edm² – son of edm

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• 23 Years + of EPICS at TRIUMF

• Transitions
  – Sun/Solaris → x86/Linux
  – Motorola MV162 / VxWorks → x86/Linux, Arm/Linux
  – edd/dm → edm
  – Capfast™ → tdct

• Constants
  – Trar ASCII archiver
  – burt
  – StripTool
  – Alh
• Started to prepare for Motif demise
  – no more Motif programmers
  – Linux support?

• Progress so far
  – StripTool → TChart
  – alh → TAih
  – edm → ??
Why upgrade edm?

- TRIUMF has big investment in edm
  - EdlBuild libraries (Perl, Python)

- Looked at the other options (CS Studio, EPICS Qt, caQtDM)

- we like edm functionality
- we converted once edd/dm → edm (2005 – painful)

- I am cheap labour
• Why “son of edm”
  – shares lots of genes
  – looks like the father
  – eats the same food (edl files)
  – thinks the father is old-fashioned ...
  – .. but behaves exactly like him
  – the older he gets, the more he
    • acts like his dad
    • appreciates his dad
  – will do things his father never did
• In different words

– fully backward compatible with edm
  • edl file format (100%) – must be able to coexist with edm
  • functionality (as much as possible)

– uses Qt as GUI framework
– C++11 STL

– not predicated on Qt
  • design makes Qt replaceable

– clear separation of
  • widget definitions
  • run-time behaviour
  • graphics rendering / user interaction
edmq Implementation

GUI implementation
QtContext class for Widget rendering
(Widget editing)

edmLogic
edmLogicSite

edmBase
edmBaseSite

Application

• Instantiation of displays, widgets
• Widget behaviour
• Channel access
  (future: PV access)

Libraries

• Widget and display definitions
• Hooks for editing

Expansion
Present Status

- All functionality used at TRIUMF:

<table>
<thead>
<tr>
<th>Arc</th>
<th>Bar</th>
<th>Button</th>
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<tbody>
<tr>
<td>Embedded Window</td>
<td>Byte</td>
<td>Choice Button</td>
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<tr>
<td>Lines</td>
<td>Message Box</td>
<td>Exit Button</td>
</tr>
<tr>
<td>Rectangle</td>
<td>Meter</td>
<td>Include Widget</td>
</tr>
<tr>
<td>Static Text</td>
<td>NdArrayVideo</td>
<td>Menu Button</td>
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<td>Symbol</td>
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<td>Table</td>
<td>Message Button</td>
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<tr>
<td></td>
<td>Text Monitor</td>
<td>Radio Box</td>
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<td>XYGraph</td>
<td>Related Display</td>
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<td>Shell Command</td>
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<td>Text Control</td>
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<td>Triumf Slider</td>
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+ TriumfSlider2D

Process

😊
• All functionality used at TRIUMF:
  - Arc
  - Bar
  - Button
  - Choice Button
  - Byte
  - TriumfSlider2D
  - Embedded Window
  - Lines
  - Rectangle
  - Static Text
  - Table
  - Text Monitor
  - XYGraph

• can coexist with edm
  - all widget properties will be saved to .edl, even if they are not functionally implemented
  - displays which contain non-implemented widgets cannot be saved

• Process
  - Message Button
  - Radio Box
  - Related Display
  - Shell Command
  - Text Control
  - Triumf Slider
1st week of May: Review with J.W. Sinclair

architecture improvements are implemented

Presently: testing, bug-fix. Started use for editing

Production version for TRIUMF: end of summer
Thank you!

Merci!