

Control System Studio Training - Overview

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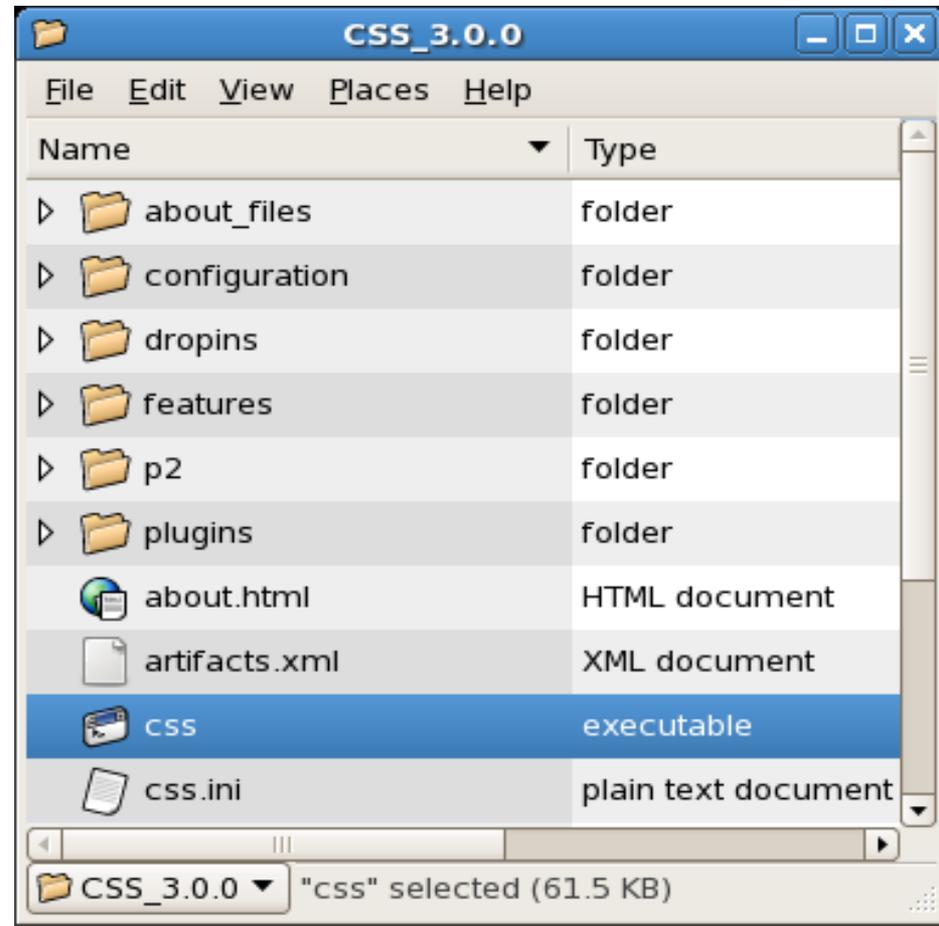
Oct. 2012 EPICS Meeting, PAL, Korea

Exercise: Start CSS

Precondition:

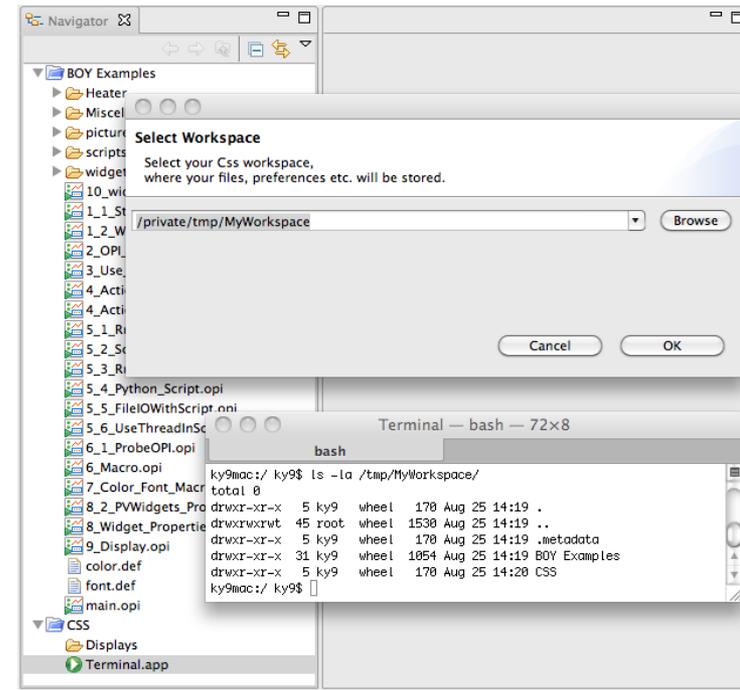
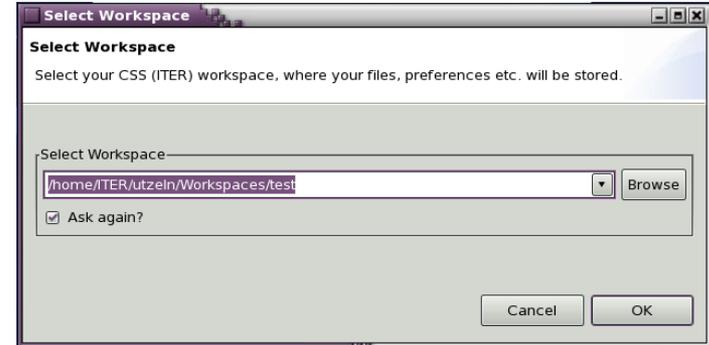
You somehow got CSS onto your computer

- **Start the executable**
 - **Linux: css**
 - **Windows: css.exe**
 - **Mac OS X: css.app**



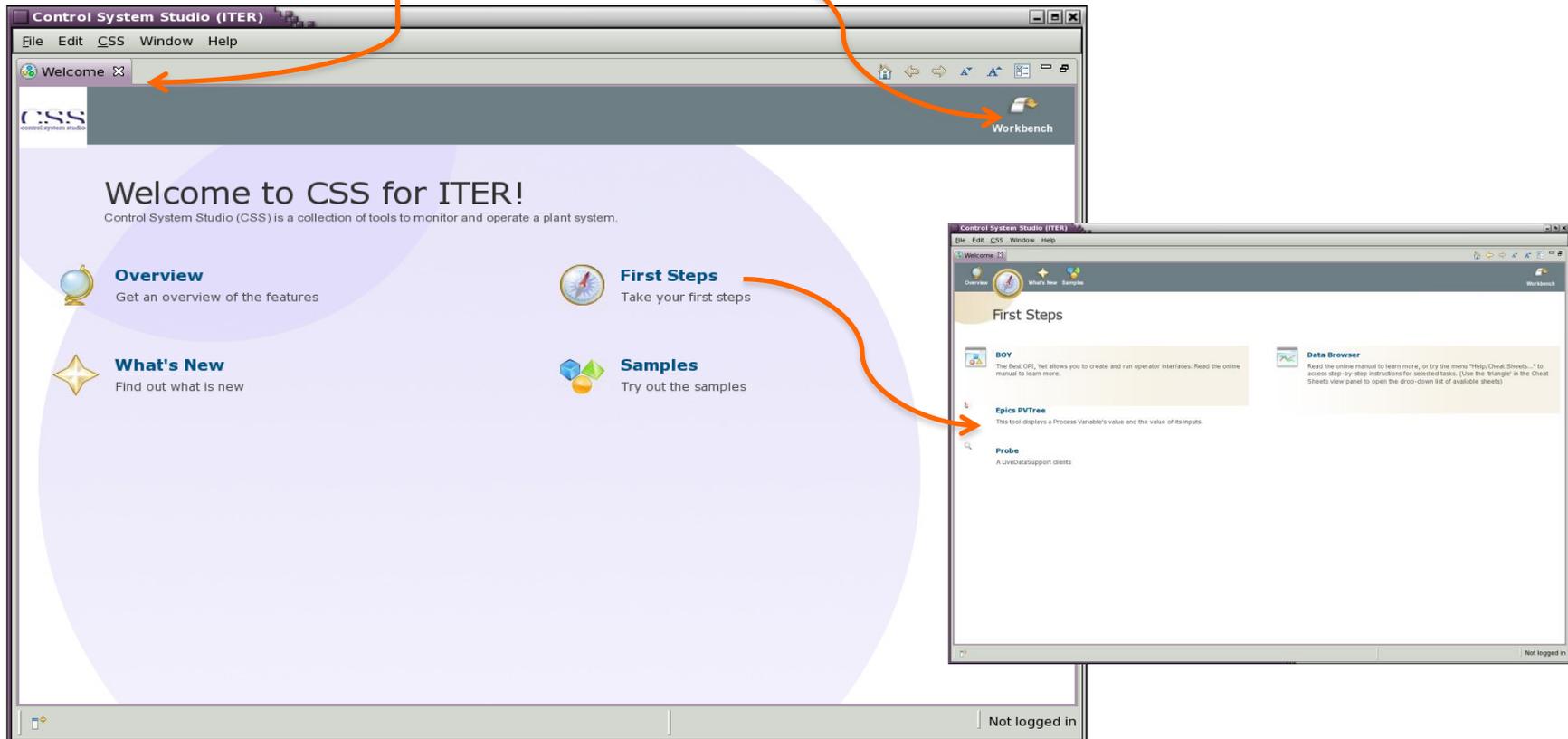
Workspace

- **Workspace**
 - Directory where you store files
 - Hidden `.metadata` directory with settings
- **Most versions of CSS prompt for a workspace at startup**
 - Check or change later via menu *File, Switch Workspace*
- **Run only one instance of CSS per workspace!**
 - Each user should have own workspaces
 - One for development, one for operation, ...



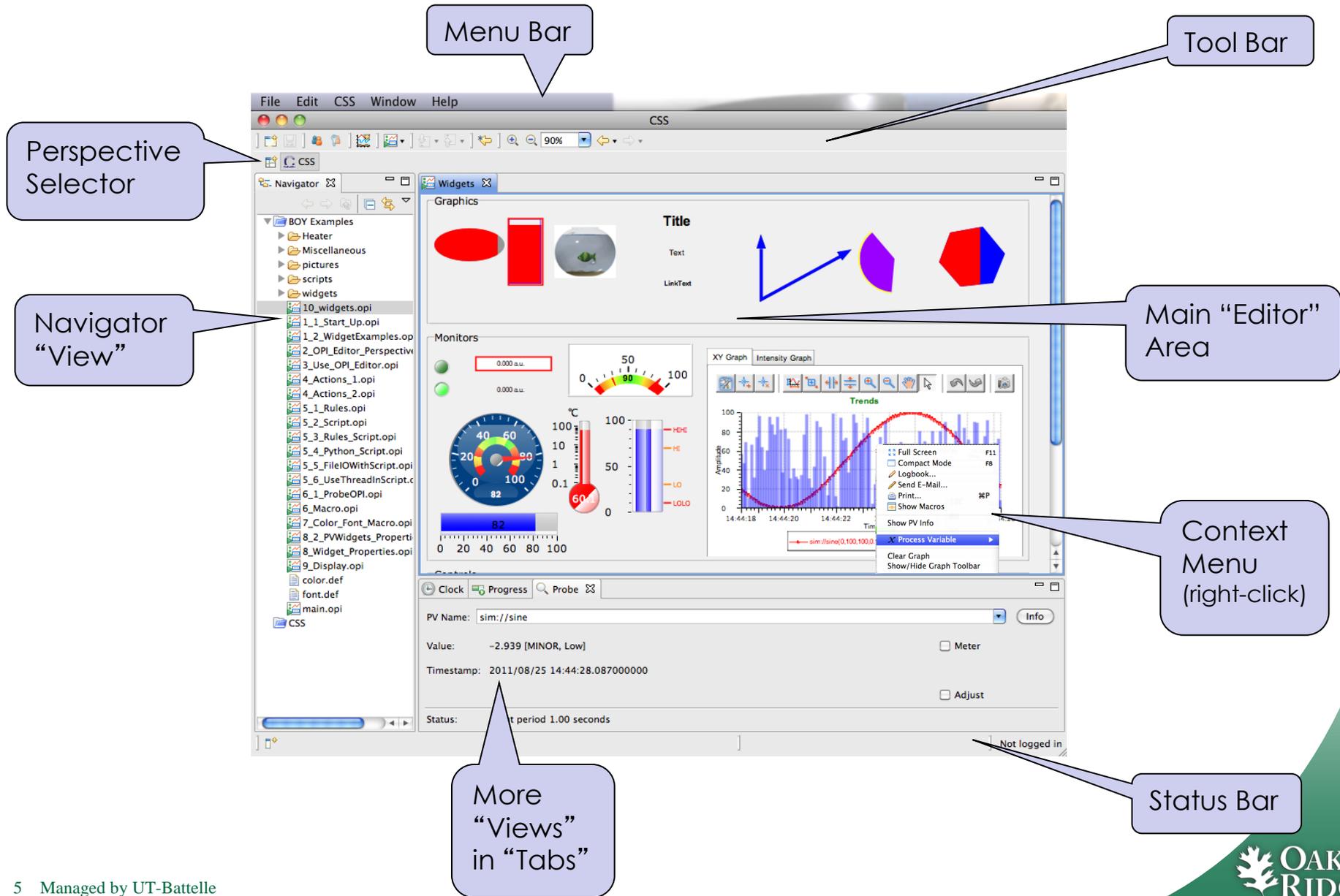
“Welcome”

- Displayed when CSS opened for the first time (i.e. on a new workspace)
 - Close here or here



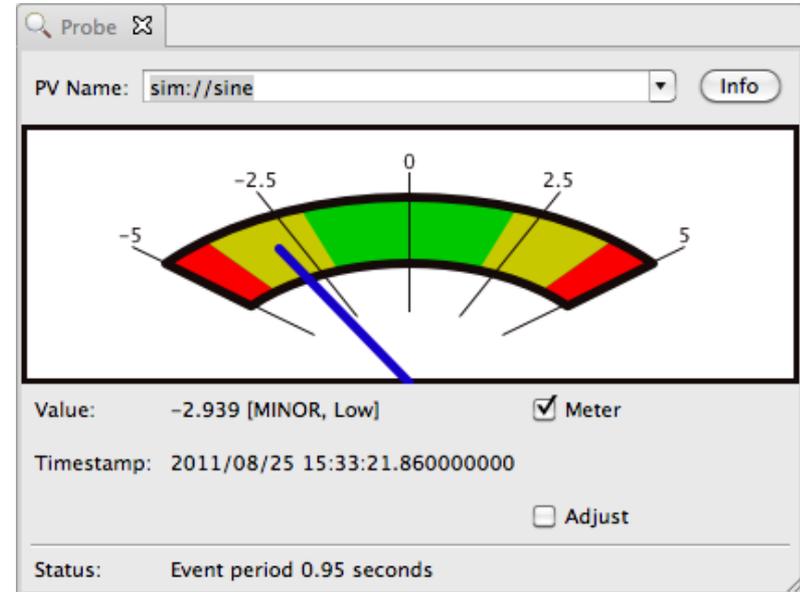
- Re-open: Menu *Help, Welcome*

Workbench



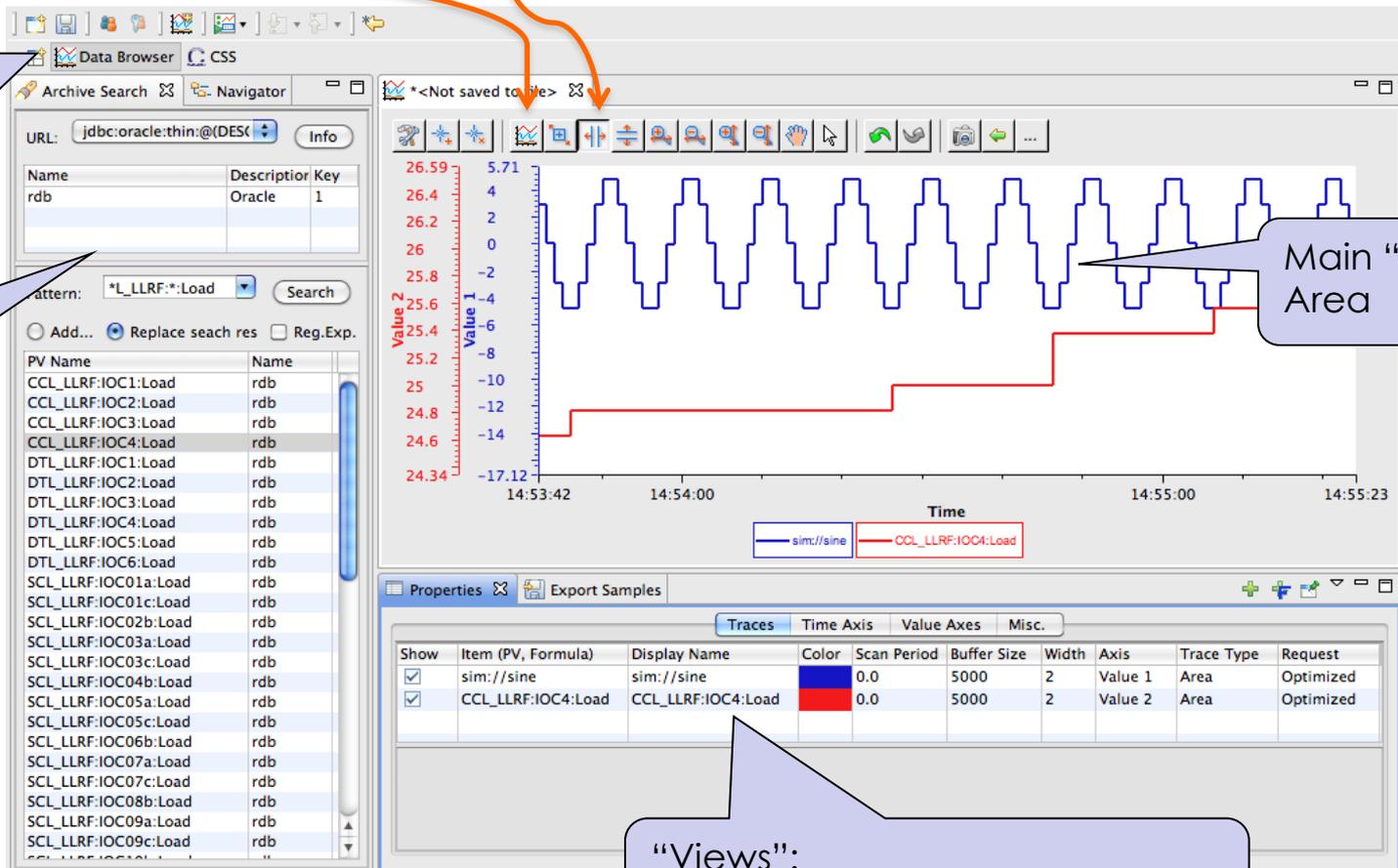
Exercise: Probe

- Menu *CSS, Diagnostic Tools, Probe*
- Enter PV name “sim://sine”
- Close Probe
- Open it again
- Select previously entered PV from drop-down
- Move Probe to other view area
- Close Probe



Exercise: Data Browser

- Menu *CSS*, *Trends*, *Data Browser*
 - Note change to “Data Browser” Perspective, new plot
- Plot context menu, *Add PV*, “sim://sine”
- Wait a little, use *Stagger* and *zoom* buttons



Data Browser Perspective

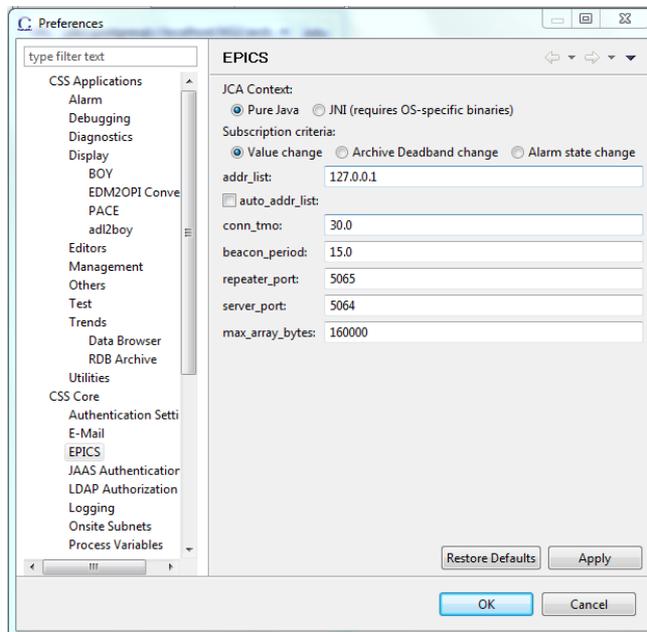
Archive Search "View"

Main "Editor" Area

"Views":
Plot Properties, Sample Export

Exercise: Preferences, Online Help

- Menu *Edit*, *Preferences* resp. *Help*, *Help Content*
- Locate preferences and help for
 - CSS Core, EPICS
 - CSS Applications, Trends, Data Browser



The screenshot shows the 'Help - Css' window. The left pane shows a tree view with 'CSS Applications' expanded, and 'EPICS Library' selected under 'Utilities'. The main pane displays the 'EPICS Library' page. The page title is 'EPICS Library' and it contains the following text:

This provides the ChannelAccess (CA) client library for accessing Process Variables on EPICS IOCs via the network.

Preferences

There are two main items to configure:

- **JCA Context:**
There is a pure Java as well as a JNI implementation available. The pure Java version is the default because it is easier to install and should work "out of the box", while the JNI implementation might provide maximum compatibility with existing EPICS installations.
- **addr_list and auto_addr_list**
If all CA servers (IOCs) are on the same subnet as the computer running the CSS application, you can stay with the default: Empty `addr_list`, using `auto_addr_list`. Otherwise, if you need to access PVs on a gateway or in another subnet, list the IP addresses of IOCs or IOC subnets in the `addr_list`, and un-check the `auto_addr_list`. For details on this as well as the remaining settings, refer to the EPICS Channel Access reference manual.

Note that changes require a restart of the application, they do not take effect at runtime!

Default Settings

Editors, Views, Perspectives

Editors: Central Workbench Area

- Text editor, BOY Operator Interface panel, Data Browser plot, ...
 - Associated with a file. “Do you want to save?” when closed.

Views: Auxiliary panels around Editors

- *Probe, Properties, Navigator, ...*

Perspective: Arrangement of Editors and Views

- *Size of editor area. Actual editors remain.*
- *Choice of Views. Views change when switching perspectives.*

Layout Options

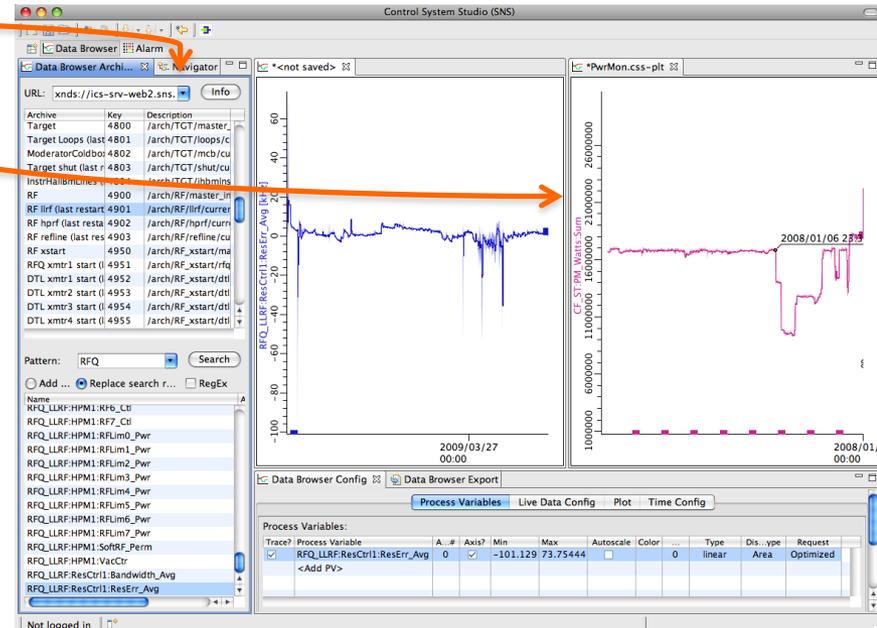
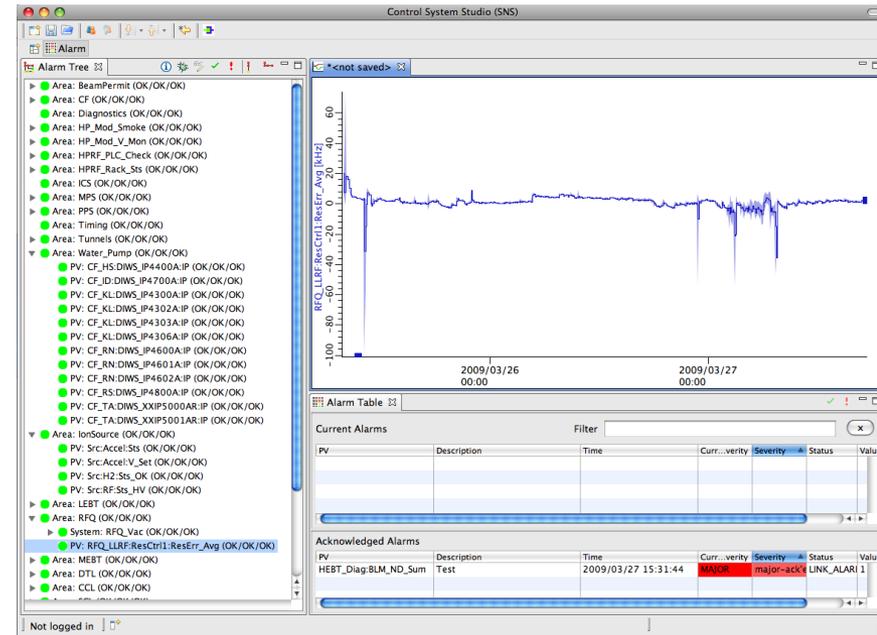
- **Editors, Views can be closed, reopened, repositioned**

- Grab title of panel, move while watching black rectangle indicate possible target locations

- Arrange 'behind' or 'beside' other panels

- **Multiple Perspectives**

- Use Context Menu of Perspective to Name, Save, Close, Restore



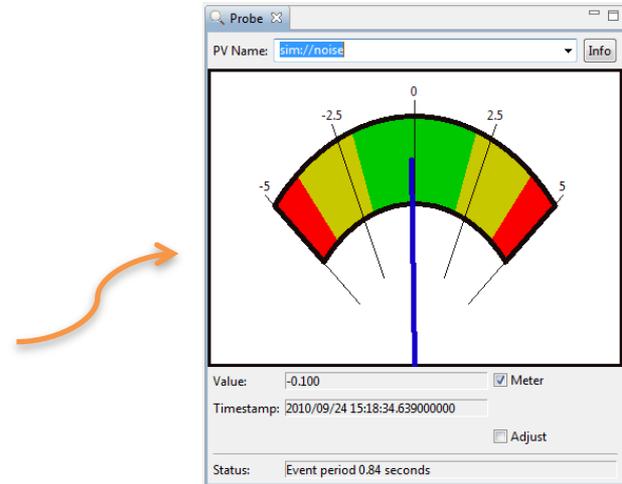
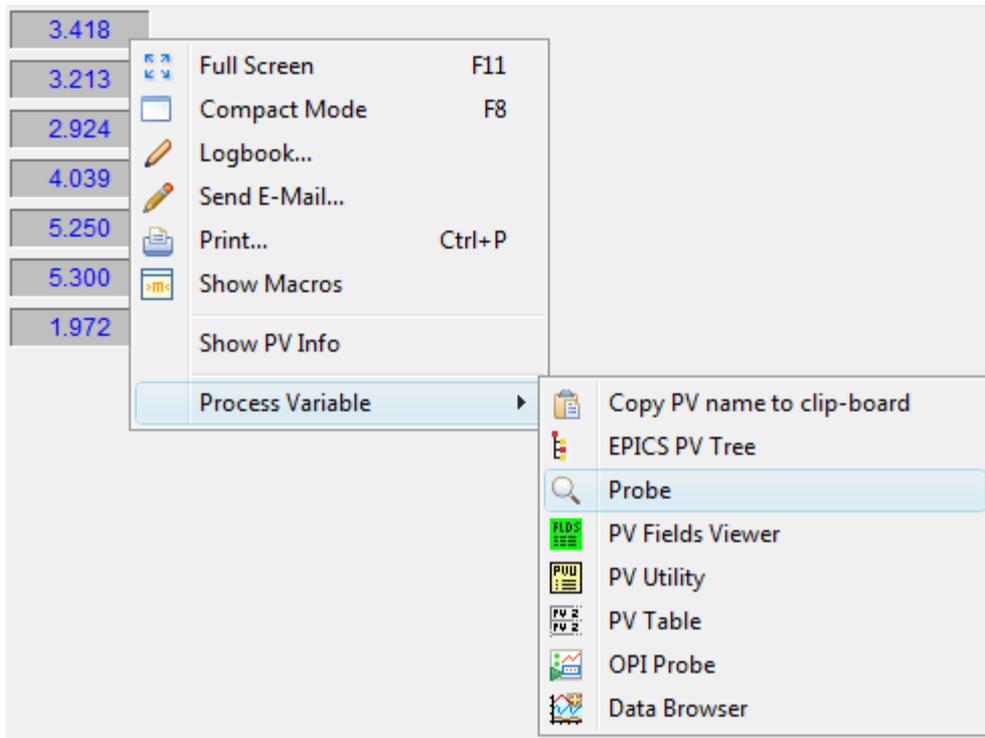
Editor/View Limitations

In the current release of CSS,

- **Editors stay in the central editor area of the screen, surrounded by multiple View areas.**
- **Views cannot be in the editor area and vice versa.**
- **Views can be ‘detached’ as standalone windows, but Editors stay in the workbench window. Multiple workbench windows are OK, though.**
- **In “Eclipse 4” editors and views will be more similar.**

CSS PV Exchange

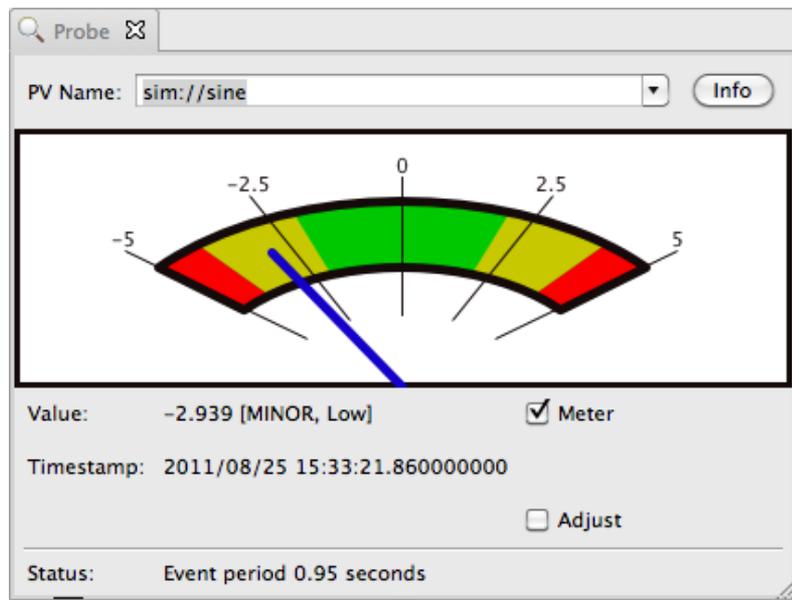
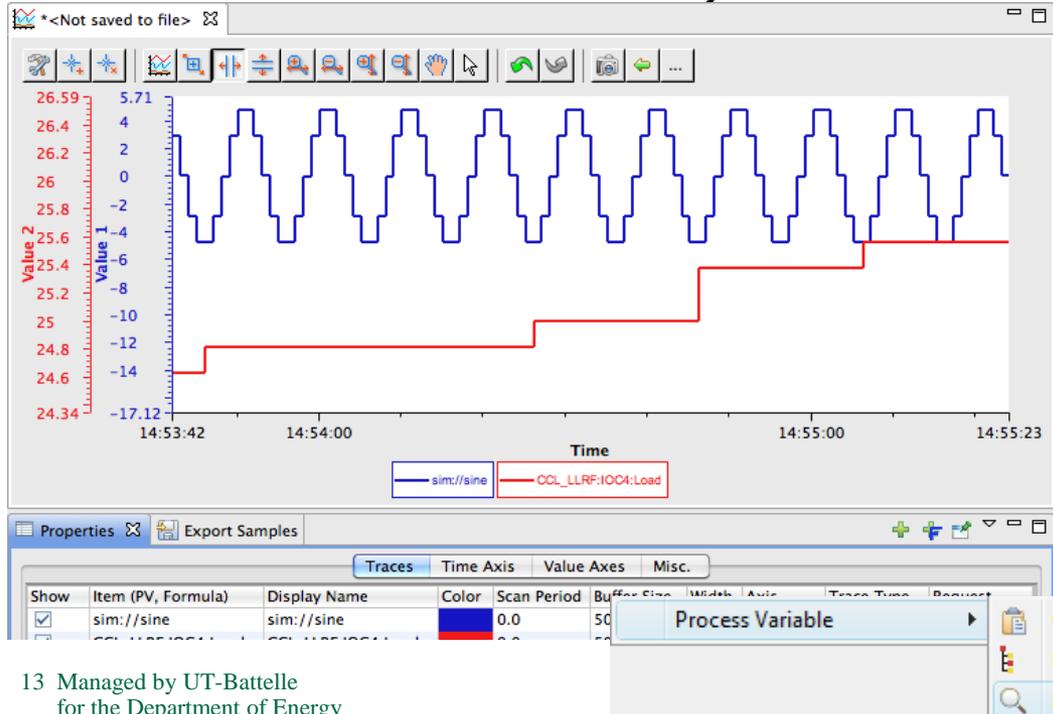
- PV in *any* CSS Tool
 - Context Menu → Select other PV Tools
 - Opens other tool with that PV



Exercise: Probe via PV Exchange

Open Probe on PV from Data Browser

- Properties Panel
- Context menu of "sim://sine" trace
- *Process Variable, Probe*

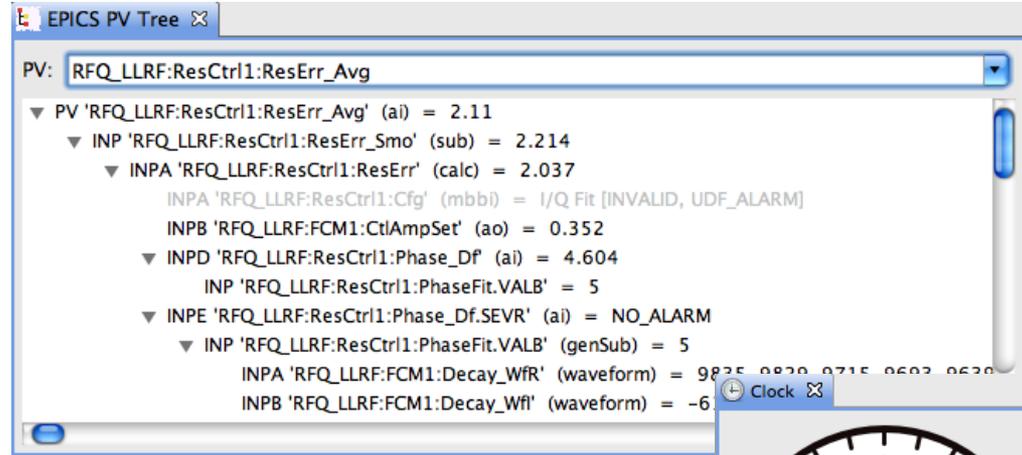


- Process Variable
- Copy PV name to clip-board
- EPICS PV Tree
- Probe

Exercise: Things to Try

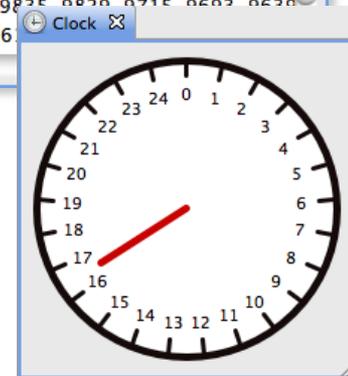
EPICS PV Tree

- Trace PV links



Clock

- What's special about it?



Therapist

- When all else fails

