

# PyDM: 2018 Status Update

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# Collaboration

- Contributions from 18 people, across 5 organizations:
  - SLAC
  - LNLS
  - Max Planck Institute Heidelberg
  - APS
  - BNL



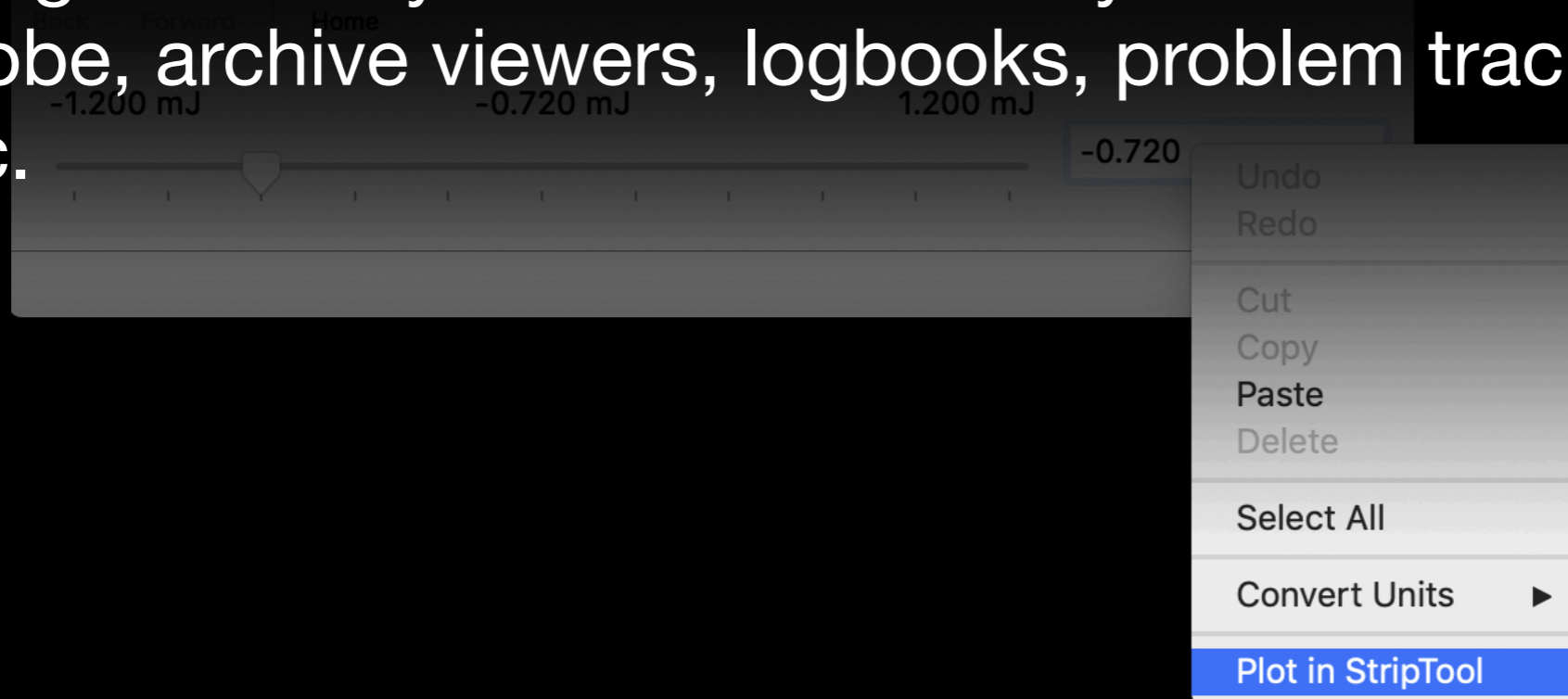
# Whats New in 2018?

- **Stylesheets** - Give displays a customized look.
- Selectors work with Qt properties, which in PyDM includes things like alarm severity.
- Styles can change any Qt property.
- Works like CSS: multiple style sheets can be applied at different levels (global, per-display, and per-widget) and will cascade.

```
PyDMDrawing[alarmSensitiveBorder="true"][alarmSeverity="2"] {  
    border: none;  
    qproperty-penColor: yellow;  
    qproperty-penStyle: SolidLine;  
}
```

# Whats New in 2018?

- **External Tools** - Define interfaces to other applications.
- Right click any PyDM widget or display to get a context menu with a list of actions you can execute. PyDM sends the action a list of PVs and a reference to the widget.
- Integrate with your other control system tools: StripTool, Probe, archive viewers, logbooks, problem tracking tools, etc.

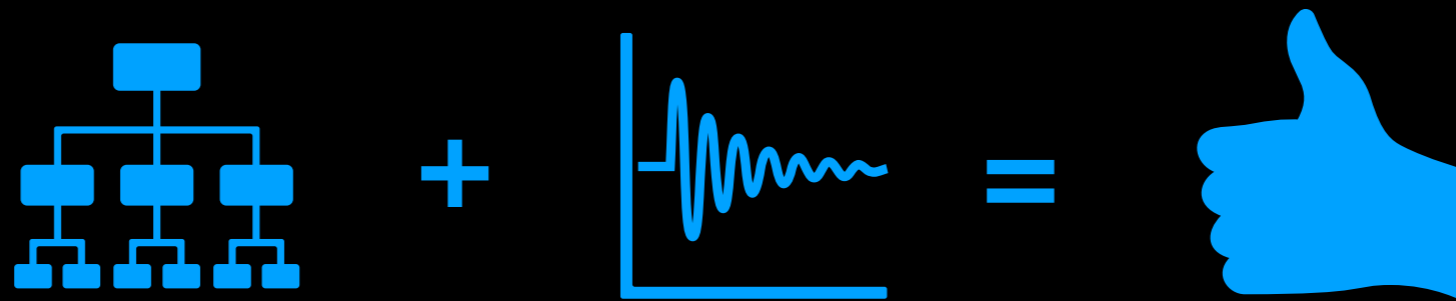


# Whats New in 2018?

- **Widget Rules** - Define simple expressions to change properties of widgets based on PV values, from within Qt Designer.
- Widgets define which properties are controllable.
- Write an expression that evaluates to the same type as the property you are changing (float, int, bool, etc.)
- The Numpy module is available in expressions.
- Hide/show widgets, enable/disable widgets, change colors, opacity, etc.

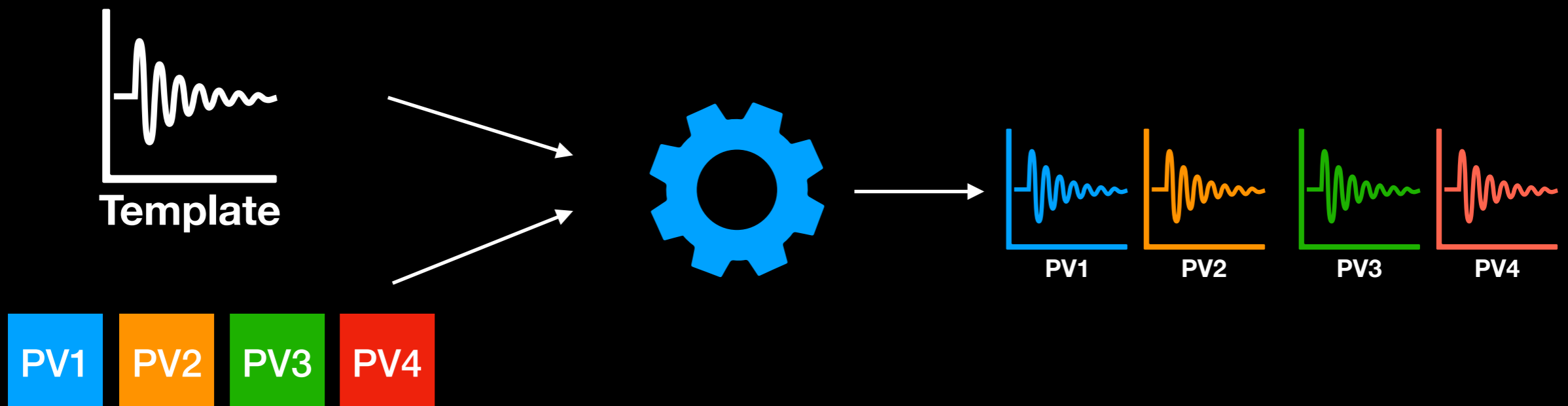
# Whats Coming in 2019?

**EPICS7 Structured Data** - Widgets can accept whole data structures in channels, or you can specify a particular value from a structure to use.



# Whats Coming in 2019?

**Templating Widget** - Create an item template with macros, supply the templating widget with a list of values to use, and the templating widget will populate a layout of items, filling them in with values from the list.



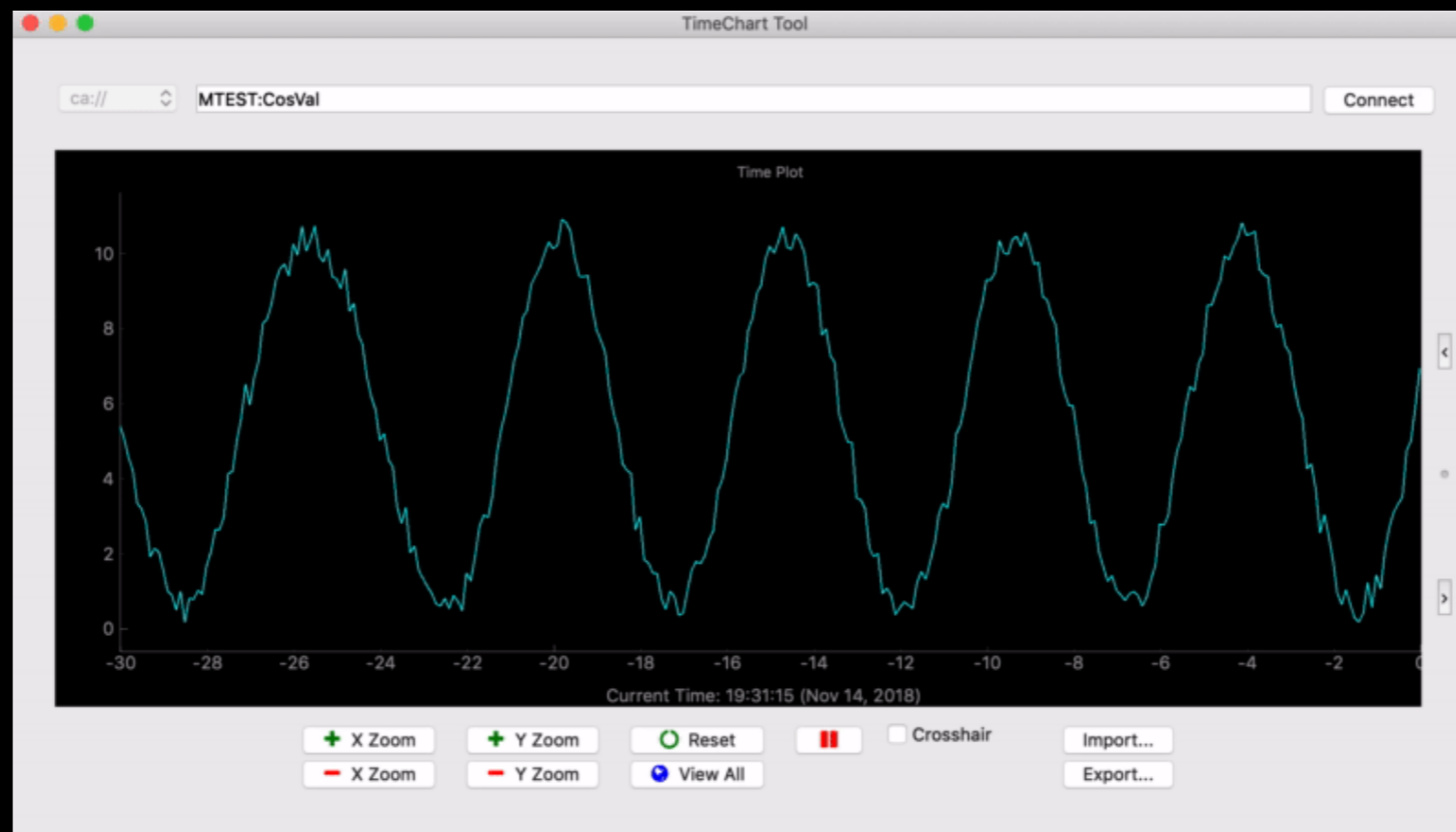
# Whats Coming in 2019?

**Expanded Archive Appliance Support** - Better data source plugin for using archive data with widgets, and a new widget specifically for displaying archive data.

# Whats Coming in 2019?

**TimeChart** - Standalone StripTool-like application based on PyDM widgets.

<https://github.com/slaclab/timechart>



# Thanks!

[github.com/slaclab/pydm](https://github.com/slaclab/pydm)

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