

EPICS Codeathon 2022

Python Session

Friday, May 13th, 2022



- 17 participants joined for at least one day
 - 13 on-site: SLAC (12), APS (1)
 - 4 remote: SLAC (1), CNPEM (1), BNL (2)
- Project ideas and status were captured in GitHub discussions:

<https://github.com/pcdshub/epics-codeathon-2022-python/discussions>

- Existing issues and new functionality were our primary focus
 - 10 different repositories and 47 (!) pull requests
 - We also found (and resolved!) new issues

Contributions by the numbers

<i>Project</i>	Contributors	Total Issues	Total PRs	Merged/Resolved
adl2pydm	1	2	2	1
happi	1	4	4	3
ophyd	4	7	7	6
pmps-ui	1	1	1	1
pyca	1	1	1	1
pydm	9	19	19	14
pythonSoftloc	1	1	0	0
timechart	3	10	10	10
typhos	1	3	2	3
whatrecord	1	1	1	1
Grand Total	15	49	47	40

<https://github.com/pcdshub/epics-codeathon-2022-python/discussions/25>

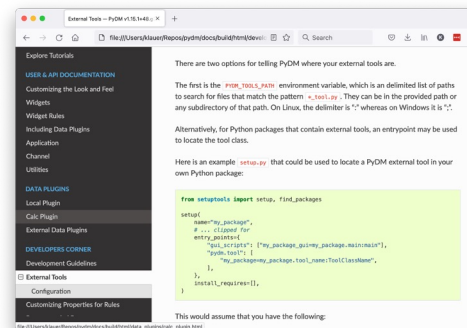
Irregular polygon support



PVAccess support + better
alarm handling for Channel
Access

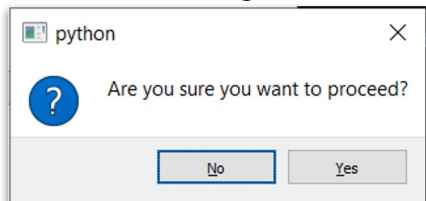


Entrypoints support for user-supplied
extensions + improved
documentation



Screenshots - PyDM

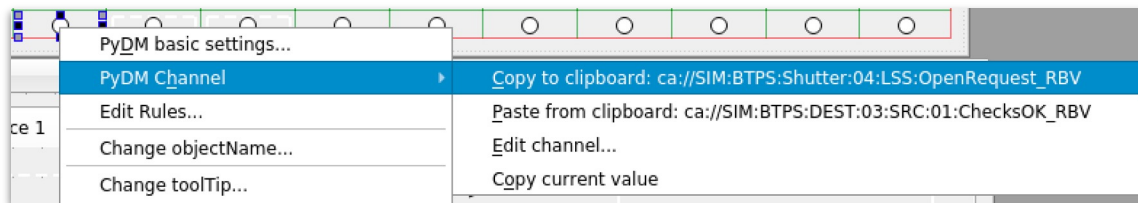
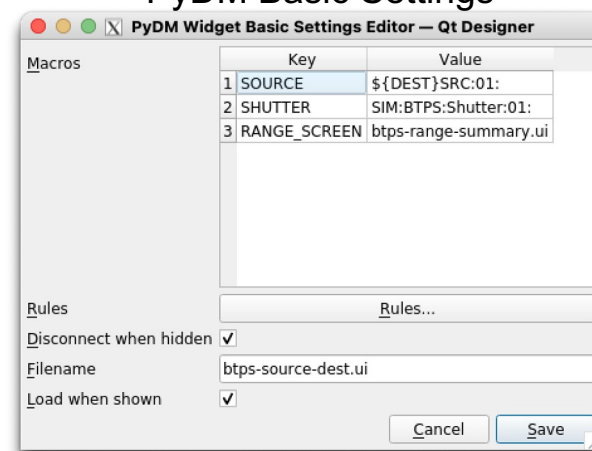
Simplified confirmation dialogs



EDM-inspired macro inspector dialog

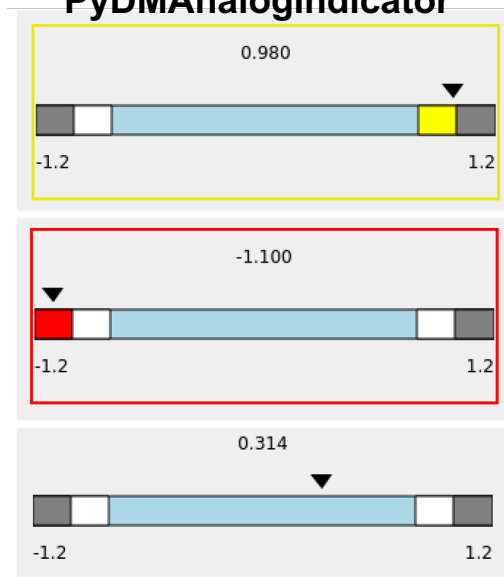


Qt Designer improvements: "PyDM Basic Settings"



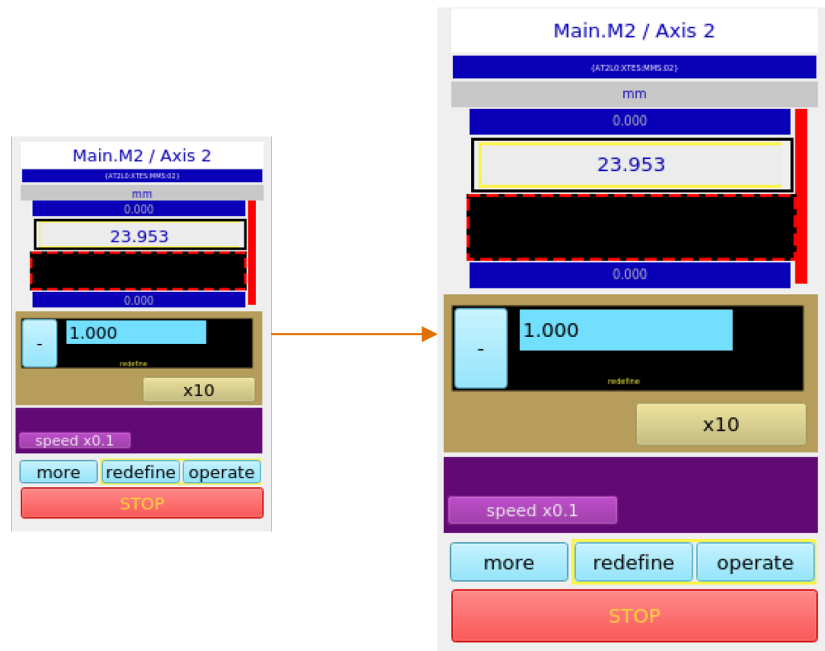
Analog scale indicators with intuitive warning/error alarm limits:

PyDMAbsoluteIndicator



MEDM-style on-demand automatic resizing layouts:

PyDMAbsoluteGeometry



Screenshots - timechart

Settings filename in title + filtering fixes:

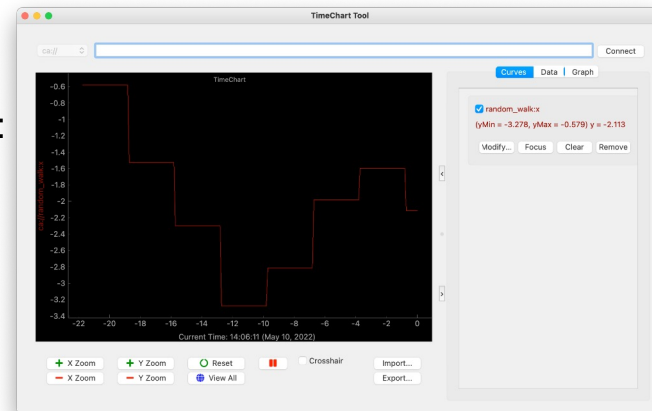
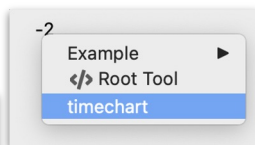
TimeChart Tool - twocurves.stp

✓ Timechart JSON file (*.json)

TimeChart StripTool file (*.stp)

All files (*.*)

PyDM context menu tool:

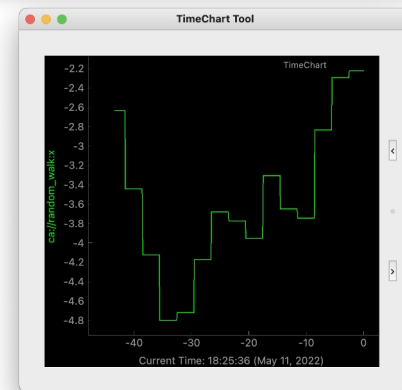


Minimal widget fullscreen-like mode:

Toggle Fullscreen-Like Mode

A more convenient command-line interface:

```
timechart --pvs random_walk:x
```

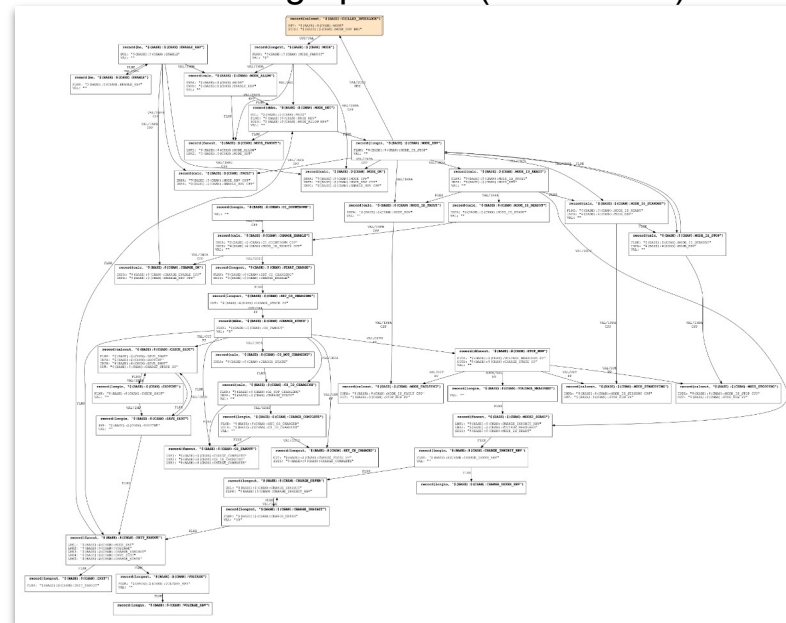


Last, but not least

Other repository contributions were less photogenic but just as significant:

- ophyd
 - New positioner and signal type enhancements
 - A variety of fixes
- happi
 - Longstanding bugs fixed
 - Packaging improvements
- pyca
 - Deadlock/threading fixes
- adl2pydm
 - Better display conversion + conda-forge recipe
- Miscellaneous package releases, documentation, and more...

PV relation graph fixes (whatrecord)



ENH: add enforce_doc kwarg to EntryInfo #241

Merged ZLLentz merged 5 commits into pcdshub:master from tangkong:enforce_doc 8 hours ago

Conversation 3 Commits 5 Checks 1 Files changed 3

Thank you to all attendees and collaborators!