

Test Automation Solutions

for Electronics

“ TestShell's winning combination of robust test design and flexibility has given us the independence to create top quality tests, whilst making drastic cost and time savings ”

*Manfred Muller, Production Manager
Leuze electronic GmbH&Co. KG*

QualiSystems

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Electronic Manufacturers Testing Challenges

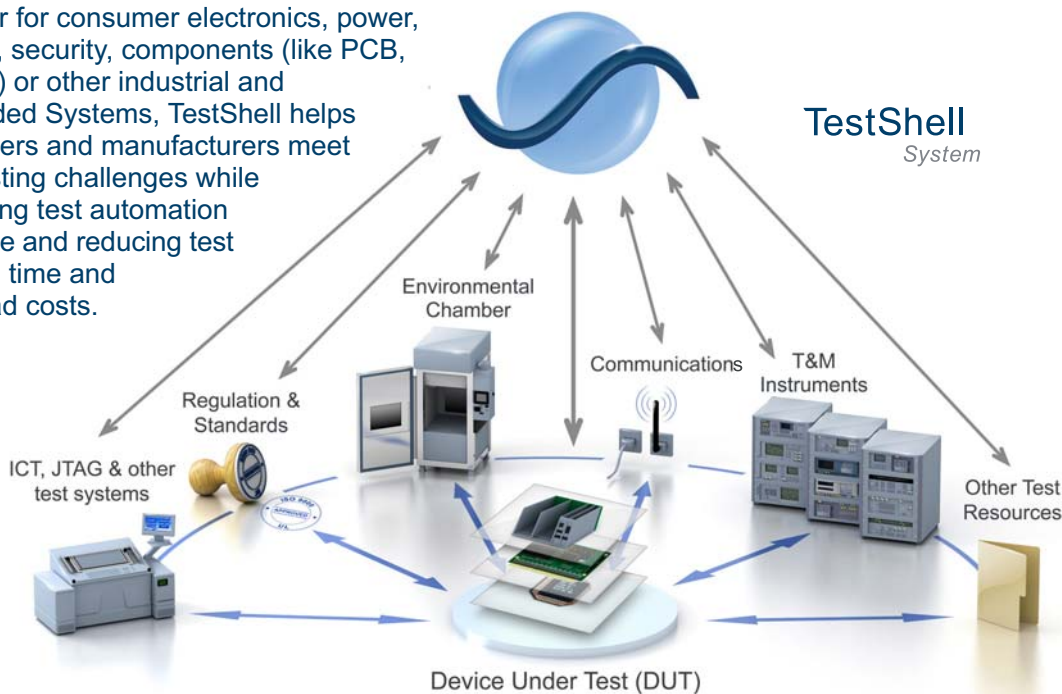
Electronic Manufacturers are facing growing testing challenges as product lifecycle shortening and complexity increasing:

- The combination of hardware, software and firmware components makes it difficult to test the equipment as a single integrated system, and often requires manual intervention
- A growing variety of required test equipment types and brands results in repeating set up and configuration
- Testing at multiple production lines and sites, sometimes across the globe, complicates the test process, and makes it difficult to meet tight time-to-market requirements
- Lack of test standardization leads to miscommunication among test developers and inhibits the use of test data for making well-informed management decisions

These challenges impacts Electronics manufacturers' ability to respond to market demands for constantly upgraded product features and technologies.

TestShell for Electronics

Whether for consumer electronics, power, storage, security, components (like PCB, Chipset) or other industrial and Embedded Systems, TestShell helps developers and manufacturers meet their testing challenges while increasing test automation coverage and reducing test creation time and overhead costs.

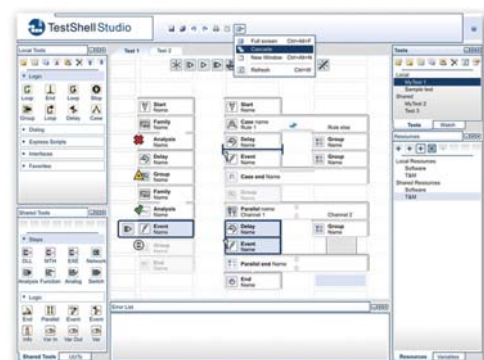


Fast and easy test creation in complex environment

TestShell provides a simple way to create complex code-free test scenarios, enabling organizations to dedicate R&D resources to product development, slash test overhead expenses and empower QA teams to create tests in-house.

- A user-friendly graphical UI requiring no programming skills
- Flowchart-like test scenarios display for at-a-glance comprehension
- Editing and updating tests with minimal effort
- Coordination of parallel actions in an intuitive visual manner

- Simple event driven and linkage capabilities
- Built-in logic and test-flow control tools
- Complete marshaling of information within and between tests via a powerful variables engine



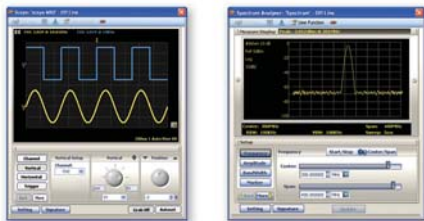
Automated test setup and execution

Significantly reduced test duration, optimized test operations and coverage:

- Complete automation of test setup and configuration prior to testing
- Created tests are standardized for maximum flexibility, and can easily be shared and reused throughout the product lifecycle
- Automatic and configurable alerts (e.g. email, pop up, text message)
- Multiple test stations are controlled simultaneously from a single central server

Built-in support for key technologies

- **Broad test & measurement instrument support for easy interchangeability:**
 - Complete control of hundreds of T&M equipment (Scope, Power Supply, Multimeter and more) via built-in virtual panels
 - A wide-ranging support for various instrument interfaces (GPIB, Serial, VSB, LXI and more)
 - Software- integration with existing in house or 3rd party testing software (DLL, EXE, .NET/ActivX, Labview™ VI and more)



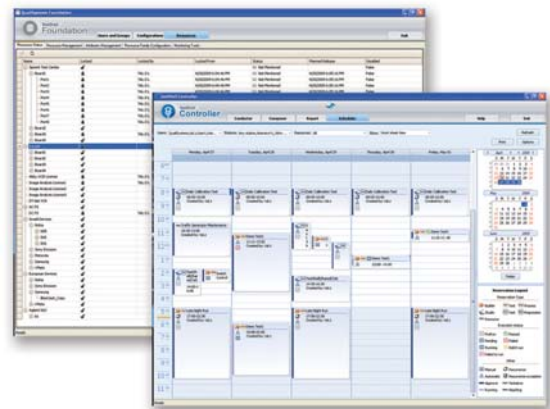
- Robust script automation - TestShell streamlines multiple script management (Tcl, JavaScript, Python, VBScript, Perl, Batch Files and more) and dynamically modifies them for easy reuse based on parsing capabilities
- Wide protocol support - TestShell supports any type of network protocol (e.g. HTTP, SNMP, Telnet, FTP/TFTP, UDP, TCP/IP)

End-to-end test coverage

- Functional testing (IC, Assembly, Device)
- RF Testing (Channel Power, IP3, spurious...)
- Power testing (Line and load regulation, ripple noise...)
- Mixed signal
- Design verification and validation testing

Tests, lab and resources management

- Regressions, tests and functions are stored in a central database for easy cross-organizational and multi-site sharing
- Automatic synchronization of tests and test data, even from remote sites
- All test assets are managed in a flexible hierarchy over a network environment
- Smart scheduling and coordination capabilities of tests, assets and test resources among stations maximize utilization, saving time and costs



Advanced data collection and analysis

In addition to test data manipulation capabilities during test creation and run-time (such as parsing capabilities and the use of validation rules), all data and test results are stored in a central database, ready for insightful trend analysis and powerful business intelligence:

- Data collection from all tests, log files and other inputs is easily handled
- Built-in mathematical and statistical tools allow quick and advanced results analysis
- Fully Automated reporting and results sharing
- Powerful Query Builder allowing users to mine any information from the database
- Real-time dashboard display of test data, generated from both OLAP-based and direct online queries



TestShell

- All inclusive** A single framework reduces bureaucracy and improves collaboration
- Scalable** Vendor agnostic integration to any test equipment
- Dynamic** Flexible test environment simplifies modification and regression
- Easy to use** QA team independency saves time and overhead costs

About TestShell System

TestShell is an end-to-end test automation solution compatible for testing virtually any hardware, device or embedded system. While providing **code free test authoring, automatic test execution, advanced test management and comprehensive test reporting and analysis**, TestShell helps equipment manufacturers and service providers to **improve product quality, shorten time to market and significantly reduce capital and operational expenditures**.

About QualiSystems

QualiSystems is a test automation pioneer. The test automation world is evolving from a collection of various tools to an enterprise quality management platform. QualiSystems' mission is to provide equipment manufacturers and service providers with unparalleled Test Automation solutions that drive innovation, efficiency and ROI. QualiSystems' TestShell is used by leaders in diverse industries including telecommunications, mobile, aerospace and defense, automotive, basic-electronics, medical devices and others.

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