cosylab
CONTROL SYSTEM LABORATORY

Evolution of VisualDCT

Jaka Bobnar
jaka.bobnar@cosylab.com

Matej Sekoranja
matej.sekoranja@cosylab.com

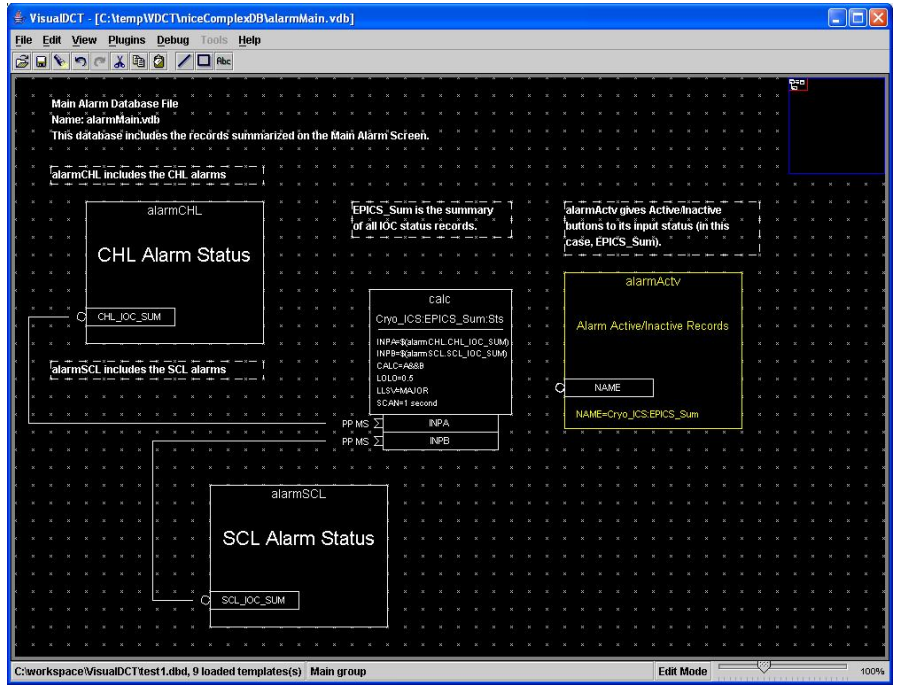
Igor Verstovsek
Igor.verstovsek@cosylab.com

Contents

- Basic concepts of VDCT
- Short history
- Current and future plans
  - Spreadsheet View
  - Integration into Eclipse and Control System Studio
  - Integration with VCCT and use of relational databases

Very short introduction to VDCT

- Visual Database Configuration Tool for EPICS
- Written in Java
  - Platform independent
  - Webstart support
- Open-source product
- Easy and fun to use



How did it start

- Began as a project funded by Swiss Light Source
- A tool designed for EPICS was required – no excess baggage
  - Simple “electronics-drawing style” application was developed
- Feature requirements started to flow in from various labs around the world
- Hierarchies were introduced to EPICS

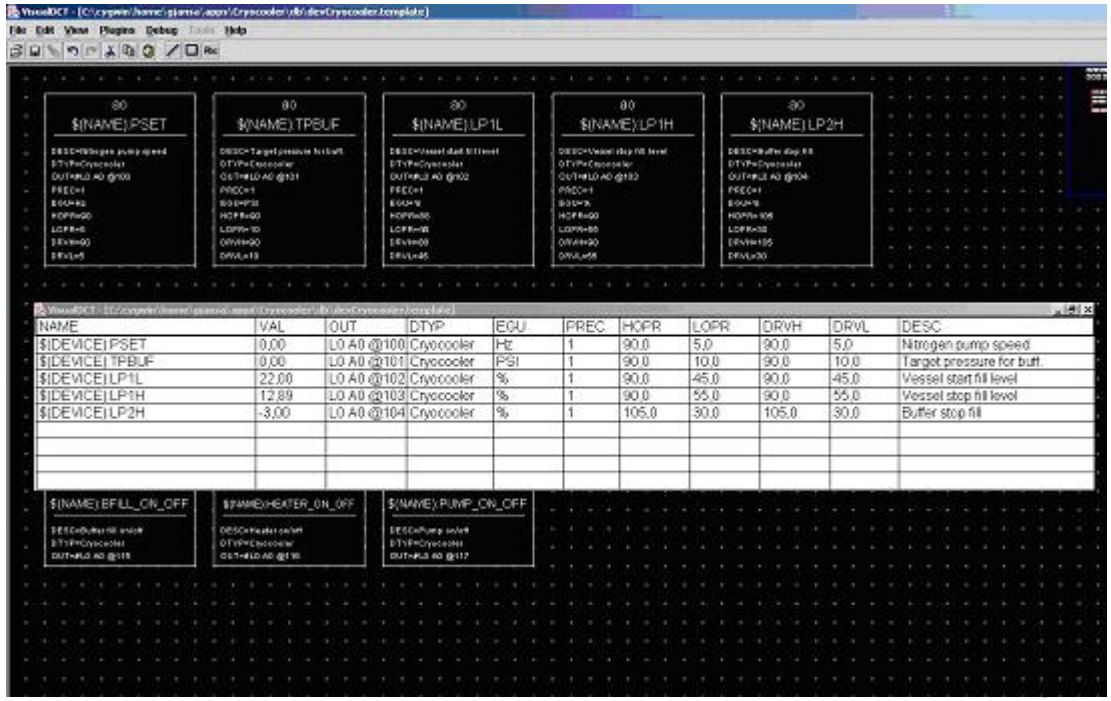
Plugins

- JCA Debug Plugin
  - Allows displaying actual CS values in design-time
- CapFast Conversion Tool
  - Old CapFast databases can be maintained with VDCT
- Channel Archiver Configuration Plugin
- Alarm Handler Configuration Plugin

The last two plugins allow easy configuration of additional EPICS configuration files

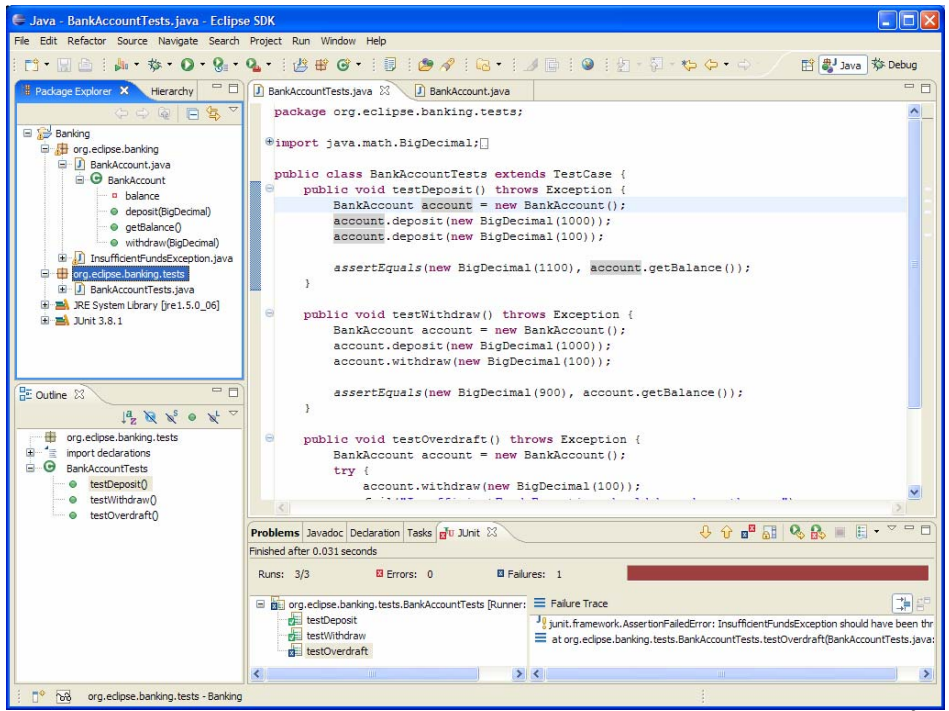
Spreadsheet View

- Graphical representation is not very helpful when database is large
- Spreadsheet View
  - Records presented in an editable table
  - Allows editing of multiple records simultaneously
  - Import/export from/to Excel



Eclipse

- An Open Development Platform
- One of the most popular IDEs
- Written in Java
  - Portable to many operating system
  - Provides native look and feel (SWT libraries)
- Platform is fully extensible via plugins

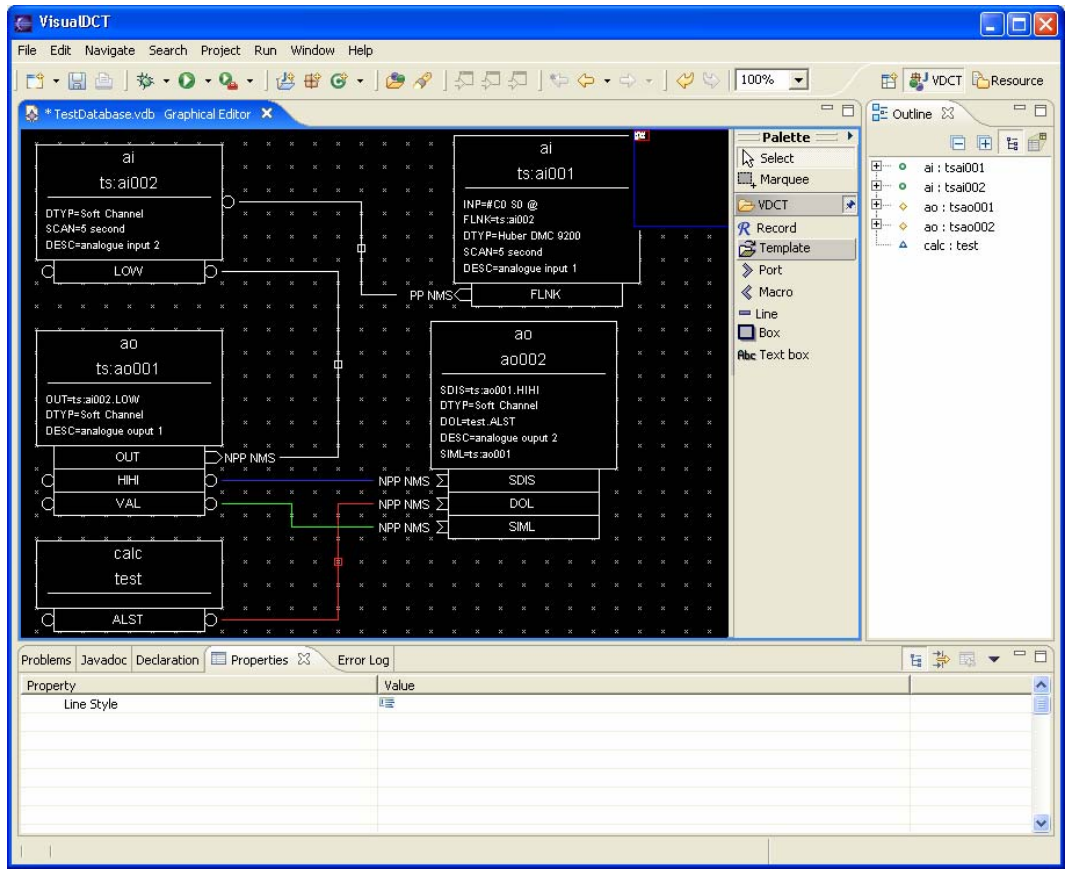


Integration of VDCT into Eclipse

- Easy implementation of most common IDE features
  - Undo/redo
  - Drag ’n’ drop
- Graphical Editing Framework (GEF) for the VDCT visual editor
  - Model agnostic
  - Provides many of the existing VDCT features
  - Offers easy solution for Spreadsheet View

Integration of VDCT into Eclipse

- Use of Eclipse Modeling Framework (EMF) as a model
  - It can be adapted to use an existing POJO model
  - Employs different levels of code generation
  - Complements with GMF



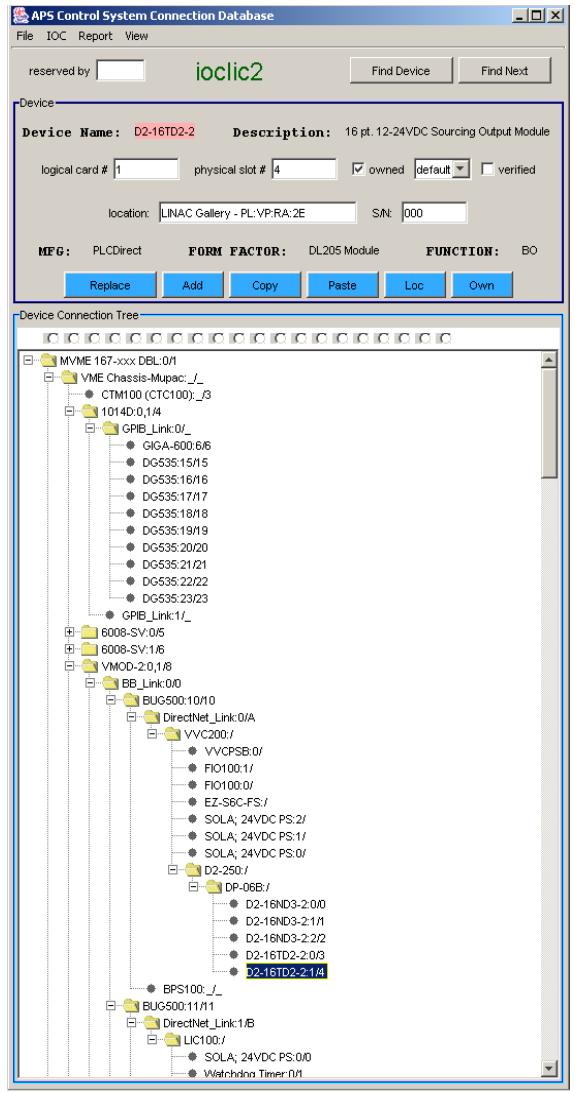
Integration with CSS

- Control System Studio is based on Eclipse
  - It offers an extensive set of EPICS tools
- VDCT could implement the CSS's DnD model
  - Easy handling and transfer of different records
- The use of Mouse Button 3
  - Import/export of records, databases

- Eclipse based VDCT could become an extension plugin for CSS

Integration with VCCT

- APS developed Visual Connection Configuration Tool (VCCT)
  - EPICS control system in a relational database
  - Records presented in a hierarchical tree
- Drag ‘n’ drop between VCCT and VDCT
  - Easy inspection and debugging



Conslusions

VisualDCT has become a powerful EPICS tool

Let’s keep it that way!

Visualdct.cosylab.com

Thank You for Your Attention