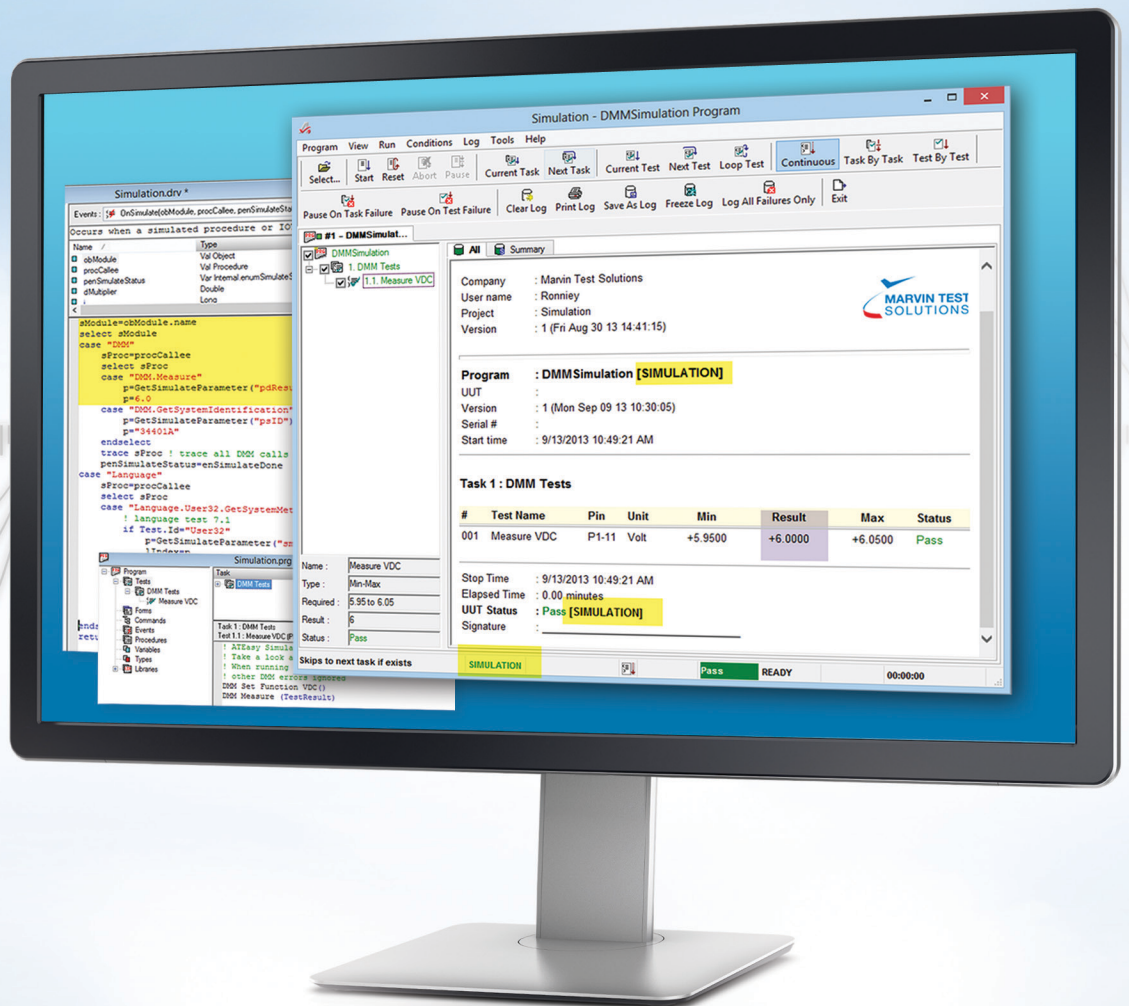


✓ ATEasy® 9.0

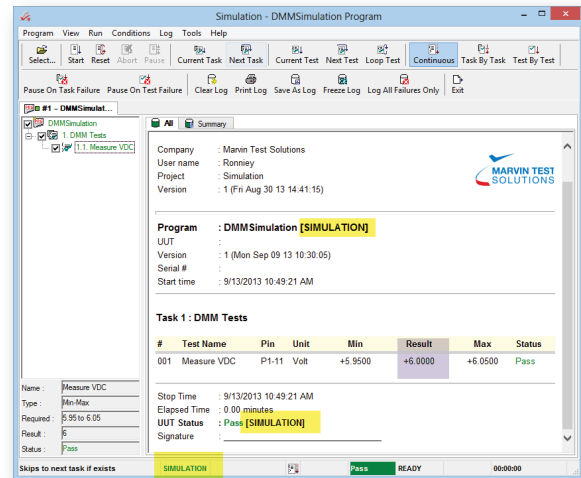


**Integrated Test Executive and
Application Development Environment**

ATEasy offers a rapid application development framework and a test executive for functional test, ATE, data acquisition, process control, and instrumentation systems. It provides all the necessary tools to develop, integrate, document, and maintain software components, from instrument drivers to complex test programs including full-featured test system / UUT simulation capability. ATEasy's development environment combines the structure of ATLAS, the ease of programming associated with Microsoft's Visual Basic, and the flexibility of Microsoft's Visual C++ to create a complete object-oriented, Windows programming environment.

Integrated Test Executive

ATEasy includes a ready-to-run, customizable, Test Executive module – providing test developers a complete and easy to use framework for simulating, executing, maintaining and reusing test sequences.. 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.

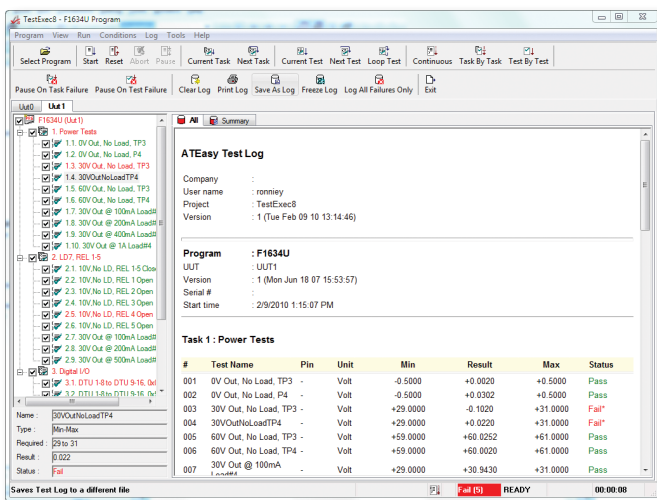


Hardware and Software Simulation

Customize the Test Executive for Your Specific Needs

ATEasy's test executive can be customized to accommodate specific application requirements, which can then be deployed and re-used throughout a test engineering department or organization. Customizable features include:

- Define user groups, user interfaces and associated options / privileges
- User interface – ATEasy supports both a Modal user interface via a touch panel and a Modeless interface which uses the familiar Windows menu bar and toolbar, in conjunction with the mouse and keyboard. Each user interface mode can be assigned to a specific user group. Additional customization can be done programmatically using the test executive source code that is provided with ATEasy.
- Test sequences - users can define specific test sequences (profiles), allowing a test program to be customized for specific UUT variants, test limits, or any other case requiring a specialized test sequence..
- Integrated data logging – automatic generation of HTML, ATML, .mht or text based test logs is supported by the test executive, which can be displayed or saved to a file. The test log can be customized and can include all test results, failures, or only pass / fail results.
- Test multiple UUTs - Under user control, multiple UUT testing can be performed in parallel, sequential, or mixed-mode; with shared resources managed by ATEasy.
- Fault analysis library – users can build a fault dictionary, based on test results and test status. Additionally, the fault library can be integrated with third party tools, such as DSI International's Workbench and eXpress fault diagnostic tools.



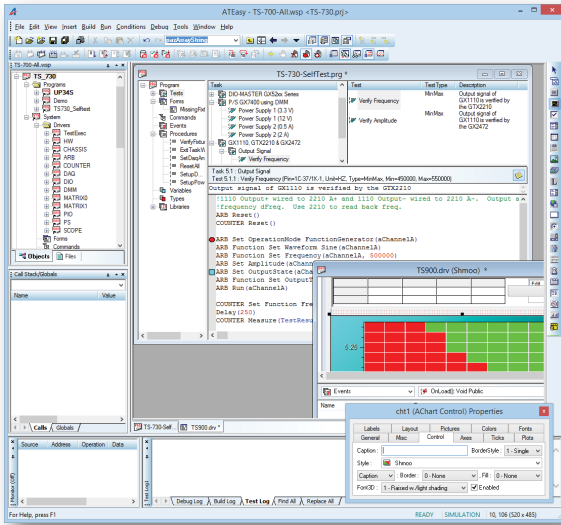
ATEasy Test Executive

Full - Featured Test System and UUT Simulation

ATEasy 9.0 is the only commercial test executive / development environment to offer full-featured simulation capability which includes the simulation of test system hardware, software, the UUT, and test events / failure scenarios. With simulation capability, users are able to develop and verify test programs without needing valuable time on a tester or access to a UUT. Additionally, test engineers can use the simulation feature to trace / analyze test program performance off-tester. The result is higher productivity, higher quality programs, faster deployment, and better test system asset utilization.

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, and Commands which offer a streamlined, easy-to-follow framework and a wide array of features which allows the user to easily create and reuse these components. The result is a test application that is faster to generate and easier to maintain.



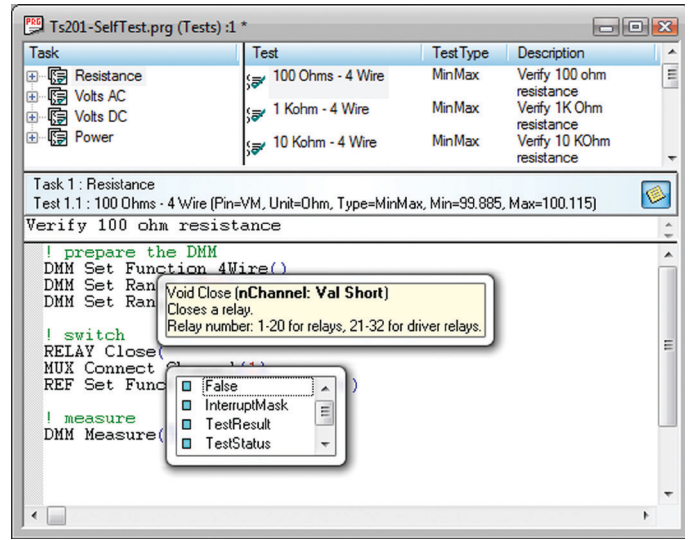
ATEasy Application Development UI

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 test code, users can use these components to quickly isolate problems. Once a modification is complete, smaller portions of the application code can be executed independently without executing the entire application, facilitating coding/debugging development cycles. ATEasy also features a Just-In-Time Compiler which compiles only the necessary code for execution – making the coding / debugging process fast and easy. Once debugging is complete, the Build command creates an executable file.

Easy & Intuitive 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 for parameters and commands. ATEasy also provides tool tips that describe the function call and arguments associated with specific programming parameters.



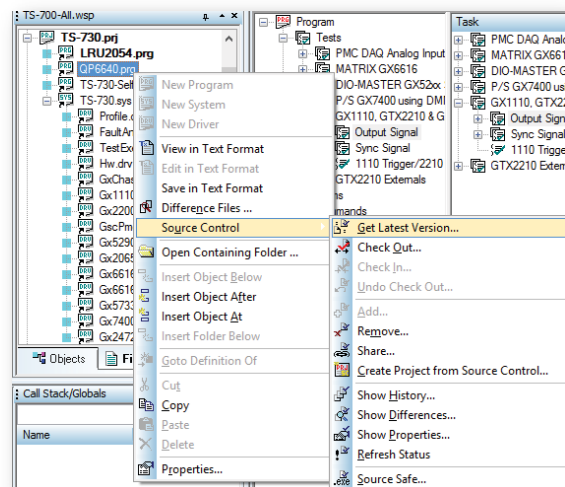
Code Completion

Integrated Exception and Error Handling

ATEasy provides a unique approach to error and exception handling. Errors generated by statements, run-time events, or instrument communication can be trapped and handled locally using ATEasy's 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.

Integration With 3rd Party Source Control Tools

ATEasy 9.0 supports various source and version control tools. Interfaces are provided for several standard source control providers including CVS, Git, Subversion, Microsoft Team Foundation Server and Visual SourceSafe, and for any SCC API or Command Line compatible tool.



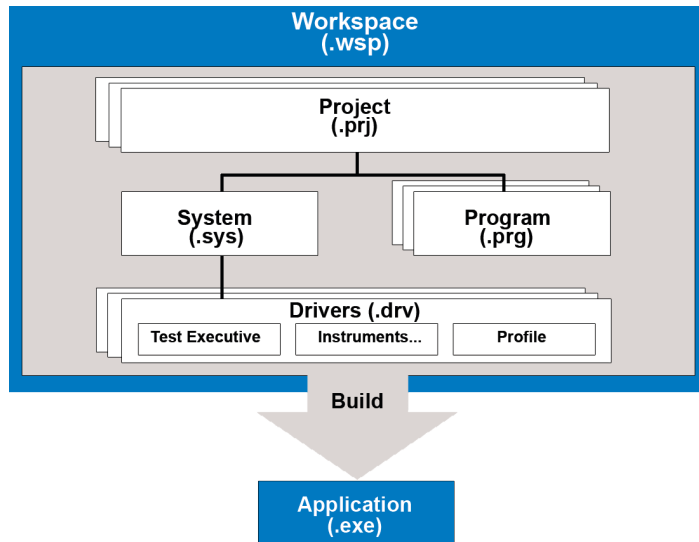
Source Control Tools

Structured Application Module Framework

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

- Program Module – contains the test program (tests and tasks). A Task consists of a group of Tests, which tests a functional or logical unit in the UUT and each Test contains code and various properties such as Name, Type, Pin, Unit, Result, Status, etc. Each test type is used to automatically generate the test log, eliminating the need for users to create specific code to support the generation of data logging for each test.
- System Module – contains 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

Easy to Use Commands and UI Development

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 – providing users with a full featured UI development environment that supports form types, menus, controls, and event programming components that are specifically designed for supporting T&M applications. ATEasy's forms also accommodate system-installed ActiveX controls, offering users the option to use hundreds of ActiveX controls and components which are available from third party vendors.

Multithreading

ATEasy provides full support for the Windows® multithreading model, which allows users to execute multiple code segments simultaneously. Synchronization of 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. Additionally, the multi-threading debug environment supports the viewing of call stacks and local variables – simplifying the code development and debug process.

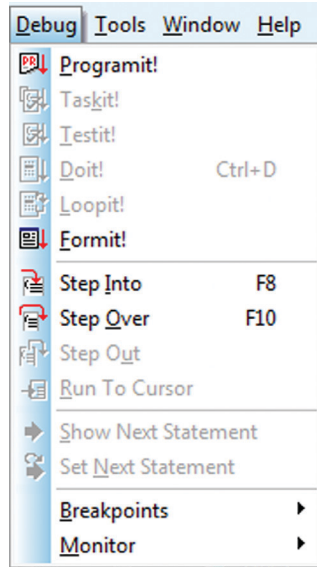
Instrument Driver Support

ATEasy is supplied with many popular instrument drivers and all of the currently available standard I/O drivers. In addition, ATEasy's open architecture supports the creation and use of instrument drivers via a wide range of methods including:

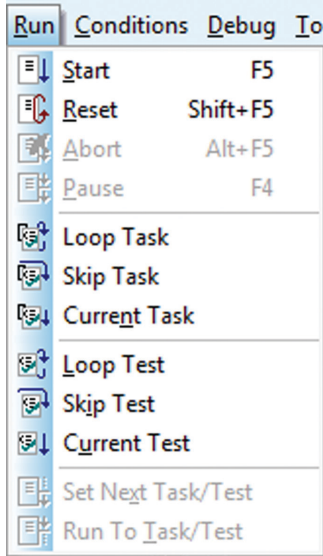
- Writing ATEasy procedures in conjunction with I/O Tables and libraries which support the communication and control of instruments via GPIB, RS232, TCP/IP, LXI, VXI, PXI, PCI, USB interfaces
- Importing VXI Plug-and-Play and Function Panel (.fp files) files
- Calling LabVIEW Virtual Instrument drivers (.vi files or VI library .lib files)
- Use of external libraries such as DLLs, COM/ActiveX and .NET assemblies including the ability to dynamically load / unload libraries at run-time

Full-Featured Debugging Environment

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 program 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



Debug Menu



Run Menu

procedures, view local and global variable values, evaluate expressions, execute or debug selected code (Doit!/Loopit!) , as well as monitor communication instrument buses such as GPIB for received / transmitted data. Additionally, the ATEasy debugger can execute a Test or a Task without executing the complete application, saving the user the time needed to run the complete application until the required test is reached.

Run Time Executable

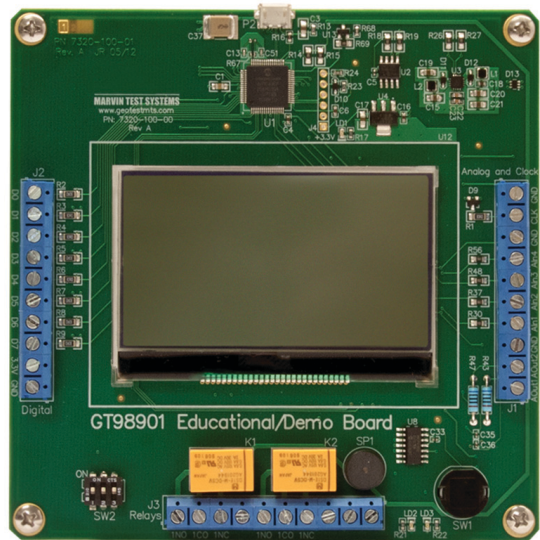
ATEasy includes a built-in application builder, which allows the creation of run-time executables. These executables can be comprised of one or more .exe files, providing users with the flexibility to easily update or change programs after the initial release of the application, without recompiling the complete application. These .exe files can be distributed freely with no licensing fee allowing users to deploy multiple production test systems royalty free, saving thousands of dollars in licensing fees.

Licensing, Documentation, and Training

ATEasy is available with software or hardware license keys (USB or parallel port). Optionally, ATEasy is available with a network license for multiple user deployment.

Documentation includes a copy of the “ATEasy Getting Started” manual and PDF / HTML Help versions of the User’s Guide, Preference Manual, Programming Language Manual, and the Test Executive Manual. The HTML-based help provides a TOC, index search and context sensitive help for the development environment dialogs and keywords.

Marvin Test Solutions offers a 3 –day, ATEasy training package which can be conducted at our Irvine, CA facility or at a customer’s site. In addition, MTS offers a getting-started version of ATEasy with a USB controlled, multi-function demo board for both commercial users and educational institutions which provides a cost-effective way to learn about ATEasy and its many features / capabilities. This same demo board is used to support the 3 day ATEasy training course.



USB Demo Board

Compatibility and System Requirements

- ATEasy 9 is compatible with 32/64 bit Windows operating systems including Windows XP, Windows 7 and 8 and Windows Server 2003, 2008 and 2012.
- Compatible with LabView 2013, .NET 4.5
- 100% backward compatible with ATEasy versions 3.0-8.0 file formats. Migration tools for ATEasy 1.0 and 2.0. EXE and DLL files compiled with older versions of ATEasy can be used with the 9.x run-time.

For more information:
www.marvintest.com/ateasy

Customer Feedback

We've been using ATEasy for quite a while now. I have to say it's the easiest environment we've ever used.

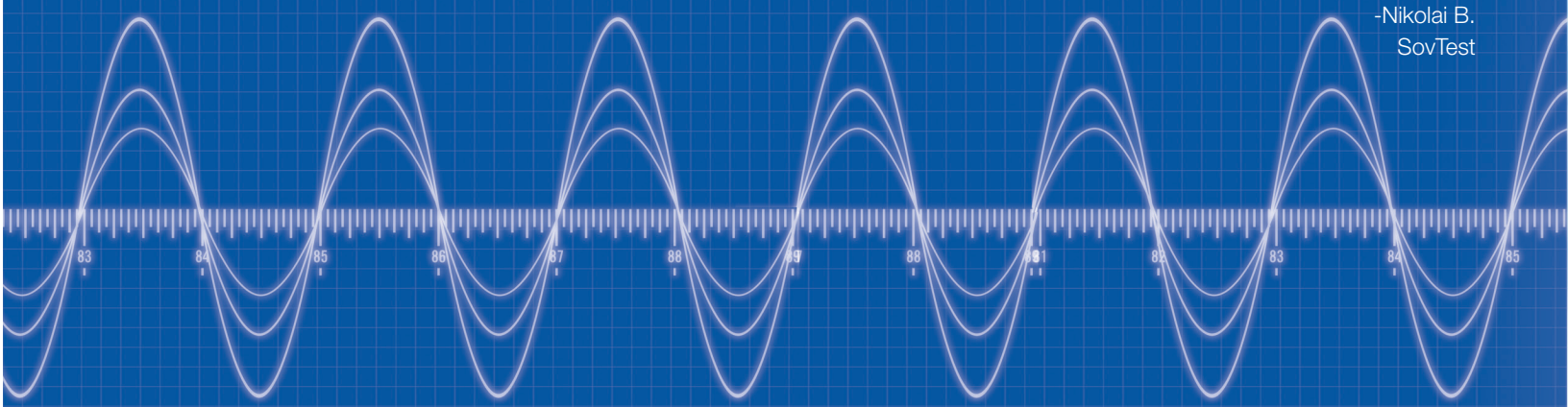
-Jim M.
LXE Inc.

I thought I might let everyone know that my first ATEasy test program was a resounding success. The setup is simple, and the test runs in 2 minutes. With "hand" testing a 4 hour test would be required, and any procedural error would have required restarting the test. (Figure the odds of setting 131 tests exactly right every single time.) A major part of the credit goes to an easily programmed system excellent training and extremely responsive support. I'm extremely happy with the software and system.

-Robert B.
DRS Technologies (Tamsco)

We have been using ATEasy at our enterprise for 5 years. With the help of ATEasy we have developed programs for functional inspection and for fault-finding of 40 electronic units and assemblies. Using a large set of standard forms and also creating custom ones has allowed us to create "turn-key" projects for repair of rather complicated analogue units and assemblies, in accordance with the customer's requirements and needs. The accessibility and simplicity of programming in the ATEasy environment has allowed our engineers with various levels of programming skills, to create test programs – minimizing our development time and costs. Developing test equipment is a rather complicated and a labor-consuming process and it's very good to have access to Marvin Test Solutions products and the ATEasy programming environment.

-Nikolai B.
SovTest



Having been an ATEasy user for the past 12 years, I look forward to each new release because I know Marvin Test Solutions will unveil more outstanding and impressive features. One of my favorite features introduced a few years ago is the capability to use ActiveX and .NET Components in your software. Because of that, ATEasy is extremely powerful, yet so simple to use. Not only do I use it to create our test software, I use it to write company-wide applications which are utilized every day.

-Michael W,
Sechan Electronics, Inc.



1770 Kettering
Irvine California, 92614-5616
TF: 888.837.8297
Tel: 949.263.2222
Fax: 949.263.1203
E-Mail: info@marvintest.com
www.marvintest.com

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