TRIUMF

Canada's national laboratory for particle and nuclear physics
Laboratoire national canadien pour la recherche en physique nucléaire
et en physique des particules

SCALING OF EPICS EDM DISPLAY PAGES AT ISAC

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Control System of the ISAC Radioactive Beam Facility (Highlights)

- Uses EPICS
- 4500 Devices
- 130 000 EPICS records

- Beam diagnostics: VME
- Beam optics: CANbus micro-controllers
- Vacuum, Ion sources, Cryo distribution: PLC (Schneider / Modicon)
- Cryo Plant (Linde): PLC (Siemens)

Our problem:

ISAC Displays

- 900 Synoptic and other manually generated display pages
- 3000 Device Control Panels (mostly auto-generated)
- Designed for 1280X1024

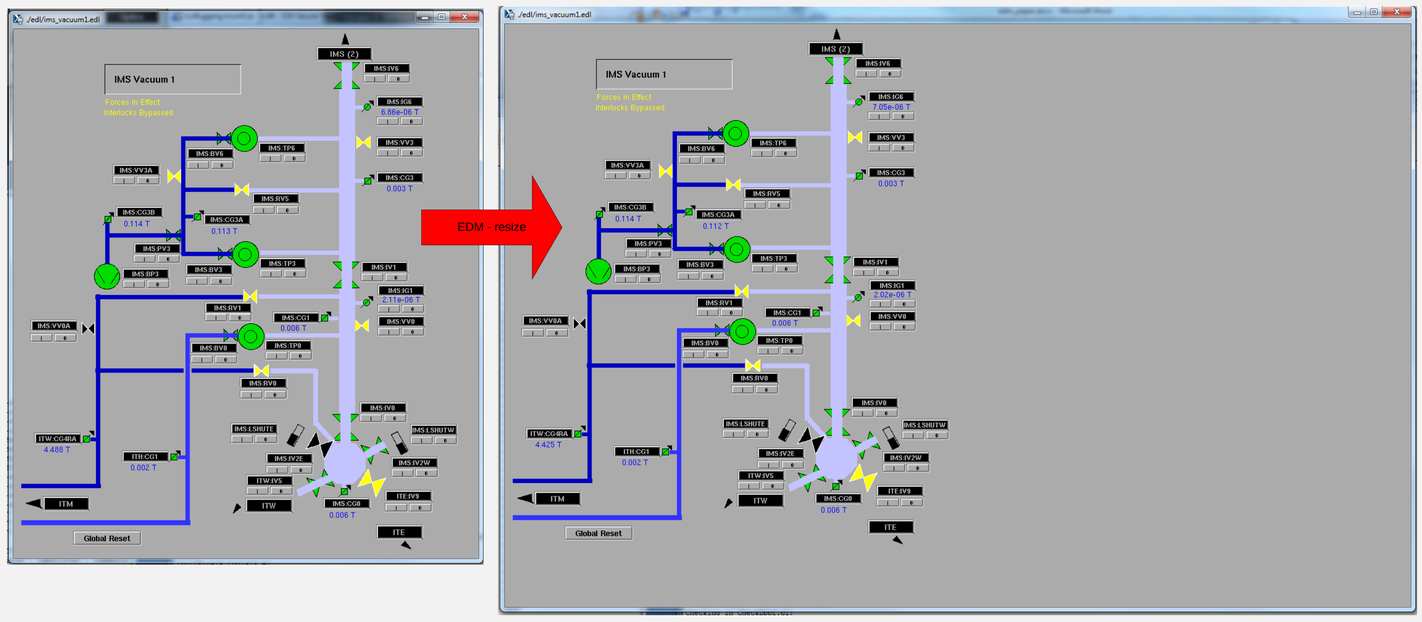
- Modern LCD monitors have smaller pixels
  → display pages look "smallish"

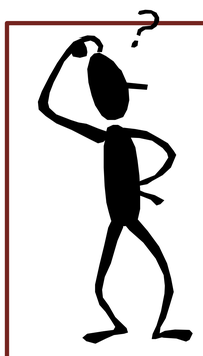
EDM Display Manager

- Graphics is pixel-based
- Integer coordinates
- Window-resizing does not scale widgets!

→ @#%$!!!!!!!!

EDM Scaling – graphics does not scale!



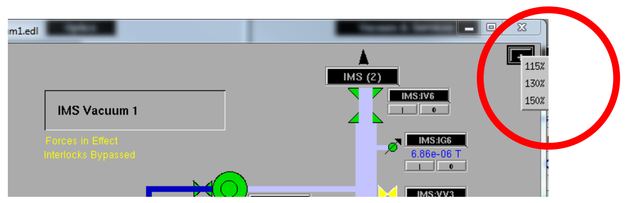


Our solution:

Perl tool "edlMagnify

- Adds magnification button to major screens
- Creates scaled copies of display page.
- Select fixed set of magnifications
  - 100%, 115%, 130%, 150%
  - Magnification encoded in file name (<file>.edl, <file>-m1.15.edl, <file>-m1.3.edl, ….)

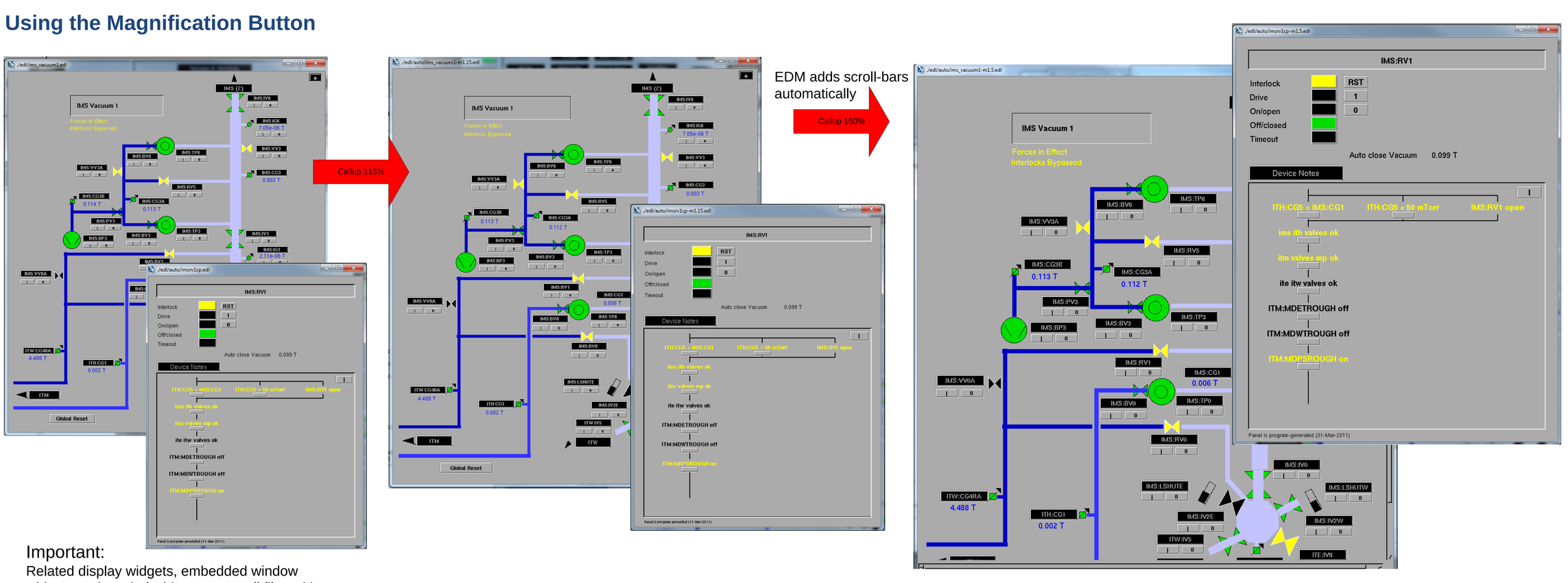
Automatically scale displays when moving to production



Magnification Button-popup

- Shows all magnifications but present
- Uses EDM widget property to close parent display
  → switch future displays to new magnification

Using the Magnification Button



Important:
Related display widgets, embedded window widgets and symbol widgets must call files with proper magnification.