TECH NOTE : Digital output signal with catman sequencer and QX MX879

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Author: Thomas Markwitz, Product Manager Test & Measurement, HBM Germany
Status: public

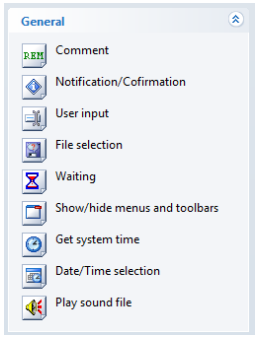
Abstract

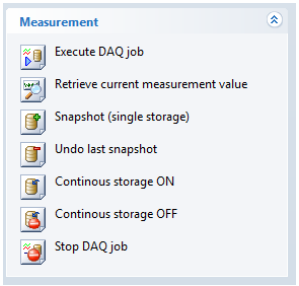
The TechNote describes how to generate a predefined digital output signal on QuantumX MX879 using Catman-Sequencer.

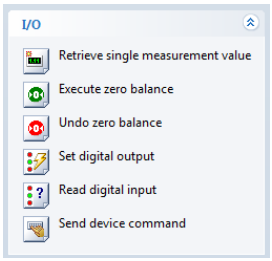
Intro

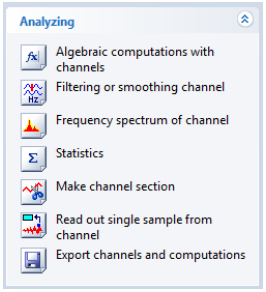
This example can be used for small test stands to control the Test-Sequence.

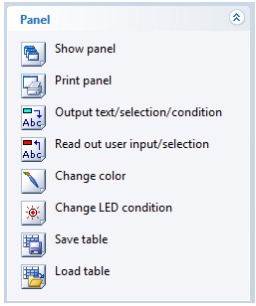
The Auto Sequence Editor is part of catmanAP and an option of catmanEasy. It provides a large set of commands which can be programmed to a sequence.
The commands are grouped to several families with similar functionality:

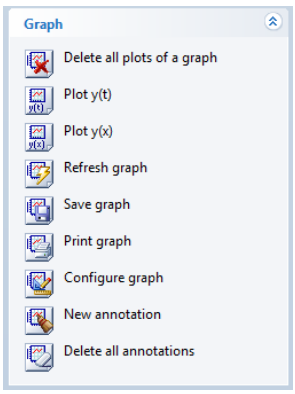


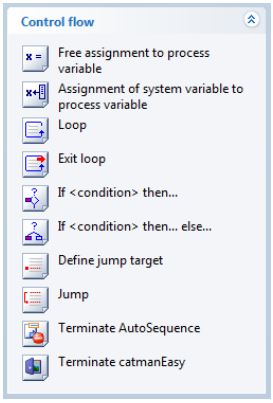


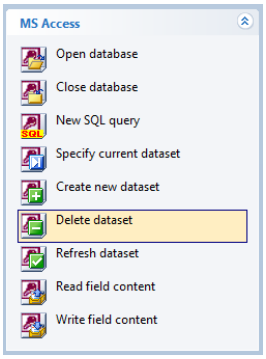


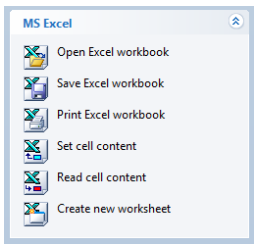


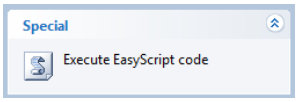








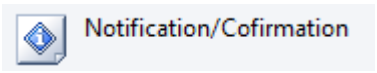


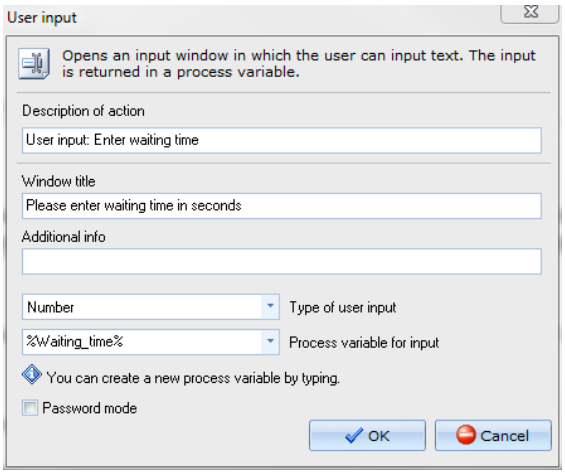


Example

In the following example you learn how to set and reset digital outputs with a variable switching period.
The switching period (On and Off time) will be entered by the user and also how often the bits are set and reset.

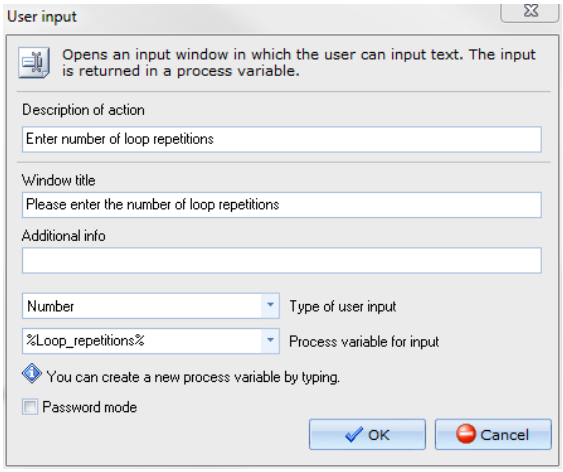
Step 1:
Enter a “Notification/Confirmation” command in the sequence to create a user input and let the user enter the waiting time (Switch on and Off time):





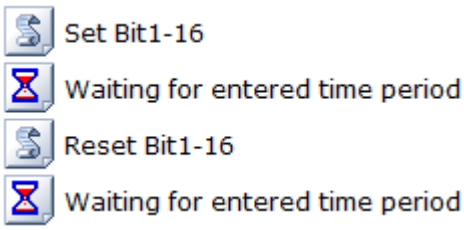
The process variable “%Waiting_time%” will be used in “Waiting” command later.

Step 2:
Enter a second “Notification/Confirmation” command in the sequence to let the user enter the loop repetitions (how often the bits are switched on and off).

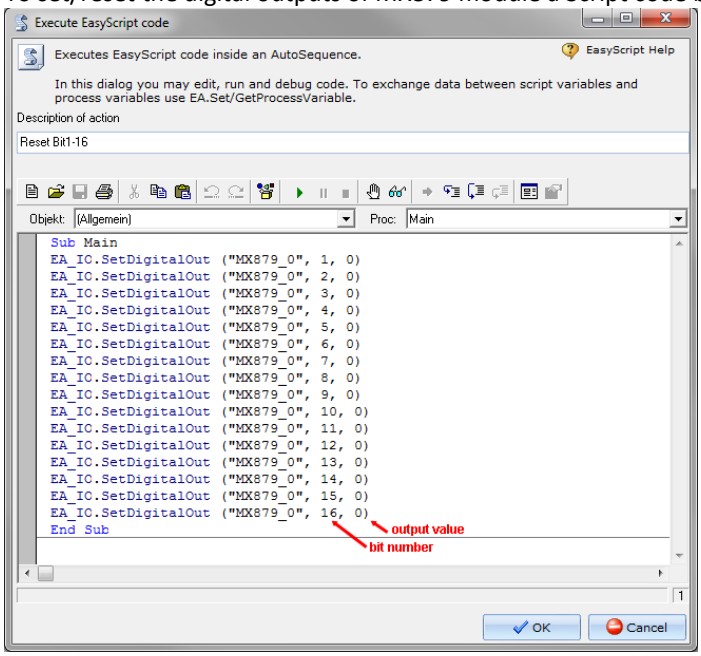


The process variable “%Loop_repetitions%” will be used in “Loop” command later.

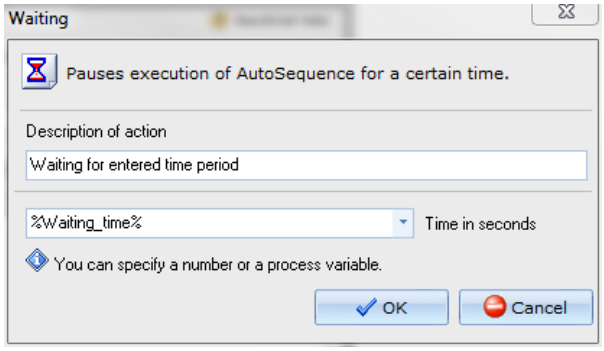
Step 3:
Enter a simple sequence of “Execute EasyScript code” and “Waiting” commands:



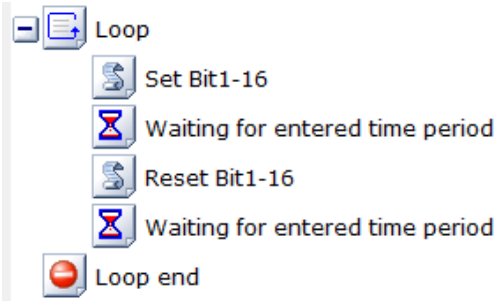
To set/reset the digital outputs of MX879 module a Script code block is used. In this example we use Bit 1 to 16.



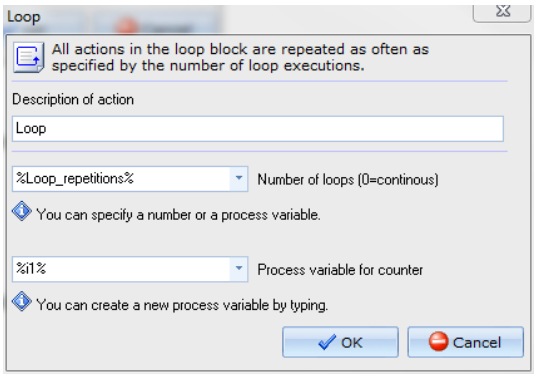
For the Waiting command the process variable “%Waiting_time%” is used:



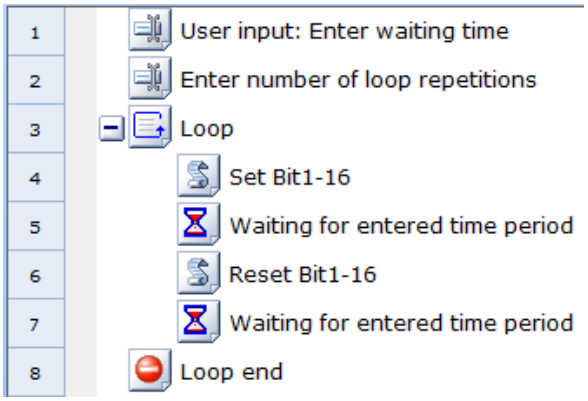
Step 4:
Enter a loop around the sequence created in step 3:



For the parameter “number of loops” the process variable “%Loop_repetitions%” is used:

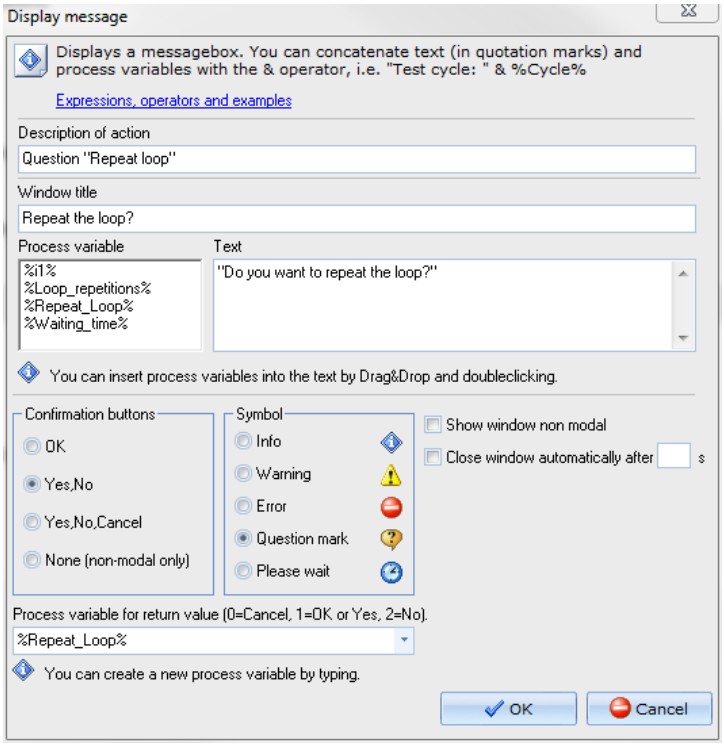


Intermediate Result:

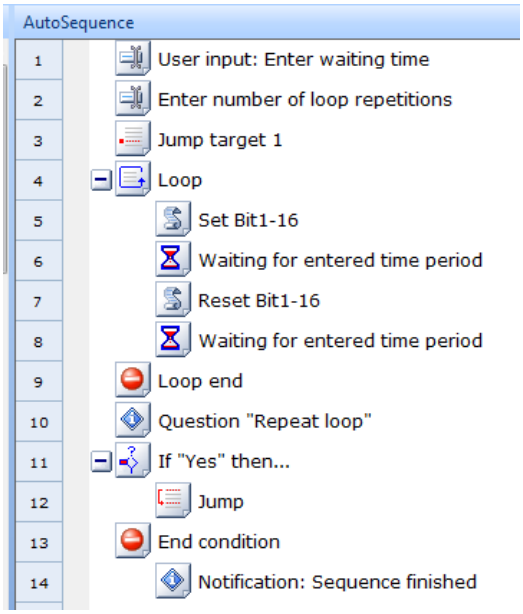


Step 5:

If you want you can now add an additional “Notification/Confirmation” command to ask the user if he wants to repeat the loop. If yes you have to jump in the sequence before the loop. If not you can display an information window showing “The sequence is finished.”

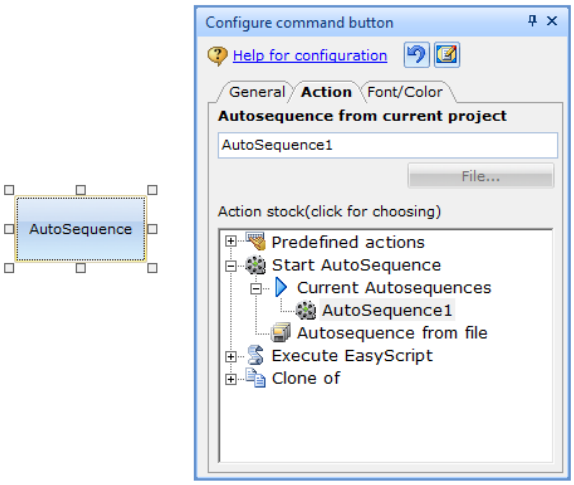


Final Sequence:



Step 6:

The AutoSequence can be started e.g. at DAQ Start or by clicking a button in the visualisation:



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