FDSN Working III on Software Coordination
Minutes of Meeting June 14, 2002
Waikoloa, Hawaii

The Software Working Group was well attended with 19 people attending. The primary purpose of this meeting was to provide a forum where current software capabilities and systems could be enumerated and as such promote sharing of resources across the FDSN community.

The agenda focused in three areas
1. Current systems working with real time data
2. Applications available within the FDSN that can readily be shared by others

and
3. A summary of the current efforts within the FISSURES Data Handling Interface.

Real Time Systems

Chad Trabant summarized the real time effort taking place within the European Community, in the form of the MERIDIAN Project. At ORFEUS, the Antelope software is used to create a Virtual European Broadband Seismic Network presently comprised of 43 real time stations with latency of 10s of seconds. They anticipate doubling the data flow rate within the next year by incorporating more data from Spain, Portugal and France.

ORFEUS is using Antelope for automated processing of the data to detect and locate events and produce the corresponding waveform event volumes for distribution through ORFEUS. They anticipate adding a capability to export selected data to a finite number of locations from the Antelope system in the future. The may be adding an export ORB in the near future.

Trabant summarized two applications of particular interest that were developed in Europe. QuakeExplorer was written by Anthony Lomax that allows one to browse WILBER events, both SPYDER® and FARM. It can make data from many sites in a seamless manner. Manfred Baer from ETH has developed an application called CollectWaves. It leverages autoDRM technology to collect data from many data centers for specific events.

Joachim Saul summarized the developments in the SEEDlink arena at GEOFON. This is a data relay and buffering system that is miniSEED based. It is robust and reliable. It has gained significant acceptance in Europe and interest is being expressed in the US.

Tim Ahern summarized the IRIS BUD system. In general this system leverages existing data delivery systems such as Earthworm and Antelope to move data into a Uniform Format. Currently the BUD system at the DMC is receiving data from 600-700 stations every day with about 3,000-4,000 channels. IRIS is developing a variety of data access methods from the BUD including LISS, WWW Wiggles applet, FISSURES/DHI and a soon to be released autoDRM.

Harold Bolton described the USGS LISS system. It is a system that relies on a single connection between a data center (ASL) and Quanterra stations. LISS acts as a socket copier that allows multiple other centers to then tap into the real time data feed. The development of the LISS2 protocol is still taking place.

Dan McNamara gave a presentation on the Earthworm system. The USNSN and regional networks within the United States use it heavily. At the present time

Earthworm features web access tools, state of health information, wide community support. It is being considered for use by the Volcano Hazards programs. It has a variety of products such as Shakemap and it is likely to be used as part of the ANSS.

Software sharing was highlighted first by summarizing the various software modules that are part of the ORFEUS software library. More information can be found on the ORFEUS Web site. Ahern summarized applications and utilities developed and supported by IRIS. They fall into roughly three different categories 1) applications intended for end users, 2) applications intended for use by data centers, and 3) new object-oriented based tools.

Ilya Dricker of ISTI described the new EvalRESP, JEvalRESP and JPlotRESP applications that ISTI developed for IRIS.

Rob Casey summarized IRIS' work on developing SEED classes for the SEED format. Tom Owens asked about connectivity of these classes to databases through something like FISSURES. Casey replied that this was still in development.

Tom Owens described work within FISSURES for the Standing Order for Data (SOD) in the FISSURES/DHI system. It uses XML to configure the system and it is used to formulate a request to a data center for past present and future information. The Global Earthquake Explorer (GEE) program is an IRIS E&O application for use by teachers and perhaps in the future as a research tool.

Several people reviewed other FISSURES tools. Ahern described the FISSURES Visualization and Seismogram Extraction (VASE) application. Casey described the FISSURES implementation of WEED. Ahern reviewed JEvalRESP in its DHI mode. Ken Creager described the FISSURES MATLAB interface.

The meeting was adjourned after about two hours but the discussion was lively and a large amount of information was shared.

Tim Ahern, Chair FDSN Working Group II on Software Coordination

Attendance FDSN WG III on Software Coordination
June 14, 2002

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