HFT Cooling Test

Touch 1 & Examiner Program

Documentation

Andrew Kubera – akubera@kent.edu

Touch 1 Program -

Power on the Touch 1 tester unit. If the unit doesn't boot up in a few minutes, make sure there is no floppy drive in the device; if you still have problems, plug a monitor into the back and diagnose the problem.

Always make sure the date&time are set correctly after startup, the output data files are organized by date&time. To check date: go to 'system setup' in the Touch1's home menu and then find Time&Date.

The test script should already be loaded, but if something bad happens and you need to reload, go to Test Setup in the home screen, scroll down to "Script" and tap, click 'change script' in upper right corner and browse C:\ looking for "HFT_Cooling_Test.lua", or something similar to that name. It should be loaded and ready.

To set up networking on the Computer connected to the device, download the *Networking Made Easy Server* application from the Cirris Website here: ftp://ftp.cirris.com/touch1/networking/ . Run that program on the computer connected to the device, and create a config file with the Testers Serial Number and IP address, and a network drive set to Z:\. Save the network config file to a floppy drive, load it into the Touch1 by taping: system setup, then software update, then network configuration. After rebooting, check date and time, then see if you can copy a file to the computer by tapping system setup, disk utilities, copy file. If it doesn't work, retry with different server settings in the config file.

Tap "Test" or "Start Test" to begin. Enter in the airspeed in meters/sec and current used in amps. Then if will ask if you want to test each Module (or Sector) of the machine. If you want to test all 10, tap 'OK', else you can set a range or test just one by making start and stop number the same. Then it will ask for what type of test it'll do: a quick test will test each thermistor once, a Timed test will test each module for a set amount of seconds, a Passes test will check each module a set number of tries.

After that setup, tap Start Test to begin putting in the modules. It'll ask you to put each

module number into either slot J1 or J3, tap "lets do it" when both are firmly in place and ready to go. It should warn if there are no wires detected, but don't rely on that for a failsafe.

After it is done running, it will ask where to save data to, it will generate a filename based on the date and time: (month,day-hour,min,sec). It will ask to change the name and what drive it saves to (defaults to 'z:'). It then asks to copy to floppy, but that is usually unnecessary and doesn't always work.
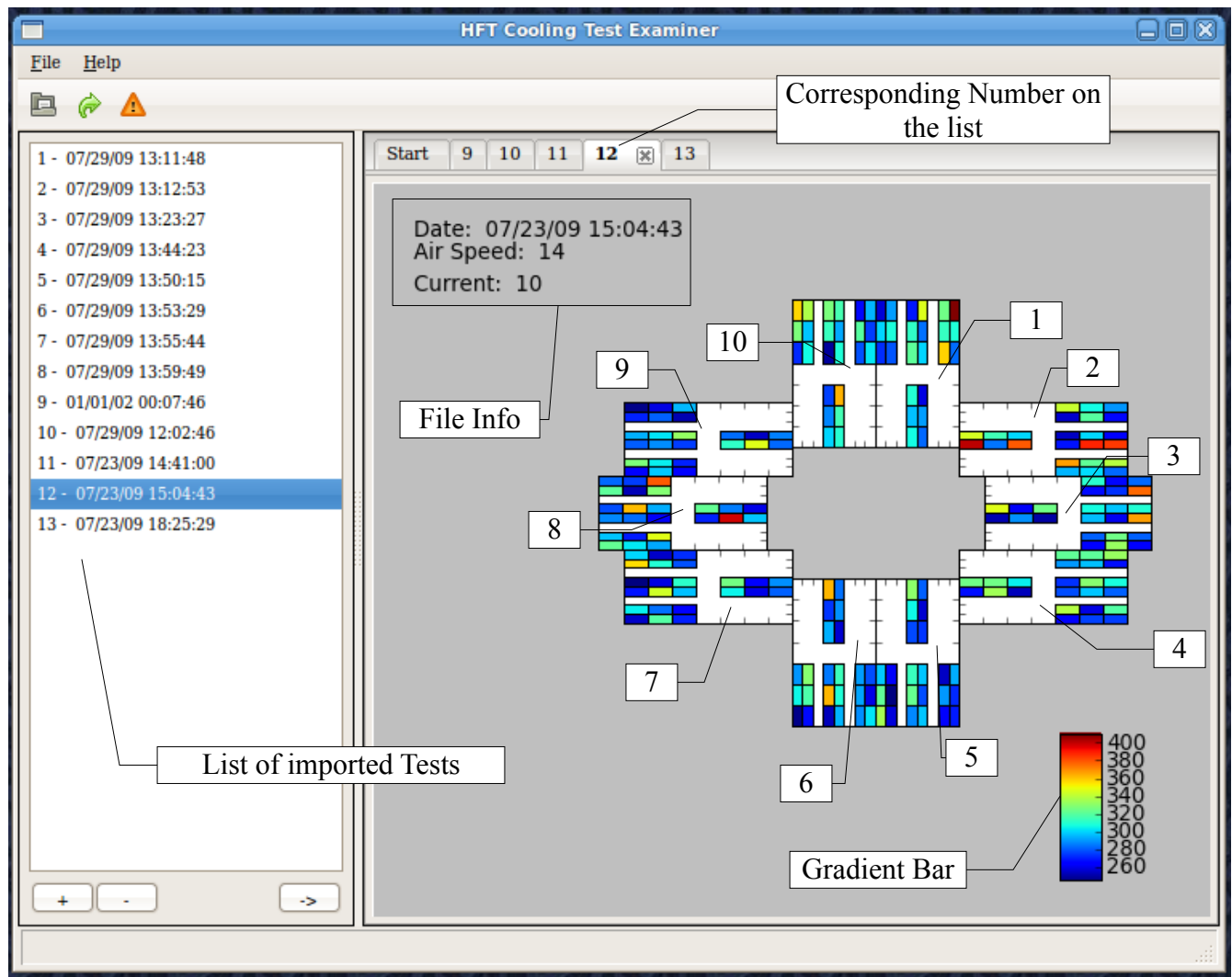
HFT Cooling Test Examiner -
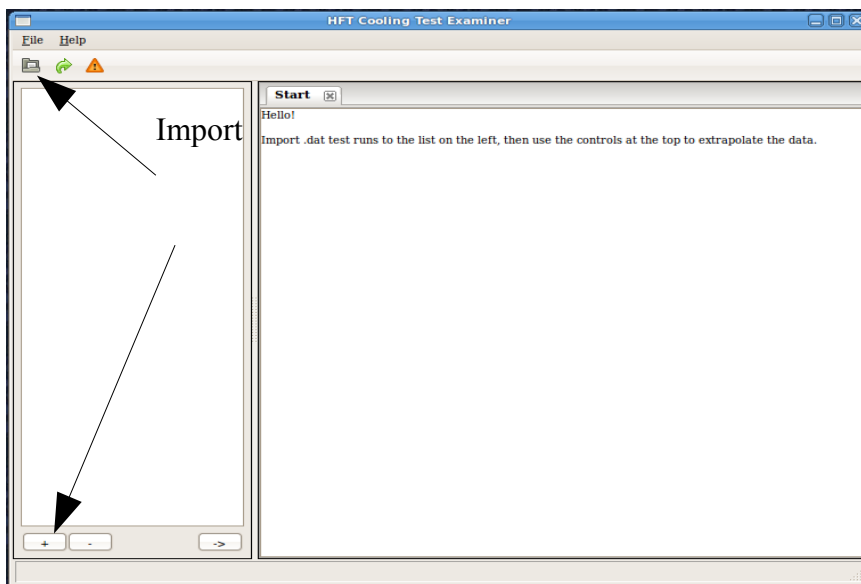
Import

Import .dat files generated by the Tester Program by clicking either of the buttons indicated in the picture on the left or through the file menu, "import".

Create Module Graph
from selected tests in list
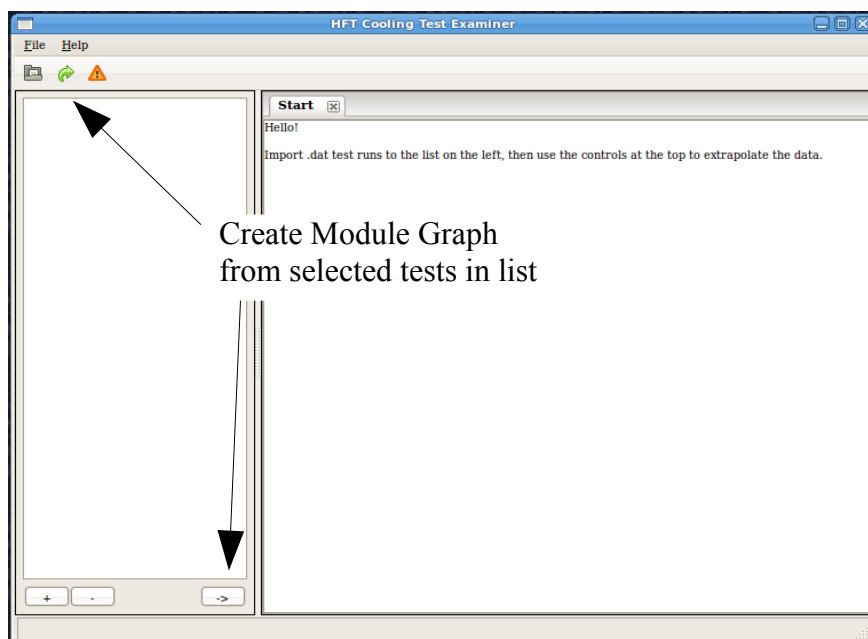
Click these buttons to create a new graph showing all the modules in the selected test runs.

Module Graph:

Each number in the picture above identifies the corresponding module that was tested. This graph maps to the physical device if you look at it from the wired end. Each ladder is represented by the set of 6 rectangles, and each rectangle is corresponding thermistor. The ladder closest towards the middle in the graph represents the inner ring of thermistors, and the outer ring is the rest of them in order.
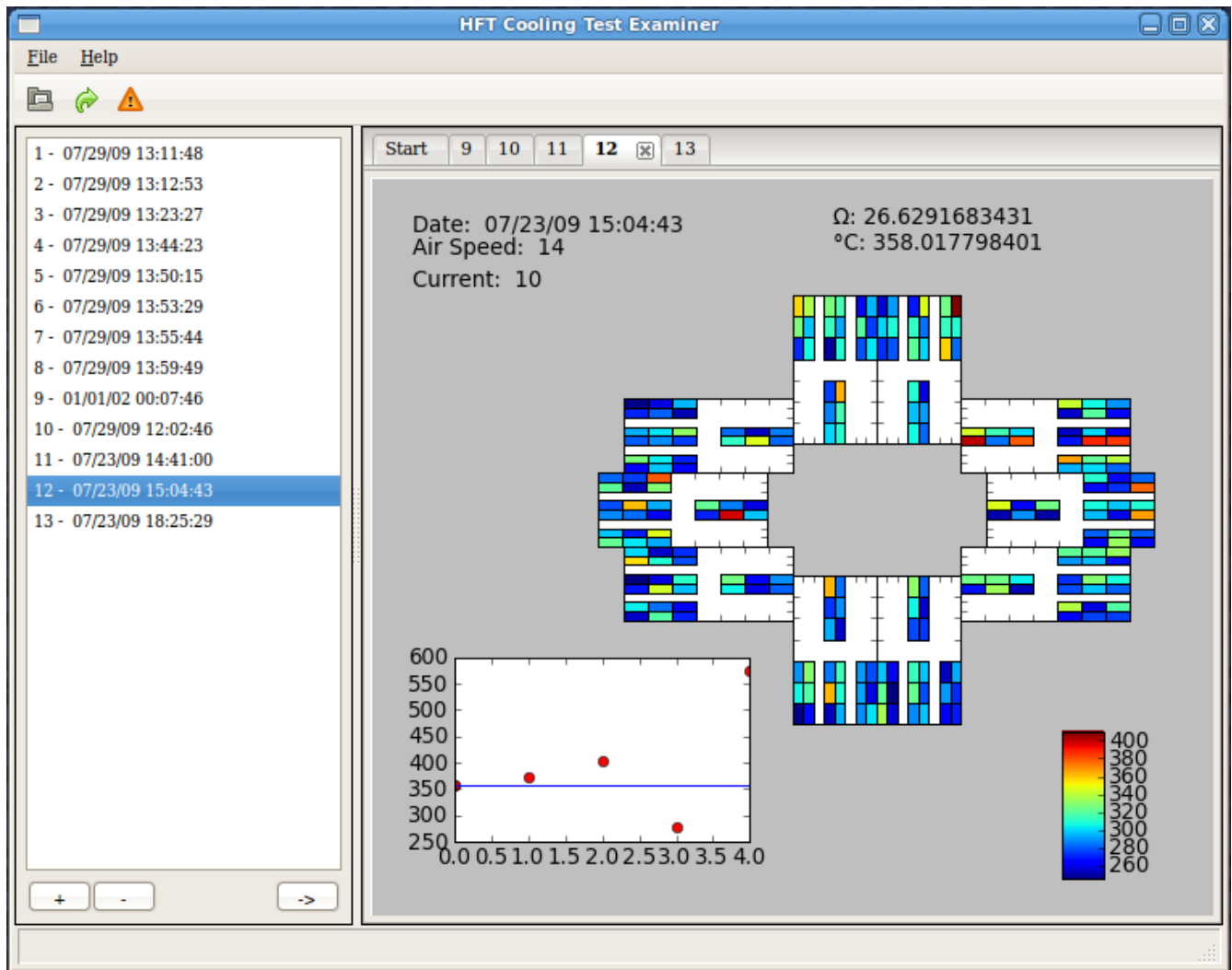
Left clicking on a thermistor brings up data at the top, right clicking once brings up the mini graph in the bottoms showing each pass, right clicking again hides this. The first data point at 0 (and the position of the blue bar) is the average of the thermistor readings converted into temperature, which **might not be the average of the temperatures**, but with the ranges we're testing at, there shouldn't be a problem. Left-click on the red dots to see info about it, right click hides that info.

Under file Menu, you can choose to export to Excel, which will take all the imported runs and save each to a sheet in a workbook. Export to HTML will save an HTML file for each run selected.