Chapter 29
Web Component

The HCA Web Component is an application installed when HCA installs that allows HCA to generate HTML pages from browser requests. By using a network and a browser, you can access your design to control devices, start and stop programs, look at the HCA log and many other actions. You have full control except you can't modify your design – add new devices, change programs, modify schedules, etc.

Once the HCA Web Server is started, http references to a configurable port number show a display which will allow you to interact with your HCA design.

With the HCA Web Server started you can view the web interface by directing your web browser to the following address: http://xxx.xxx.xxx.xxx:yyyy where xxx.xxx.xxx.xxx is the IP address of the computer running HCA and yyyy is the port number you've configured.

For example,

http://169.254.180.32:9955/

Hint: There are many methods to reference your computer by name rather than by IP address. This can be especially helpful if your IP address changes over time. This is beyond the scope of the user guide. The HCA Web Server technical note will have more information on this. See the final section of this chapter.

The Web Server creates pages that are either optimized for a big screen – the high resolution of a laptop or desktop computer – or the small screen on a handheld device.

Configuration of the HCA Web Server is simple and described later in this chapter.

NOTE: This feature is in "legacy" support. This means that no support, improvements, or modifications to correct programs will happen. We suggest you use the Android, iOS or Windows clients instead of this.

Accessing your design from a web browser

Once the Web Server is started your design appears in the browser when you connect to the correct port. For example:
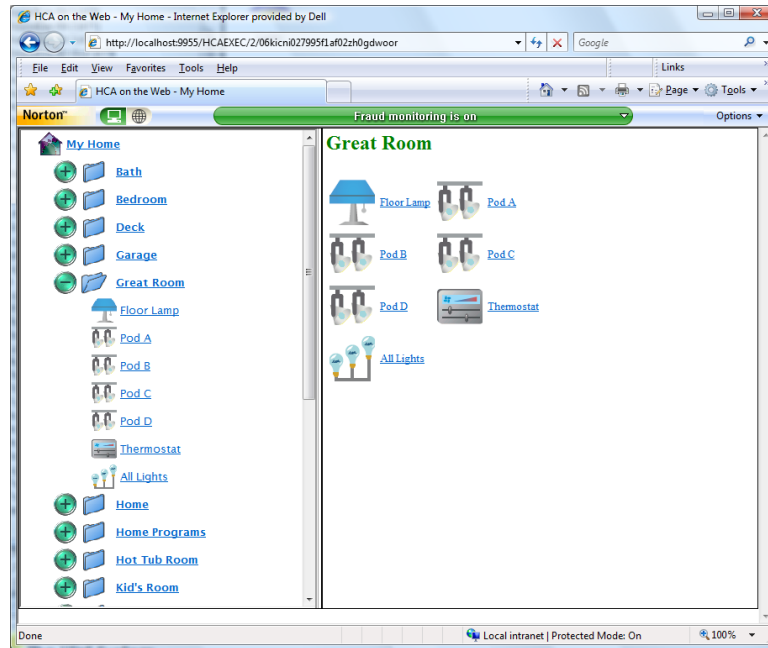
Note that the left hand pane is very similar to displayed in HCA. The only difference is that there is a branch of the view for Logs and Flags. In this example, the right hand pane displays the contents of the folder. When you click on a device, program, group, or controller the right hand pane changes to display appropriate actions. For example, clicking on a dimmable device shows this:
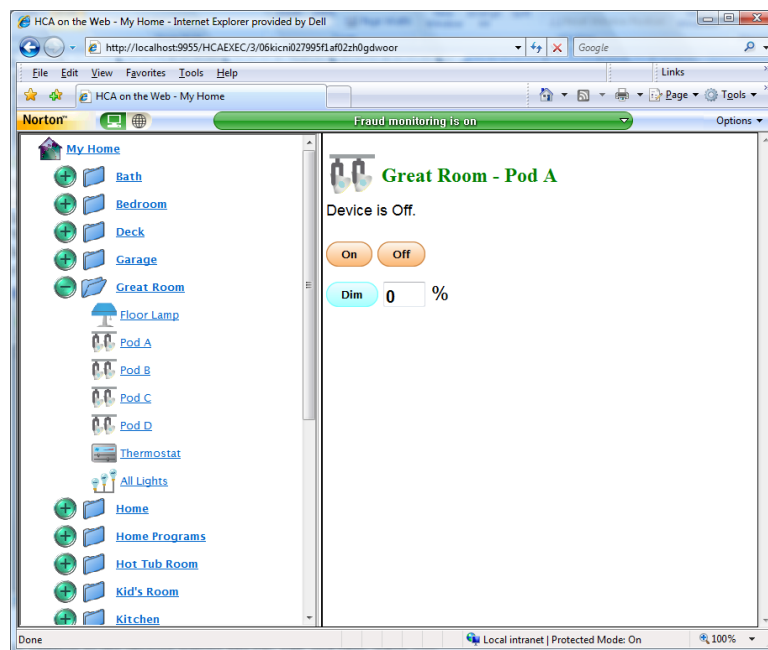
In addition to the obvious actions like On, Off, and Dim, when you click on a controller a virtual keypad displays. Here is an example:
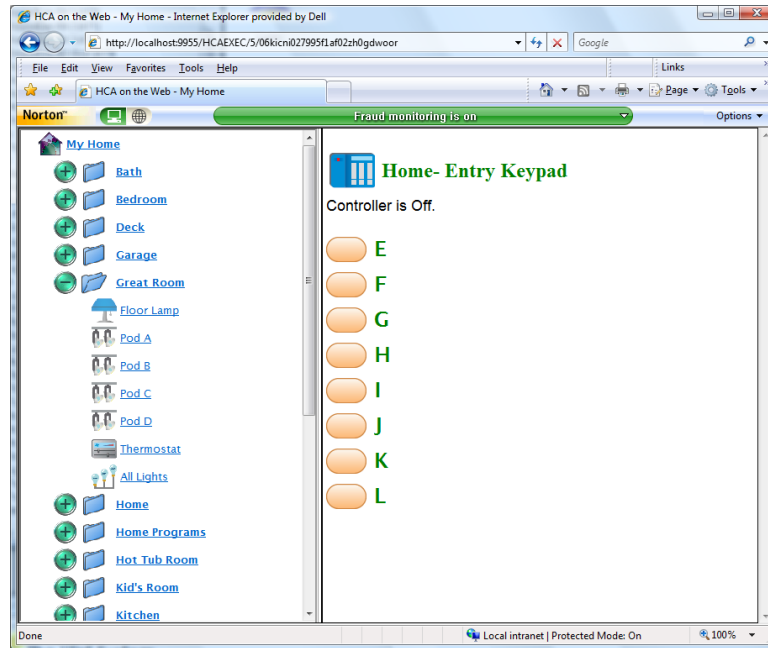
What is the purpose of a virtual keypad? After all a keypad just controls devices or sends signals to HCA that start programs.

The purpose of the virtual buttons is to simulate a physical button push. Imagine that in your home you have a keypad by the front door. You know that if you press the "A" button on the keypad a whole sequence of things happen. Just what are those actions are easy to forget. All you need remember is that when you want to do something – like get the house ready for a late night arrival – you push *this* button on *that* keypad.

When working remotely you can use the Virtual Keypads to initiate those actions. HCA both initiates the actions that the keypads would have controlled and also simulates reception of what the keypad sent. An example: You have a simple X10 keypad. If you pressed the 3rd key on the actual keypad it would send a B3.

Using the Virtual Keypad you press the 3rd button. HCA sends a B3 - to cause whatever the keypad controls to be controlled. And it also simulates receiving a B3. This allows programs that trigger on that reception to happen.

Virtual Keypads support simple X10 keypads, X10 KeypadLincs, Insteon ControlLinc and KeypadLincs, and UPB keypads. Virtual Keypads also implement switches that can be programmed to initiate scenes on rocker action – UPB and Insteon types.

Accessing your design from a mobile browser

You can also access your HCA design on a pocket PC, PDA, or other mobile devices. Once the Web Server is started, your design appears in a smaller format that the desktop browser would.

Across the top of the display is a dropdown that allows for selection of any folder or display in your design.

Here are some sample screens shown on an non-Android phone
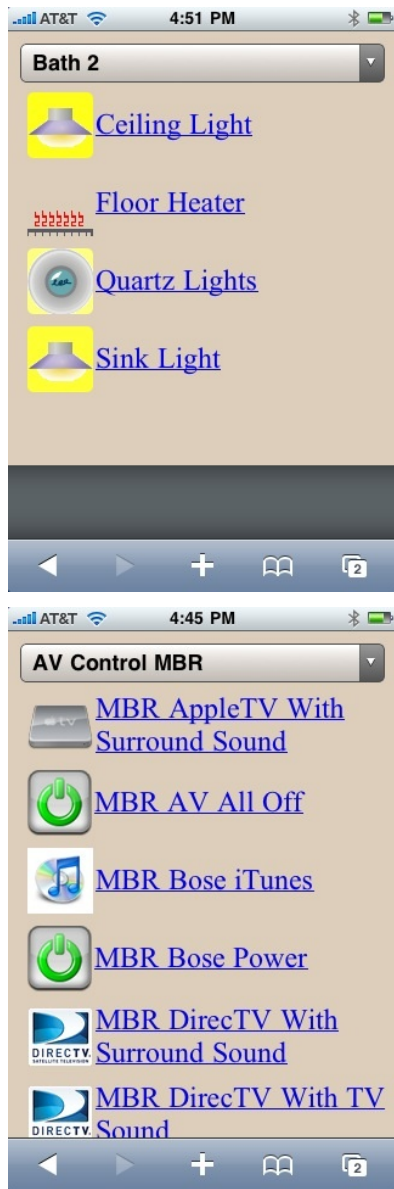
The mobile browser web interface has been optimized for the limited screen size. The main change is that the "design pane" has been removed and replaced drop down box. The basic actions of controlling devices on and off, starting and stopping programs, are all supported in the small screen display.

Hint: How does the Web Server know to display in large screen or small screen mode? When a browser first connects to the web server it supplies information necessary to make this decision. Normally you need do nothing to affect this but in some cases you may need to. The next section on configuration will describe this.

Configuring the HCA Web Server

To start, stop, and configure the web server, press the *HCA Options* button from the application menu and choose the Web tab.
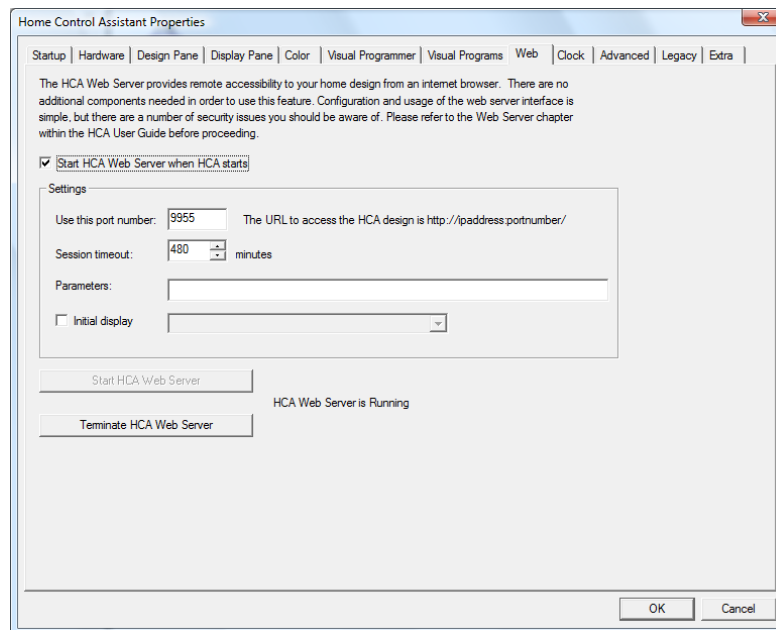
The options on this tab are:

- An option to start the Web Server each time HCA starts. When HCA terminates, the web server is also terminated.

- The Port number to use for the web server.

- The session timeout allows you to set the session length, in minutes. If a web browser is open with the web interface and is idle for the session length time, the session will expire. This prevents users from reusing a session that may have been left open unintentionally.

- Web Server parameters. These are described in the Web Server technical note.

- Initial display. You can chose a display or folder that forms the "home" page for the Web Server.

- Buttons to start and terminate the Web Server.

Security Considerations

Using the web server opens up your home design to remote access. And that can be good! When "on the road" you can use the internet to get to your home and adjust lighting, temperature, A/V equipment, or just check status.

The potential problem is that without password control it may be possible for anyone to get access. There are two methods of adding security to your home design

HCA Design Passwords

As explained in an earlier chapter of this User Guide, you an add passwords to your HCA design. In brief, the three possible passwords are:

- Remote Access password. Before the Web Server can even view your design, this password must be entered.

- Control password. No action – on, off, dim, start program, stop program, execute schedule entry, etc. may be done without this password being entered.

- Design password   No change in the design can be made unless this password is entered.

If you are using the Web Server you are strongly urged to add a Remote Access password to your design. To be even safer, adding a Control password prevents changes even if the remote access password is compromised.

Hardware Security

In addition to the HCA security, the hardware that connects your home to the internet often has password facilities built-in. You should investigate them and if supported by your hardware you should enable them. This will block unauthorized access at the basic connect level.

Web Server – More information

There are a number of parameters and URL options that can be used to tailor the web interface. These are explained in a technical note on the HCA Support web site.

Also in this technical note are some helpful notes about getting your browser to display your HCA design in the best possible manner.