edmq – 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 $\rightarrow$ TChart
  - alh $\rightarrow$ TAlh
  - edm $\rightarrow$ ??
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

Expansion

Application

Libraries

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

• Widget and display definitions
• Hooks for editing
All functionality used at TRIUMF:

- Arc
- Embedded Window
- Lines
- Rectangle
- Static Text
- Bar
- Byte
- Message Box
- Meter
- NdArrayVideo
- Symbol
- Table
- Text Monitor
- XYGraph
- Button
- Choice Button
- Exit Button
- Include Widget
- Menu Button
- Menu Mux
- Message Button
- Radio Box
- Related Display
- Shell Command
- Text Control
- Triumf Slider
- TriumfSlider2D
- Process
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- 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
• 1\textsuperscript{st} week of May: Review with J.W. Sinclair

• \rightarrow \text{architecture improvements are implemented}

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

• Production version for TRIUMF: end of summer
Thank you!

Merci!