Control System Studio (CSS)
The next Generation of OPI

PCaPAC
Jefferson Lab 27. October 2006

Matthias Clausen, DESY
Agenda

- Motivation
- CSS Design Criteria
- Applications
- CSS Development/ Collaboration
- Schedule
- Outlook
Motivation – Current State

Have a look at current operator interfaces:

- Many applications of different kind
  - Implemented by different programmers
  - Different look and feel
  - Implemented in different programming languages
  - GUI with text in specific languages (difficulties for Japanese Operators)
  - Running only on specific operating systems
  - Running only in the context of a specific control system type

- Which kind of data/information transfer is possible?
  - Drag and drop basic information as ‘string’
  - Cut and paste ‘strings’
  - Drag and drop ‘objects’ within the same program environment (Windows)
Motivation - Future

For the next projects at DESY

- Upgrade of Cryogenic Plant (2007) - tentative
- PERTA-III Utility Controls (2008)
- XFEL Test Facilities (2009)

 Desired features:

- Common look and feel
- Common functionality
- Running on several operating systems
- Drag and drop complex (control system – specific) objects
- Find related applications/ information
- Running in the context of several control systems
Environment:

- Java – to run on many platforms
- Eclipse – to use the RCP approach and to join a growing Eclipse developers community
Eclipse is an Open Source community
It was started in 2001 by IBM
  ● IBM donated a lot of research
  ● Controlled the early development, but later relinquished control
Out of the box it looks like a Java IDE
It is really a Plug-in manager
  ● That happens to come with Java Development plug-ins.
  ● You can take these out and put your own (and/or others) in
Eclipse Consortium Strategic Members

© Kenneth Evans, Jr.

Matthias Clausen, DESY
CSS – Control System Studio
Eclipse Platform

Java Development Tools (JDT)

Plug-in Development Environment (PDE)

Eclipse Project

Another Tool

Your Tool

Their Tool

Very Extensible and Very Flexible

© Kenneth Evans, Jr.  Modified From: Tony Lam, ICALEPCS Presentation, October 2004
Eclipse as a Java IDE
Eclipse As a Rich Client Platform

Looks like an application, not an IDE
Inherits a lot of functionality
- Persistence (Properties and Preferences)
- Help
- Featured About dialog (like Eclipse’s)
- Splash screen
- Dockable windows, and much more...

© Kenneth Evans, Jr.
Probe on Steroids
Leveraging the Eclipse Framework

JProbe SWT RCP is an experimental application to test some of the features of the Eclipse Rich Client Platform (RCP).

Its main feature is JProbe, an EPICS Channel Access application that monitors process variables and allows you to set the values for them. It uses Java Channel Access (JCA) and Channel Access Java (CAJ), a pure Java version of Channel Access developed at Cosylab.

© Kenneth Evans, Jr.
An RCP Application is Also a Plug-In
CSS-Core

Eclipse Platform

CSS Core

Your Plugin

CSS Libraries

Eclipse Project
RCP Plug-in in the CSS context
CSS Design II

Design Criteria:

- Common Look and Feel
- ‘Information on your Fingertips’
  Find related applications using <MB3>
- Drag and drop Java objects between (CSS compliant) applications
- Management of installed CSS installations
- Talking to control systems through interfaces rather than directly through control system specific API’s
- Authentication/ Authorization
- Internationalization
- Do not preclude other implementations
CSS Design II

Design Criteria:

- Common Look and Feel
- ‘Information on your Fingertips’
  Find related applications using <MB3>
- Drag and drop Java objects between (CSS compliant) applications
- Management of installed CSS installations
- Talking to control systems through interfaces rather than directly through control system specific API’s
- Authentication/ Authorization
- Internationalization
- Do not preclude other implementations
Common Look and Feel

CSS is running as an (Eclipse) RCP

- Inherits the Eclipse look and feel
- Adds CSS specific menus and actions
CSS Design II

Design Criteria:

- Common Look and Feel
- ‘Information on your Fingertips’
  Find related applications using <MB3>
- Drag and drop Java objects between (CSS compliant) applications
- Management of installed CSS installations
- Talking to control systems through interfaces rather than directly through control system specific API’s
- Authentication/ Authorization
- Internationalization
- Do not preclude other implementations
Information on your Fingertip
Accessing Object Aspect Data

Click on item in LDAP tree
Select ‘related’ plug-in from list
Plug-in started with item’s value (record name)

Data from EPICS-Ora database
Data from EPICS-IOC

Jefferson Lab
Object Aspect Management

GUI 1

GUI 2 (another View / Plugin)

<< use >>

<< extensions >>

CSS.DAT.A.RECEIVER

CSS.DAT.A.PROVIDER

CORE

# d2 #d4
1 55 2334
2 43 34
3 544 4434
4 2323 621
5 5455 53

CSS.Data

1 2 3 4

#d2 #d4
1 55 2334
2 43 34
3 544 4434
4 2323 621
5 5455 53

GUI 1

GUI 2 (another View / Plugin)

CSS.DAT.A.RECEIVER

CSS.DAT.A.PROVIDER

CORE

<< use >>

<< extensions >>

CSS.Data

1 2 3 4

#d2 #d4
1 55 2334
2 43 34
3 544 4434
4 2323 621
5 5455 53

CSS.DAT.A.RECEIVER

CSS.DAT.A.PROVIDER

CORE

<< use >>

<< extensions >>

CSS.Data

1 2 3 4

#d2 #d4
1 55 2334
2 43 34
3 544 4434
4 2323 621
5 5455 53

CSS.DAT.A.RECEIVER

CSS.DAT.A.PROVIDER

CORE

<< use >>

<< extensions >>

CSS.Data

1 2 3 4

#d2 #d4
1 55 2334
2 43 34
3 544 4434
4 2323 621
5 5455 53
Object Aspect Applications/ Data

Applications:
- (EPICS) Probe
- Device Properties *
- PV-Table
- StripTool/ Trend

Data:
- Configuration
  - EPICS Ora DB *
  - Device DB
  - Field-bus
- Maintenance DB
- Asset DB
- Purchase DB
CSS Design II

Design Criteria:

- Common Look and Feel
- ‘Information on your Fingertips’
  Find related applications using <MB3>
- Drag and drop Java objects between (CSS compliant) applications
- Management of installed CSS installations
- Talking to control systems through interfaces rather than directly through control system specific API’s
- Authentication/ Authorization
- Internationalization
- Do not preclude other implementations
Drag and Drop

An extendible list of DaD data dypes is defined in org.csstudio.data.exchange

- ‘Process Variable’
- ‘Process Front-end’
- ‘Archive Data’
- …
Design Criteria:

- Common Look and Feel
- ‘Information on your Fingertips’
  Find related applications using <MB3>
- Drag and drop Java objects between (CSS compliant) applications
- Management of installed CSS installations
- Talking to control systems through interfaces rather than directly through control system specific API’s
- Authentication/ Authorization
- Internationalization
- Do not preclude other implementations
CSS Management

- Query for existing CSS instances
- Control if and when CSS instances get updated from Eclipse Update Site
- Get statistical information from CSS instances
- Stop CSS instance in case of problems
CSS Management

XMPP Server

CSS Management Console

getList
update
getStatistics
...

CSS Update Site

CSS
CSS
CSS
CSS
CSS
CSS
CSS
CSS
CSS
CSS
CSS
Design Criteria:

- Common Look and Feel
- ‘Information on your Fingertips’
  Find related applications using <MB3>
- Drag and drop Java objects between (CSS compliant) applications
- Management of installed CSS installations
- Talking to control systems through interfaces rather than directly through control system specific API’s
- Authentication/ Authorization
- Internationalization
- Do not preclude other implementations
Interfaces - Interfaces

- One prominent Interface-Family are the Eclipse extension-points
Interfaces - Interfaces

- One prominent Interface-Family are the Eclipse extension-points
- Management Interfaces:
  - Authentication
  - Authorization
  - Update/ Manage (XMPP)
- Name Server (JNDI)
- Archive Access Layer (AAL)
- Data Access Layer (DAL)
Data Access Library Layers

CSS and other DAL applications

**Common DAL glue code**
- Collaborating set of common helper classes. Can be replaced by case or completely by DAL implementation.

**Proxy implementation (communication specific)**

**Communication libraries**
- So far supported Simulator (internal), EPICS-CA and GSI.

**DAL API**
- Wide style API with many methods and interfaces for programming convenience

**Proxy API**
- Simple API concentrated on data transfer and simplicity when implementing DAL

**Communication API**
- When common glue code does all the work, then this layer is thin, simple and oriented around communication particularities.
CSS Design II

Design Criteria:

- Common Look and Feel
- ‘Information on your Fingertips’
  Find related applications using <MB3>
- Drag and drop Java objects between (CSS compliant) applications
- Management of installed CSS installations
- Talking to control systems through interfaces rather than directly through control system specific API’s
- **Authentication/ Authorization**
- Internationalization
- Do not preclude other implementations
Authentication/ Authorization

CSS-Core provides the means to keep (access) control over graphical widgets, (graphically) issued commands or even individual classes.

To use this feature the user must be authenticated to get authorized to perform a specifically configured action.

**Authentication**
- CSS-Core provides an interfaces to verify Username/ Passwords entered into Login Window
- Login Window can be enabled/ disabled (if you are authorized)

**Authorization**
- CSS-Core provides an interface to verify the username for it’s actual role

**Implementation:**
This action can be performed by a user who has the role **Manager** for the Component **RF-System**
### Authorization Roles

Roles defined for user: claus

<table>
<thead>
<tr>
<th>Role^ / Component &gt;</th>
<th>CSS</th>
<th>Cryo</th>
<th>RF</th>
<th>Water/FLASH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guest</td>
<td></td>
<td></td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Operator</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineer</td>
<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td>*</td>
<td></td>
<td></td>
<td>Red</td>
</tr>
</tbody>
</table>

... ‘claus’ can not perform the action...
CSS Design II

Design Criteria:

- Common Look and Feel
- ‘Information on your Fingertips’
  Find related applications using <MB3>
- Drag and drop Java objects between (CSS compliant) applications
- Management of installed CSS installations
- Talking to control systems through interfaces rather than directly through control system specific API’s
- Authentication/ Authorization
- Internationalization
- Do not preclude other implementations
Fortunately Eclipse has a built in multi language support.
Developers are encouraged to make use of multi language support.
CSS Design II

Design Criteria:

- Common Look and Feel
- ‘Information on your Fingertips’
  Find related applications using <MB3>
- Drag and drop Java objects between (CSS compliant) applications
- Management of installed CSS installations
- Talking to control systems through interfaces rather than directly through control system specific API’s
- Authentication/ Authorization
- Internationalization
- Do not preclude other implementations
Do not preclude non-CSS implementations

The consequence of not using CSS interfaces is limited CSS functionality

Plug-ins which do not use all CSS interfaces can still run in the CSS context.

In fact: Any Eclipse plug-in can run in CSS
Applications

• Synoptic Display
• Alarm Display
• Archive Viewer
• Diagnostic Tools
Applications

• Synoptic Display
• Alarm Display
• Archive Viewer
• Diagnostic Tools
Designing and implementing a new Synoptic Display for the CSS is the main task of a new contract between DESY and the University of Hamburg.

The company C1-WPS is a key partner in a scientific project supported by German government. And – our partner through the University of Hamburg. The SDS is the proof of concept for the CoEUD – ‘Component Based End User Development’.

This way the two partners share the same interest:

-> To successfully implement a new Synoptic Display based on – and integrated in - CSS.
SDS basic requirements (subset)

- Graphics can be created by non professional programmers and thus are configured – or graphically programmed as one might call it.
- The persistent store of configuration data is kept in XML files.
- New graphic elements can easily be added to the CSS graphic framework. Ideally new elements have only to implement two extension points for the edit mode and the runtime mode.
- Display call up must be accomplished within the time frame of a second.
- Extended edit features. As a result of a survey of editing frameworks - GEF has been chosen.
- Support for zooming, panning and multiple graphic layers.
Applications

• Synoptic Display
• Alarm Display
• Archive Viewer
• Diagnostic Tools
JMS based Alarm System

IOC

Interconnection Server

A mail client

James Mailer

OpenJMS Server

Any Source

Filter Manager

SMS-Filter

Any Filter

OpenJMS Server

Jms2Ora

CSS-Client

Any Destination

SMS-Receiver

Any Receiver

Configuration

ORACLE

JMS based Alarm System

COMMAND

ALARM

LOG

SMS_CLIENT

ANY TOPIC
Alarm handling (CSS point of view)

- **JMSReceiver**
  - JMS-Nachrichten aus einer oder mehreren Topics
  - Filter Konfiguration

- **LDAPAlarmTree**
  - Alarm-Acknowledge

- **JMSLogTable**

- **OraAlarmQuery**
  - Archivierte JMS-Nachrichten

- **JMSSender**

- **JMSNotify**
  - Alarm-Acknowledge

- **LDAPServer**
  - Alarmstatus

- **JMSServer**
  - Alarm
  - Command
  - Log

- **Oracle DB**
Log viewer plug-in 1

- Log viewer plugin offers three views:
  - JMS Log view
  - JMS Log archive view
  - JMS Alarm view
- All views use the same data model

JMS Log view
- Displays every new message on top of the table
- Color rule for the severity of messages
- Context menus for css-datatypes (objekt contribution)
Log viewer plugin 2

JMS Alarm view
- Displays only messages of type "Alarm"
- First sort criteria is "Severity", second is "Eventtime"
- Alarm acknowledge (not yet implemented)

JMS Log archive view
- Displays log messages archived in the Oracle database
- Offers buttons with predefined time periods
- Popup window to set special time periods
Applications

- Synoptic Display
- Alarm Display
- **Archive Viewer**
- Diagnostic Tools
Archive Viewer

Archive Viewer by Sergei
- Existing Swing based viewer will be modified to support also Eclipse
- JFreeChart (Swing) -> draw to memory -> display image in Eclipse
- Status: ready by 5’2007

Archive Viewer by Kay Kasemir/ Albert Kagarmanov
- Supports AAPI
- Supports Eclipse contributions and CSS DaD Data Types
- Status: prototype – end of 2006

Archive Analyser
- Query for archive data with special conditions
- Status: collecting requirements
Applications

• Synoptic Display
• Alarm Display
• Archive Viewer
• Diagnostic Tools
Existing CSS Tools (subset)

- (LDAP) Namespace Browser
- Record Property Viewer
- Archive Chart
- JProbe

Other:
- PV-Table View
- JMS message table...
CSS Development/ Collaborating

Our Partners and their tasks:
Individuals:
• Kay Kasemir, Sergei Chevtsov, Emma Shepherd, ...
• Basic design, tools (archive viewer ...)
JSI (Josef Stefan Institute - Slovenia):
• Students in Collaboration with Cosylab
• Basic design, graphic libraries, management tools, login, secure password store
Cosylab:
• Data Access Layer (DAL), coordination of students work
C1-WPS (spin-off from University of Hamburg):
• Basic design, CSS-Core refactoring, CSS-Wizard, synoptic display studio (SDS)
University of Hamburg:
• Students writing their diploma thesis
• Authorization in CSS
• CSS record/ playback
DESY:
• Logging, alarming, database integration, managing CSS
Coordinating CSS Developments

Code repository:
- CVS repository at DESY
- ‘Open’ for registered users with DESY account (~15 external)

Mailing List:
- css-core@desy.de

Web Page:
- http://css.desy.de
- http://www.cs-studio.org

Collaborative Tools (bug tracker...)
Collaborative Software Development

-> Tracker

<table>
<thead>
<tr>
<th>Tracker Name</th>
<th>Status</th>
<th>Open Items</th>
<th>Total Items</th>
<th>Assigned Items</th>
<th>Submitted by</th>
<th>Subscribed</th>
<th>Modified At</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bug Dug Tracker</td>
<td>Open</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>Customize</td>
</tr>
<tr>
<td>Change Request Tracker</td>
<td>New</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>Customize</td>
</tr>
<tr>
<td>Charge Request Tracker</td>
<td>New</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>Customize</td>
</tr>
<tr>
<td>Requirements Tracker</td>
<td>New</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>Customize</td>
</tr>
<tr>
<td>Task Tracker</td>
<td>New</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>Today 10:54</td>
<td>Customize</td>
</tr>
<tr>
<td>Summary</td>
<td></td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>Customize</td>
</tr>
</tbody>
</table>

Project Dashboard

Last 7 Days' Changes

Last 7 Days' Trends
Collaborative Software Development

-> Tracker

Project: CSS-SDS - Tracker: Task

<table>
<thead>
<tr>
<th>ID</th>
<th>Summary</th>
<th>Status</th>
<th>Owner</th>
<th>Submitted at</th>
<th>Assigned to</th>
<th>Submitted by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1076</td>
<td>Dynamic behaviour of the line model element</td>
<td>--</td>
<td>--</td>
<td>Today 10:50</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1075</td>
<td>Dynamic behaviour of the ellipse model element</td>
<td>--</td>
<td>--</td>
<td>Today 10:50</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1074</td>
<td>Dynamic behaviour of the rectangle model element</td>
<td>--</td>
<td>--</td>
<td>Today 10:49</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1073</td>
<td>Releasing mode</td>
<td>--</td>
<td>--</td>
<td>Today 10:49</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1072</td>
<td>Introduce a line model element</td>
<td>--</td>
<td>--</td>
<td>Today 10:49</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1071</td>
<td>Introduce an ellipse model element</td>
<td>--</td>
<td>--</td>
<td>Today 10:48</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1070</td>
<td>Introduce a rectangle model element</td>
<td>--</td>
<td>--</td>
<td>Today 10:48</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1069</td>
<td>Direct Manipulation of the SDS model</td>
<td>--</td>
<td>--</td>
<td>Today 10:48</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1068</td>
<td>Model Editor</td>
<td>--</td>
<td>--</td>
<td>Today 10:47</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1067</td>
<td>DAL Extension of the data model</td>
<td>--</td>
<td>--</td>
<td>Today 10:47</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1066</td>
<td>Integration into the CSS</td>
<td>--</td>
<td>--</td>
<td>Today 10:47</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1065</td>
<td>Erase file browser view for managing XML model files</td>
<td>--</td>
<td>--</td>
<td>Today 10:47</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1064</td>
<td>Introduce workspace concept</td>
<td>--</td>
<td>--</td>
<td>Today 10:46</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1063</td>
<td>Locate the data model within an XML based file</td>
<td>--</td>
<td>--</td>
<td>Today 10:46</td>
<td>--</td>
<td>awil</td>
</tr>
<tr>
<td>1062</td>
<td>Extensibility of the data model</td>
<td>--</td>
<td>--</td>
<td>Today 10:46</td>
<td>--</td>
<td>awil</td>
</tr>
</tbody>
</table>
Collaborative Software Development

-> (Tracker) Story Cards (Agile Programming)
Exporting Tracker for Agile Project Meetings

Set Priorities To ‘Story-Cards’

<table>
<thead>
<tr>
<th>ID</th>
<th>P</th>
<th>Summary</th>
<th>Status</th>
<th>Owner</th>
<th>Submitted at</th>
<th>Assigned</th>
<th>Submitter</th>
<th>Start Date</th>
<th>End Date</th>
<th>Estimated</th>
<th>% Spent</th>
<th>Category</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1068</td>
<td>High</td>
<td>Model Editor</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
<td></td>
<td>Critical</td>
</tr>
<tr>
<td>1076</td>
<td>Normal</td>
<td>Dynamic behaviour of</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1075</td>
<td>Normal</td>
<td>Dynamic behaviour of</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1074</td>
<td>Normal</td>
<td>Dynamic behaviour of</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1073</td>
<td>Normal</td>
<td>Rendering mode</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1072</td>
<td>Normal</td>
<td>Introduce a line model</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1071</td>
<td>Normal</td>
<td>Introduce an ellipse m</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1070</td>
<td>Normal</td>
<td>Introduce a rectangle</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1069</td>
<td>Normal</td>
<td>Direct Manipulation of</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1067</td>
<td>Normal</td>
<td>DAL-Extension of the</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1066</td>
<td>Normal</td>
<td>Integration into the CS</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1065</td>
<td>Normal</td>
<td>Simple file browser view</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1064</td>
<td>Normal</td>
<td>Introduce workspace</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1063</td>
<td>Normal</td>
<td>Load/store the data m</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1062</td>
<td>Normal</td>
<td>Extensibility of the da</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1061</td>
<td>Normal</td>
<td>Design a simple data</td>
<td></td>
<td>awill</td>
<td>25.10.2006 18:45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Enabling Collaboration

Free access to cvs repository

Basic design criteria

- No hard coded configuration parameter
Eclipse preference pages are used to define current values of CSS plug-ins. (example: EPICS CA-Settings)

Preference pages allow the flexible implementation of plug-ins independent from the local runtime settings.
Enabling Collaboration

Free access to cvs repository

Basic design criteria

- No hard coded configuration parameter
- Do not preclude implementations with limited (no) CSS usage

CSS-Wizard

- Quick Starter for CSS plug-in developments
- Individual wizards to describe specific functionalities
  ⇒ Drag and drop
  ⇒ Contributions …
- ‘Encourage’ the developer to use CSS tools, to enter help pages, to fill the multi language files …
Schedule

10’ 2006
● CSS-core design finished (C1-WPS)
● CSS refactoring started (C1-WPS)
● CSS Wizard started (C1-WPS)
● Authorization configuration ready (DESY – IT)

11’ 2006 (end)
● CSS refactoring, wizard - beta ready to publish (C1-WPS)
● DAL V 1.1 finished (incl. CA plug) (Cosylab)
● Alarm viewer (incl. tree view) beta ready (DESY)
● Kay’s utility tools (Kay Kasemir)

12’ 2006
● SDS first working version (reduced functionality) (C1-WPS)
● CSS update site open to public (DESY / C1-WPS)

1st Q 2007
● Management plug-in (JSI-Students)
● Authorization beta (Univ. Hamburg-Students)

2nd Q 2007
● Sergei’s archive viewer (Sergei)
Outlook

CSS is leaving the ‘vapour ware’ cloud
CSS is getting real
First test version(s) this year

Hope it will attract others to join this initiative

... or just give us input to improve the product
What is Missing?

What did I forget to mention?

CSS itself is independent from EPICS
(Therefore it’s not called EPICS-Office any more)

Any idea for a CSS-Logo?
Useful Books

Excellent, Must have

Only RCP book

For the Help Plug-in

http://www.cs-studio.org