

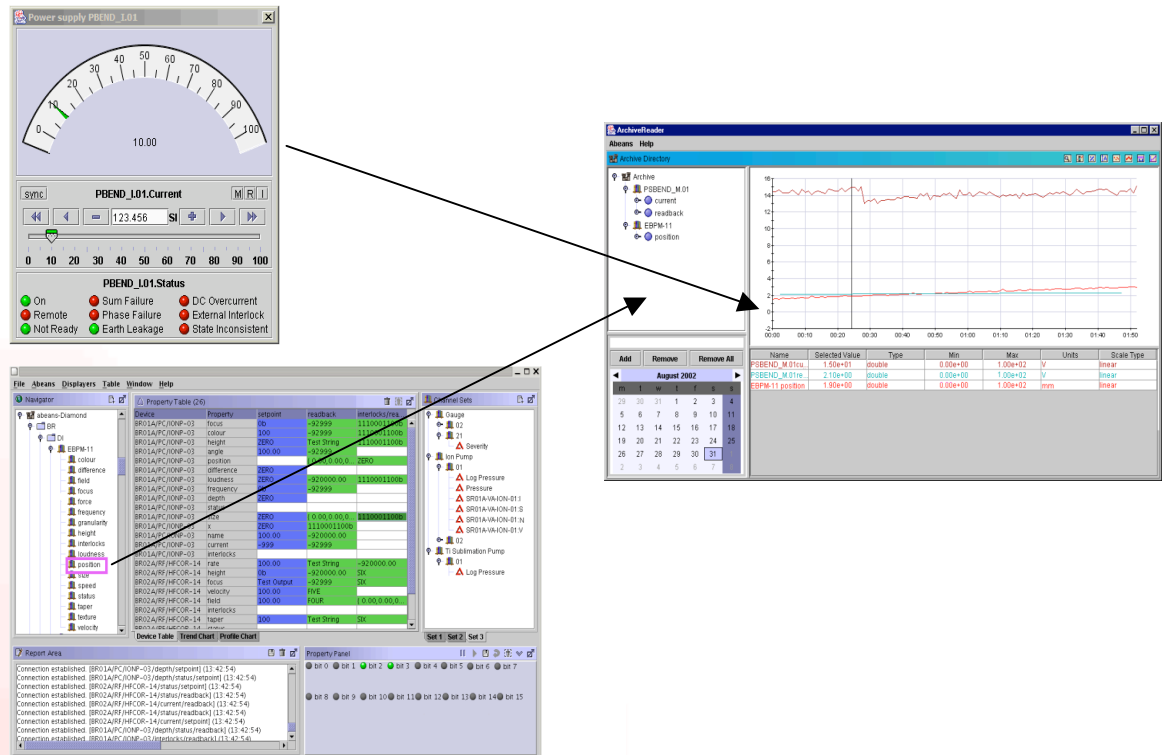
EPICS Office HowTo

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User's viewpoint

- Same **L&F**, common **actions, data** interpreted by different applications
- **Community knowledge** (like TeX vs Word → example with colors in GUI)
- Chart example - reference exchange
- **Scenarios:** deployment, monitoring, exploration, configuration, spec. tasks



Office functionality is a complement to traditional application functionality and API

User's viewpoint

Name service if available, otherwise connected stuff

Define e.g. groups

Menu NOT hardcoded

Components in the main view

Scripting access from console

Property	setpoint	readback	interlocks/rea...
BR01A/PC/IONP-03 focus	0b	-92999	1110001100b
BR01A/PC/IONP-03 colour	100	-92999	1110001100b
BR01A/PC/IONP-03 height	ZERO	Test String	1110001100b
BR01A/PC/IONP-03 angle	100.00	-92999	
BR01A/PC/IONP-03 position		{ 0.00,0.00,0...	ZERO
BR01A/PC/IONP-03 difference	ZERO		
BR01A/PC/IONP-03 loudness	ZERO	-920000.00	1110001100b
BR01A/PC/IONP-03 frequency	0b	-92999	
BR01A/PC/IONP-03 depth	ZERO		
IONP-03 status			
IONP-03 size	ZERO	{ 0.00,0.00,0...	1110001100b
IONP-03 x	ZERO	1110001100b	
IONP-03 name	100.00	-920000.00	
IONP-03 current	100.00	-92999	
BR02A/RF/...	100.00	Test String	-920000.00
BR02A/RF/...	100.00	-920000.00	
BR02A/RF/...	100.00	FIVE	
BR02A/RF/...	100.00		{ 0.00,0.00,0...
BR02A/RF/HFCOR-14 field	100	Test String	Six
BR02A/RF/HFCOR-14 interlocks			
BR02A/RF/HFCOR-14 taper			
BR02A/RF/HFCOR-14 status			

Report Area

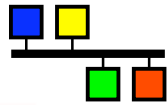
```
Connection established. [BR01A/PC/IONP-03/depth/setpoint] (13:42:54)
Connection established. [BR01A/PC/IONP-03/depth/status/setpoint] (13:42:54)
Connection established. [BR02A/RF/HFCOR-14/status/setpoint] (13:42:54)
Connection established. [BR02A/RF/HFCOR-14/current/readback] (13:42:54)
Connection established. [BR02A/RF/HFCOR-14/status/readback] (13:42:54)
Connection established. [BR01A/PC/IONP-03/depth/status/readback1] (13:42:54)
Connection established. [BR01A/PC/IONP-03/interlocks/readback1] (13:42:54)
```

Property Panel

● bit 0 ● bit 1 ● bit 2 ● bit 3 ● bit 4 ● bit 5 ● bit 6 ● bit 7

● bit 8 ● bit 9 ● bit 10 ● bit 11 ● bit 12 ● bit 13 ● bit 14 ● bit 15

EPICS



Integrated Development...

Select Girder: < 3.00 > Activated: ACTIVATE DEACTIVATE Node: Machine To Machine mode

Selection bar

Girder Positioning:

	Current Readback	Drive Value	Delta Value (RD)	Old Value	User parameters
Display X	0.00000	0.00000000	0.00000000	0.000000	mm
Display Y	-0.00000	-0.00000000	0.00000000	-0.000000	mm
Display ROLL	0.00000	0.00000000	0.00000000	0.000000	mRad
Display PITCH	-0.00000	-0.00000000	0.00000000	-0.000000	mRad
Display YAW	-0.00000	-0.00000000	0.00000000	-0.000000	mRad

Calculation commands

Calculate new Drive from Delta Restore old values Reback failure:

Motors status:

Motor	Position in motor angles		Movement status			Encoder failure	
	Angle Readback [Deg]	Motor Drive Angle [Deg]	Moving status	Blocked	Ramping	Max Delta Warning	Not Positioned
Motor 1	0.000000	-0.000000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor 2	0.000000	-0.000000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor 3	0.000000	-0.000000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor 4	0.000000	-0.000000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor 5	0.000000	-0.000000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Movement commands

MOVE BLOCK RELEASE BLOCK CANCEL MOVE

T:\EPICS_DB\flatGizmo.db

Debug Tools Help

ABC

abeans-EPICS

- DEFAULT
- SR01A
 - VA
 - Gauge
 - 02
 - 21
 - Severity
 - Ion Pump
 - 01
 - Log Pressure
 - Pressure
 - SR01A-VA-IONP-01:IMON
 - SR01A-VA-IONP-01:SCON
 - SR01A-VA-IONP-01:SMON
 - SR01A-VA-IONP-01:VMON
 - 02
 - Ti Sublimation Pump
 - 01
 - Log Pressure

Refresh

... and deployment environment

ai

gizmo:readback

3.14

INP=gizmo:stepper01:stepper

EGU=A

HOPR=10

LOPR=-10.0

INP VAL

NPP NMS

D:\Gauss\DC\EPICS_DB\example.dbd, 1 loaded templates(s) Main group 150%

EPICS Office - Why now

- Is there a need?
 - Collecting feature requests
 - More than 'It would be nice' argument?
(Is there *really* code reuse and added value)

- Is there a way?
 - **Java**
 - Shift towards **Rich Client Platform**
 - Collaborative tools (Sourceforge)
- What is the cost?
 - Be afraid of the **framework**?



What kind of Java is brewing...

AOP

Inversion-
of-Control

- **Server side:** great success of EJB, **complexity**
- **Client side:** slow adoption (JVM, GUI, **services, packaging**)

OSGi

a LOT of
stuff

Pure Java, Knoplerfish, Eclipse, Spring

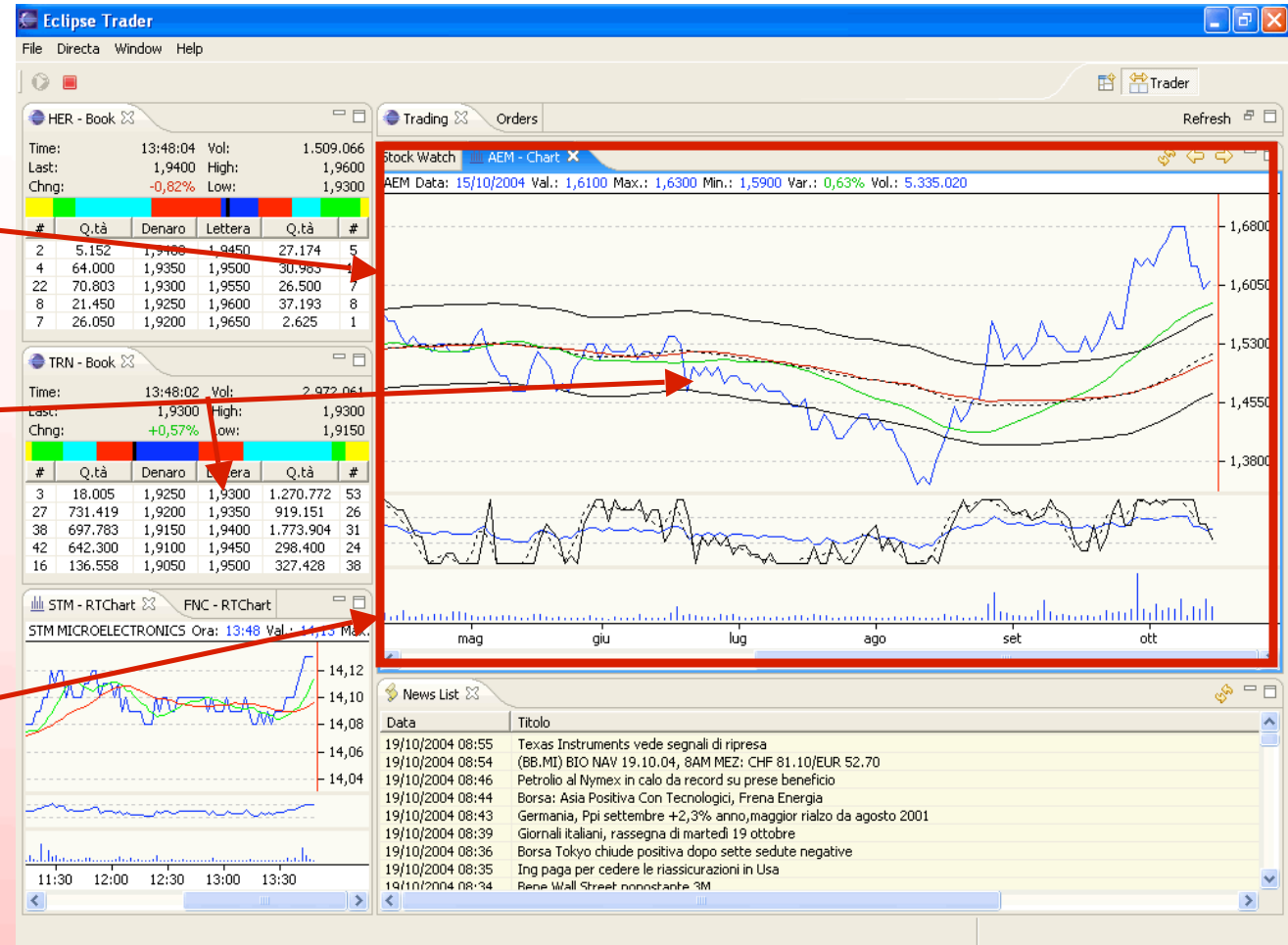
Eclipse for RCP

Extension:
Button in the
toolbar

**Extension
point:**
clicking on
the price

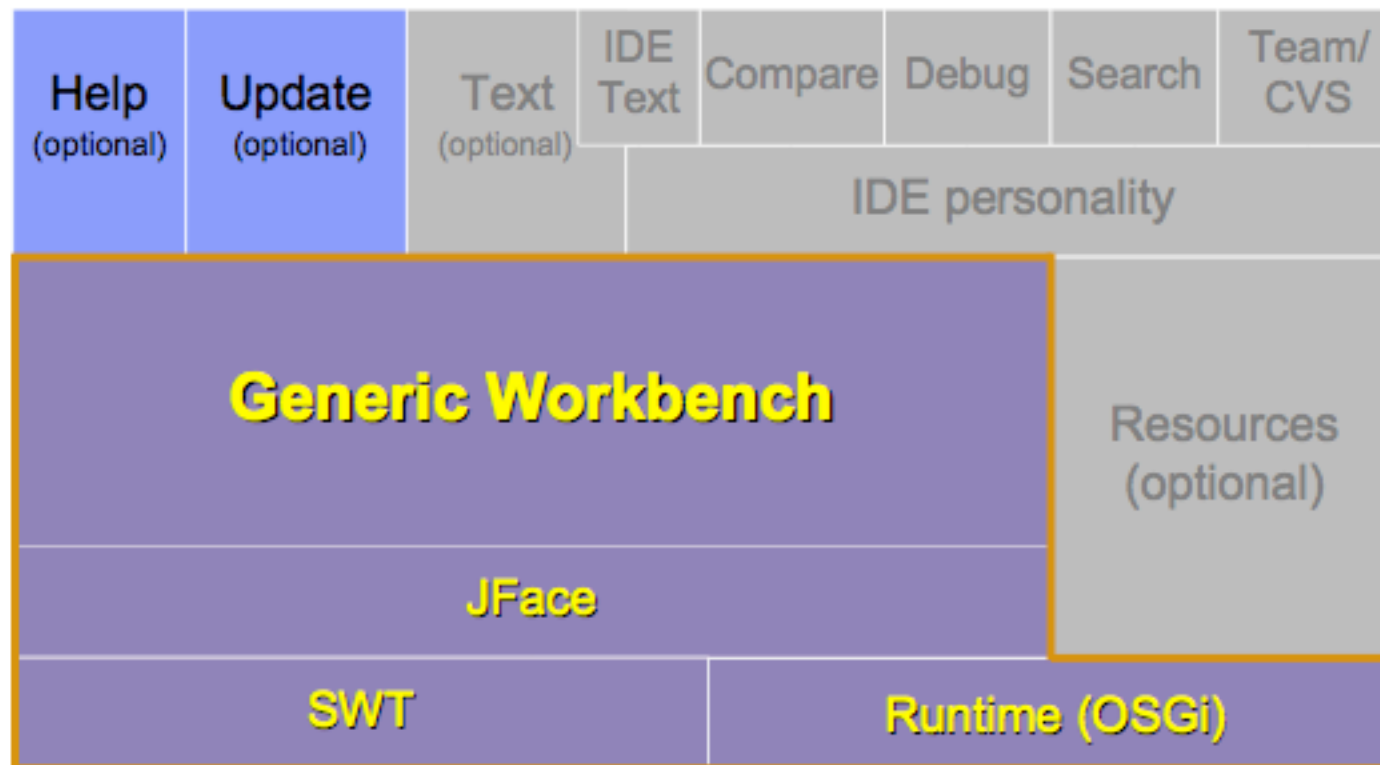
Plug-in
component
deployed as
bundle

OSGi





Application Platform



Conclusions

- EPICS Office **is** possible
- But we need to:
 - Leverage existing frameworks in a smart (= simple enough) way
 - Design data-exchange core well
 - Project management (= Office can not be a 'hobby' activity)
- Integration of cool stuff, tools (JEDM anyone), applications (VDCT model - suggestions)

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