

# Chapter 26

## File Format

Up until now most of what we have been concerned with was getting messages in and out of HCA. Messages from events – powerline transmissions, weather data, clock time – into HCA, worked on, and then messages sent from HCA.

In this chapter we look at getting information out of HCA that doesn't control anything but rather is a way for you to see what is happening in your home.

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### File Format Overview

What file format does is very simple, why you want to use it may be a bit harder to grasp.

File Format reads what HCA calls a Template File, processes it, and produces what HCA calls a Result file. That's all that it does.

What's in the template file? Anything you want. Anything that is not a placeholder is copied directly from the template file to the destination file.

Placeholders are evaluated and the result is placed in the destination file. File format knows what a placeholder is because they all start and end with the percent character. Between the starting and ending percent signs is an HCA expression – the same sort of thing you use in the Compute element. See the expression chapter to learn about HCA expressions.

An example place holders are:

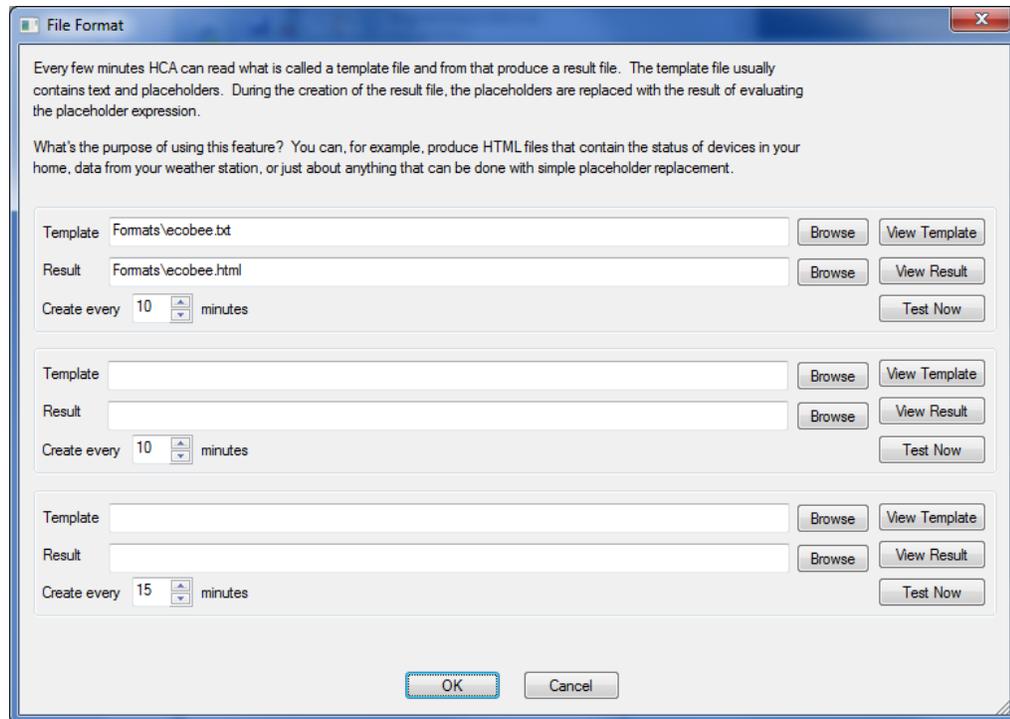
```
%_State("Table lamp")%
```

When HCA processes the template, it takes whatever is between percent signs and evaluates it in the same manner that the Compute and Compute test element does. Then it changes the result to text and writes that to the Result file.

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### Configuring File Format

To setup this tool, press the *File Format* button in the ribbon *Design Tools* category. The configuration dialog opens:



As you can see in this dialog, you can configure up to three different operations with different settings on how often they happen. In this example, only the first one is configured and that happens every 10 minutes.

The View Template button starts the Windows Notepad program to view the template file. The View Result button starts whatever program is appropriate to the kind of file you are producing. If it's a text file then Notepad is used, if it's an HTML file then your browser is used, if a CSV file is used then a spreadsheet program starts, etc.

The Test Now button performs the file format – copy the template to the result file with placeholders replaced – right now, so you can test your work.

**Hint:** In the configuration for an export, if you make the setting for how often the export is done to zero, the file format operation doesn't happen automatically until caused to happen by the Visual Programmer File Format element. See the Visual Programmer chapter for the File Format element.

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## Using File Format

This tool allows you to create files that contain almost anything you want as long as it's all text.

One use would be to periodically produce a file that contains the status of all your lights and appliances. This file can be stored someplace on your network for easy access or display. If you have a web server it can be placed into a folder managed by the web server and seen from any browser.

In addition to the what you configure here, you can also use the File Format element in programs. See the Visual Programmer chapter for more info on that element.

**Hint:** If you want to move your result files to a remote web server using, for example FTP, HCA can't do it directly. But it is simple to do! First configure File Format and set the time to zero. Next create a program that causes the operation using the file format element and then use the Run program element to invoke the Windows FTP program. Finally schedule this program to run whenever you want.

**Hint:** There are good FTP shareware programs you can find available on the internet.

