MEDM Is Not Dead, Yet

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Topics Covered

- History
- Features
- Philosophy
- The Future

- The short MEDM update is that it continues to work well
Historical Facts

- MEDM was started by Mark Anderson at Argonne in 1990
  - It was based on DM and EDD
  - It used Motif, which was new at that time
    - MEDM stands for Motif Editor and Display Manager
- Fred Vong maintained MEDM from 1994 – 1996
- Ken Evans took over in 1996
- Many others have contributed
- There has been at least one major derivative, DM2K
MEDM Design Philosophy

• Performance, robustness, and maintainability come first
  - KISS [Keep It Simple Stupid] tends to work well
• Features are important but feature bloat is incommensurate with robustness and maintainability
• MEDM tries to strike a balance
  - Robustness and maintainability come first
• MEDM tries to enable, not restrict, the user
  - You are responsible for not shooting yourself in the foot

• This philosophy has been successful in that MEDM is, in fact, very robust and stable today
  - And still has enough features to run a very large control system
What MEDM Has Going for It

• It is a mature program
  - Robust: Hardly ever crashes or misbehaves
  - Powerful: Is the principal control method for many facilities
  - Efficient: Is optimized for speed and performance

• Tens of thousands of screens have been designed for MEDM

• It is and has been used worldwide at many sites
  - Over a long period of time

• There has been time to discover and fix bugs that only occur infrequently or in special circumstances

• It is tested and runs on all the major platforms
  - Solaris, Linux, HPUX, Mac OS X, Windows

• It hardly ever crashes or misbehaves
  - In spite of touching almost every device in the facility
  - Rather, it is relied upon to diagnose other problems
MEDM Has Substantial Power

- A deck of cards has 52 cards
  - That has lead to endless games
- MEDM has 24 Objects
  - All of these have multiple features and options
  - That is enough to design tens of thousands of screens
  - It is enough for the basic control of a large facility
- It does not have every feature you may need or want
  - No program does
- It does not do everything the way you might like
  - No program does
MEDM Is Capable of Impressive Screens

- And tens of thousands of others
**MEDM Runs on Microsoft Windows**

- Is part of the EPICS WIN32 Extensions

- Many experimental teams use Windows
- Home and notebook users tend to use Windows
The E in MEDM Does Not Mean Extensibility

- MEDM is not easily extensible
  - Owing to its original design
    - Started before the days of standardized C++
    - Could have been, but was not Object Oriented

- Extensibility is best added with additional applications
  - StripTool is a good example
  - As are all the Tcl/Tk apps at the APS or XAL at SNS
  - Can be coded with the developer’s language of choice
  - They can be made to do whatever the developer wants
  - If these crash or use resources, they do not bring down MEDM
  - MEDM is free to do the few things it does rapidly and efficiently

- This philosophy has worked out well at the APS
There Should Only Be One DM

- Many share the opinion that there should be one DM
  - As with most other parts of EPICS
  - Except that there are now CA and CAJ and this is good
- I do not share this opinion
- There is a significant advantage to having the DM developer “In House”
  - He / she will be more responsive to your needs
  - Communication is vastly better
  - Problems will be fixed much faster
  - New ideas will be implemented
- Duplication of effort need not be a problem
  - DMs, along with EPICS in general, are Open Source
  - There is no reason not to copy features or use code from an existing DM (provided credit is appropriately given)
The Future

- **MEDM is not being actively developed**
  - There are no planned major new features
  - However, features will be added if there is a need and resources permit
  - A WheelSwitch Object is currently being added

- **MEDM will be maintained**
  - Because it is essential to the APS
Thank You

This has been an
APS Controls Presentation
Thank You

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