EnSight Tips & Tricks Did you know...?

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Talk Segments

Part 1: Tips and TricksPart 2: Color PalettesPart 3: Introduction EnSight GraphicsPart 4: Python Scripting 'teaser'

Part 1 Outline

- EnSight user directories
- Ways to change settings
 - Preferences
 - Command line parameters
 - Environment variables
- Did you know about...
 - Data reader options?
 - How to load individual parts?
 - Extended CFD variables?

CEI manuals

- Getting Started Manual
- How To Manual
- User Manual
- Interface Manual
- Command Language Manual

88 pages 438 pages 826 pages 358 pages 1577 pages

- These are reference manuals. Users are not expected to read them cover to cover.
- I hope this presentation gives you useful knowledge about EnSight

EnSight user directories

• For storing personal preferences, macros, userdefined tools, license keys

Users may not have access to installation directories

• Default paths of EnSight user directories:

- Windows Vista and 7:
 C:¥Users¥username¥.ensight91
- Windows (XP and older):
 C:¥Documents and Settings¥username¥.ensight91
- Linux:
 - ~/.ensight91
- Mac:

~/Library/Application Support/EnSight91

• EnSight 9.2 will use .ensight92

Preferences

| Preferences | X |
|--|---|
| Preference Categories (select one) | |
| Annotation Color Palettes Command Line Parameters Data | |
| General User Interface Image Saving and Printing Interactive Probe Query Mouse and Keyboard | E |
| Parts Performance Plotter Query | Ŧ |
| General User Interface Preferences | |
| ✓ Tool tips | |
| Large parts list | |
| ✓ Frame mode allowed | |
| Record part selection in command language by Number | • |
| Save above items to preference file | |
| Modify and save icon layout | |
| Save size and position of main windows | |
| Close Help | |

- Preferences can be set in the menu
 Edit -> Preferences
- After a preference is changed, it must be saved to change the default setting
- See detailed info in How To Manual: How To... Set or Modify Preferences

How To ... Set or Modify Preferences

Color palettes:

Use continuous palette for per element vars

OFF (default)

ON



- Command Line Parameters:
 - See list of parameters
 - Add or remove them

| -batch -c -case -cip -cm -custom -display_list -gl -glsw -gold -hc -iwd -ogl Add selected | E titem to current args, below | |
|--|-----------------------------------|--|
| | | |
| Add Science | tell to current args, below | |

- Data:
 - Default data directory
 - If starting time step is not specified load:
 - Last (default) or first

• General user interface: Large parts list

OFF (default)

ON







- General user interface:
 - Modify and save icon layout...

Most users do not use all of EnSight's features. Turn off the icons you don't use!

- General user interface:
 - Frame mode allowed
 - Advanced feature for visual rigid body transformations
 - Record part selection in command language by
 - Name or Number (default)
 - Save size and position of main windows
 - Arrange the GUI windows to suit you, then save the layout
- Mouse and keyboard:
 - Assign functions to mouse buttons
- Performance:
 - Abort server operations
 - Set a time limit for operations in EnSight
- Query:
 - Auto Plot Queries

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- Color palettes
 - Use continuous palette for per eleme kars
- Command Line Parameters
- Data
 - Default data directory
 - If starting time step is not specified Ic
- General user interface
 - Large parts list
 - Frame mode allowed
 - æ Record part selection in command lai age
 - Modify and save icon layout...
 - Save size and position of main windo (AII)
- Mouse and keyboard lacksquare



Command line parameters

- Type manually
- Add to a script
- Set in the preferences
- For a list of command line parameters, see How To Manual: How To... Command Line Start-up Options



Environment Variables

- How to view/set environment variables:
 - Windows Vista and 7:
 - Control Panel -> System -> Advanced -> Environment Variables

• For a list of environment variables, see How To Manual: How To... Use Environment



Did you know...?

Reader options

- Many data readers have options that can be selected
- In the File Open window:

| Simple interface Advanced interface | In Advanced interface: |
|---|--|
| Data Format options Time options Binary files are: little_endian Set measured | 1. Select reader format in 'Data' tab |
| □ Load Internal Parts ▲ ↓ Use Meta Data Files □ Load _M1 _M2 vars □ Load all cell types ↓ Poly to Regular Cell | 2. Change to 'Format options' tab 3. Select options |
| Poly faced Hex to Poly Load all parts Cancel Select parts to load Help | Options are unique to each reader |

• For more information see the User Manual Section 2.3: 'Other Readers'

Individual Part Loading

File Open window 'Advanced interface' tab: 1.Select file format and data file 2.'Select parts to load...'

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| EnSight's | |
|-------------|--|
| part loader | |

- Load individual parts
- group parts
- choose visual representation
 - These settings can also be changed later in EnSight
- Useful for large datasets or when you only want a few parts
- Part loader can also be accessed after data is loaded using File -> Load Parts...
- Can be used to load multiple copies of the same part

| Parts List | |
|--|------------------------|
| espelhos disco_freio carroceria bottom | |
| Element Visual Rep. | 3D feature, 2D full 🗨 |
| | Feature Angle 10.0 |
| Load points and | normals only |
| Group these par | ts |
| New Part Description | |
| NOTE: Variables will not be loaded for newly created parts until this dialog is closed. | |
| Close Load S | Selected Load All Help |

Extended CFD Variables

| File Edit Help | Automatically compute |
|---|--|
| | common CFD variables |
| Available variable Actv Type Result Density () Gvn(N) Scalar | Open the variable calculator |
| Energy() Gvn(N) ScalarMomentum() Gvn(N) VectorFSMACH() Gvn(N) ConstantALPHA() Gvn(N) ConstantRE() Gvn(N) ConstantTIME() Gvn(N) ConstantCoordinates(*) Gvn(N) Vector | |
| Activate Activate All Deactivate Extended CFD Variables | Open CFD variables window |
| | Learn more in the How To Manua |



Extended CFD Variables



Extended CFD Variables

- Variables created:
 - Enthalpy
 - Entropy
 - Helicity
 - Mach
 - Pressure
 - ShockPlot3d
 - SonicSpeed
 - Swirl

- Temperature
- Vorticity

and more