PQLX XML Input

Introduction

PQLX provides the possibility to import data not specifically trace-related. Specifically, using XML format files, the following information can be imported to a PQLX Database:

- Channel Meta-Data Information
- Seismic Event Information

General Description

Using XML-format input files, it is possible to import additional information for use within the client GUI program, pqlx. The manner in which this import occurs is the following:

- XML-format input file provided and placed into directory $PQLXXML
- Data is imported during next execution of server program, pqlxSrvr
- Once data file has been imported, file is moved to directory $PQLXXML/hist with a date/time stamp added to the filename.

Since this import is automatic upon execution of the server program, it is quite easy then to create a separate process outside PQLX that is responsible for generating these files. For example, channel meta-data information may be extracted from another database and written to the PQLX XML input file ready for subsequent automatic import.

XML File Name Format

The XML file name format must adhere to the following naming conventions:

  dbName.importType.xml

where
  dbName is the name of the PQLX database to import to
  importType is one of the following values:
- **chnMETA** - representing channel meta-data information
- **eventInfo** - representing seismic event information

Channel Meta-Data

The following channel-specific meta-data information may be imported:
- Start and End Dates information represents
- Site Name
- Position: Latitude, Longitude, and Depth
- Sensitivity
- Units
- Instrument ID
- Azimuth
- Dip
- Sample Rate

Since all information is defined to be valid for a specific date range, it is possible to input all information for a channel's entire life. If on import a record is found to have been previously imported, it is replaced. Thus, it is possible to re-import information guaranteeing that all previous records are deleted and replaced.

A sample input file can be found in directory $PQLXXML, named
dbExample.chnMETA.xml.

Seismic Event Information

The following event-related information may be imported:
- Description: Name and ID
- Origin ID
- Providing Catalog
- Location Information: Time, Latitude, Longitude, and Depth
- Magnitude and Type

If on import a record has been previously imported, it is replaced. Thus, it is possible to re-import information guaranteeing that all previous records are updated as expected.

A sample input file can be found in directory $PQLXXML, named
dbExample.eventInfo.xml.

Post-Import Usage

Once the information has been imported, it may be used in the following ways within the client program 'pqlx':

1 Channel Meta-Data Information:

    1.1   Within STN Viewer Main Tab - on mouse-hover over channel label, display as pop-up the channel-specific meta-data information corresponding to the specific date and time of data on display.

    1.2   Within STN Viewer Analysis Tab - Station location information used when computing predicted arrival times vs. a selected seismic event.

    1.3   Within STN Viewer Analysis Tab - Channel azimuth and sensitivity information from the XML files (not the response file) is used for the necessary computations in generating the Particle Motion plot.

2 Seismic Event Information:

    2.1   Within STN Viewer Analysis Tab - Imported events are selectable via the side-bar button 'Events'.

    2.2   Selected event used to compute predicted arrival times vs. channel data on display. Channel Meta-Data information is also needed for this.

    2.3   Selected event used to compute Event Back Azimuth for computation of Particle Motion plot. Channel Meta-Data information is also needed for this.