



## The Generic Recording Format (GRF)

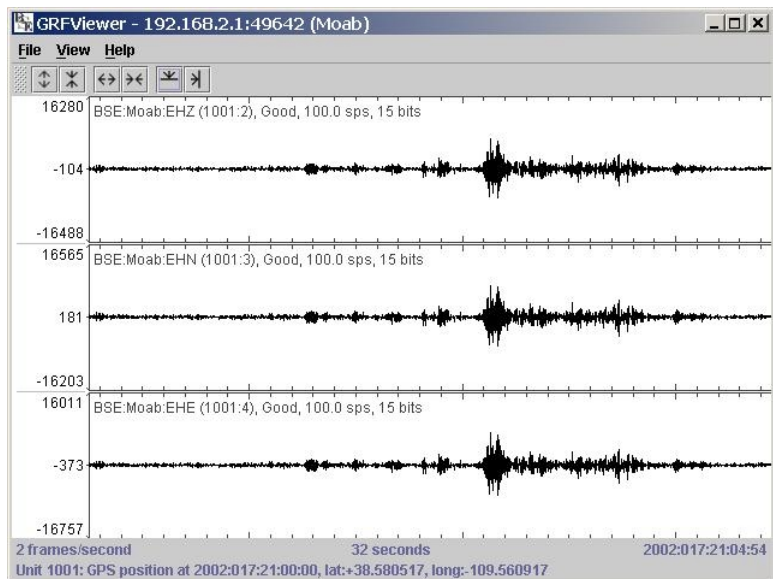
During development of the NetDAS field digitizer, we surveyed the various open, packet-oriented, recording formats that were available and found that each had various shortcomings. None of these recording formats met our design criteria for this new, network-oriented, instrument. We designed the GRF to overcome all of these issues. The GRF is:

- Platform independent, it is usable across all common platforms transparently.
- Device independent and extensible, digital waveforms and ancillary data from any new or existing digitizer can be easily accommodated.
- Network-centric, based on small (~1k), self-identifying, and self-contained packets. By self-contained, we mean that each GRF data packet contains all information needed to view the contained waveform segment. These packets can be moved through any network and/or stored in packet image files on a filesystem.

### GRF Tools Software

We have developed a suite of tools for use with GRF data. These tools have been designed following the same design principals that were used in the design of the GRF itself. The tools software is available on most UNIX-like and Win32 platforms.

- **GRFViewer** – As seen on right, this is a GRF real-time display client GUI application.
- **GRFd** – The GRF daemon. This server application drives a digitizer and serves GRF data to client applications and/or stores GRF data into a repository.
- **GRFHub** – The GRF hub. This client/server application connects to upstream GRF servers and concentrates the data before serving it to GRF data clients and/or storing it in a repository. GRFHub can also collect data from USGS-DST style digital streams.



- **GRFTrig** – The GRF trigger. This client/server application acts as a hub but serves only triggered event data to clients. Fully general sub-network triggering is implemented using STA/LTA event and amplitude threshold channel triggers.
- **GRFLog** – The GRF logging client. This is a simple GRF data client application that displays the contents of GRF packets in various forms. It also can be used to perform various statistical analyses of GRF packet data.
- **GRFConvert** – The GRF data converter. This is a GRF data client application that converts GRF data into various standard analysis formats. These formats currently include: GSE2.0, SAC, SEG-Y, Mini-SEED, MATLAB, PC-SUDS, and ASCII.
- **GRF2ew** – The GRF to Earthworm data source module. This is a GRF client application that feeds the Earthworm system in near real-time.

## More Information

You can obtain much more information about the GRF, including the latest GRF Tools Suite and documentation, at the GRF home page on the web at <http://www.banfill.net/grf.html>.

## Contacting Us

We can be reached at:

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