**Developing seismic monitoring systems with Antelope and Earthworm: perspectives from Alaska and Montserrat**

The University of Alaska Fairbanks office of the Alaska Volcano Observatory (AVO-F) is co-located with the Alaska Earthquake Information Center (AEIC), which is committed to Antelope and is the clearing house for all seismic data in Alaska, and the USGS office in Anchorage (AVO-A) which is committed to Earthworm. The latter enables all USGS volcano observatories to work towards a common software platform to aid data sharing and response, as recommended by the NVEWS proposal. For many years this led to heated discussions over which platform (Antelope or Earthworm) is best.  
Here we examine the technical merits of each system for our purposes, drawing from the author's experience with Earthworm and Antelope systems in Alaska and Montserrat, with a bias towards software development. The main advantages of the Antelope system for our purposes are: (i) it is built from the ground-up around a relational database incorporating event, waveform and station metadata, (ii) BRTT supported orb and database interfaces exist in C, Perl, PhP, Tcl and are thoroughly documented, (iii) Community supported Matlab and Python orb and database interfaces also exist. These translate to an ability to develop a wider range of applications, and do so more rapidly. The advantages of Earthworm for volcano-monitoring purposes are its free cost, wider user-base (which may ultimately translate to more contributed software), and it's integrate with Winston, SWARM and VALVE. Examples of software products we have developed including alarm systems and web-based monitoring systems will be described.  
A significant recent development is the ANSS Quake Monitoring System (AQMS), which is based on Earthworm but appears to add-on a relational database similar to Antelope, and Jiggle for event processing. This may make it possible to develop some products that were previously only possible within the Antelope framework, within the Earthworm framework. The way forward for AVO-F will likely to be to run Antelope and AQMS in parallel, so that we can collaborate effectively with AEIC and AVO-A partners, and to develop products that are cross-framework. A major advantage of this approach will be the ability to take advantage of any new monitoring products that become available in either framework.