Report on the ANSS NetOpsVIII Workshop, October 11-12, 2016 at Caltech in Pasadena, CA.

The Organizing Committee for NetOpsVIII was composed of Peggy Hellweg, Kris Pankow, Natalia Ruppert, Mitch Withers, and Ellen Yu. The workshop included sessions on vault construction, surge suppression, power systems, the ANSS Depot, telemetry, environmental hardening, state of health monitoring, data handling, latency, multi-sensor networks, and the Station Information System (SIS). There were 66 registered participants from 19 different networks from both the ANSS and the VHP programs as well as independent regional networks.

The organizing committee wishes to thank Caltech for hosting the workshop and providing local logistic support, the venue, and refreshments. The committee also thanks the USGS for travel support. Several recommendations and common unresolved problems were highlighted in the concluding session.

1. ANSS should revisit the establishment of a NetOps wiki or similar resource for information and document sharing. Access, privacy, and privileged information should be considered.
2. Many networks have or are working toward redundant telemetry and communications paths both from stations to data processing nodes and between redundant processing nodes. Software and applications at the central as well as distributed processing sites needs to properly handle multiple incoming redundant data in real-time.
3. Spectrum licensing and the need to move telemetry bands continue to be an issue. Recertification of analog to bidirectional digital in the UHF and VHF bands is needed from the NTIA. Establishment of a working group among affected networks would be useful.
4. Federal encouragement of cell tower operators to provide access to seismic networks would dramatically expand possible points of telemetry presence for ANSS networks.
5. Government sponsored VPN with priority service through the cell systems would help comply with DHS/DOI IT security standards and data latency requirements, particularly in cases of cellular congestion as might occur after a large earthquake affecting the region.
6. The ANSS Depot is a valuable asset and the participants strongly encourage its continued support. Depot GFE metadata should be entered and available to RSN's in SIS. The operational business rules for the ANSS Depot should be reviewed jointly by the USGS and RSNs.
7. The regional networks encourage the ANSS to consider ways for the Depot to support non-GFE and non-EHP equipment that meets ANSS performance standards.
8. Clarity and guidance on the process for meeting NEPA requirements is needed. A system wide resource is needed to facilitate permitting.
9. The participants noted the value in meeting face-to-face to exchange best practices, brainstorm new ideas and to forge cooperation and there is thus overwhelming support among NetOps participants to continue to have workshops on this and other topics related to producing data and earthquake information for ANSS.