DSV has several components.
- **Data View** window: Map from a data source to a view
- **QCDisplay**: View three dimensional slices of the data
- **TkCon**: Command line interface.

## Data View

The primary purpose of this window is to establish a mapping between a data object and a view object. Data objects are displayed in the left half of the window and the view objects are displayed in the right half of the window. Data vectors can be dragged to a view variable and dropped. The view dependence on the data format is eliminated by requiring the data object to pass a vector.

New data formats can be added by creating a tcl package consisting of a few tcl scripts and possibly a shared library containing the C or C++ data reading and navigation routines. DSV can then load these packages as required. DSV can be connected to multiple data sources, even of different types, at the same time.

The Data View window is all Tcl/Tk and uses some widgets from the BLT and Bwidgets sets.

## QCDisplay

QCDisplay is a 3D display program. The drawing is done using Xlib primitives and the GUI uses the Motif widget set. QCDisplay compiles and runs on Linux using the Lesstif widget set.

The primary motivation is to have fast drawing while not requiring special graphics hardware. To enhance the drawing speed there are many ways to inhibit drawing of view items.

QCDisplay is highly configurable. You can modify the colors and save them, you can save interesting viewpoints and you can change the drawing mode from perspective to ortho-normal. Rotations are quick, as is zooming.

You can define multiple objects within QCDislplay and each object can have multiple items. For example, you could define a detector with GEANT and reconstructed information. You can then turn the detector off, leaving the other detectors visible, or just turn the GEANT or reconstructed information off.

## TkCon

TkCon is a command console for Tcl. QCDisplay and DSV have Tcl interfaces which can be invoked using the TkCon window. This can be useful either in creating scripts or when a GUI does not give the level of precision required. Setting the viewpoint or rotation origin to a specific position is often hard to do with a GUI.

TkCon has many advanced features that make it very convenient for use as a command line.

TkCon can be found at
www.purl.org/net/hobbs/tcl

Tcl/Tk can be found at
www.scriptics.com