Application Note AN0170801

Dynamic Script Parameters

Introduction

There may be scenarios when script parameters need to be adjusted in real time to accommodate a particular operation. For instance, some clients may want to periodically test a master lamp using different tolerances than those used for production lamps. Creating a single script that can test both lamps is preferable to having two separate scripts that may get out-of-sync with one another.

IntelliAim scripts can be written to define symbols which are, in turn, used in symbol-capable fields. IntelliAim also has a *Read digital inputs* task, which can read multiple inputs and pack them into a data field. This data field can be used with the *If goto* task to select the values to which symbols translate.

Tasks of Interest

Set Symbol

The *Set symbol* task allows a user to set the value of a user symbol. If the symbol does not exist, it will be created.

Read Digital Inputs

The *Read digital inputs* task allows a user to read an input or a group of inputs as a numeric value. This task stores the value in a symbol based on the task name so that it can be used to make decisions in the script.

If Goto

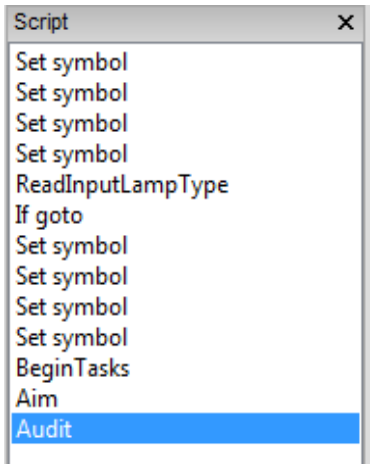
The *If goto* task allows a user to make script flow decisions based on user-specified criteria. This can be used to control the value assigned to a symbol using the *Set Symbol* task.

Script Label

The *Script label* task is used as a jump-to point by *If goto* tasks.

Script Example

The following is an example of a script that adjusts values if a certain digital input is read.



Set Symbol(s) – Default Values

Add as many *Set symbol* tasks as necessary. A symbol should be created for each field whose value will change based on the type of lamp. For each of these tasks, enter a symbol name into the "Symbol" property and a value into the "Value" property. These symbols will be available for use in any symbol-capable field.

Read Digital Inputs

Create a *Read digital inputs* task and give it a unique name. Specify the inputs that will be used. This could be one input, or many inputs that will be used as bits to create a numeric value. After this task is ran, the numeric value will be stored in a symbol called `<taskname>_Value`, where `<taskname>` is ReadInputLampType for this example.

The symbol will be used with the following *If goto* task to make a decision on whether to redefine the symbols created in Set Symbol(s) – Default Values.

If Goto

Create an *If goto* task with a conditional statement in the "If" property that tests the results of the previous *Read digital inputs* task. For instance, if the *Read digital inputs* task expects to read a value of 1 for a certain type of lamp, and a value of 0 for a different lamp, the conditional statement could be `[ReadInputLampType_Value] == 0`.

The "Label" property expects a *Script label* task name that the script will jump to if the conditional statement evaluates to TRUE. If the conditional evaluates to FALSE, the script will continue uninterrupted.

Set Symbol(s) – Modify Values

Add as many *Set symbol* tasks as necessary.

Note: these symbols should define the values needed if If Goto evaluates to FALSE. The symbols created here should have the same names as the symbols in Set Symbol(s) – Default Values, but with different values.

Script Label

Add a *Script label* task. This task's name should be equivalent to the "Label" property of If Goto, and is where the *If goto* task will jump to if it evaluates to TRUE. This task will precede the beginning of the tests in the script.

Create Tests

Create as many tests as necessary for the lamp using the symbols defined in Set Symbol(s) – Default Values and Set Symbol(s) – Modify Values as needed in any symbol-capable field.

For instance, the symbols created in Set Symbol(s) – Default Values and Set Symbol(s) – Modify Values could be called "tolerance_x_up", "tolerance_x_down", "tolerance_y_left", and "tolerance_y_right". The values will be different depending on the results of If Goto.

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