

Short Bio for Frank Vernon

Dr. Vernon is a Research Seismologist at the Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography, University of California at San Diego. His current research interests are focused on developing distributed networked real-time sensor networks in terrestrial and marine environments. Currently he is the Director for the USArray Array Network Facility for the NSF EarthScope program. This network currently has over 500 stations using seismic, acoustic, and atmospheric pressure sensors delivering real-time data to UCSD, which are redistributed to multiple sites. The ANF is responsible for real-time state-of-health monitoring for the network in addition to the real time data processing, archiving, and distribution. Data are acquired over multiple types of communication links including wireless, satellite, and wired networks.

Dr. Vernon is the PI on the ANZA broadband and strong motion seismic network that has operated since 1982 providing real-time seismic monitoring capability for southernmost California. Dr. Vernon is a co-PI on very dense seismic deployment around the San Jacinto fault zone, focusing on earthquake source physics, fault structure, and providing real-time seismic monitoring capability for southernmost California. In addition Dr. Vernon is PI on the HPWREN program creating a large-scale wireless high-performance data network that is being used for interdisciplinary research and education applications, as well as a research test bed for wireless technology systems in general. HPWREN provides wide area wireless internet access throughout southernmost California including San Diego, Riverside, and Riverside counties and the offshore regions. Under UCSD's HPWREN program, research being conducted on building "last kilometer" wireless links and developing networking infrastructure to capture real-time data from multiple types of sensors from seismic networks, hydrological sensors, oceanographic sensors, wildfire cameras, meteorological sensors, as well as data from coastal radar and GPS.

Dr. Vernon obtained a B.A. in Physics with Specialization in Earth Sciences from UCSD in 1977, and a Ph.D. in Earth Sciences from UCSD in 1989.