



EnSight User-Interface Customization

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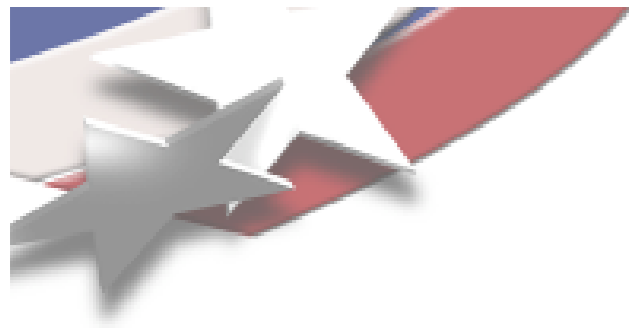
Why Customize ?

- Simplify Usage
- Make application specific processes easier
- Standardize across similar tools
- Implement capabilities not directly available in EnSight



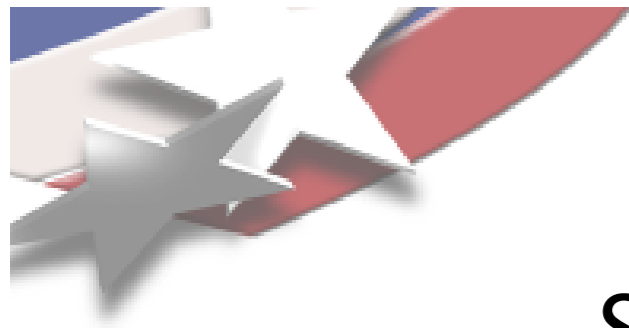
EnSight Customization Areas

- User-defined Commands
- Keyboard Macros
- Heads-Up Macro Panel
- User-Defined Reader GUI
- Site Preferences
- External Interface



User-defined Commands

- Defined in commands.define file
 - \$CEI_HOME/ensight80/site_preferences/macros
 - \$home/.ensight8/macros
 - User directory commands overlay system ones
- Command prompting
 - \$angle = ??Rotate angle
- Environment variables
 - \$string var
 - \$var = \$APPUSERHOME
 - \$var = \$APPENV_CEI_HOME
 - \$var = \$APPENV_???



Sample commands.define File

Version 1.0

EnSight Command Line Macro File

#

\$float angle

\$string on_off

\$float color1

\$float color2

\$float color3

\$string black

\$black = 0. 0. 0.

rotate about x axis

rotx \$angle | view_transf: rotate \$angle 0. 0.

color the viewport

vp \$black

vp \$color1 \$color2 \$color3 | play: viewport_color.cmd

#list test commands

list | test: list



Keyboard Macros

- Defined in macro.define file
 - \$CEI_HOME/ensight80/site_preferences/macros
 - \$home/.ensight8/macros
 - User directory macros overlay system ones
- Macro generation – macromake
 - PC keyboard values different than all others
 - PC only use of modifier keys
- Macro tips
 - Non-destructive behavior (toggles)
 - Present user quick reminder of available macros



Sample macro.define File

44 1 zoomout.cmd

46 1 zoomin.cmd

100 2 pdon.cmd pdoff.cmd

103 2 gui_panel_on.cmd gui_panel_off.cmd

104 2 showhelp.cmd hidehelp.cmd

110 2 normals.cmd rmnorms.cmd

111 2 show_hidden.cmd hide_hidden.cmd

114 1 reset.cmd

120 1 rotx.cmd

121 1 roty.cmd

122 1 rotz.cmd

127 1 delpart.cmd



Heads-Up Macro Panel

- OpenGL interface originally designed for use with head-mounted displays
- Defined in hum.define file
 - \$CEI_HOME/ensight80/site_preferences/macros
 - \$home/.ensight8/macros
 - Only one can be used and user file takes precedence
- Components
 - Part List
 - Variable List
 - Time Slider
 - User-defined command buttons



Sample hum.define File

location 0.3 0.03 0.45 0.1

size 1 3

background .3 .3 .3 .3

foreground 1. 1. 1. .8

macro 1 1 "Fast Exit" exit.cmd

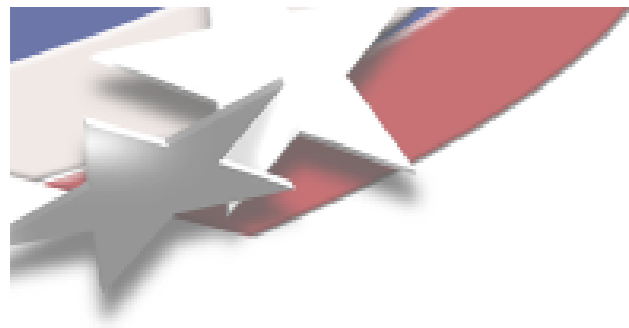
macro 1 2 "Plot Var/Node" plot.cmd

macro 1 3 "Flipbook" makeTransFlip.cmd

part list location 0.011 0.724 0.20 0.25

var list location 0.238 0.725 0.20 0.25

slider location 0.675 0.955 0.3 0.02



User-defined Reader GUI

Case (add,replace,delete)

****File information****

Format **MultiExodusII**

ExodusII Gold v2.58 (geom file required).
Use wildcards '*' & '?' for timesets and
<n:sprintf> suffix for multifile.
ExodusII casefiles (*.e2c) can be used.

(Set) geometry

(Set) result

(Set) measured

(Set) boundary

Path

Binary files are **Big-endian(HP,IBM,SGL,SUN)**

Time settings: Specify starting step

Tnew = * (Torig -) +

Selection

Use distribution factors
 Ignore side sets
 Ignore node sets
 Use node and element maps
 Verbose mode
 Use higher-order elements

Epsilon

Scale factor



Site Preferences

- LocalHelp.pdf
- ensight_reader_extension.map
- ensight.part.colors.default



External Interface

- Command Socket API
 - C code to send command language to EnSight through socket connection
 - Can be used concurrently with standard EnSight GUI
 - Python interface included with EnSight
- Python 2.3.4, QT, AND PyQT included with CEI software
- All tools needed to build external Python-based application with QT widgets to drive EnSight