



# Label Editor Video3D Feature List

## 1 General

With Video3D option Philosys Label Editor (LE) supports 3D annotation. This means that object around the ego vehicle are annotated in 3D space.

## 2 Window Manager

- Concurrent display of view on 3D scene in separate windows
- Layout Configuration by XML
- Hierarchical mix of vertical and horizontal sub windows
- Window size fixed or in relation to other windows
- Tabs allow stacking of windows
- Thumbnails allow fast switching of tabs

## 3 Views

- Define content displayed within a window
- Type is 3D view (regular), image (raw) or topview
- Regular or Thumbnails
- Perspective or Orthographic
- Associated with vehicle camera or with camera pointed to projection screen
- Camera calibration for un-distortion of background videos
- Color or video as background
- Position and orientation for virtual camera
- Field of View
- Near and far clipping
- Zoom in and zoom out limits
- Rendering to window or to image file (“screenshot”)
- Rendering to image file with auto crop and scale
- Render to video output pin for Mixin Adapter

## 4 Video streams

- Define mapping between camera name and pin
- Define “master” pin with clock
- Color outside image frame
- Min and mag filter





## 5 Overlays

- Sight ray
- Point cloud
- Label
- 3D models
- Edit region
- Trajectory
- Profile support

## 6 Object types

- Point3D
- Polygon3D
- Box3D
- Mesh3D
- Stationary objects

## 7 Car Body/Camera shake compensation

- Keep labels derived from reference data in sync with camera input
- Controlled by transformation matrix
- Input from filter graph pin as XML format

## 8 Object detector interface

- ADTF plugin
- Population of object specific context menu by detector plugin
- Invoked by context menu, create object, frame change, post processing
- Input is current label object, output is manipulated label object
- Access to image and point cloud data
- Display of point cloud data on overlay

## 9 Camera calibration interface

- ADTF plugin
- Projection function for multiple cameras
- Perspective and orthographic cameras
- Cameras with arbitrary non-parametric projection (e.g. fisheye)





## 10 Mixin Adapter interface (optional)

- Uses OSG Composite View for multiple view support
- Dynamic pins of enabled mixins
- Mixin activation by using ADTF configuration editor
- Display of GUI panels in specific windows
- Control of ambient and diffuse light color
- Lighting mode off, directional and positional
- Light position
- Coordinate systems ego and world
- Available as separate product as standalone filter usable as replacement for 3DSceneDisplay
- Compatible to ADTF Display Toolbox 2.0
- Provides source and binary compatible interface to 3DSceneDisplay, but some restrictions apply because of use of the composite viewer and LE specific OSG functionality
- No support of multiple synchronization methods
- No support of hidden access to osgViewer::Viewer
- IViewer::GetContextID() not guaranteed to work

