



## **ASG-SMARTTEST™**

FOR INTERACTIVE APPLICATION TESTING AND  
DEBUGGING



execution paths, ASG-SmartTest gives users the ability to hone in on the root cause of the application failure or ABEND. Data values at the time of the ABEND can be viewed alongside their definitions using ASG-SmartTest Fault Analyzer. Programmers can trace invalid or corrupted values back to their point of origination, resulting in a resolution time of minutes rather than hours.

## INCREASED PROGRAMMER PRODUCTIVITY

Because ASG-SmartTest addresses environments and languages, only one set of commands and one setup process needs to be learned. Users can easily set up and execute an application test session using commands or via ISPF-standard drop-down menus. Test execution is then viewed and controlled from the program view screen, which can be customized to meet each user's specific needs. ASG-SmartTest also enables users to dynamically alter values and memory from within a test session, minimizing the requirement to restart tests. In addition, environmental setup and program-specific information can be shared by programmers, minimizing their learning curve and speeding entry to the test session.

ASG-SmartTest also allows programmers to update their program during a test session and see if proposed changes have their desired effect. By allowing this to take place during the test session, ASG-SmartTest eliminates the need to open the source code, make the changes, compile and link the program, and then start a new session. Once an update has been tested and proven to be correct, ASG-SmartTest's synergy with the ASG-Existing Systems Workbench™ (ESW®) SmartEdit component provides an automatic process by which the change can be applied to the original source. With its fundamental understanding of the tasks programmers need to perform, ASG-SmartTest provides this and many other methods to improve productivity while increasing the quality of the code.

## IMPROVED APPLICATION QUALITY

In addition to the new Fault Analyzer option, ASG-SmartTest's integrated and efficient testing capabilities are further enhanced by the Test Coverage Analysis (TCA) option. TCA enables organizations to measure and analyze the coverage of a test suite for a set of programs, increasing their confidence that modified programs will function correctly when moved to production.

With TCA, programmers can be sure they have completely tested all new or modified code before it is put into production. This directly increases the quality of the code and provides programmers with a tool fundamental to their success.



## MAIN FEATURES

- Serves as a vital component of ASG's comprehensive application modernization solution, the ASG-Existing Systems Workbench™ (ESW®)
- Tests load modules without source code
- Supports testing of production-ready modules, eliminating any need for special options or changes



## GREATER VALUE FOR LEGACY MODERNIZATION

ASG-SmartTest is a critical component of the ASG's ESW, a comprehensive, integrated suite of tools that supports legacy application reengineering and maintenance throughout the application lifecycle. ESW helps organizations modernize their legacy applications. ASG-SmartTest uses the Analytical Engine™ to populate the Application Knowledge Repository™ (AKR) to provide source-level debugging for COBOL, Assembler, and PL/I (for programs running in TSO, Batch, and Dialog Manager, as well as in CICS and IMS regions). The AKR allows code and application knowledge to be shared between the tools in the ASG-ESW Suite.

It supports application reengineering tasks, including the general inspection tasks of revealing program structure, relationship tracing, and exposing program anomalies.

## ASG-SMARTTEST OPTIONS

### ASG-SMARTTEST FOR CICS®:

Equips programmers to interactively monitor and change program logic, data, and memory for transactions running in a CICS region or CICSplex.

- Offers complete support for synchronous and asynchronous transactions
- Tests CICS transactions started from the Internet
- Operates with minimal use and impact on your CICS region's resources
- Provides COBOL and PL/I intelligent find facility
- Features environment-sensitive, test setup wizards
- Presents a consistent user interface between CICS and batch testing
- Provides an option that logs the test session for historical record

### ASG-SMARTTEST FOR FAULT ANALYZER:

Provides a vital bridge between ASG-SmartTest and ASG-SmartScope, utilizing root cause analysis to diagnose and fix ABENDS faster. By bringing the powerful toolset of ASG-SmartTest to bear on ABEND understanding, programmers now have the ability to easily explore data definitions, program execution paths and other components of the application that can affect execution and cause abends.

This extraordinary synergy makes program exploration very simple. It provides a combination of ABEND interception and full program and data display. This changes the focus from seeing what the system was able to capture, to what actually happened in the execution of the program.

ASG-SmartTest Fault Analyzer provides programmers with the ability to thoroughly explore data values, including aliases, follow the flow of control logic, and understand all the possible root causes for the abend. It dramatically reduces the Mean Time to Recovery (MTTR). As a result, not only can a specific issue can be resolved, but related problems that have not surfaced yet can be researched.

**ASG-SMARTTEST FOR PLI:**

- Supports the testing and debugging of PL/I programs.
- Common look and feel for all environments
- Standard execution commands
- Displays of pointers and based variables
- Dynamic addition of changes during test sessions

**ASG-SMARTTEST FOR IMS:**

- Extends the power of ASG-SmartTest to IMS/DC applications, preparing programmers to interactively test and debug Fastpath, MPP, or BMP applications and view IMS/DC formats.
- An IMS batch program can be tested running in the same TSO address space with SmartTest-TSO or in a separate batch address space. The batch program can be tested with private databases (DLI or DBB) or public databases (BMP). GSAM files are also fully supported.
- With IMS 3270 Terminal Emulation Mode, an IMS message processing program (MPP) can be tested running independently from an IMS control region using private databases. Emulation Mode also supports testing connected to an IMS control region and using public databases. 3270 Terminal Emulation Mode uses the TSO terminal to emulate the IMS terminal, IMS message queues, and IMS Message Format Service.
- With Native IMS Terminal Support, message processing program (MPP) can be tested with an active IMS control region and all available IMS MPP functionality. Native IMS Terminal Support allows the user to test an application scheduled by IMS for an incoming message from any source (e.g., a separate 3270 terminal or a Web-based application).
- Supports testing of application programs with IMS Batch Terminal Simulator (BTS). It provides a consistent user interface between IMS/DC and batch testing.

**ASG-SMARTTEST FOR ASM:**

- Supports the testing and debugging of Assembler drivers and subroutines
- Provides a common look and feel for all environments
- Allows standard execution commands
- Displays of registers and program storage areas
- Modification of registers and program storage areas for exception testing
- Viewing of expanded macros in-line

**ASG-SMARTTEST FOR TEST COVERAGE ANALYSIS (TCA):**

Measures how effectively modified lines of code have been tested. It reduces risk by increasing the probability that modified programs will function correctly when moved to production.

**ASG-SMARTTEST FOR DB2 STORED PROCEDURES (SP):**

Gives users a quick and convenient way to test their stored procedures. All components defined to DB2 can be referenced and used, including input and output fields, field data types, and field lengths. It enables DB2 Stored Procedures to run in the user's TSO address space, thereby reducing the resources used and maintaining a single user interface for all test environments.

**Improve quality and productivity while reducing the cost of ownership with ASG-SmartTest.**



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