

What is Impact Analysis?

Impact Analysis is a process of identifying the potential consequences of a change, or estimating what needs to be modified to accomplish a change [Bohner/Arnold 96]. TBevolve assists with this process by providing critical information, which enables users to monitor and assess the impact of software changes in key areas and hence implement specific, targeted processes with the aim of reducing the risks associated with such changes.

Benefits of Impact Analysis

- Identifies the impact of source code changes
- Assists with change documentation
- Assists with ongoing maintenance and risk reduction

Impact Analysis Facilities

Static Analysis

At the source code level TBevolve's [IDA](#) facility detects and records significant areas of source code change. This information is then utilised by TBevolve to provide users with a series of reporting facilities relating to the potential impact of these changes. In the static domain these may include highlighting the following:

- Additional standards violations
- Increased structural complexity
- Increased data complexity
- Reduced maintainability
- Reduced testability
- Reduced reliability

Dynamic Analysis

In addition to the reporting of this static based impact information, TBevolve extends this reporting facility into the dynamic domain, providing information on:

- Additional code statements
- Additional code branches
- Existing branches affected by code change
- Additional LCSAs (Test Paths)
- Existing LCSAs (Test Paths) affected by code change

TBbrowse

File Edit View Window Help

Program Difference Coverage Report

File under test : "D:\Server_Testbed\Accounts_System_Driver.c"
 Date of analysis : Tue Jun 17 13:58:45 2003
 by LDRA Testbed : Version 7.0.9

Ref Line	Reformatted Text	Previous Run	Current Run	Combined
function equalsides				
143	++ *increment_result;	0	1	1
144	)	0	1	1
145	if	0	1	1
146	{	0	1	1
152	++ *increment_result;	0	1	1
153	)	0	1	1
154n	serve_results =	0	1	1
155n	pointer (	0	1	1
156n	& serve_results_string) ;	0	1	1
157n	)	0	1	1
158	/*	-	-	-
159	*/	-	-	-
function system_processing				
199	system_processing (	0	1	1
200	UINT_32 i ;	-	-	-
201	UINT_32 j ;	-	-	-
202	UINT_32 k ;	-	-	-
203	UINT_32 system_match)	-	-	-
204	{	-	-	-
205n	switch (	0	1	1
206n	system_match	0	1	1
207n	)	0	1	1
208n	{	0	1	1
209n	case 0 :	0	1	1
210	if	0	1	1
211	{	0	1	1

Done

	Quality Result	Unique Standards Failure Ratio (%)
total	Fail	4
found_to_fail	Pass	0
merge_accounts_phase_two	Pass	0
merge_accounts_phase_one	Pass	0
cost_saving	Fail	1
number_telephone_call_per	Fail	2
system_processing	Conditional Pass	1
call_processing	Pass	0

Impact Analysis Display



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