

Performance testing of EPICS user interfaces -- an attempt to compare the performance of MEDM, EDM, CSS-Boy and EPICS

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- “Is it fast enough?” rather than “Which is fastest?”?
- Used commodity desktop hardware - what you can buy today for ~ \$1000 or so
- Linux Red Hat Ent 6.4 and Windows 7 Ent
- Mac hardware made direct comparisons difficult
- Lowest common denominator – text and simplest widget only
- MEDM, EDM, CSS-Boy, EPICSQt, and CAQtDM and AS Delphi
- Tried to be fair



Results - text

Table 1: Linux Update Rates, Text Widget

| UI | Version | CPU | Max Update Linux | Lossless Update Linux |
|----------------|------------|-------|------------------|-----------------------|
| CSS-BOY | 3.1.4 | 14.88 | 22000 | 15000 |
| <u>EPICSQt</u> | 2.4.18 | 13.12 | 11100 | 10000 |
| EDM | 1.12.40 | 10.95 | 35100 | 20000 |
| MEDM | 3.1.7 | 12.83 | 65000 | 45000 |
| <u>CAQtDM</u> | 2.8.0 | 13.71 | 13500 | 5000 |
| AS-Delphi | <u>Int</u> | 16.54 | 9900 | 5000 |

Table 2: Windows Update Rate, Text Widget

| UI | Version | CPU | Max Update W7 | Lossless Update W7 |
|----------------|------------|-------|---------------|--------------------|
| CSS-BOY | 3.1.4 | 14.88 | 23000 | 16500 |
| <u>EPICSQt</u> | 2.4.18 | 13.12 | 10000 | 8000 |
| EDM | 1.12.40 | 10.95 | NA | NA |
| MEDM | 3.1.7 | 12.83 | 22250 | 16000 |
| <u>CAQtDM</u> | 2.8.0 | 13.71 | 13000 | 5500 |
| AS-Delphi | <u>Int</u> | 16.54 | NA | NA |

Table 3: Linux Update Rates, Graphical Widget

| UI | Version | Max Update Linux | Lossless Update Linux |
|----------------|------------|------------------|-----------------------|
| CSS-BOY | 3.1.4 | 9840 | 8000 |
| <u>EPICSQt</u> | 2.4.18 | 14400 | 4000 |
| EDM | 1.12.40 | 142880 | 32000 |
| MEDM | 3.1.7 | 136800 | 48000 |
| <u>CAQtDM</u> | 2.8.0 | 16600 | 12000 |
| AS-Delphi | <u>Int</u> | -- | -- |

Table 4: Windows Update Rates, Graphical Widget

| UI | Version | Max Update W7 | Lossless Update W7 |
|----------------|------------|---------------|--------------------|
| CSS-BOY | 3.1.4 | 28800 | 16000 |
| <u>EPICSQt</u> | 2.4.18 | 40000 | 40000 |
| EDM | 1.12.40 | NA | NA |
| MEDM | 3.1.7 | 36000 | 7360 |
| <u>CAQtDM</u> | 2.8.0 | -- | -- |
| AS-Delphi | <u>Int</u> | -- | -- |



Screen shots, Questions? And thanks for your attention.

The image displays several screenshots from a Qt application. The top-left screenshot shows a calendar grid with dates from 20 to 22. The top-middle screenshot shows a grid of small windows titled 'mybars400', each containing a bar chart. The top-right screenshot shows a window titled '/local/perftest/edls/mydialog.edl' containing a grid of numerical values, likely representing test results. The bottom-left screenshot shows a window titled 'mydialog.adl' with a grid of '4E' characters. The bottom-right screenshot shows a 'Dialog' window with a grid of '82' characters. A status bar at the bottom reads 'Information: Opening uis/mydialog.ui in new window'.

