

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

CSS Design I

Environment:

- Java – to run on many platforms
- Eclipse – to use the RCP approach and to join a growing Eclipse developers community

Eclipse

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

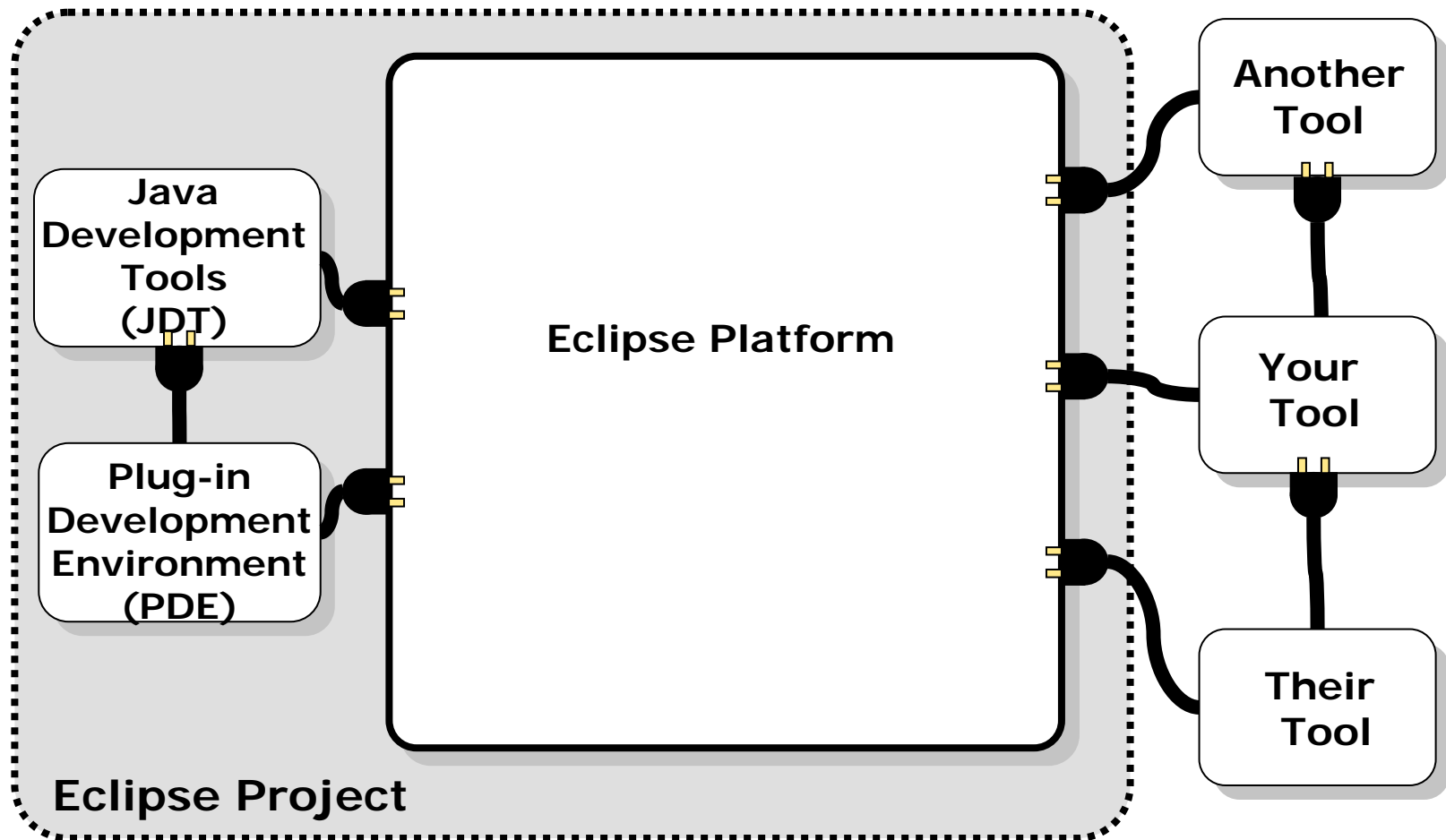
It is really a Plug-in manager

- That happens to come with Java Development plug-ins.
- You can take these out and put your own (and/or others) in

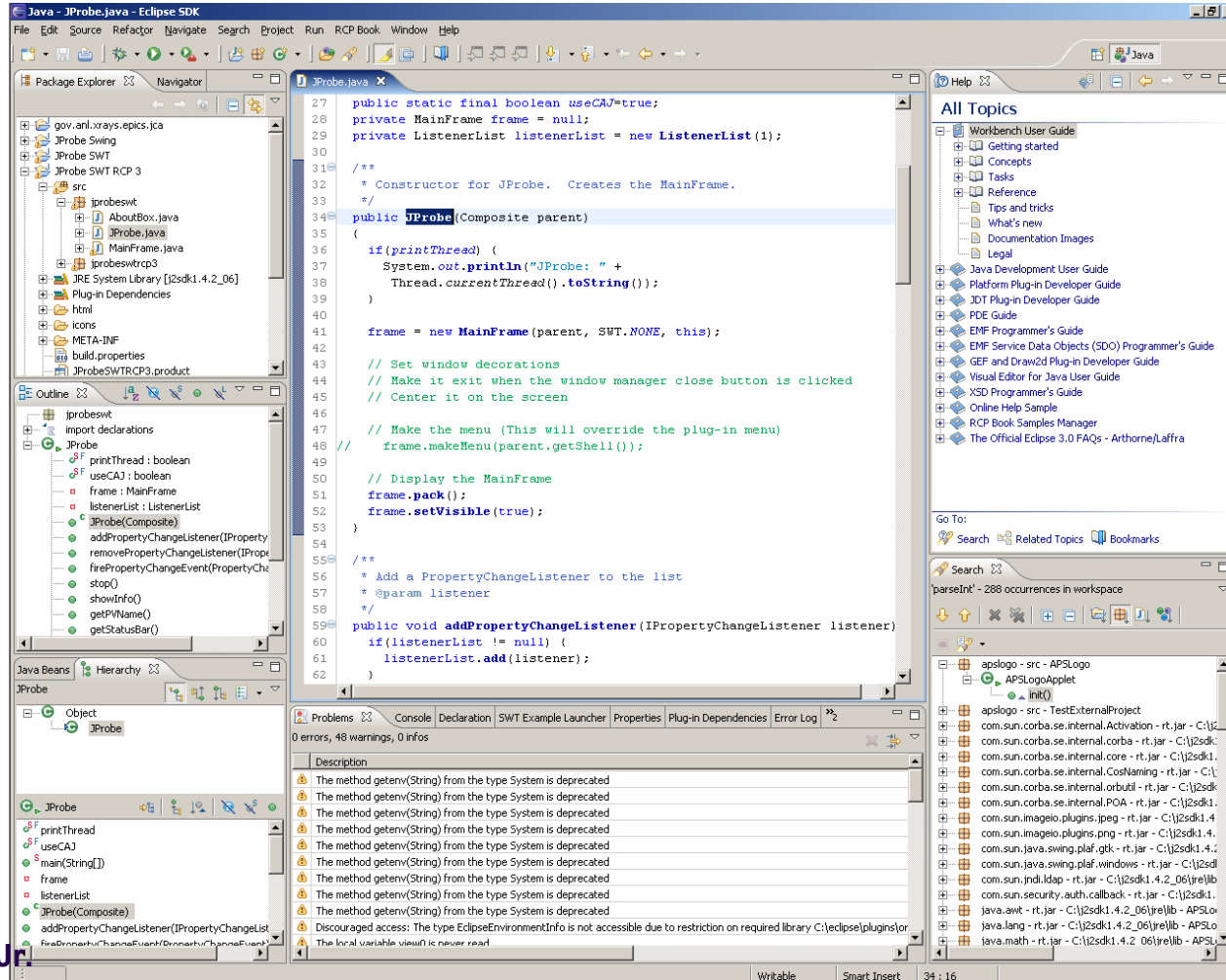
Eclipse Consortium Strategic Members



Very Extensible and Very Flexible



Eclipse as a Java IDE



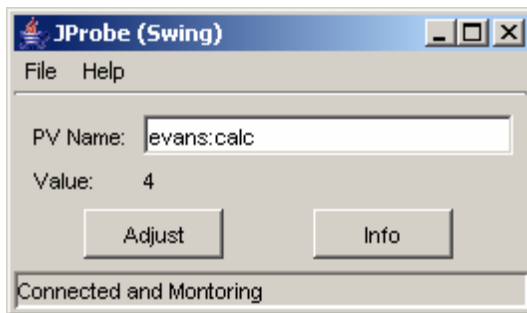
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Eclipse As a Rich Client Platform

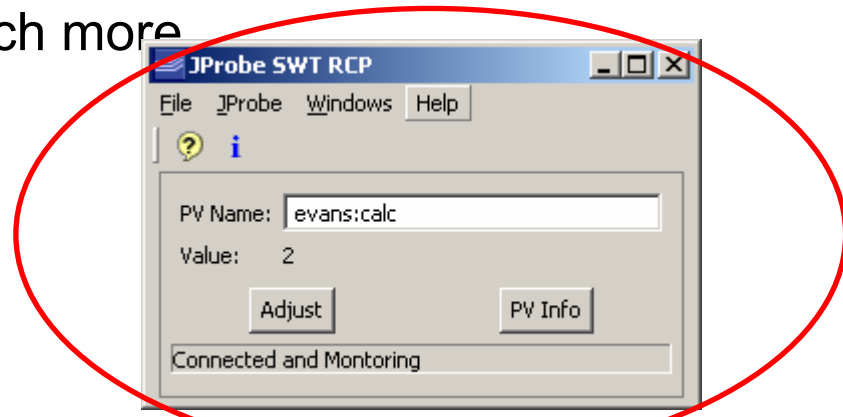
Looks like an application, not an IDE

Inherits a lot of functionality

- Persistence (Properties and Preferences)
- Help
- Featured About dialog (like Eclipse's)
- Splash screen
- Dockable windows, and much more



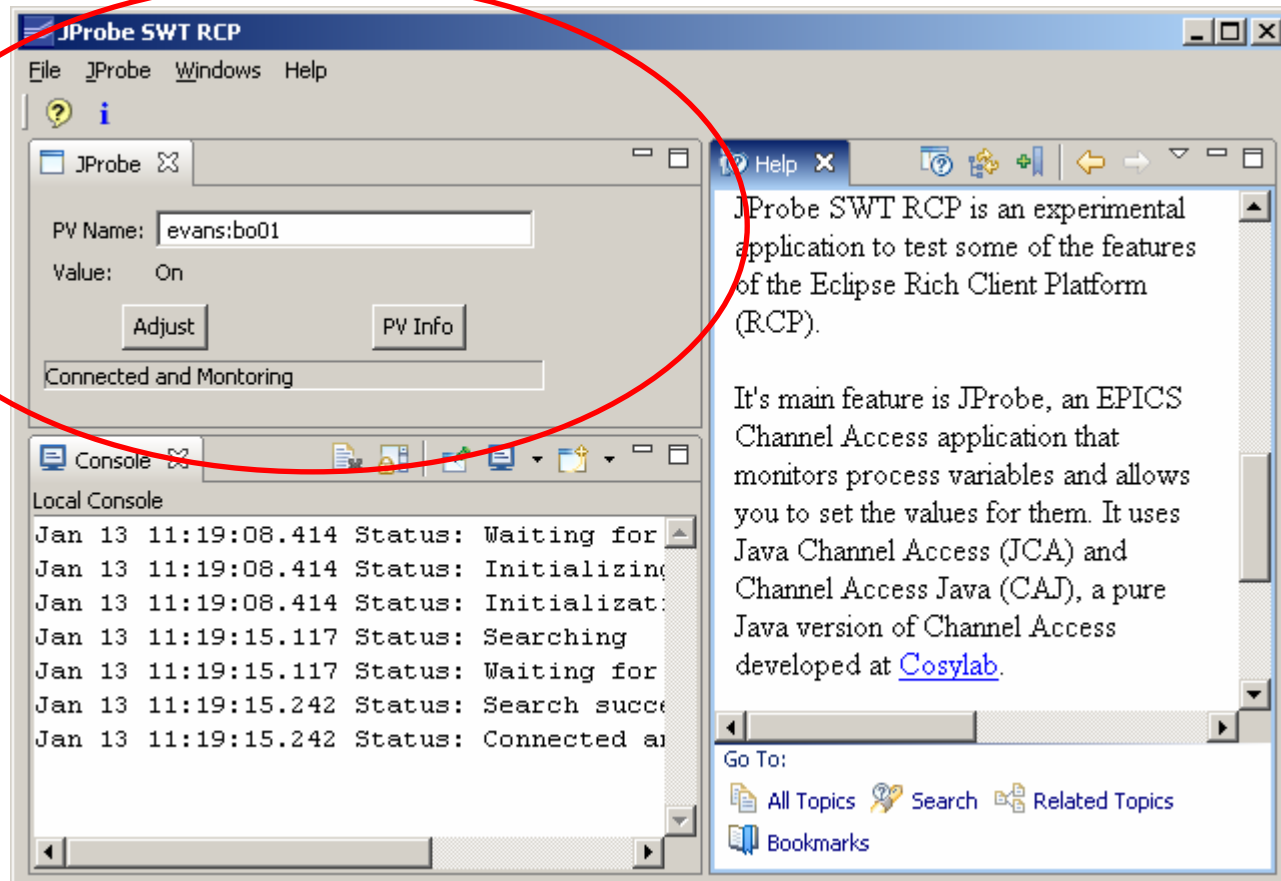
Java Application



RCP Application

Probe on Steroids

Leveraging the Eclipse Framework



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An RCP Application is Also a Plug-In

The screenshot displays the Eclipse IDE interface. On the left, the Project Explorer shows a tree view for the 'Test IOC' project, including folders like 'bin', 'cygwin-x86', 'configure', 'db', 'dbd', 'include', 'iocBoot', 'ioctest', and 'lib'. The 'st.cmd' file is selected in the 'ioctest' folder. The main editor window shows the contents of 'st.cmd', which includes comments and code for loading a database and registering record device drivers. The Console window at the bottom shows the output of running 'st.cmd', including the command '#!../../bin/cygwin-x86/test' and the output of 'iocInit' and 'dbLoadDatabase'. The JProbe window, which is circled in red, shows a PV Name of 'evansHost:aiExample' and a Value of 6. The console output also shows the command 'epics> db1' and the resulting PV values.

```
#!/../../bin/cygwin-x86/test

## You may have to change test to something else
## everywhere it appears in this file

#< envPaths

## Register all support components
dbLoadDatabase("../dbd/test.dbd",0,0)
test_registerRecordDeviceDriver(pdbbase)
```

Test IOC [C/C++ Local Application] C:\Documents and Settings\evans\My Documents\Eclipse\runtime-workspace\Test IOC\bin\cygw
Starting iocInit

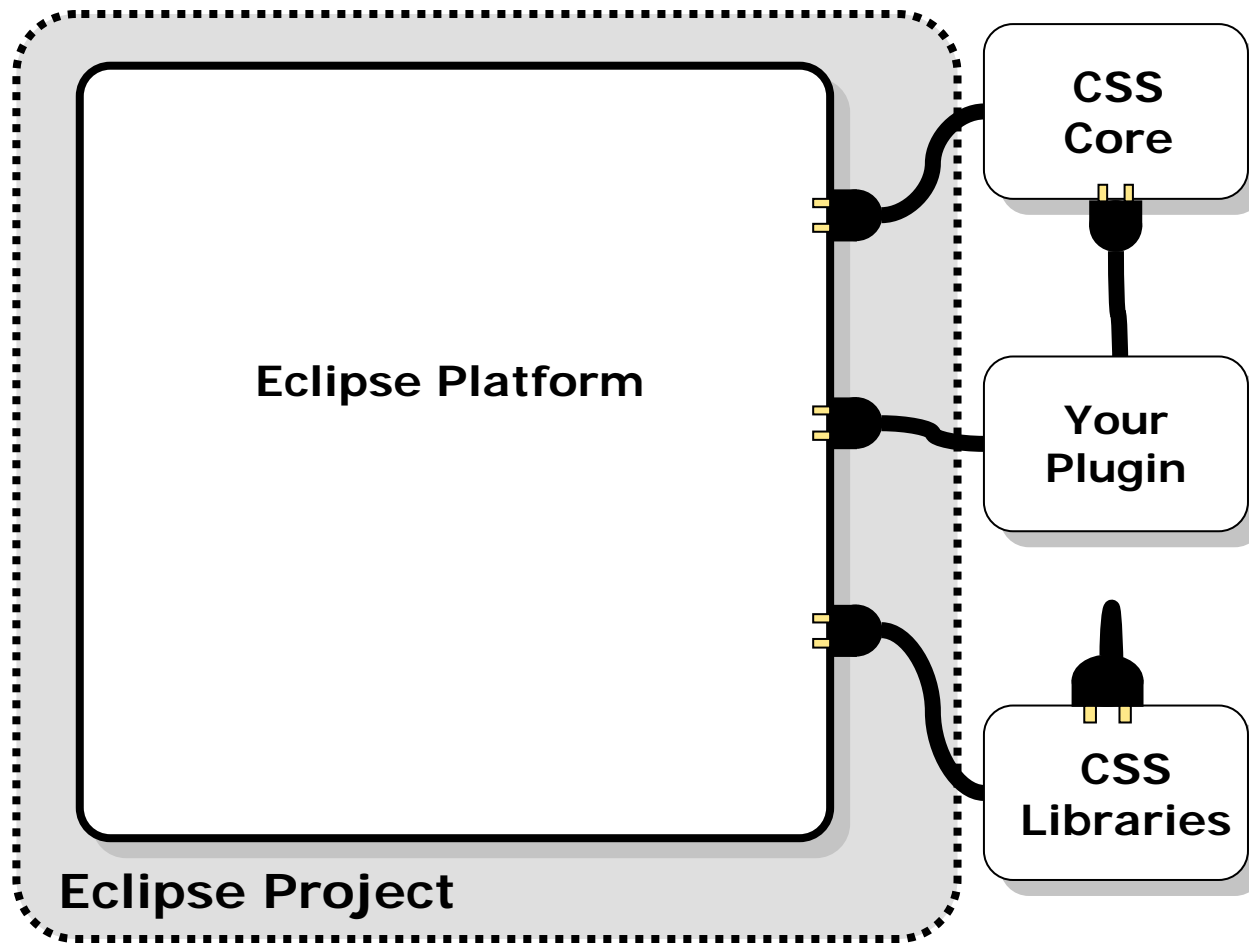
EPICS IOC CORE built on Apr 20 2006
EPICS R3.14.8.2 \$\$Name: R3-14-8-2 \$\$ \$\$Date: 2006/01/06 15:55:13 \$\$

iocInit: All initialization complete
Start any sequence programs
#seq sncExample,"user=evans"
epics> db1
evansHost:aiExample
evansHost:aiExample1
evansHost:aiExample2
evansHost:aiExample3

PV Name: evansHost:aiExample
Value: 6
Adjust PV Info
Connected and Monitoring

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CSS-Core



RCP Plug-in in the CSS context

The screenshot displays the Control System Studio (CSS) interface. On the left, the 'Ldap viewer' shows a tree structure of components under 'o=DESY,c=DE', including 'EpicsAlarmcfg', 'EpicsAuthorize', 'EpicsControls', 'cta', 'HERA', 'KRYK', 'KRYO', 'MHF', 'MKK', 'MTH', 'test', 'TTF', 'UTILITY', and 'EPICS-IOC'. Under 'EPICS-IOC', there is a sub-tree for 'wienerVME' containing multiple 'Crate1' instances.

The central graph shows a plot of 'Crate1:airTemp_ai' over time. The y-axis ranges from 0 to 10, and the x-axis shows a time range from 2006/10/25 16:01:02.806999921 to 2006/10/25 16:03:00. The plot shows a single data point at approximately 4.71.

On the right, the 'Data Browser' window is open, displaying a table of field names and prompts:

Field name	Prompt	
NAME	Record Name	Crat
DESC	Descriptor	Temperal
ASG	Access Security Group	
SCAN	Scan Mechanism	\$
PINI	Process at iocInit	
PHAS	Scan Phase	
EVNT	Event Number	
TSE	Time Stamp Event	
TSEL	Time Stamp Link	
DTYP	Device Type	
DISV	Disable Value	
DISA	Disable	
SDIS	Scanning Disable	
MLOK	Monitor fastlock	
MLIS	Monitor List	
DISP	Disable putField	

Below the data browser, a 'JProbe' window is open, showing the 'PV Name' as 'HP5I01_ai' and the 'Value' as '0'. The 'Adjust' and 'Info' buttons are visible. A red circle highlights the JProbe window.

The 'Console' window at the bottom shows the following output:

```
CSS Console
-->1.7976931348623157E308 ... -1.7976931348623157E308
ValueUpdateThread starts
Activate <not saved>
```

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

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Common Look and Feel

CSS is running as an (Eclipse) RCP

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

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Information on your Fingertip

Accessing Object Aspect Data

The screenshot shows the CSS interface with the LDAP viewer pane on the left. A tree view shows a hierarchy of objects, with 'Crate1' selected. A context menu is open over 'Crate1', listing options like 'Create new entry', 'Display LDIF', 'Delete entry', 'JProbe', 'record editor', 'RecordProperty', and 'Ldap sender'. The 'RecordProperty' option is highlighted. A callout points to 'RecordProperty' with the text 'Select 'related' plug-in from list'. Another callout points to 'Crate1' with the text 'Click on item in LDAP tree'. A third callout points to the top of the context menu with the text 'Plug-in started with item's value (record name)'. At the bottom of the window, two callouts point to the status bar area, labeled 'Data from EPICS-Ora database' and 'Data from EPICS-IOC'.

Plug-in started with item's value (record name)

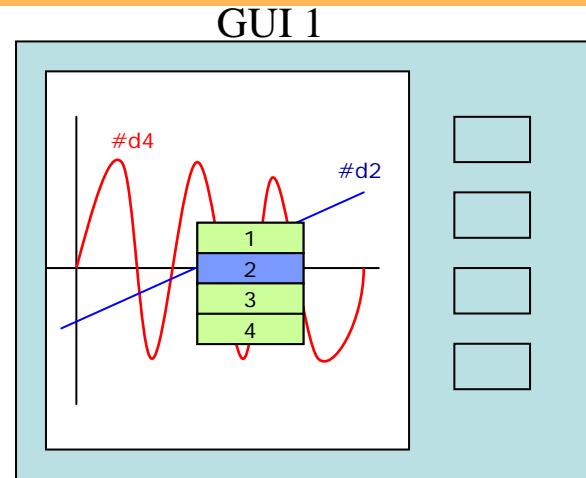
Click on item in LDAP tree

Select 'related' plug-in from list

Data from EPICS-Ora database

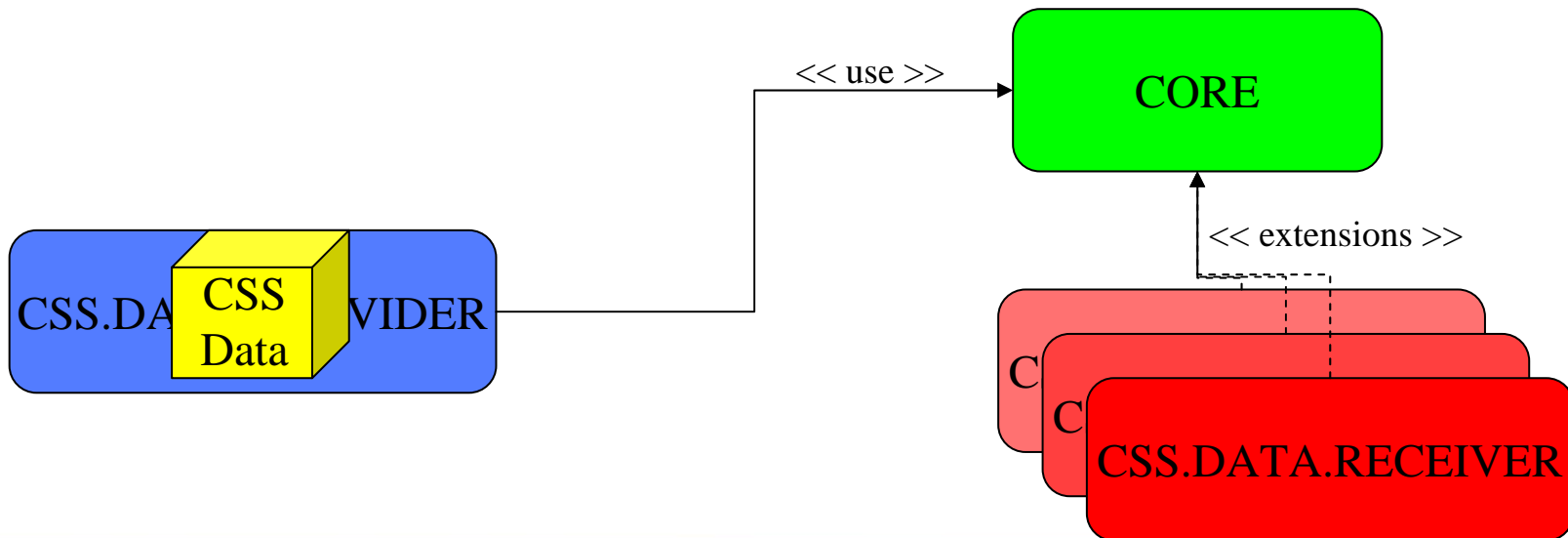
Data from EPICS-IOC

Object Aspect Management



GUI 2 (another View / Plugin)

#	#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**

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Drag and Drop

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

- 'Process Variable'
- 'Process Front-end'
- 'Archive Data'
- ...

CSS Design II

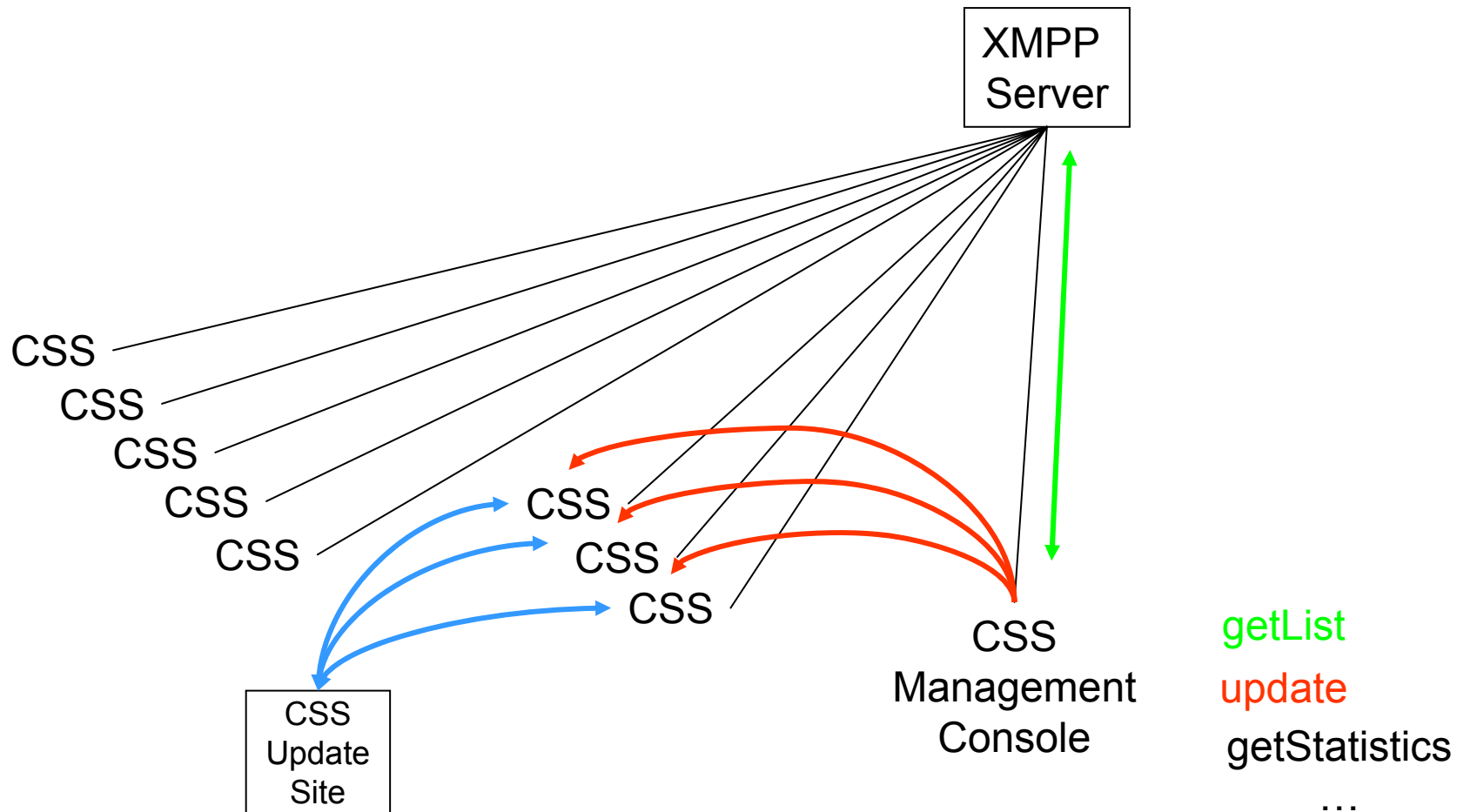
Design Criteria:

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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



CSS Design II

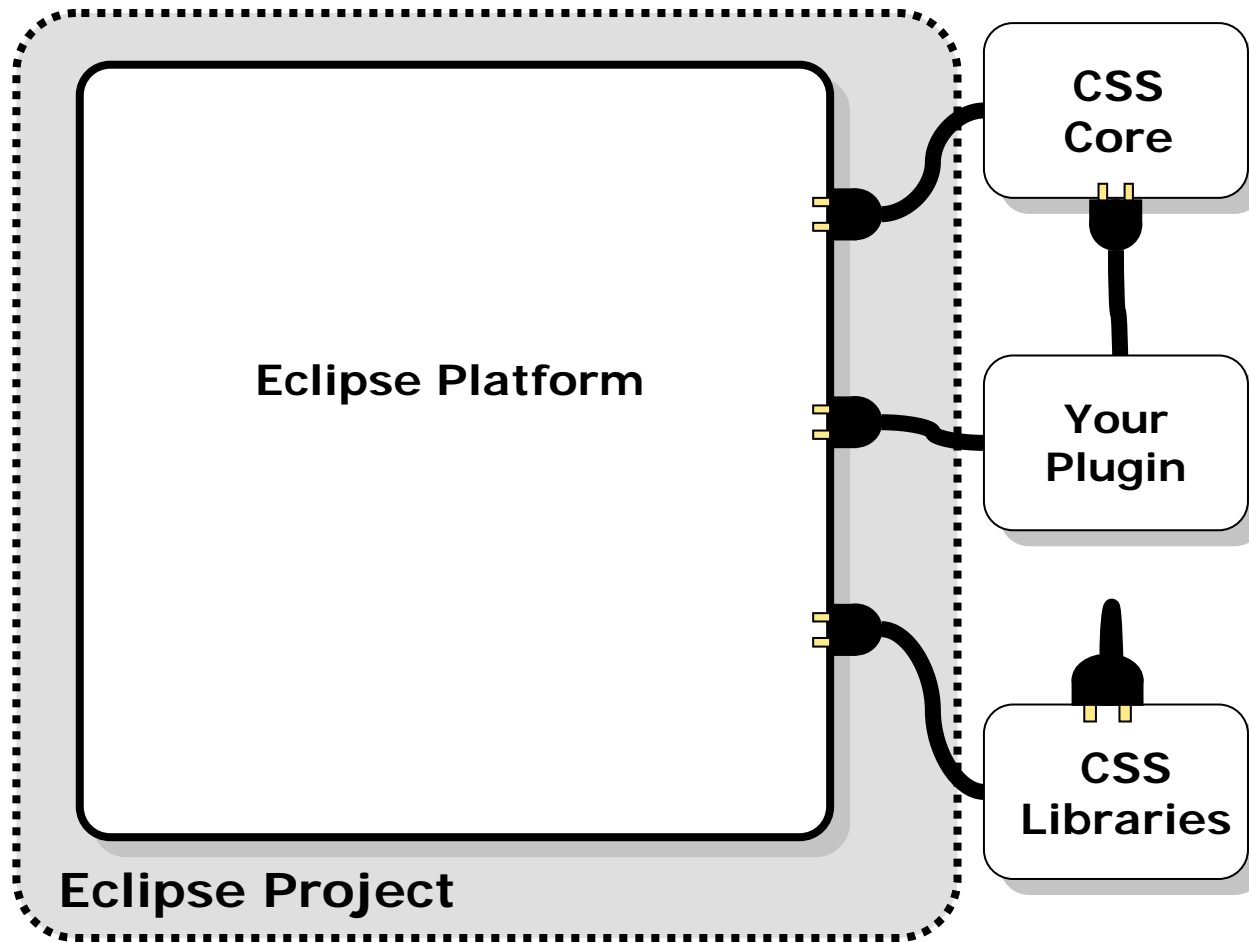
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Interfaces - Interfaces

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

CSS-Core



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

© Igor Kriznar

Wide style API with many methods and interfaces for programming convenience

CSS and other DAL applications

DAL API

Common DAL glue code

Collaborating set of common helper classes. Can be replaced by case or completely by DAL implementation.

Simple API concentrated on data transfer and simplicity when implementing DAL.

Proxy API

Proxy implementation (communication specific)

Communication API

Communication libraries

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

When common glue code does all the work, then this layer is thin, simple and oriented around communication particularities.

CSS Design II

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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

Role^ / Component >	CSS	Cryo	RF	Water/ FLASH	...
Guest			*	*	
Operator					
Engineer		*			
Manager	*				

-
-
- ... 'claus' can not perform the action...

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International Language Support

Fortunately Eclipse has a built in multi language support.

Developers are encouraged to make use of multi language support.

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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

Synoptic Display Studio (SDS)

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.

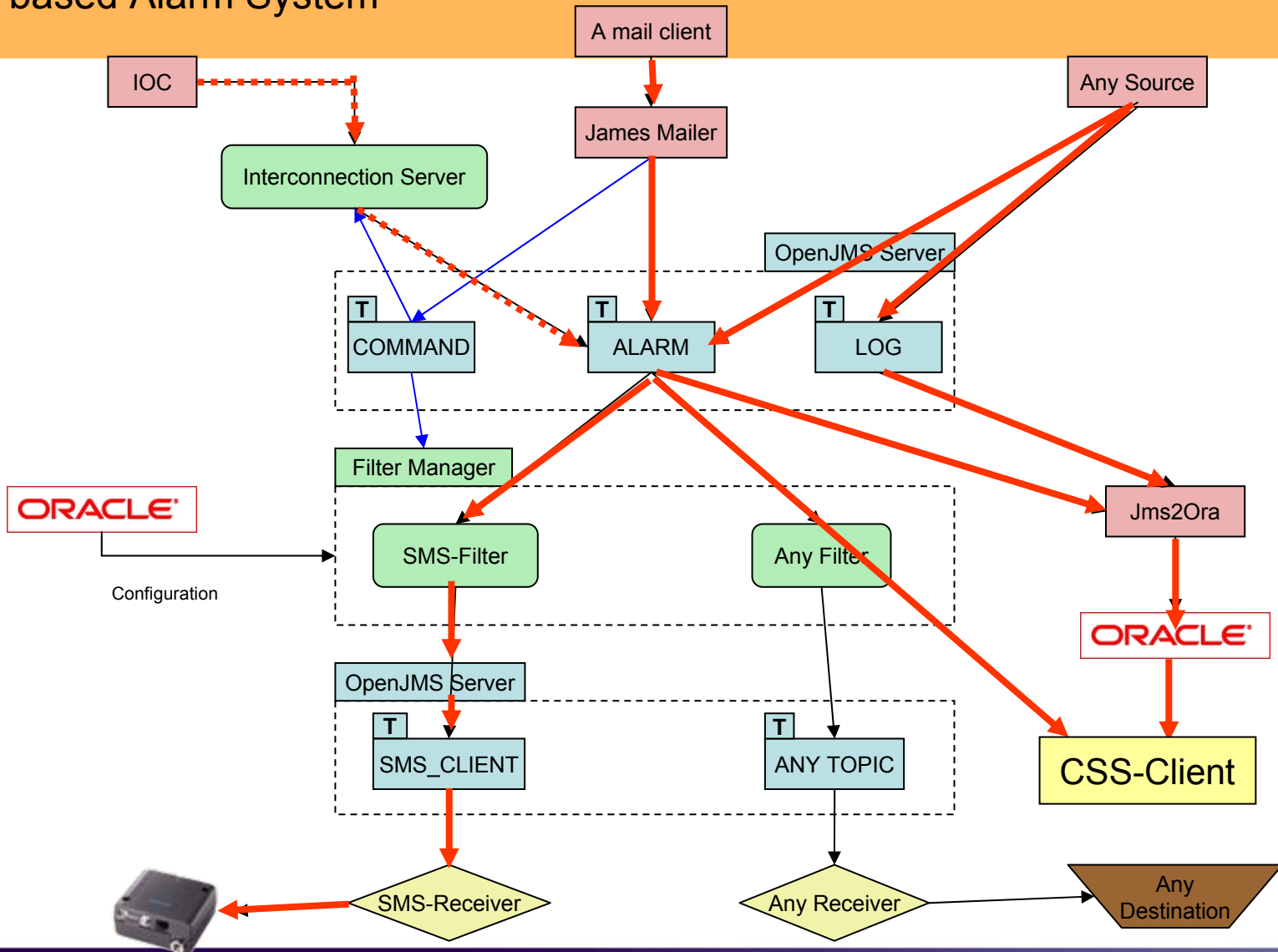
SDS basic requirements (subset)

- **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.**

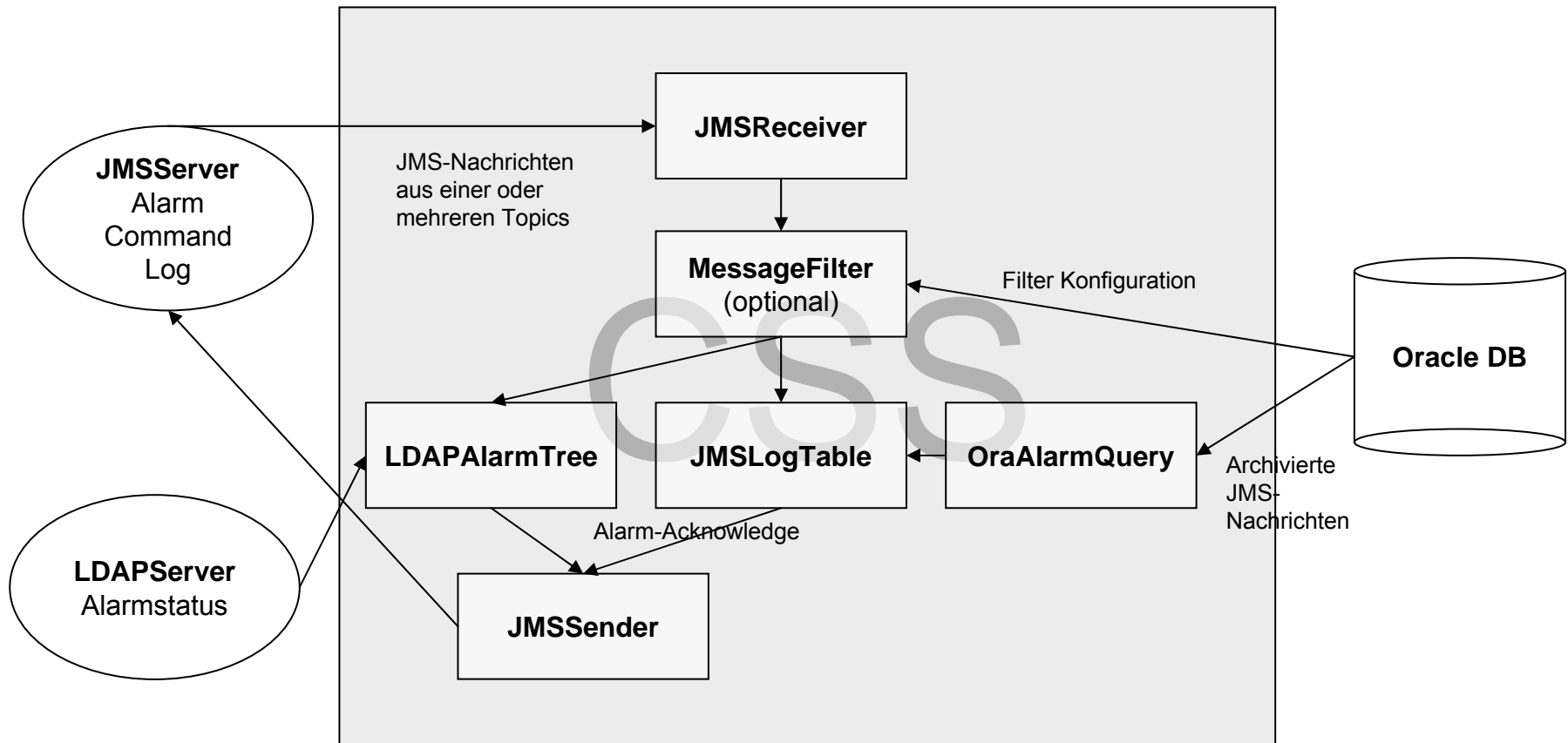
Applications

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

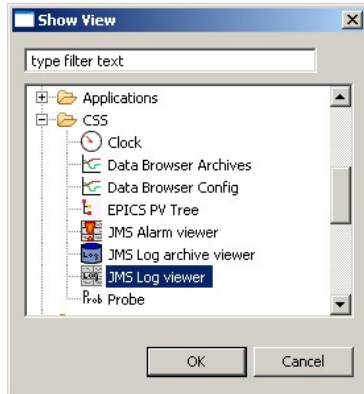
JMS based Alarm System



Alarm handling (CSS point of view)



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 (object contribution)

TYPE	EVENTTIME	NAME	FACILITY	HOST	STATUS	SEVERITY	VALUE	TEXT
Alarm	2006-10-18 08:...	WRVF11_ao	HERA	herakryoRingM	LOLO	MAJOR	-0.32	
Alarm	2006-10-18 08:...	ORVF24_ao	HERA	herakryoRingN	LO	MINOR	16.03553	
Alarm	2006-10-18 09:...	OFTA64_ao	HERA	herakryoZeus	HIHI	MINOR	-47.464392	
Alarm	2006-10-18 09:...	HSXVF69GG_ao	HERA	herakryoRing5	HIHI	MINOR	1.3	
Log	2006-10-18 09:...	HSXVF69GG_ao		JMS Server		INVALID SEVERITY		configuration error
Log	2006-10-18 09:...	sendMapMessage()		JMS Server		INVALID SEVERITY		
Alarm	2006-10-18 10:...	HSXVF31GG_ao	HERA	herakryoRingN	HIHI	MINOR	2.320043	
Alarm	2006-10-18 11:...	SRVF65_ao	HERA	herakryoRingN	LO	MINOR	5.109	
Log	2006-10-18 11:...	SRVF65_ao		JMS Server		INVALID SEVERITY		start
Alarm	2006-10-18 11:...	HSXVF69GG_ao		herakryoZeus	HIHI	MINOR	6.54314	
Alarm	2006-10-18 11:...	WLVF99_ao		herakryoRingN	HI	MINOR	-7.29	
Log	2006-10-18 12:...	WLVF99_ao				INVALID SEVERITY		stopp
Alarm	2006-10-18 12:...	ORST65L_ao				INVALID SEVERITY		
Alarm	2006-10-18 12:...	SLST11_ao	HERA		HIHI	MINOR	1.301	
Alarm	2006-10-18 12:...	SLST24_ao	HERA		HI	MAJOR	202.3	
Alarm	2006-10-18 12:...	WLST28_ao	HERA		HIHI	MINOR	-5.317	
Alarm	2006-10-18 12:...	SRST87_ao	HERA		HI	MAJOR	112.533	
Alarm	2006-10-18 13:...	HSST68GG_ao	HERA	herakryoZeus	HIHI	MINOR	-12.30043	
Alarm	2006-10-18 13:...	HSST15GO_ao	HERA	herakryoRingN	LOLO	MINOR	205.3	
Alarm	2006-10-18 13:...	SRDF65_ao	HERA	herakryoZeus	HIHI	MINOR	56.3213	

Log viewer plugin 2

Control System Studio

Datei DummyLogger Applications CSS CSS Window Hilfe

CSS Standard

JMS Alarm viewer JMS Log viewer

TYPE	EVENTTIME	NAME	FACILITY	HOST	STATUS	SEVERITY	VALUE	TEXT
Alarm	2006-10-18 08:...	WRVF11_ao	HERA	herakryoRingN	LOLO	MAJOR	-0.32	
Alarm	2006-10-18 12:...	SLST11_ao	HERA	herakryoZeus	HI	MAJOR	200.3	
Alarm	2006-10-18 13:...	SRST67_ao	HERA	herakryoRingS	HI	MAJOR	112.533	
Alarm	2006-10-18 13:...	ORSTV21_ao	HERA	herakryoRingN	LOLO	MAJOR	-4.2341	
Alarm	2006-10-18 14:...	SLSP12_ao	HERA	herakryoRingS	HIHI	MAJOR	292.3	
Alarm	2006-10-18 08:...	ORVF24_ao	HERA	herakryoRingN	LO	MINOR	16.03553	
Alarm	2006-10-18 09:...	OFTAE64_ao	HERA	herakryoZeus	HIHI	MINOR	-47.464392	
Alarm	2006-10-18 09:...	HSXVF69GG_ao	HERA	herakryoRingS	HIHI	MINOR	1.3	
Alarm	2006-10-18 10:...	HSVF31GG_ao	HERA	herakryoRingN	HIHI	MINOR	2.320043	
Alarm	2006-10-18 11:...	SRVF65_ao	HERA	herakryoRingN	LO	MINOR	5.109	
Alarm	2006-10-18 11:...	HSXVF69GG_ao	HERA	herakryoZeus	HIHI	MINOR	6.54314	
Alarm	2006-10-18 11:...	WLVF39_ao	HERA	herakryoRingN	HI	MINOR	-7.29	
Alarm	2006-10-18 12:...	ORST65L_ao	HERA	herakryoRingN	HIHI	MINOR	1.301	
Alarm	2006-10-18 12:...	SLST24_ao	HERA	herakryoRingS	HIHI	MINOR	-5.317	
Alarm	2006-10-18 12:...	WLST28_ao	HERA	herakryoZeus	HIHI	MINOR	7.7701	
Alarm	2006-10-18 13:...	H5ST168GG_ao	HERA	herakryoZeus	HIHI	MINOR	-12.30043	
Alarm	2006-10-18 13:...	H5ST15GG_ao	HERA	herakryoRingN	LOLO	MINOR	205.3	
Alarm	2006-10-18 13:...	SLSP63_ao	HERA	herakryoZeus	HIHI	MINOR	56.3213	

<not saved>

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

JMS Log archive viewer

Period: DAY 3 DAYS WEEK USER

TYPE	EVENTTIME								
Alarm	2006-10-18 11:...	WLVF39_ao	HERA	herakryoRingN	HI	MINOR			
Alarm	2006-10-18 12:...	ORSTV21_ao	HERA	herakryoRingN	LOLO	MAJOR			
Alarm	2006-10-18 12:...	SLSP63_ao	HERA	herakryoZeus	HIHI	MINOR			

Start/End Time

Start Time: 2006/10/18 12:12:00 Now

End Time: 2006/10/18 12:12:00 Now

Period: Oktober 2006

Mo	Di	Mi	Do	Fr	Sa	So
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Time: 12 : 12 : 0

Time: 12 : 12 : 0

OK Cancel

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 Kagarmenov

- 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)

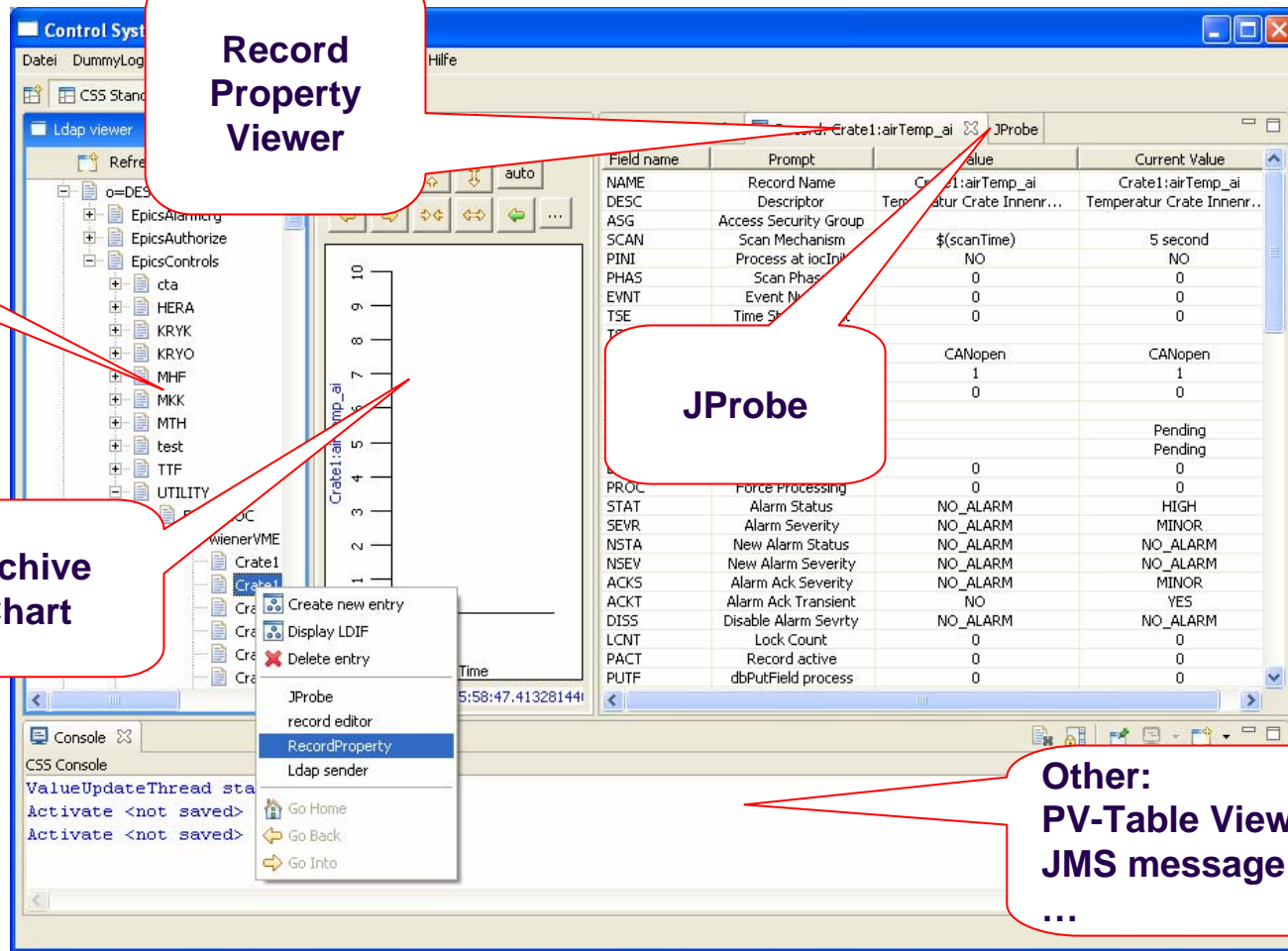
(LDAP) Namespace Browser

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...)

- CodeBeamer -> <http://elogbook.desy.de:8181>

Collaborative Software Development -> Documentation

The screenshot shows a Mozilla Firefox browser window displaying the Intland CodeBeamer Collaborative Development Platform @ DESY. The browser address bar shows the URL: http://elogbook.desy.de:8181/cb/proj/doc.do?proj_id=51. The page title is "INTLAND CodeBeamer Collaborative Development Platform @ DESY". The navigation menu includes: My Start, Summary, Documents (selected), Wiki, Trackers, Reports, Forums, Chats, Builds, Source Code, Members, and Admin. The user is logged in as "Claus".

The main content area displays "Project: CSS-SDS - Documents". It features a search bar, a "GO" button, and a "Current Project" checkbox. Below the search bar is a "Working Set" dropdown menu set to "I'm a Member". A "Projects" sidebar lists various project categories, with "CSS-SDS" highlighted. The main document list table is as follows:

	Name	Version	Description	Modified at	Modified by	Status	Size	Action
<input type="checkbox"/>	Project-Management	--	--	10 Oct 09:58	Claus	--		
<input type="checkbox"/>	Protocols	--	--	10 Oct 10:05	Claus	--		
<input type="checkbox"/>	Requirements	--	--	10 Oct 09:55	Claus	--		

At the bottom of the browser window, the status bar shows "Fertig".

Collaborative Software Development -> Tracker

The screenshot shows the Intland CodeBeamer web application interface. The browser window title is "Intland - CodeBeamer - Mozilla Firefox". The address bar shows the URL "http://elogbook.desy.de:8181/cb/proj/tracker.do?proj_id=51". The page header includes the Intland CodeBeamer logo and navigation tabs: My Start, Summary, Documents, Wiki, Trackers (selected), Reports, Forums, Chats, Builds, Source Code, Members, Admin. The main content area is titled "Project: CSS-SDS - Tracker Summary" and contains a table of tracker items.

Tracker Name	Key	Open Items	Total Items	Assigned to me	Submitted by me	Subscribers	Modified at	Action
Bug Tracker	BUG	new	0	0	0	0	--	Customize
Change Request Tracker	CRQ	new	0	0	0	0	--	Customize
Requirements Tracker	REQ	new	0	0	0	0	--	Customize
Task Tracker	TSK	new	16	16	0	0	Today 18:50	Customize
Summary:			16	16	0	0		

Below the table is a "Project Dashboard" section with two charts: "Last 7 Days' Changes" and "Last 7 Days' Trends". The "Last 7 Days' Changes" chart shows "Tracker Items" on the y-axis (0.00 to 1.00). The "Last 7 Days' Trends" chart shows "Tasks" on the y-axis (0.00 to 1.00). Below the charts are links for "Trends -- Trend reports." and "Gantt Tasks".

Collaborative Software Development

-> Tracker

Intland - CodeBeamer - Mozilla Firefox

http://elogbook.desy.de:8181/cb/proj/tracker/browseTracker.do?tracker_id=204

INTLAND CodeBeamer Collaborative Development Platform @ DESY

My Start Summary Documents Wiki **Trackers** Reports Forums Chats Builds Source Code Members Admin

Logged in: Claus

Search

GO Advanced...
 Current Project

Working Set

I'm a Member

Projects

- Archive Record
- Channel Archiver Web Access
- CSS-Core
- CSS-DAL
- CSS-DummyLogger
- CSS-Log
- CSS-SDS
- Eclipse Training
- Electronic Logbook
- EPICS IOC
- EPICS Office
- EPICS Redundancy Control
- EPICS Redundancy Monitor
- James Java Mailer
- JMS.desy.de
- rkBa
- test-configurator

Project: CSS-SDS - Tracker: Task

Tracker: Task (16) Tracker View: Open New Filter: GO Basic

Items New

16 items found, displaying 1 to 15.[First/Prev] 1, 2 (Next/Last)

<input type="checkbox"/>	ID	Summary	Status	Owner	Submitted at	Assigned to	Submitted by
<input type="checkbox"/>	1076	Dynamic behaviour of the line model element	--	--	Today 18:50	--	awill
<input type="checkbox"/>	1075	Dynamic behaviour of the ellipse model element	--	--	Today 18:50	--	awill
<input type="checkbox"/>	1074	Dynamic behaviour of the rectangle model element	--	--	Today 18:49	--	awill
<input type="checkbox"/>	1073	Rendering mode	--	--	Today 18:49	--	awill
<input type="checkbox"/>	1072	Introduce a line model element	--	--	Today 18:49	--	awill
<input type="checkbox"/>	1071	Introduce an ellipse model element	--	--	Today 18:49	--	awill
<input type="checkbox"/>	1070	Introduce a rectangle model element	--	--	Today 18:49	--	awill
<input type="checkbox"/>	1069	Direct Manipulation of the SDS model	--	--	Today 18:48	--	awill
<input type="checkbox"/>	1068	Model Editor	--	--	Today 18:47	--	awill
<input type="checkbox"/>	1067	DAL-Extension of the data model	--	--	Today 18:47	--	awill
<input type="checkbox"/>	1066	Integration into the CSS	--	--	Today 18:47	--	awill
<input type="checkbox"/>	1065	Simple file browser view for managing XML model files	--	--	Today 18:47	--	awill
<input type="checkbox"/>	1064	Introduce workspace concept	--	--	Today 18:46	--	awill
<input type="checkbox"/>	1063	Load/store the data model from/in an XML based file	--	--	Today 18:46	--	awill
<input type="checkbox"/>	1062	Extensibility of the data model	--	--	Today 18:46	--	awill

Export options: CSV Excel XML PDF

Cut Copy Mass Edit... Delete... Import...

Collaborative Software Development -> (Tracker) Story Cards (Agile Programming)

The screenshot shows the Intland CodeBeamer web interface in a Mozilla Firefox browser. The address bar shows the URL: `http://elogbook.desy.de:8181/cb/proj/tracker/itemDetails.do?navigation=true&task_id=1068`. The page title is "INTLAND CodeBeamer Collaborative Development Platform @ DESY". The navigation menu includes "My Start", "Summary", "Documents", "Wiki", "Trackers", "Reports", "Forums", "Chats", "Builds", "Source Code", "Members", and "Admin".

The main content area displays a task card for "Project: CSS-SDS - Tracker: Task - [# 1068] Model Editor". The card includes a table with the following data:

Close	Resolve	Verify
Next	Previous	Summary
Edit	New	Cut
Copy	Delete...	Notification
Cancel		
Priority: High	Status: --	Owner: --
Assigned to: --	Submitted by: awill Today 18:47	Last Modification: Claus Today 20:04
Start Date: --	End Date: --	Estimated Hours: 4,0
Spent Hours: --	% Spent / Plan: --	Category: --
Severity: Critical	Resolution: --	

The "Description" field contains the text: "Provide an Eclipse editor that is based upon the SDS data model." The "Details" section shows tabs for "Comments (0)", "Attachments (0)", "Associations (0)", "SCM Commits (0)", "History (3)", and "All". Below the tabs is an "Add Comment" section with a "Submitted" status and the text "Nothing found to display." The card also includes navigation buttons: "Next", "Previous", "Summary", "Edit", "New", "Cut", "Copy", "Delete...", "Notification", and "Cancel".

Collaborative Software Development

-> Tracker / Story-Cards

Exporting Tracker for
Agile Project Meetings

Set Priorities
To
'Story-Cards'

ID	P	Summary	Status	Owner	Submitted at	Assigned	Submitter	Start Date	End Date	Estimated Spent	Hot % Spent /	Category	Severity
1068	High	Model Editor			25.10.2006 18:47		awill			4	0,00%		Critical
1076	Normal	Dynamic behaviour of			25.10.2006 18:50		awill						
1075	Normal	Dynamic behaviour of			25.10.2006 18:50		awill						
1074	Normal	Dynamic behaviour of			25.10.2006 18:49		awill						
1073	Normal	Rendering mode			25.10.2006 18:49		awill						
1072	Normal	Introduce a line model			25.10.2006 18:49		awill						
1071	Normal	Introduce an ellipse m			25.10.2006 18:49		awill						
1070	Normal	Introduce a rectangle			25.10.2006 18:49		awill						
1069	Normal	Direct Manipulation of			25.10.2006 18:48		awill						
1067	Normal	DAL-Extension of the			25.10.2006 18:47		awill						
1066	Normal	Integration into the CS			25.10.2006 18:47		awill						
1065	Normal	Simple file browser vie			25.10.2006 18:47		awill						
1064	Normal	Introduce workspace c			25.10.2006 18:46		awill						
1063	Normal	Load/store the data m			25.10.2006 18:46		awill						
1062	Normal	Extensibility of the da			25.10.2006 18:46		awill						
1061	Normal	Design a simple data			25.10.2006 18:45		awill						

Enabling Collaboration

Free access to cvs repository

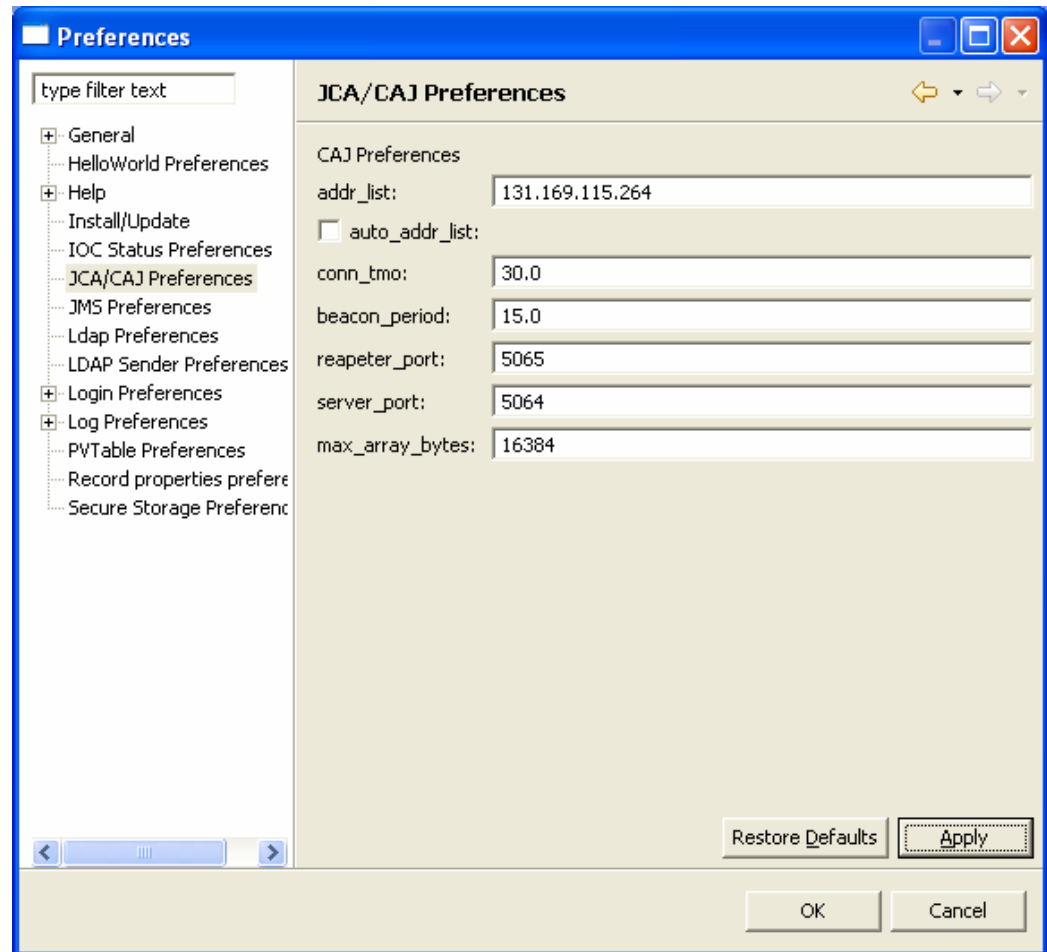
Basic design criteria

- No hard coded configuration parameter

CSS Configuration

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**

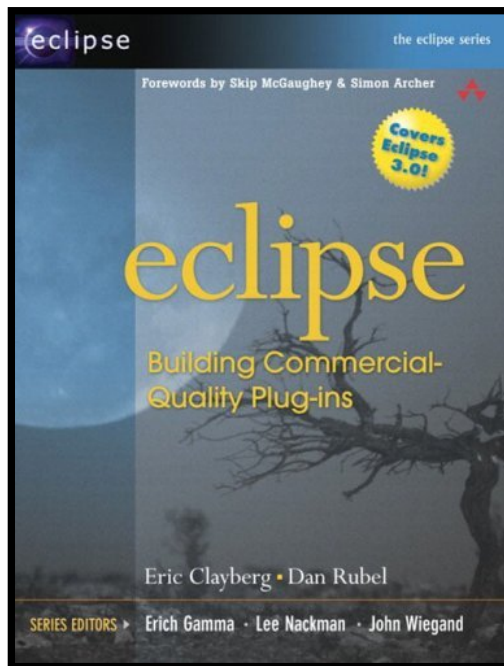
(Therefore it's not called EPICS-Office any more)

Any idea for a CSS-Logo?

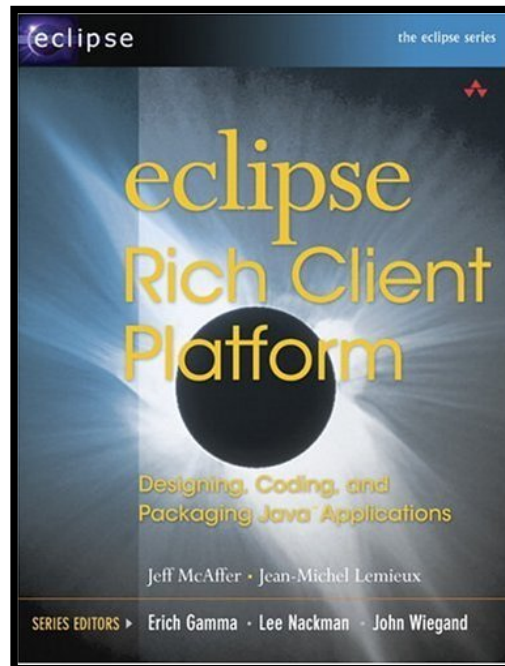


Useful Books

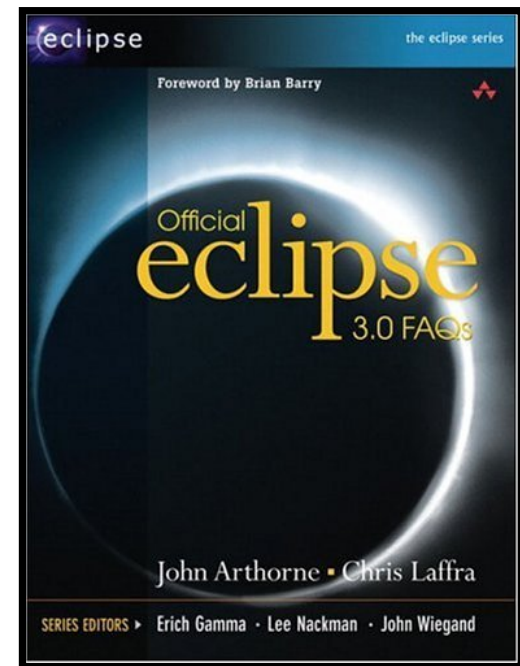
Excellent, Must have



Only RCP book



For the Help Plug-in



<http://www.cs-studio.org>

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