

The Problem:

A provider of HALT/HASS equipment and services needed to update their software. Their old program was designed for Windows 3.x, lacked flexibility, was missing some desired functionality, and was difficult to maintain. Users were required to use one program to control the environmental chamber, one or more separate programs for some basic data acquisition, and a separate program to perform product functional testing. None of these programs could communicate with any of the others and in addition, reports were, for the most part, manually generated.

The Solution:

LabVIEW from National Instruments was chosen as the language to create a Test Manager program. The Test Manager was designed as a series of “Wizards” that would allow for the integration of product specific functional testing, automatic report generation, stress sequence definition, and the logging of temperature, vibration, and voltage data obtained from PC cards or external instruments. The program is capable of auto-detecting new features in the form of software “plug-ins” and can be functionally extended without the need to recompile. Test Manager can be run locally or on a TCP/IP network. It is also capable of control of chambers that have entirely different hardware and software configurations. The functional test component of Test Manager has full control and communications with programs written in LabVIEW or C and can call any executable program written in other languages.



Hardware Used:

Software Used:

National Instruments LabVIEW
National Instruments LabVIEW Test Executive
National Instruments HiQ