

# What's new at BRTT

June, 2013

Antelope User Group Meeting

Brisbane



- Personnel changes
- Operational changes
- Antelope 5.3
- Solaris, Linux and Apple
- New products from BRTT
- More on licensing

## Personnel Changes at BRTT

- Kent Lindquist hired full time January 2012
- Dan Quinlan retired December 2012
- Kent will be responsible for production of new releases
- Kent brings his experience with python and web software into BRTT
- Kent provides BRTT with stability, new blood and increases BRTT's ability to undertake new development
- Kent will no longer be available as a private consultant
- BRTT will either hire a new full-time employee or make use of consultants

# Operational Changes at BRTT: Distribution and Installation

- Lots of problems in 2012 with CD publishing
- We are getting close to the CD size limit
- Kinematics is now responsible for CD (or DVD) publishing
- We have incorporated an automated verification check to identify duplication errors and stop installation
- Installation has been simplified (always installs everything, automatically moves existing directories)
- No more -64 in directory names (e.g. 5.2-64). All software is by default 64-bit.
- For 5.3, no more paper published manuals, including reference guides (they are web accessible)

# Operational Changes at BRTT: Support

- Improved support responses via email and web <https://brtt.zendesk.com>
- Always get an automated reply with a ticket number
- Provides BRTT staff with coordinated support response tools
- You can go to the web site to see current and old support requests
- You can access your support requests from any web browser
- Our web site ([www.brtt.com](http://www.brtt.com)) describes this in more detail
- **YOU ABSOLUTELY MUST USE [support@brtt.com](mailto:support@brtt.com)  
WE WILL NO LONGER RESPOND TO SUPPORT  
REQUESTS TO OUR PERSONAL ADDRESSES**

# Operational Changes at BRTT: Licensing

- Current Antelope licensing mechanisms are antiquated, difficult to administer (on both ends) and prone to abuse
- We are in the process of overhauling Antelope licensing mechanisms  
(a lot of this will be invisible to our users)
- We will continue to provide node-locked licenses for the foreseeable future (under some restrictions)
- We have a beta version of a server-based replacement for subnet licenses in 5.3. We think this will eventually provide the most convenient and flexible licensing system for our users (floating licenses).
- We ask for your patience as we transition into a new licensing system

## Antelope 5.3: Python

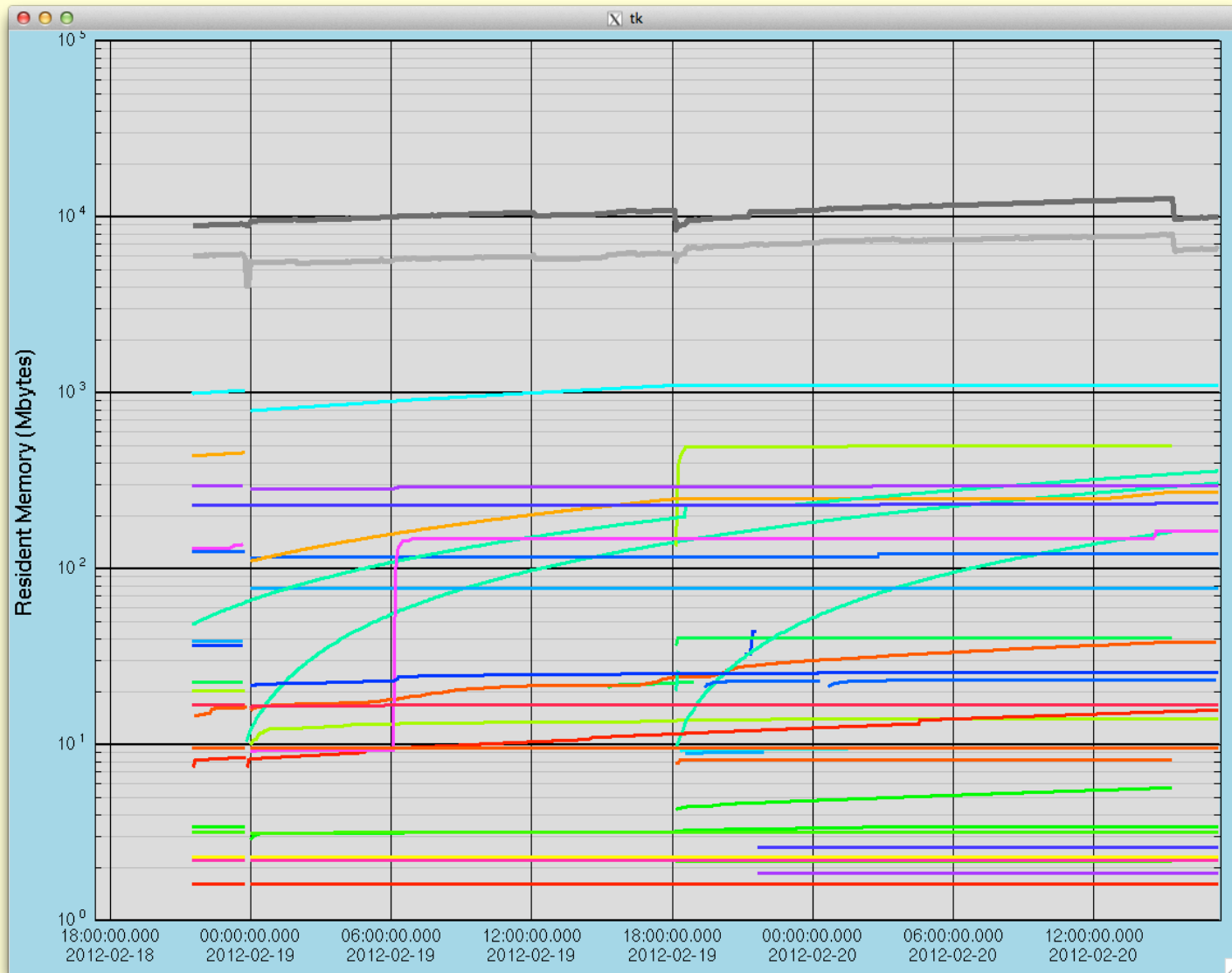
- Standard python 2.7.2 64-bit interpreter in Antelope 5.3 release
- Also included are a set of public-domain python extensions
- Also included are a set of Antelope extensions to python in the same vein as the tcl and perl Antelope extensions
  - “raw” interfaces that closely following C calling syntax and use
  - New OO interfaces that follow standard python paradigms
- Most new GUI tools will be developed using python

# Why Bother With Python?

- Heavily used “modern” object oriented scripting language
- Used extensively in Australia and US Antelope communities
- Can find young software developers who know python (not so much the case for perl and tcl)
- Has a large and comprehensive set of public-domain extensions, including scientific/engineering extensions
- Performs similar to perl
- Unlike perl, is inherently OO
- Unlike perl, provides a simple path for tk widget extensions
- Helps to prevent BRTT fossilization



# Python-based Tool for Monitoring Memory



## Antelope 5.2 **dbpick** Capabilities

- Complete rewrite of underlying data handling middleware
- Overall data access performance increased by a factor of 10+ (with caveats)
- Highly dynamic response to changing underlying database
- New typein commands, **dbrefresh** and **dbreopen**
- New typein command, **batch**, to increase graphics performance and to control display flashing when changing events
- Can keep a **dbpick** window open continuously when running **dbevents**
- First phase toward a complete rewrite of **dbpick**

## **css3.1 v. 5.2**

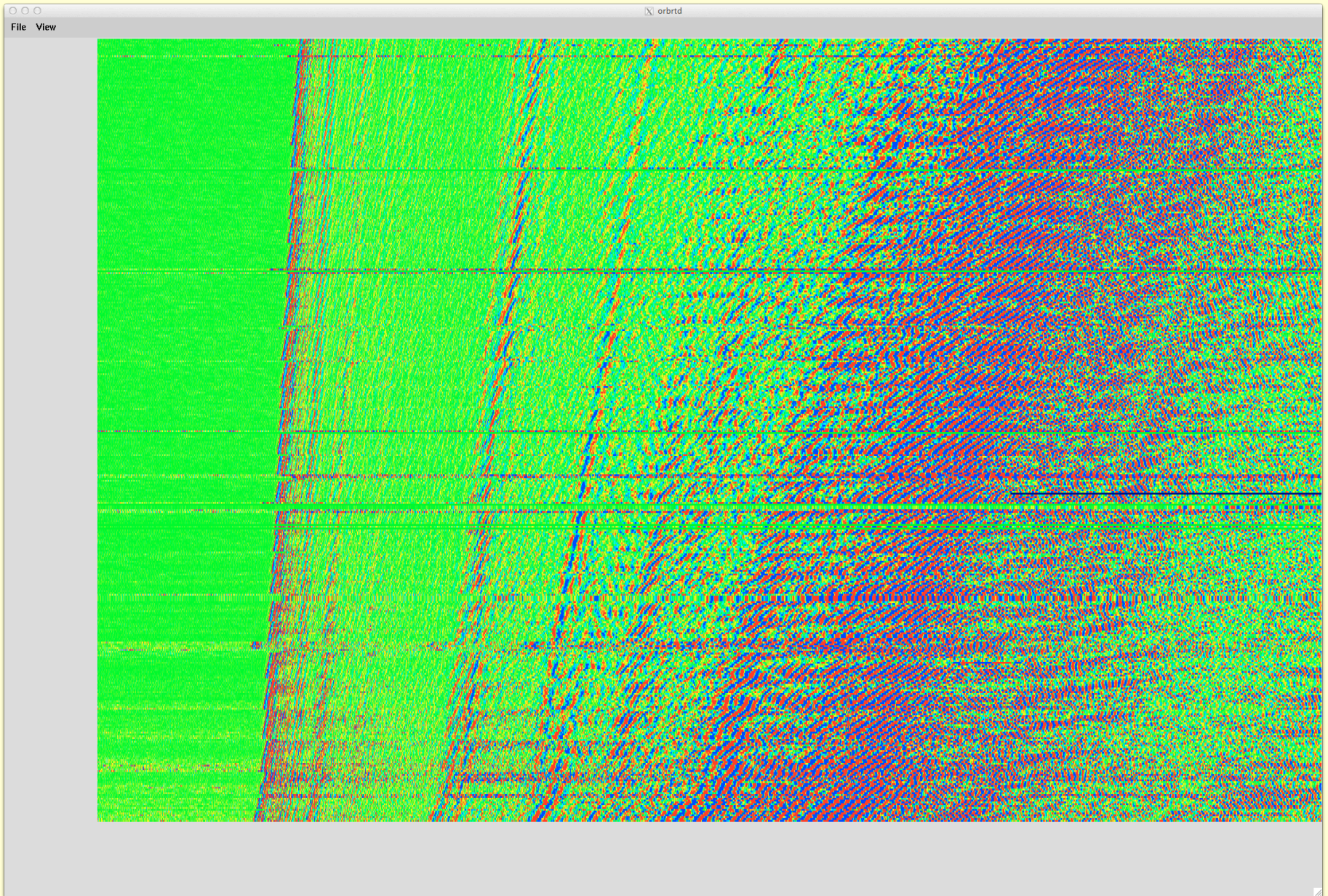
- New incremental changes to **css3.0** as we discussed last year
  - Mainly increased lengths of various attributes
  - All id attributes from 8 to 12 characters
  - All epoch times have microsecond precision
  - dnorth, deast in site have 5 digits precision
  - lat, lon have 7 digits precision
  - Increase dir to 80 characters and dfile to 48 characters
  - Increase sta to 8 characters and chan to 14 characters
- Increased sta attribute size means that SEED to css aliasing can be done with consistent snet\_ssta type naming convention
- Intention to use **dbconvert** to convert from **css3.0** to **css3.1**
- New gsn\_demo uses **css3.1**
- Addition of prefmag attribute in event table
- Not all critical programs are compatible were compatible

## css3.1 v. 5.3

- Lots of problems with initial implementation
- Initial implementation hard wired SEED to css name aliasing and dropped snetsta and schanloc tables
- This insured incompatibility between existing **css3.0** and **css3.1** databases
- Cannot use **dbconvert** to convert from **css3.0** to **css3.1**
- Fixed problems by re-introducing snetsta and schanloc tables. Issues described in **cssconversion(5)** man page. Helper script, **cssconvert**, provided for dealing with changes in SEED to css name aliasing during conversion.
- New gsn\_demo now goes back to using **css3.0**
- Now works with all critical programs

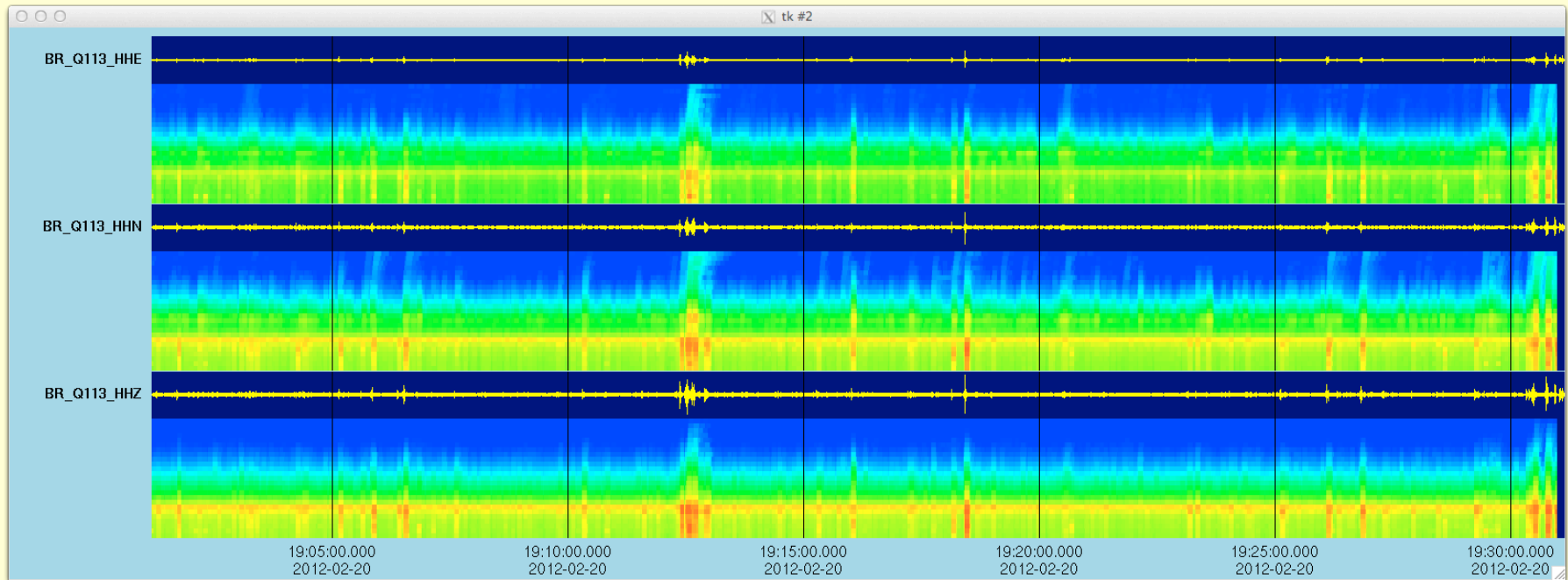
# orbbrtd

- **orbbrtd** is a complete rewrite of **orbmonrtd**
- Rewrite of old tcl/tk script as a python script
- Adaptation of buplot bptrace tk canvas item extension available in python
- Provides enhanced trace amplitude plotting options (color, log scales, etc.)
- Provides capability to plot color-contoured spectrogram style time-scrolling spectra plots
- Introduces a number of new features, including dynamic automatic channel configurations
- First stage in converting **dbpick** display graphics



**BRTT**

March 2013



# Solaris, Apple, Linux

- Antelope 5.3 IS THE LAST ANTELOPE SOLARIS RELEASE!
  - Ramp down in Solaris development
  - Solaris support through one year from 5.3 release
- Uncertainty of Apple hardware future
  - Cannot depend on Apple for enterprise-class hardware
- BRTT will fully supports Linux as a platform for enterprise-class systems
  - BRTT will fully support RHEL and CentOS 6.2 in Antelope 5.3 release



# Future Antelope Development

- **orbbrtd**
  - Add display of arrivals and detections
  - Enhanced autoscaling
- **dbpick**
  - Next phase is to migrate the GUI to our new tk-based graphics extensions
  - Develop new **dbpick** main program as a python script
- **dbloc2**
  - Kent will head a complete rewrite
  - Currently soliciting comments/suggestions for new **dbloc2**
  - Probably a python script with embedded **dbpick** functionality

# New Products from BRTT!

## ***Peregrine***

Web enhanced version of Antelope

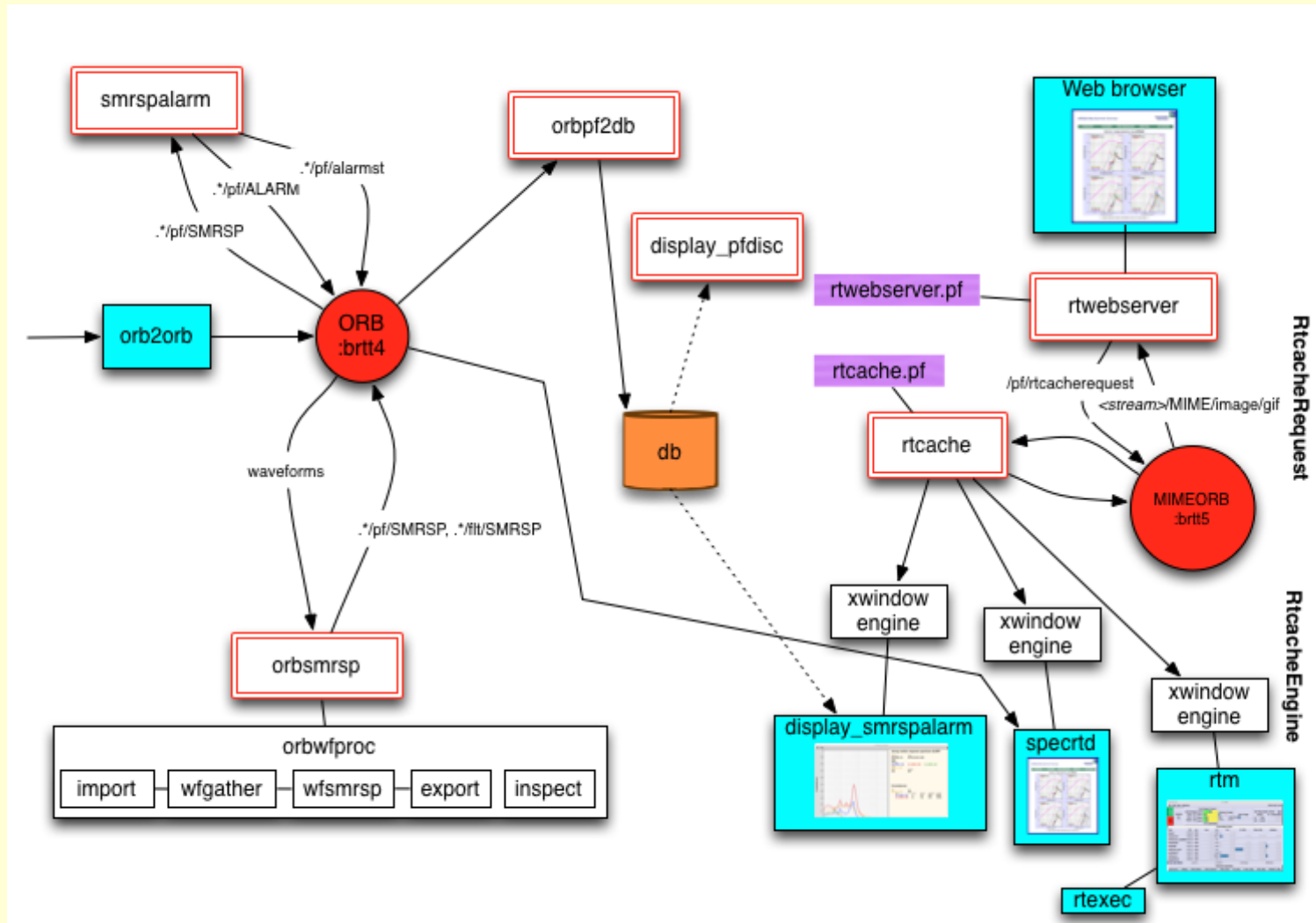
## ***Bighorn***

Strong motion/structure monitoring version of Antelope also including web enhancements

# ***Peregrine***

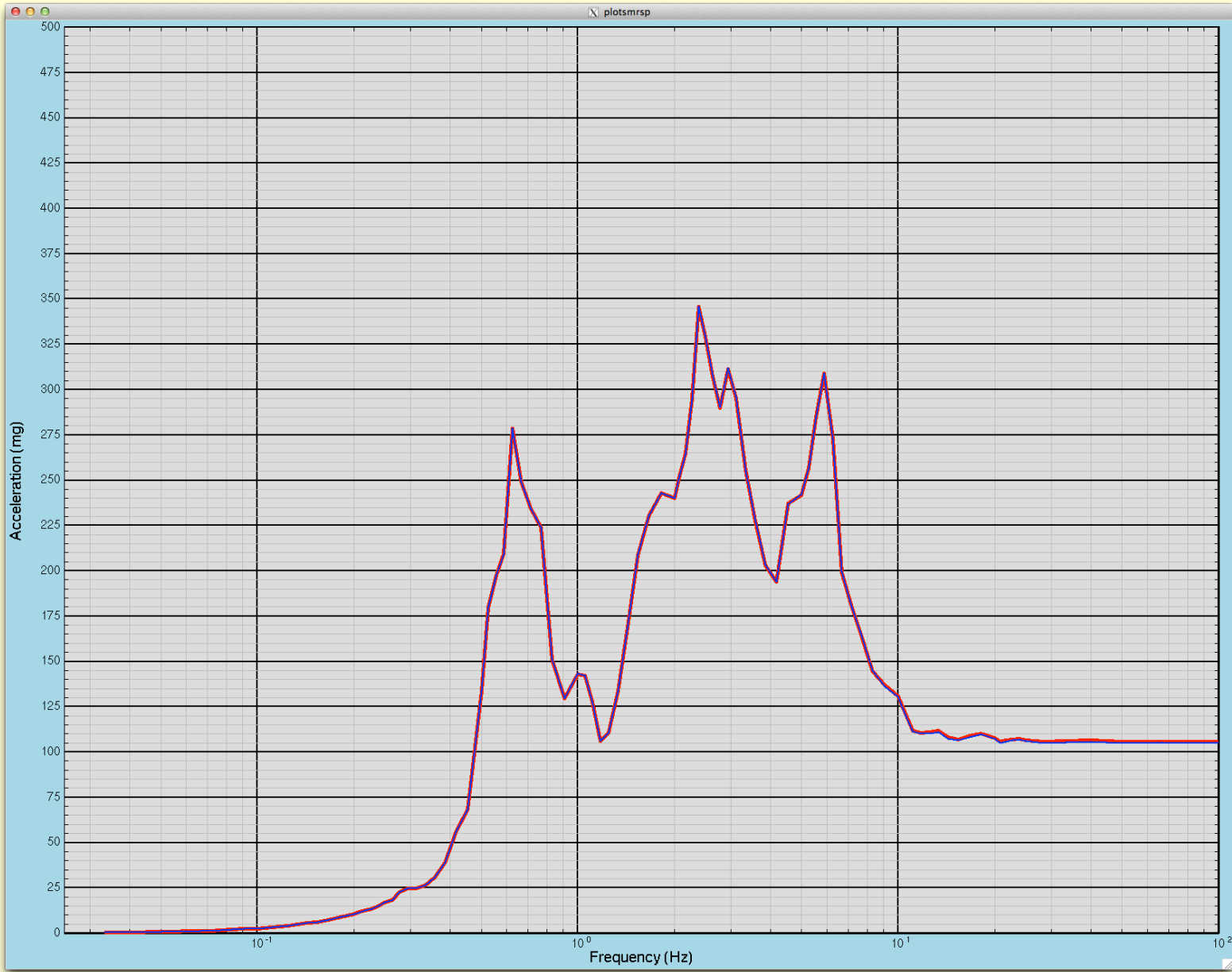
- Python-based web server
- Along with the various python extensions, provides a comprehensive toolkit for developing custom web servers that are highly integrated into the Antelope environment (configuration, connectivity, etc.)
- Along with other components, will be sold as a separate BRTT product or as an add-on to existing Antelope site licenses
- Current version is not ready for release. We are probably one year away from a production version.

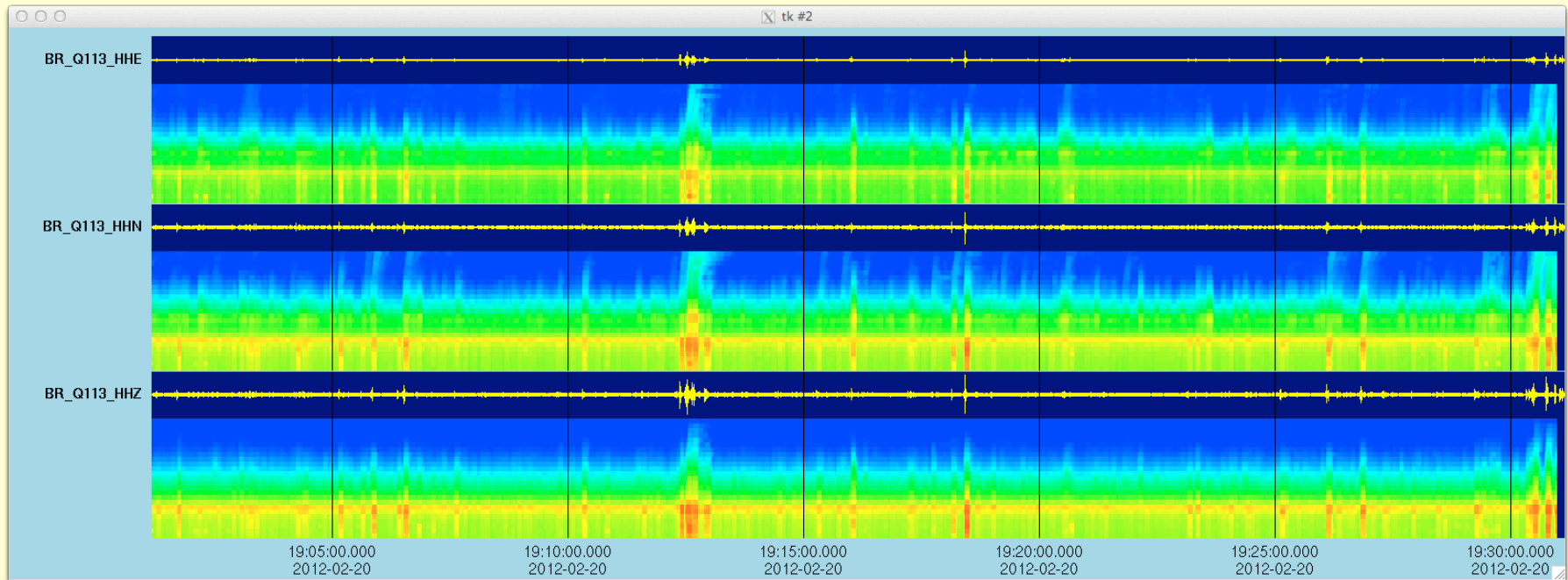
# Bighorn



## ***Bighorn - orbsmrsp***

- New ability developed for producing continuous time-dependent strong motion response spectra
- Expanded floating point data representations within ORB packets and Datascope waveform files
- Pf ORB packets to represent time continuous strong motion response spectra
- Provides a very fast method for computing continuous time-dependent response spectra for large numbers of channels









OVERALL FACILITY MAP SPECTRA FACILITY SOH

SMDemo0 FACILITY STATUS: NORMAL

OUTPUT FROM SPECTRD FOR FACILITY: SMDemo0 FACILITY

