

Web2cToolkit: Framework for Internet Control System Applications

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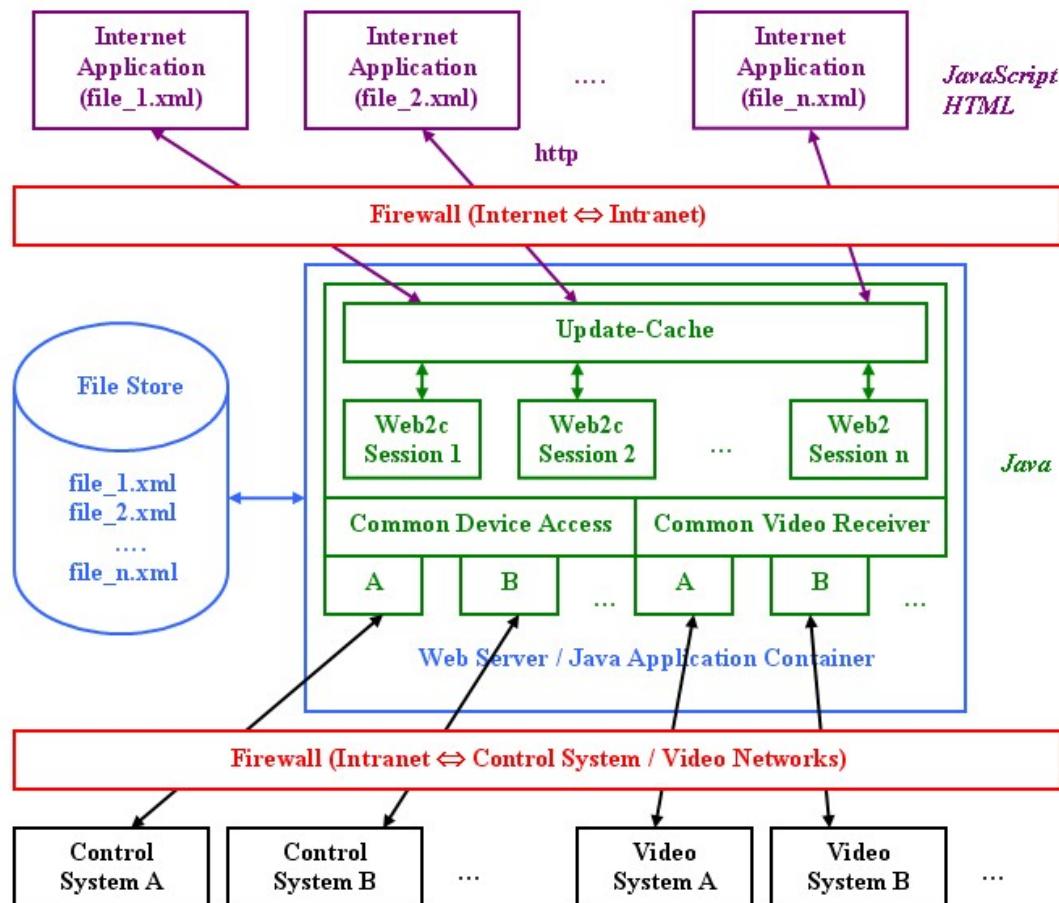
Web2cToolkit

- **Web2c**
 - Acronym for **Web-based controls client**
 - Framework for internet control system applications
- **Features**
 - Browser-hosted, interactive, graphical
 - User-friendly look-and-feel, multi-language support
 - OS platform independent
 - Runs without additional specific software installation
 - Supports different user roles (layman, expert and supervisor)
 - Secure user authentication and authorization
 - Access allowed from everywhere if not explicitly restricted, no firewall constraints
 - Common device access (live and archived data) interface for various accelerator control systems
 - Common video receiver interface for various video transmitting standards

Web2cToolkit

- Dynamic web page:
 - runs in web browser
 - contains only HTML tags and JavaScript code snippets
 - asynchronous communication with web application server (Java servlet) via XMLHttpRequest / XMLHTTP method, no page re-load
- MD5-encrypted password transmission
- Control system interfaces:
 - TINE, DOOCS, TANGO (via DOOCS), EPICS (via DOOCS)
- Video receiver interfaces (protocol / format):
 - rtp / jpeg
 - TINE / jpeg
- Implemented tools:
 - synoptic display (Web2c)
 - graphical synoptic display editor (Web2cEditor)
 - archive viewer (Web2cArchiveViewer)

Web2cToolkit



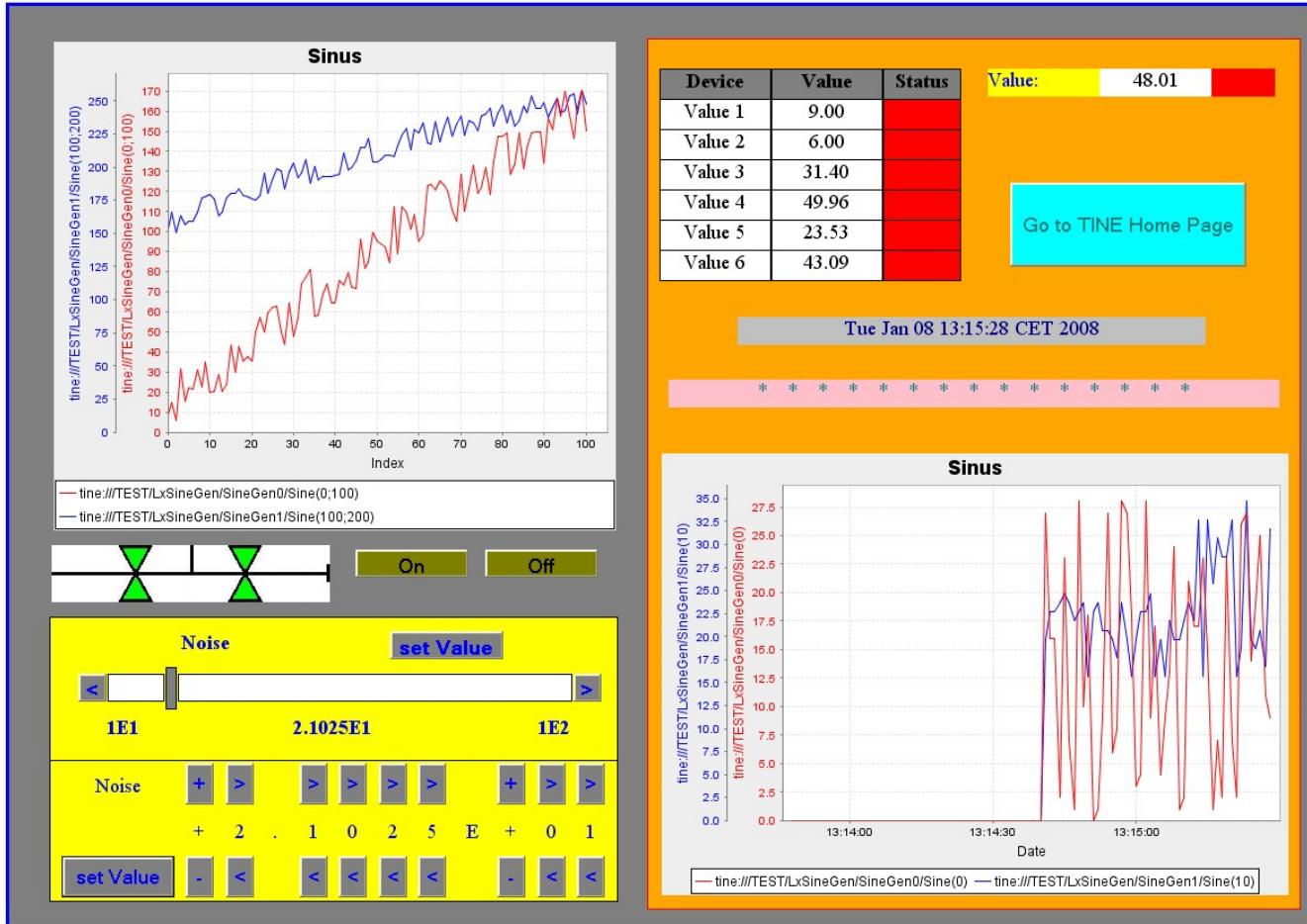
Web2cToolkit

- **Synoptic Display (Web2c):**

- Application layout and content described by configuration file (.xml)
- Implemented widgets:

- | | | |
|----------------------|----------------------|--------------|
| • Web2cSection | • Web2cImage | • Web2cVideo |
| • Web2cEmbeddedPage | • Web2cAnimatedImage | • Web2cChat |
| • Web2cLabel | • Web2cButton | |
| • Web2cLabelList | • Web2cSlider | |
| • Web2cValue | • Web2cWheelSwitch | |
| • Web2cValueList | • Web2cInput | |
| • Web2cIndicator | • Web2cTicker | |
| • Web2cIndicatorList | • Web2cTime | |
| • Web2cText | • Web2cTrend | |
| • Web2cTextList | • Web2cHisto | |

Web2cToolkit: Synoptic Display



Web2cToolkit: Synoptic Display Editor

The screenshot illustrates the Web2c Toolkit's Synoptic Display Editor interface. At the top left is a component palette with sections like Section, EmbeddedPage, Label, LabelList, and Text. Below it is a main workspace containing two large panels: "Histo Plot" on the left and "Trend Plot" on the right. The Histo Plot panel has sub-components "Slider" and "Wheel Switch". A detailed view of the Trend Plot panel shows its internal structure: "Value Label" and "Label" components are positioned above a red rectangular area, which contains a "Button". To the left of the red area are "Static Label" and "Text" components. The Trend Plot panel also features a horizontal slider with three green markers and three buttons at the bottom. At the top right of the workspace are "Add Component" and "Remove Component" buttons. On the far right of the workspace are navigation arrows (< >). At the bottom of the editor are several buttons: "Toggle among components", "Confirm attribute changes", "Reset page", "Help", "Save to file", and "Read from file". To the right of the workspace is a detailed configuration table showing the attributes and values for the selected "Indicator" component (id: indicator1).

Attribute	Value
type	Indicator
section	section2
id	indicator1
bounds	1104 84 1160 108
tooltipText	Indicator
border	none
borderColor	black
trueValue	10
falseIcon	redicon.jpg
trueIcon	greenicon.jpg
uri	tine:///TEST/LxSineGen

Buttons at the bottom:

- Toggle among components
- Confirm attribute changes
- Reset page
- Help
- Save to file
- Read from file

Web2cToolkit: Archive Viewer

Data Selection

User-defined selection:

HERA Electron Beam Current [mA]
HERA Proton Beam Current [mA]
HERA Electron Beam Lifetime [1/s]
HERA Proton Beam Lifetime [1/s]

>>

HERA Electron Beam Current [mA]
HERA Proton Beam Current [mA]
HERA Electron Beam Lifetime [1/s]
HERA Proton Beam Lifetime [1/s]

clear selection

Predefined selection:

HERA Beam Current Overview
HERA Beam Lifetime Overview

>>

clear selection

Time Period Selection

Archive: Year Month Day Hour Minute

2007 06 30 23 59 2007-06-30 22:00:00 2007-06-30 23:59:00

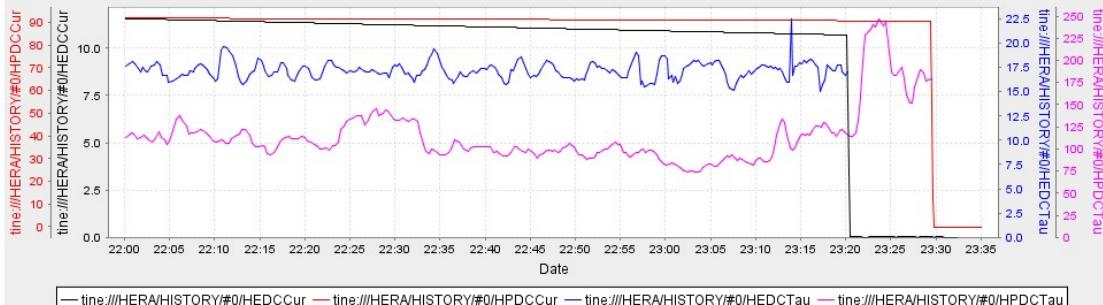
clear selection

Live:

last 12h

clear selection

Archive Data



backward

forward

left half

reset zoom / shift

right half

Web2cToolkit

- **Home page:**

<http://web2cToolkit.desy.de>