



Design Verification for Mobile Phones

A European manufacturer of mobile phones is using HP VEE to dial-up higher profits and greater market share.

The company uses 15 HP VEE-based test systems for pre-production testing of its transmitter and receiver designs. Each of the test stands is different, with instrumentation ranging from a few cards in a C-size VXI card cage to several racks of instruments. The designs are verified by measuring parameters in the 400 to 900 MHz range, including measurements for temperature, vibration, modulation, and power levels.

The company's test department consists of 20 engineers who must constantly reconfigure systems as new designs need to be verified. This creates a challenge: since time to market is critical, especially in the competitive communications industry, bottlenecks of any kind are extremely costly. The test department helps by verifying designs quickly and thoroughly, and ensuring that quality products are shipped as soon as possible.

Test Sequencing

The department's test sequences need to change based on run-time results, so the test software must be able to repeat tests, jump forward or backward to a particular test, issue error messages, or ask the operator for instructions. HP VEE's standard features support these branching capabilities. It also supports audit testing and allows an entire suite of diagnostic and C routines to be launched from within the test program. Test operators can even initiate test sequences from a menu.

I/O Flexibility

HP VEE supports the company's wide range of IEEE-488 instruments and VXI devices. The software includes drivers for virtually all of the company's instruments, as well as the HP VEE Driver Writer tool that allows custom drivers to be created quickly. The company also uses HP VEE's Direct I/O capability to control a

temperature chamber by sending commands over the RS-232 interface bus.

Test Development and Maintenance

To meet critical time-to-market pressures, the test department needs rapid test development, fast reconfiguration, and painless integration of existing C routines into new programs. HP VEE meets those needs and goes a step further: programs are easy to document, so as new engineers are added to the development team, they have the information they need to edit programs, even if the original developer is unavailable.

Local Support

The company required a contract for technical support as well as on-site VXI diagnostics and repair. The contract is backed locally by HP's worldwide support network, and includes an array of support options.

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