



HCA Tech Library Note

Do By Tag Package

The "Do By Tag" package offers a way to have a program you create invoked for every device in your design that has a supplied tag or tag and value.

This is a simple way to use the "Mark, Find, and Process" technique described in the [Aug 23th weekly message](#).

The use of "Do By Tag" is best explained by an example. The goal of this example is to have every device marked with the "nighttime" tag turned off at 11pm. If you change your mind and want some new devices added to this "off at 11pm" list or some removed from it, no programs need be changed.

Step 1: Import

Import from the library the "Do By Tag" package

Step 2: Create the "action" program.

Create a program that performs the operation you want on a single device. After you create the program, on the "Advanced Options" tab tick this option:

Program Construction

- This program supports parameters and/or local variables
Parameters are defined in the Begin-Here element. When started from another program using the Start-Program element, the actual objects or data are selected to use when elements in this program operate upon one of its parameters.



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Step 3: Add parameters to your program

Open the properties of the program and in the programmer double-click on the "Begin-Here" element and update its properties like this:

Parameter	Type
Parameter 1: Device	Object
Parameter 2: TagName	Value
Parameter 3: TagValue	Value
Parameter 4: Info	Value

At this point, whenever you want to use "Do By Tag", you will always follow these steps in creating the "action" program and adding parameters.

Step 4: Complete the "Action" program

Update the program to do whatever you want on a single device. In this example it is to control a device off. This program needs only the addition of a single OFF element. This is the properties of that element.

Off Properties

This element turns a device, group, or room OFF, or starts a program with an OFF trigger.

Device, Group, Room, or Program:
[Device]

OK Cancel

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Note that instead of selecting a specific device, a parameter name is selected. Wherever device was supplied to the "Device" parameter is used when the program executes. If you are unfamiliar with "Parameterized programs, there is a technical note on that topic.

That completes the program that is started for every device that has "nighttime" tag.

Step 5: The "starter" program

Create another program – let's call it "nighttime off". This is the program that starts the operation. In this example, this is the program you will schedule to start at 11pm. Once created it requires only the addition of a single Start-Program element configured like this.

Start this program: Utility - Do By Tag Show Notes

Don't wait for this program to complete before continuing to the next element

Delay program start for: 0 hours 0 minutes 0 seconds

Arguments

ProgramName: Home - Off Operation
Name of program to start for each device

TagName: nighttime
Optional: Name of tag to match

TagValue:
Optional: Name of tag value to match

UserData:
Optional: Data supplied to this program and given to handler program. Can be anything needed.

Step 6: Mark devices with tags

Add the "nighttime" tag to any of your devices that you want to participate in this operation. This is done by opening the properties of the device and adding the tag on the tags tab:

Tag Name	Current Value
nighttime	

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Step 7: Schedule

To complete this example, schedule the "nighttime off" program for 11pm.

This is just an example!

You could use this same technique to work with tags added a tag for any purpose. The "Do By Tag" program can also look not only for the existence of a tag on a device but also for the existence of the tag plus a provided tag value. To use this, supply both the tag name and tag value in the "starter" program.

Lastly, you can provide to the "Do By Tag" program an additional piece of information and that is supplied to your "action" program as an argument. What that can be used for is up to you.

##end##