well-received.

NetOpsII was highly successful in facilitating exchange of a great deal of knowledge and contact information, just as was NetOpsI. In addition, several observations and concrete recommendations for ANSS management emerged from the meeting. They are, in unranked order of importance:

a) Network operators should be cautious when using infrastructures (e.g. communication) of partner organizations not in the earthquake business as those infrastructures may be rendered inoperable by a moderate size earthquake. As an alternative, operators may consider hardening shared infrastructure.
b) Contract out a communication inspection to provide a list and budget for hardening to meet performance standards (e.g. Motorola R56 Standards and Guidelines for Communications Sites).
c) As with NetOpsI, there was adamant support for a Wiki, forum, and or listserve mechanism of sharing knowledge, contacts, best practices, asking questions, seeking advice, etc, etc.
d) Documentation, schematics, and defined protocols for procured and USGS-furnished equipment are frequently incomplete or non-existent and their requirement should be made part of the procurement specifications. It would be helpful if this information could be posted in a web-accessible site, perhaps under password protection to respect vendor or security-sensitive materials.
e) New technical staff would benefit from basic seismometry training.

f) Operations would be facilitated if ANSS management could influence federal agencies for increased dedicated spectrum (e.g. 300 MHz spread spectrum).
g) Participants like the more focused nature of NetOpsII.
h) A NetOps for data analysts would benefit from presence of a few hardware people to help explain or address data anomalies and idiosyncrasies.
i) The next NetOps would benefit from manufacturer/vendor demonstrations and training (sensor providers and others such as Verizon, Comcast, etc).
j) Eastern network staff requested a primer or similar guidance on what to expect and how best to assist and exploit the EarthScope TA.
k) Distribute ANSS Depot questionnaire results.
l) Add and make available contact information for those unable to attend NetOpsII.
m) Two days is a good length for NetOps. Three days might be better if one or two afternoons were devoted to hands-on training (e.g. at ASL).
n) Holding NetOps at another network is desirable. The opportunity to see other network operations was considered valuable.
o) Getting the Depot up to speed is a high priority. The technical staff would like to see it expanded to include "rent-a-tech" for temporary staff "surge" and as a facility to provide training on instrumentation and other NetOps aspects.
p) Need to assist new people especially at smaller networks. Formats discussed include an intern program, formal class, or accelerated on-the-job training.

Finally, the organizers would like to emphasize the difficulty in providing food and beverage during breaks. The meeting hosts provided refreshments for both NetOpsI and NetOpsII. A registration fee or similar means to provide on-site refreshments is recommended. It is a more efficient use of the short time available if participants are able to obtain refreshments on site and continue discussions than it is by disrupting those discussions for travel offsite for refreshments.