QEFormStateChange Widget

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Introduction

This document describes in detail the QEFormStateChange widget which is an EPICS aware widget provided by the EPICS Qt, aka QE, Framework.

This document was created as a separate widget specification document. The main reason for this is ease of maintenance and avoiding editing large and unwieldly word documents.

Description

The QEFormStateChange is a non-visible widget like the QELink widget. This widget is capable of responding to window/form open and close events. On form open and/or close the widget can write to a PV and/or execute arbitrary local programs/scripts. This is not unlike automatically clicking a QEPushButton on open and/or close, save that there is no option to open another .ui file.

While in designer, the QEFormStateChange is visible as a small 16x16 pixel pale blue rectangle. It is not immune to Qt's layout system, but as non-visible at runtime, it should not impact the run time layout.

A form may contain many QEFormStateChange widgets. The order in which PVs are written and programs are executed should be considered arbitrary. The widget ***does not*** support any kind of order of execution mechanism.

Properties

The QEFormStateChange inherits directly from QWidget and as such inherits all the QWidget properties. The widget has the following class specific properties.

variableOpen : QString

This defines the process variable name to be written to when the form is opened.

variableClose : QString

This defines the process variable name to be written to when the form is closed. It may be the same as the open variable.

variableSubstitutions : QString

This defines the default substitutions that are applied to both variable names.

format : QEFormStateChange::Format

default value: Default

The format applied to the date written to both the open and close PVs.

openText : QString
default value: 1

The value written when the form is opened provided the variableOpen : QString property is defined and the nominated PV has connected.

openProgram :QString
default value: empty string

This specifies the program to be run when the form is opened. No attempt to run a program is made if this property is empty.

openArguments : QStringList
default value: empty list

Arguments for program specified in the "openProgram" property.

closeText : QString
default value: 1

The value written when the form is closed provided the variableClose : QString property is defined and the nominated PV has connected.

closeProgram :QString
default value: empty string

This specifies the program to be run when the form is closed. No attempt to run a program is made if this property is empty.

closeArguments : QStringList
default value: empty list

Arguments for program specified in the "closeProgram" property.

runVisible : bool
default value: false

This property defines if the widget is visible at run time, i.e. within QEGui. Not sure how useful it would be to have this widget visible at run time, but let's not second guess the users' needs and desires.