Starting Screen

First thing the user sees. User picks the
file locations for the two grain files, then
clicks the button "read data".

Title of Software

| filepath/grain_file_type_1 | Browse |
| filepath/grain_file_type_2 | Browse |

BYU Logo

Read Data

After the user clicks the "read data"
button, the Scandata and Grainmap
objects are instantiated and member
functions are ran, with a progress bar
denoting progress.

Creating grain objects...

Reconstruction Options/IPF Image Display

After the progress bar reaches its end, the reconstruction dialog box and the IPF map display window appear. The user sets reconstruction options, then clicks the "reconstruct" button.

Reconstruction Options

Clustering Options

OR ▽

Phases

Minimum Triplet Misorientation (rad)

Minimum Trio Misorientation Sum (rad)

Clustering Misorientation Tolerance (rad)

Cleanup Options

Minimum Redundant Cluster Overlap Ratio

Minimum Interior Cluster Overlap Ratio

Similar Cluster Orientation Tolerance

Ambiguous Region Resolution Method

Simulated Annealing ▽

Number of Simulation Temperatures

Number of Trials per Temperature

Starting Accept Probability

Ending Accept Probability

Reconstruct

Drop-down menu to select orinetation relationship

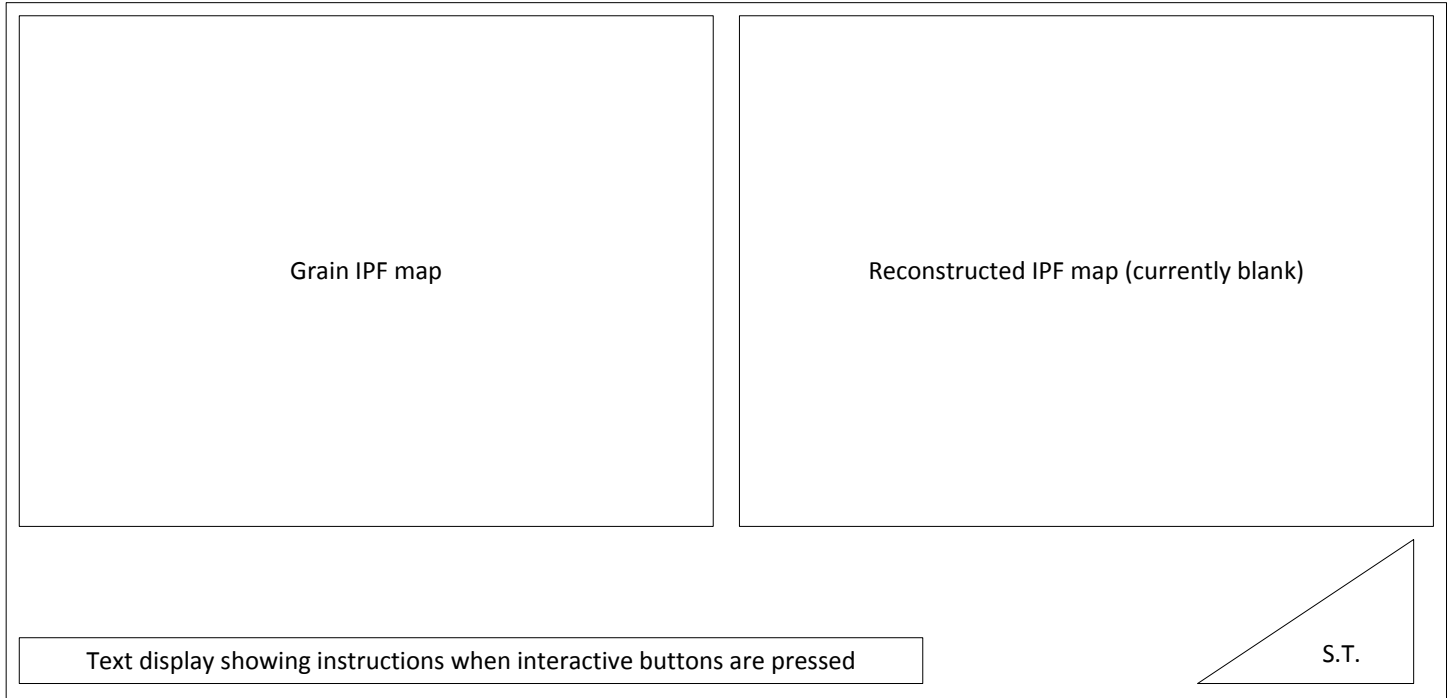Table showing "phasekey" data. Highlight row to include that phase in reconstruction

Fields to enter cutoff values

Drop-down menu to select method for resolving ambiguous overlap

Fields to enter simulated annealing parameters (grayed out if simulated annealing not selected in dropdown menu)

Reconstruction Options/ IPF Image Display

The IPF map display shows the grain IPF map on the left, and the soon-to-be reconstructed IPF map on the right. The bottom right corner contains a static image of the standard steriographic triangle, and the bottom left is a text display that will show instructions in later steps during the optional manual cleanup stage. The size of this panel should depend on the size of the scan, being no smaller than a pre-set size, and no larger than can be contained on the screen.

Grain IPF map

Reconstructed IPF map (currently blank)

Text display showing instructions when interactive buttons are pressed

S.T.

Once the "reconstruct" button is pressed (on the reconstruction options dialog box), the Reconstructor object is instantiated and its member functions ran. A progress bar comes up to indicate progress

Finding triplets...