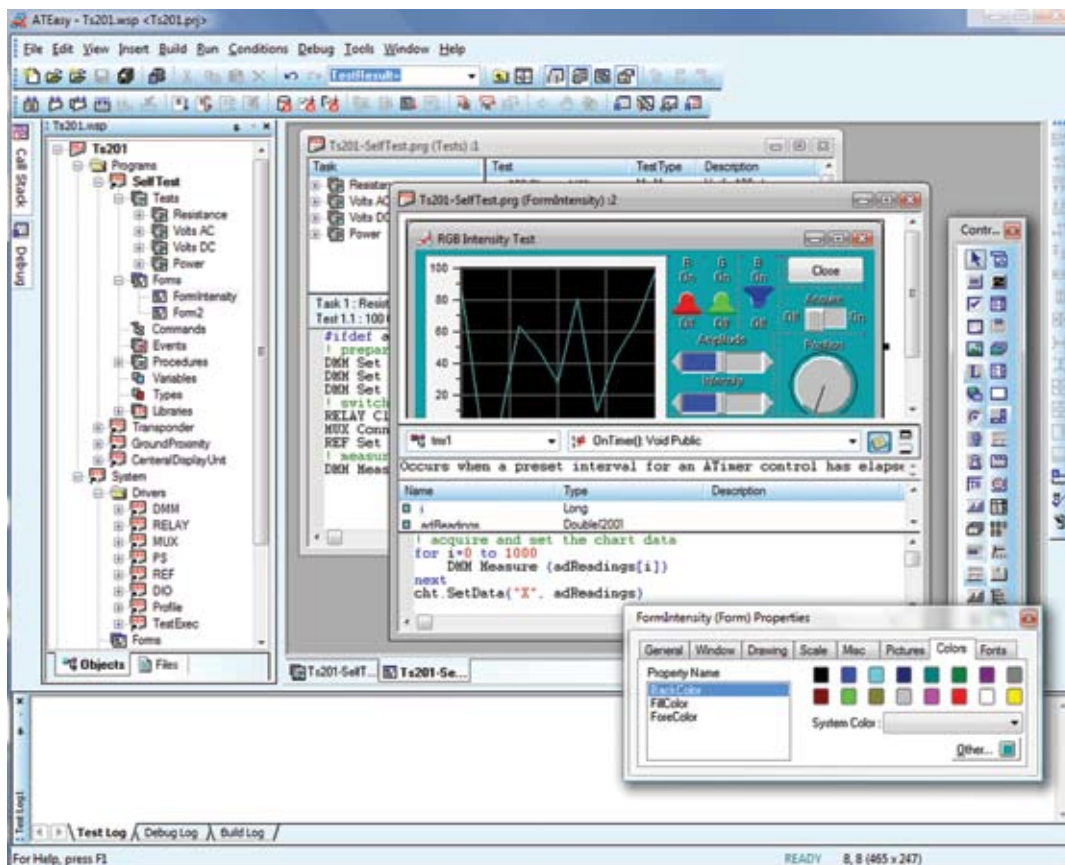


ATEasy 6.0

TEST EXECUTIVE & DEVELOPMENT STUDIO



- Integrated Test Executive and object oriented programming development environment framework for Windows 98/ME/2000/XP & Vista
- Full-featured customizable Test Executive for execution, sequencing, debugging of tests
- Automatic generation of HTML and text-based test logs files with automatic management of backup, delete, save, and naming
- Multiple users and user groups with customizable multiple user interface and privileges
- Support for touch panel user interface
- Rapid Application Development (RAD) environment enables short development cycles
- Visual Basic-like Form Editor generates graphical user interfaces, menus, and controls
- Built-in Application Builder generates royalty-free runtime executables (EXE files)
- Open architecture support for ActiveX, OCX, OLE, DDE, DLL, .NET components and importing of C/C++ header files
- Support for external instruments drivers including VXI Plug-and-Play Function Panel (.fp) drivers, LabVIEW® Virtual Instruments (.vi/.lib), and IVI drivers
- Supports PXI, PCI/cPCI, VXI, GPIB, TCP/IP, RS-232, ISA, and other instrument control busses
- Connectivity with Microsoft® Source Safe supports archiving, version control, and comparing of files

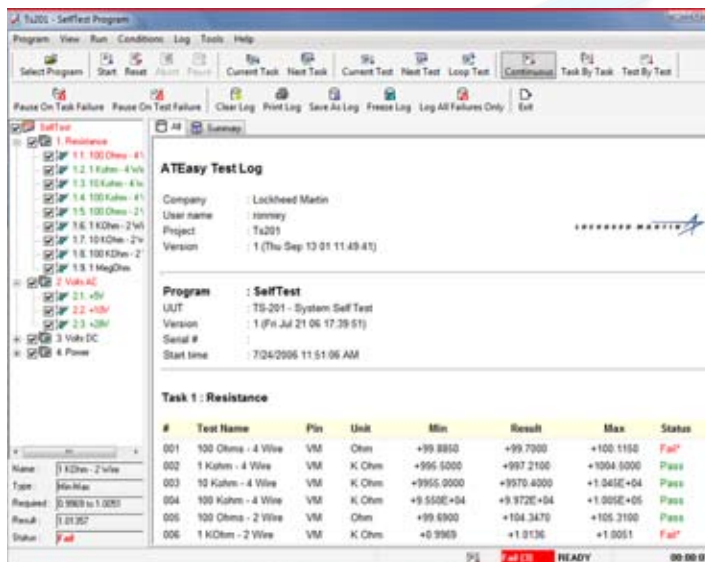
DESCRIPTION

ATEasy is rapid application development framework and a test executive for functional test, ATE, data acquisition, process control, and instrumentation systems. ATEasy provides all the necessary tools to develop and maintain software components, from instrument drivers to complex test programs. It is designed to support and simplify ATE projects with long life cycles. With ATEasy, test applications are faster to generate and easier to maintain.

ATEasy includes a complete test development suite, which is specifically designed for test applications. The ATEasy development environment combines the ease of use associated with Microsoft's Visual Basic with the flexibility of Microsoft's Visual C++ to create a complete object-oriented, 32-bit Windows programming environment. Users of these programs learn ATEasy quickly, while first time users can use the Application Wizard to generate applications quickly. Application components are displayed in an easy-to-browse tree view that follows the ATEasy framework for test application.

TEST EXECUTIVE FEATURES

ATEasy comes with a ready-to-run, customizable, Test Executive module. The Test Executive provides a user interface for the control and execution of test programs that were created by the test development environment. The user interface allows users to select and run a test program, check or uncheck tests, create and run test sequences, debug tests, and view/print test logs.



ATEasy 6.0 Test Executive

CUSTOMIZATION

The Test Executive module can be customized to accommodate specific application requirements, which can then be deployed and re-used throughout a test engineering department or organization. The Test Executive module provides the ability to define user groups as well as customize without programming - the user interface, and options/privileges associated with each user group.

USER INTERFACE MODES

The test executive supports two modes of user interface. The Modal user interface uses a small number of large buttons, which are operated by a touch panel screen, text is entered using the on-screen virtual keyboard or by a mouse/keyboard interface. The Modeless user interface uses the familiar Windows menu bar and toolbar, in conjunction with the mouse and keyboard. The Modal user interface is designed for operators that require a simplified and more directed user interface while the menu driven modeless interface is typically used by more advanced users. Each user interface mode can be assigned to a user group. Additional customization can be done programmatically using the test executive command library or by changing the test executive source code that is provided with ATEasy.



Test Executive modal UI

TEST SEQUENCES

A test sequence plug-in module allows users to define custom test sequences (profiles). Each profile contains a list of steps that specifies which program, Task, or Test to run as part of the application as well as specifying the number of times the step should be executed. The profile can also contain conditional actions based on the test status. The Profile module is fully integrated with the Test Executive module and can alternatively be used as a stand-alone module.

DATA LOGGING

The Test Executive supports automatic generation of HTML and text based test logs, which can be displayed or saved to a file. Log files can contain all results, failures only or just a summary. Additionally, The Test Executive can be configured to automatically manage the log files - when to backup, when to delete, when to save, how to name. Storing test results to a database and to other file formats is also possible.

FAULT ANALYSIS LIBRARY

ATEasy includes a fault analysis library module that allows the user to build a fault dictionary. Based on the test results and test status, test engineers can define

test conditions that when met, can describe the reason for the failure and the necessary action required to repair the UUT. The fault analysis library simplifies the troubleshooting cycle and reduces the time to repair UUTs.

TEST DEVELOPMENT FEATURES

ATEasy's test development environment allows test engineers to build test applications from components that are modeled after real-world test systems. These components include a System, Drivers, Programs, Tests, Commands, and more. ATEasy provides a streamlined, easy-to-follow framework and a wide array of features that enable the user to create these re-usable components. The result is a test application that is faster to generate and easier to maintain.

RAPID APPLICATION DEVELOPMENT (RAD) FRAMEWORK

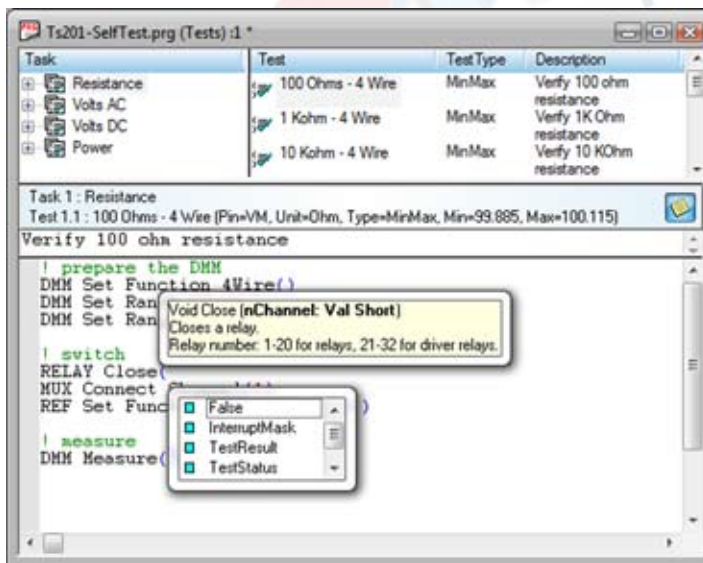
ATEasy's application framework consists of well-organized components that allow users to partition and organize their test code during development. When debugging and validating, users can use these components to quickly isolate problems. Once a modification is applied, smaller portions of the application code can be executed independently without running the entire application, facilitating coding/debugging development cycles.

ATEASY COMPILER

The ATEasy compiler is fast and efficient. During debugging, ATEasy's Just-In-Time Compiler compiles only the necessary code as required. Once debugging is complete, the Build command creates an executable file.

PROGRAMMING

ATEasy applications can be created using menus or by typing commands directly. With menu commands, users can insert driver commands, procedure calls, and even flow control statements with a few clicks of the mouse. ATEasy's code completion tools provide suggestions on completing the unfinished statements while typing the code and include Parameter suggestion and Command



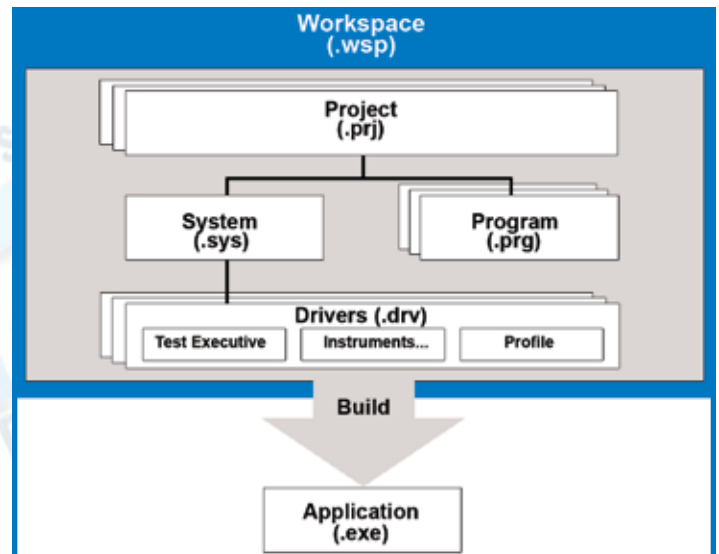
Code Completion

completion. ATEasy also provides tool tips that describe the function call and arguments associated with specific programming parameters. Information is also displayed about symbols (variables, procedures, commands, etc.) when users hover over the symbol with a mouse.

ATEASY MODULES

ATEasy applications are created from a project file that contains the application module files. ATEasy modules are modeled after a test system. Three types of modules are available:

- Program Module – contains the test program (tests).
 - System Module – lists the application drivers and their configuration. For example, a GPIB instrument driver configuration may include its primary and secondary address, terminator, etc.
 - Driver Module – contains the commands and functions that are required to operate an instrument and the associated hardware interface (e.g., GPIB, RS232, etc).
- Each ATEasy module contains sub-modules such as Forms (for user interface support), Commands, Events, Procedures, Variables, Data Types and Libraries.



ATEasy Modules

TESTS AND TASKS

The Program module contains the necessary tests required for a UUT. A Task consists of a group of Tests, which tests a functional or logical unit in the UUT. Each Test contains code and various properties such as Name, Type, Pin, Unit, Result, Status, etc. Various test types are built-in, such as Min-Max (test results must fall within the required Minimum and Maximum values), and are used to automatically generate the test log.

COMMANDS AND FORMS

ATEasy's user-defined commands allow users to create plain, English-like Command statements such as:

```
DMM Set Function VDC
Matrix Close (1, 15)
DMM Measure (TestResult)
Matrix Open (1, 15)
```

Commands include instrument driver commands, System commands, and program commands. System commands can combine commands from several instruments to simplify programming. For example, the following system command switches the DMM to a specific point and then takes a VDC measurement:

```
System Measure DMM VDC AT ("J1-15")
```

The resulting code resembles functional descriptions similar to the requirements found in a Test Requirements Document (TRD), which in turn, offers users a self-documenting test program that can be easily mapped to a TRD's specifications. As an added benefit, ATLAS language users will find the Command statements similar to ATLAS statements.

ATEasy includes a Form Editor very similar to the Microsoft® Visual Basic™ form editor. It provides similar sets of form types, menus, controls, and event programming. ATEasy's forms can accommodate system-installed ActiveX controls, offering extensibility and flexibility to use hundreds of ActiveX controls and components available from third party vendors.

EXCEPTION AND ERROR HANDLING

ATEasy provides a unique approach to error and exception handling. Errors are generated by the error statement, run-time, or instrument communication. Once an error occurs it can be trapped and handled locally using the try-catch statement or at the module level using the OnError module event. These features minimize the need to insert error-handling code throughout the application. When an error is generated, the application can decide whether to ignore or retry the statement that caused the error. It can also abort the application, reset, or re-throw the error, so other modules or ATEasy's default error handling can handle the error.

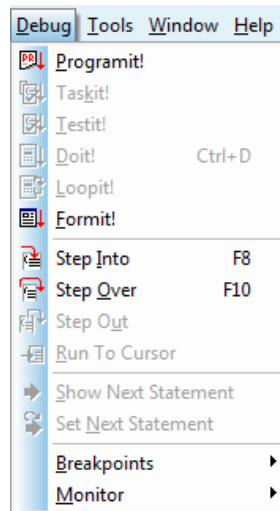
MULTITHREADING

ATEasy provides full support for the Windows®' multithreading model, which allows users to execute multiple code segments simultaneously. Synchronization objects such as semaphores and events allow users to synchronize thread execution and protects the application's resources from re-entry. ATEasy's robust multithreading model allows users to use any user-interface objects or ActiveX controls from any thread without any special programming.

INSTRUMENT DRIVERS

ATEasy is supplied with many popular instrument drivers and all of the currently available standard IVI drivers. In addition, a driver can be created using the ATEasy development environment. ATEasy drivers can also be created by:

- Writing ATEasy procedures in conjunction with I/O Tables and libraries which support the communication and control of instruments via GPIB, RS232, TCP/IP, VXI, PXI, PCI interfaces
- Importing VXI Plug-and-Play and Function Panel (.fp files) files .
- Calling LabView Virtual Instrument drivers (.vi files or VI library .lib files).
- Using external libraries such as DLLs, COM/ActiveX and .NET assemblies



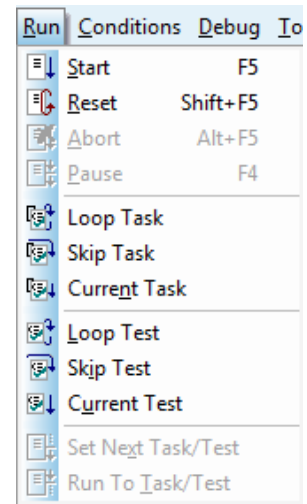
Debug Menu

DEBUGGING

The ATEasy environment provides seamless support for the debugging of low-level functions or complete test programs. ATEasy's debugger provides integrated support for both source level and test programs debugging. For example, while an application is paused, users can Step In, Step Out, and Step Over the executing code. Users can set breakpoints, Run to Cursor, and/or Set the Next Statement for execution, watch call stack procedures, view local and global variables values, evaluate expressions, execute or debug selected code (Dolt!/
 LoopIt!), as well as monitor communication instrument buses such as GPIB for received / transmitted data.

The ATEasy debugger can execute a Test or a Task without executing the whole application, saving the user the time needed to run the whole application until the required test is reached. Additional test program debugging features include: Skip Task/Test, Set Next Task/Test, Run to Task/Test, repeat Current Task/Test, TaskIt!, TestIt!, and run conditions such as: Continuous, Task By Task, Test By Test, Stop on Failure, and more.

The ATEasy debugger can execute a Test or a Task without executing the whole application, saving the user the time needed to run the whole application until the required test is reached. Additional test program debugging features include: Skip Task/Test, Set Next Task/Test, Run to Task/Test, repeat Current Task/Test, TaskIt!, TestIt!, and run conditions such as: Continuous, Task By Task, Test By Test, Stop on Failure, and more.



Run Menu

RUN TIME EXECUTABLE

ATEasy includes a built-in application builder, which allows the creation of run-time executables. These executables can be distributed freely with no licensing fee allowing users to deploy multiple production test systems royalty free, saving thousands of dollars when compared to other competing products.

INTEGRATION WITH MICROSOFT® SOURCE SAFE

ATEasy provides seamless integration with Microsoft's source control software package Source Safe. Users can Check In, Check Out, or Add Files directly from ATEasy to Source Safe, allowing archiving and management of test programs including test program versions.

ATEASY 6.0 FEATURES & SPECIFICATIONS

COMPILE/BUILD FUNCTIONS			
•Checkit!	•Check Module	•Build	•Stop Build
•Check All	•Execute	•Re-Build	•Show Error

TEST LEVEL DEBUGGING	
•Loop Task/Test	•Skip Task/Test
•Current Task/Tes	•Set Next Task/Test
•Run to Task/Test	•Taskit!
•Stop on Failure	•Testit!
•Continuous/Task By Task/Test By Test	•Programit!
•Pause on Task/Test Failure	•Repeat Run
•Prompt on Pause Failure	•Log Failures Only

SOURCE SAFE INTEGRATION			
•Check In/Out	•Compare Files	•Add Files/Project	•Show History
•Show Status/Properties			

SOURCE LEVEL DEBUGGING			
•Reset	•Step Over	•Abort	•Doit!
•Pause/Continue	•Step Out	•Run to Cursor	•Formit!
•Set Next Statment	•Step Into	•Breakpoints	•Loopit!
•Show Next Statement			

DEBUG WINDOWS
•Calls Stack/Locals with a separate tab for module variables and change value
•Watch window with expression evaluator
•Debug window for executing code in immediate mode without adding the code to a test program
•Monitor (communication bus) window with interface source filtering

INSTRUMENTATION INTERFACES
•GPIB: Supports interface boards manufactured by, Keithley/MetraByte/CEC, Agilent/HP, & National Instruments
•VXI: Supports National Instrument's — MXI-2 interface
•COMM: Supports any Windows-compatible serial and infrared port
•File/Device
•WinSock: Supports Client/Server and UDP/TCP protocols
•ISA, PCI, PXI, and PC-based instruments

COM COMPONENT SUPPORT	
•Create Object/Get Object	•Objects can be used from any thread
•Display type libraries content	•Support method, properties, and events
•Early and Late Binding	•Support for ActiveX controls
•Load type libraries	

.NET FRAMEWORK COMPONENT SUPPORT
•Import .NET 2.0 framework assemblies and components

DLL COMPONENT SUPPORT	
•Automatic type conversion	•Support for callback or procedure parameter
•CDecl or StdCall	
•Calling and using DLL functions by name or ordinal	•Import .h files for function and type definition

EXTERNAL INSTRUMENT DRIVER SUPPORT	
•Import Lab Windows/CVI or Function Panel (.fp) drivers	•LabView VI (.vi/.lib) calling and browsing, compatible with LabView 7.0, 7.1, 8.0, 8.2

IVI DRIVERS	
•Drivers for DCPwr, Dmm, FGen, PwrMeter, RFSig Gen, Scope, SpecAn, and Switch	•Full support for IVI-C and IVI-COM

BUILT-IN USER CONTROLS			
•AButton	•AGroupBox	•ALog	•AStatusBar
•AChart	•Almage	•APanel	•ASwitch
•ACheckBox	•AlmageList	•ARadioButton	•ATab
•AComboBox	•ALable	•AScrollBar	•ATimer
•ACommon-Dialog	•AListBox	•ASlider	•AToolbar
•AVirtualKeyboard	•AMenu	•AForm	

HELP/DOCUMENTATION
•Getting Started Manual
•User's Guide Manual (online)
•Preference/Programming Language Manual (online)
•HTML-based help with TOC, Index, Search
•Test Executive Manual (online)
•Context sensitive help for dialogs and keyword

MINIMUM PC REQUIREMENTS	
CPU/Memory: No Special requirements	Operating system: Windows 98/ME, 2000, XP or Vista
Video: Any; 1280 x1024 17" monitor, 16K colors recommended for development	Disk space: 60 Mbytes

Note: Specifications and features are subject to change without notice

ORDERING INFORMATION	
GT8000-XX	ATEasy single user software package with 1-year Subscription and Support
GT8003-XX	ATEasy with 1-year Subscription and Support and 3-day training at Geotest
GT8021-UG-XX	ATEasy Upgrade (from 3.0, 4.0 or 5.0 to 6.0) with 1-year Subscription and Support
GT8022-UG-XX	ATEasy Upgrade (from 3.0, 4.0 or 5.0 to 6.0) with 2-year Subscription and Support
ATEZ-LPT/USB	Replace any type of ATEasy license with another (i.e., -KP to -NL, -SL to -KY, etc).

TRAINING	
ATEASY-DS	3 days ATEasy training at Geotest (Irvine, CA) for 1-3 persons. Call for larger groups.
ATEASY-DS5	As available
ATEASY-DS2	On-site, 3 days ATEasy training seminars for 1-3 persons. Call for larger groups.
ATEASY-DS25	On-site, 5 days ATEasy Quickstart™ training seminars for 1-3 persons. Call for larger groups.

SUPPORT AGREEMENTS	
GT8020	1-year Subscription and Support for ATEasy (requires continuous agreement)
GT8020-24	2-year Subscription and Support for ATEasy (requires continuous agreement)
GT8020-34	3-year Subscription and Support for ATEasy (requires continuous agreement)

Note: Replace -xx with -SL for Software License, -KP for Parallel Key, -KU for USB Key, or -NL for Network License (Network License requires a minimum of three licenses).

COUNT ON OUR COMMITMENT TO YOU

Geotest is dedicated to delivering innovative solutions that exceed your toughest requirements for automated test and measurement. Whether you need to test individual devices, electronic subassemblies or an entire system, our team is focused on providing the highest quality solutions for your needs.

Our existing customers acknowledge and appreciate our commitment to total customer satisfaction. Over time, we strengthen our customer relationships through the responsiveness of our Customer Sales Services (CSS) and Customer Technical Services (CTS) teams. The CSS team is your primary point of contact, ensuring prompt attention to any requests or issues that may arise. The CTS team is ready to address product and application questions—before, during and after your project—and provide training programs tailored to your specific needs.

The Geotest website delivers online support 24 hours a day, seven days a week. Our support system, called M@GIC, is accessible via the Web (<http://www.geotestinc.com/magic>). Once you've registered, you can log in to search an online knowledge base, create and manage incident reports, and update your account information.

OUR MONEY-BACK GUARANTEE

We offer a 30-day money-back guarantee on all Geotest products. If you are not completely satisfied with the quality, workmanship or suitability-to-task of a product, you may return it within 30 days of the date of purchase.

Geotest

Marvin Test Systems, Inc.

The Marvin Group 

1770 Kettering
Irvine California, 92614-5616
888-TEST-BY-PXI
Tel: 949.263.2222
Fax: 949.263.1203
E-Mail: info@geotestinc.com
www.geotestinc.com



GSA



Copyright © Geotest - Marvin Test Systems, Inc. All rights reserved. Products and company names listed are trademarks or trade names of their respective companies. Revision D