

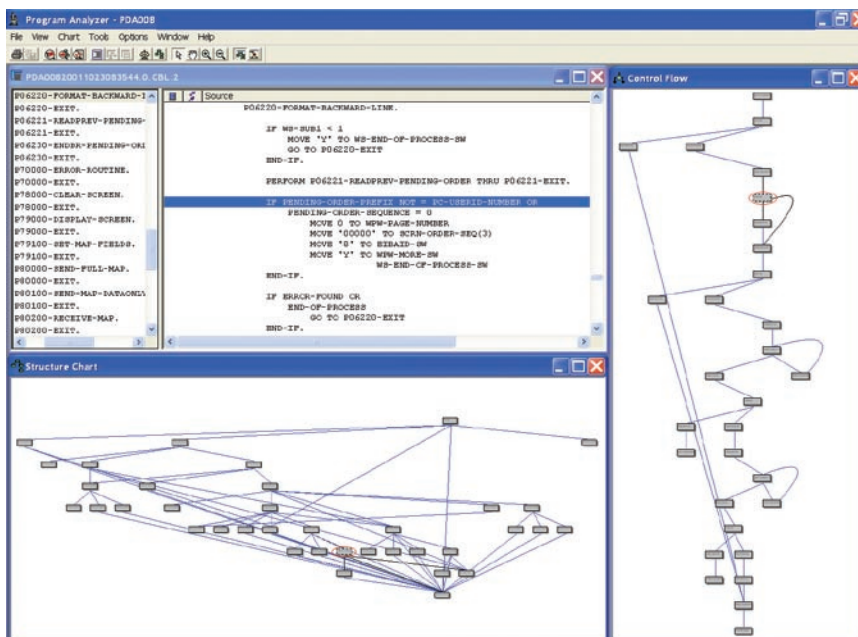
Compuware Program Analyzer deepens view into COBOL programs

No matter how much experience you have analyzing COBOL and PL/I programs, understanding a complex logic path to find and fix application problems is a painstaking process. Preventing them altogether can be difficult and costly—unless you use **Compuware Program Analyzer**.

Compuware Program Analyzer helps developers using Compuware products—Xpediter, Abend-AID and Strobe—perform powerful yet easy-to-understand analyses of complex COBOL and PL/I programs through views of the program's structure, data items and logic. Whether you're trying to investigate the source of an abend, debug a complicated logic path, assess a change request or fix a performance problem, Compuware Program Analyzer quickly delivers the information you need.

By using the common Compuware Shared Services, Compuware Program Analyzer is an integrated part of a complete enterprise testing solution, including Xpediter, Abend-AID and Strobe.

What's more, Compuware Program Analyzer works in tandem with information you gather using Xpediter/Code Coverage, Compuware's powerful solution for system-wide testing diligence, to further improve test coverage. Compuware Program Analyzer also helps you augment program maintenance by identifying code flaws such as unexecuted statements, recursions and potential runaway paths.



Compuware Program Analyzer provides developers with three distinct views of a program: the source code, a program structure chart and a Control Flow diagram of the selected paragraph's logic.

	Risk	Verbs Executed	Total Verbs	Branches Executed	Total Branches	Filtered Verbs Executed	Filtered Verbs	Filtered Branches Executed	Filtered Branches
System: BILLING	495	161(87%)	184	0(0%)	0	5(100%)	5	0(0%)	0
System: BOLTS	966	1063(41%)	2578	248(40%)	616	25(73%)	34	2(50%)	4
Load Module: PDA002	927	116(47%)	243	31(57%)	54	12(75%)	16	1(50%)	2
PDA002	927	116(47%)	243	31(57%)	54	12(75%)	16	1(50%)	2
(10/23/01-08:32:54)									
Opt=N,Debug=N									
Load Module: PDA003	74	145(47%)	303	34(53%)	64				
PDA003	74	145(47%)	303	34(53%)	64				
(10/23/01-08:33:14)									
Opt=N,Debug=N									
Load Module: PDA006	939	275(48%)	572	77(50%)	152	13(72%)	18	1(50%)	2
PDA006	939	275(48%)	572	77(50%)	152	13(72%)	18	1(50%)	2
(10/23/01-08:34:07)									
Opt=N,Debug=N									
Load Module: PDA008	89	286(35%)	809	55(26%)	206				
Load Module: PDA010	84	201(32%)	611	51(36%)	140				
Load Module: PDA014	31	21(100%)	21	0(0%)	0				
Load Module: xpediter	30	19(100%)	19	0(0%)	0				
System: BRKR	925	181(86%)	209	25(62%)	40	19(82%)	23	0(0%)	2
System: BROKER NOV6TH	924	184(88%)	209	26(65%)	40	19(82%)	23	0(0%)	2
System: CODECOVER	922	68(33%)	201	18(45%)	40	6(54%)	11	0(0%)	0
System: COLLEEN1	80	0(0%)	29	0(0%)	0	0(0%)	0	0(0%)	0
System: CWDEMCB2 COVER	922	68(33%)	201	18(45%)	40	6(54%)	11	0(0%)	0
System: DEBBIE	939	186(65%)	284	39(47%)	82	13(59%)	22	0(0%)	2
System: HONG	473	70(87%)	80	8(66%)	12	5(100%)	5	0(0%)	0
System: JERRI	959	325(79%)	407	91(65%)	138	52(75%)	69	3(30%)	10
Load Module: BL003A	480	79(98%)	80	23(76%)	30	7(100%)	7	0(0%)	0
Load Module: CWXTCOB	953	167(67%)	247	45(57%)	78	38(69%)	55	3(30%)	10
CWXTCOB	939	139(70%)	198	28(70%)	40	31(70%)	44	1(50%)	2
(10/05/98-13:53:16)									
Opt=Y,Debug=Y									
CWXTDATE	910	16(72%)	22	10(55%)	18	7(63%)	11	2(25%)	8
(10/05/98-13:52:22)									
Opt=Y,Debug=Y									
CWXTSUBC	66	12(44%)	27	7(35%)	20	0(0%)	0	0(0%)	0
(10/05/98-13:51:36)									
Opt=Y,Debug=Y									
Load Module: xpediter	480	79(98%)	80	23(76%)	30	7(100%)	7	0(0%)	0
System: MARISSA	969	274(70%)	388	46(46%)	100	75(72%)	103	5(41%)	12

Compuware Program Analyzer, when used with Xpediter/Code Coverage, provides developers with a view of execution statistics for all programs within a selected system.

With the Compuware Program Analyzer, you can:

- study a program's logic flow in chart and diagram format, augmented with intuitive graphics and highlighting
- analyze and navigate through programs to refer to specific fields or lines
- perform a logical walk-through to test a program's logic without using data
- identify and locate logic flaws, including code that can't be executed
- analyze and query a program's data and paragraph structures
- obtain detailed information about a perform group or paragraph in the program
- estimate project scope and task complexity with information from detailed metrics
- document the entire program with easy-to-read printouts of charts and tables
- analyze code coverage data provided by Xpediter/Code Coverage.

Many uses for Compuware Program Analyzer

Compuware Program Analyzer is uniquely designed to integrate with and extend the benefits of Compuware products, for a wide variety of uses:

Xpediter

Developers using Xpediter to debug a complex program can quickly bring up the same program in Compuware Program Analyzer to view structure charts of the program and paragraphs. Developers can see where the paragraphs are called from, what they call and how the data flows.

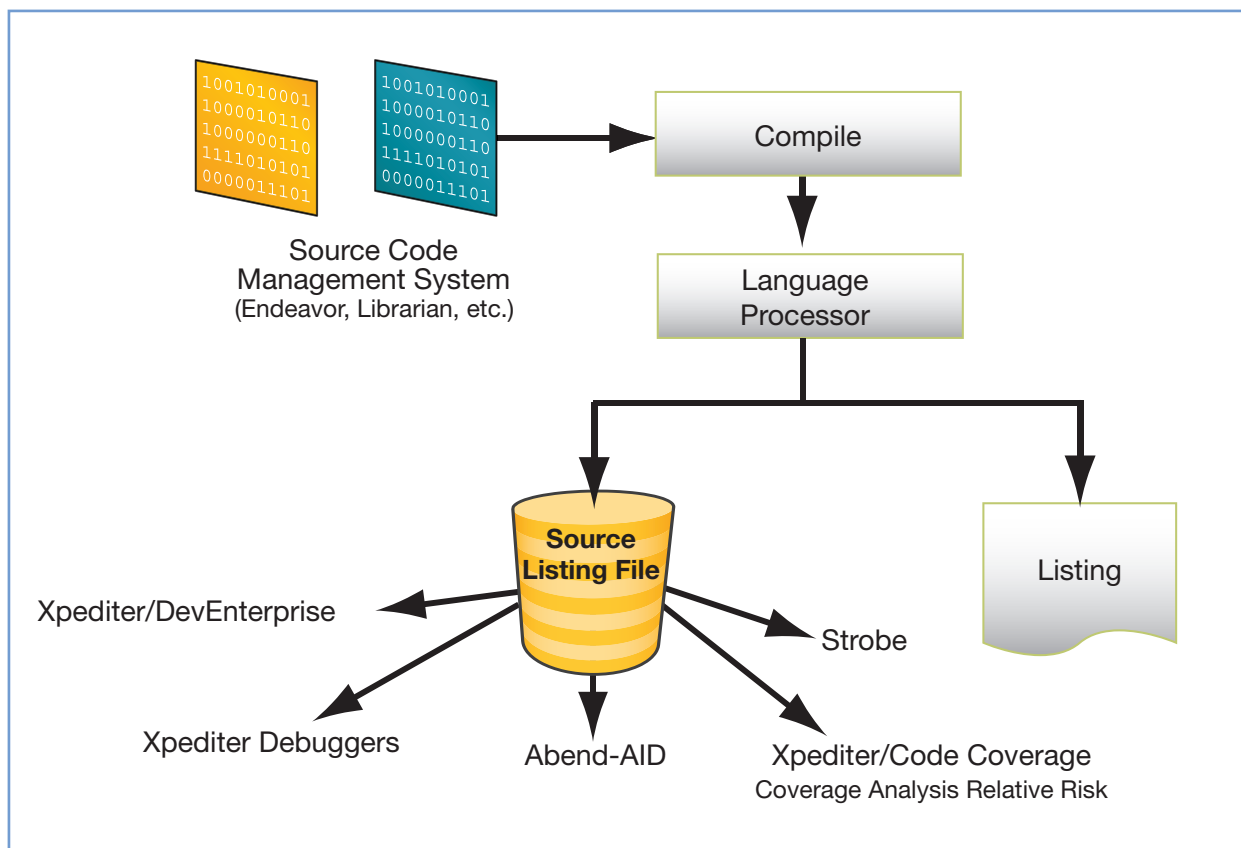
Strobe

Developers using Strobe to improve application performance can benefit from using Compuware Program Analyzer. Strobe will pinpoint where in the program the performance problem is;

Compuware Program Analyzer can show the surrounding logic to help the developer understand what change can be made. With Strobe and Compuware Program Analyzer, your developers are armed with the best products to efficiently locate and eliminate the sources of application performance problems and deliver superior ROI.

Abend-AID

Developers using Abend-AID can obtain additional information on an abending program. Using the same Compuware source listing file, they can view a program's structure chart and its paragraphs, as well as valuable information on the flow of data through the program. This enables developers to quickly understand unfamiliar programs and resolve abends sooner.



The Shared Services support feature of Compuware Program Analyzer enables developers to analyze programs that have been stored in Compuware's DDIO source listing file by quickly bringing up a structure chart for programs that developers are currently viewing in Abend-AID, Strobe or Xpediter.

Xpediter/Code Coverage

Developers using Xpediter/Code Coverage and Compuware Program Analyzer in tandem during everyday tasks of unit, integration and regression testing can significantly boost their understanding of which programs—down to the specific line of code—are affected when a business function executes. Xpediter/Code Coverage sits in the background during testing and collects test execution statistics. Data from batch, IMS and CICS applications populates the Xpediter/Code Coverage repository. The repository provides the basis for reports documenting the thoroughness of your testing activities at the system, test, program and user ID levels. Xpediter/Code Coverage shows developers code-colored displays of program logic branches to indicate the level of code complexity and testing concentration. Compuware Program Analyzer provides further assistance by showing which programs and specific lines of code are affected when a business function executes, in addition to metrics including the unique relative risk metric.

The benefits of Compuware Program Analyzer are significant both to developers and IT organizations:

- speeds the problem resolution process
- helps developers—new and experienced—become quickly familiar with a program's structure and logic
- helps increase the quality of an application to keep it in production.

The result: more accurate project estimates, reduced errors in test and production, and shorter times to market.

Xpediter®

**Interactive debugging and analysis—
driving high-quality mainframe development, faster.**

Compuware Xpediter combines the automation developers need with the metrics their managers require to move applications quickly—and confidently—into production. Because Xpediter automates the analysis, testing and debugging process, developers make the right changes the first time around, avoiding costly trial and error.

- Interactive mainframe analysis and debugging
- Full application visibility using key metrics
- Solutions for sourcing management, process improvement and legacy modernization

To learn more, visit

www.compuware.com/xpediter

Compuware products and professional services—delivering IT value

Compuware Corporation (NASDAQ: CPWR) maximizes the value IT brings to the business by helping CIOs more effectively manage the business of IT. Compuware solutions accelerate the development, improve the quality and enhance the performance of critical business systems while enabling CIOs to align and govern the entire IT portfolio, increasing efficiency, cost control and employee productivity throughout the IT organization. Founded in 1973, Compuware serves the world's leading IT organizations, including 95 percent of the Fortune 100 companies. Learn more about Compuware at www.compuware.com.

Compuware Corporation Corporate Headquarters
One Campus Martius
Detroit, MI 48226-5099

All Compuware products and services listed within are trademarks or registered trademarks of Compuware Corporation. Java and all Java-based marks are trademarks or registered trademarks of Sun Microsystems Inc. in the United States and other countries. All other company or product names are trademarks of their respective owners.