Soft for Soft

Recall cost & Complexity !

RESORT for C (Pro*C)
RESORT for Java (JSP)
RESORT for Flex
RESORT for QM, FP

Code Inspection and Quality Management Toolset

Soft4Soft

We are looking for oversea business partner for SW sales and quality consultants

RESORT for C(Pro*C) – SW Quality Tool

❑ ***SW Quality Solutions***

- Multi-level Quality Statistical Metrics
  - -Project
  - -Subsystem
  - -File
- Multi-level Automatic Visualization
  - -Subsystem
  - -File
  - -Function

❑ ***Visualization (Quality Evaluation)***

- Procedure Metrics
- Halstead Metrics
- Quality(Maintainability) Metrics

❑ ***Visualization (Reverse Engineering)***

- File Diagram
- Call Graph
- Variable Reference Graph
- Control Flow Graph
- Source Code Browser

SW Quality Tool is a suit of tightly integrated reverse engineering and software metrics measurement.

Reverse Engineering Tool supports a comprehensive visualization and procedure metrics solution that analyzes a software system to identify its current modules and dependencies, to extract and create system abstraction and design information.

SW Metrics Tool provides a quantitative basis for the development and validation of models of the software development and maintenance process. Software metrics helps you identify, diagnose and resolve potential problems to improve software quality and productivity.

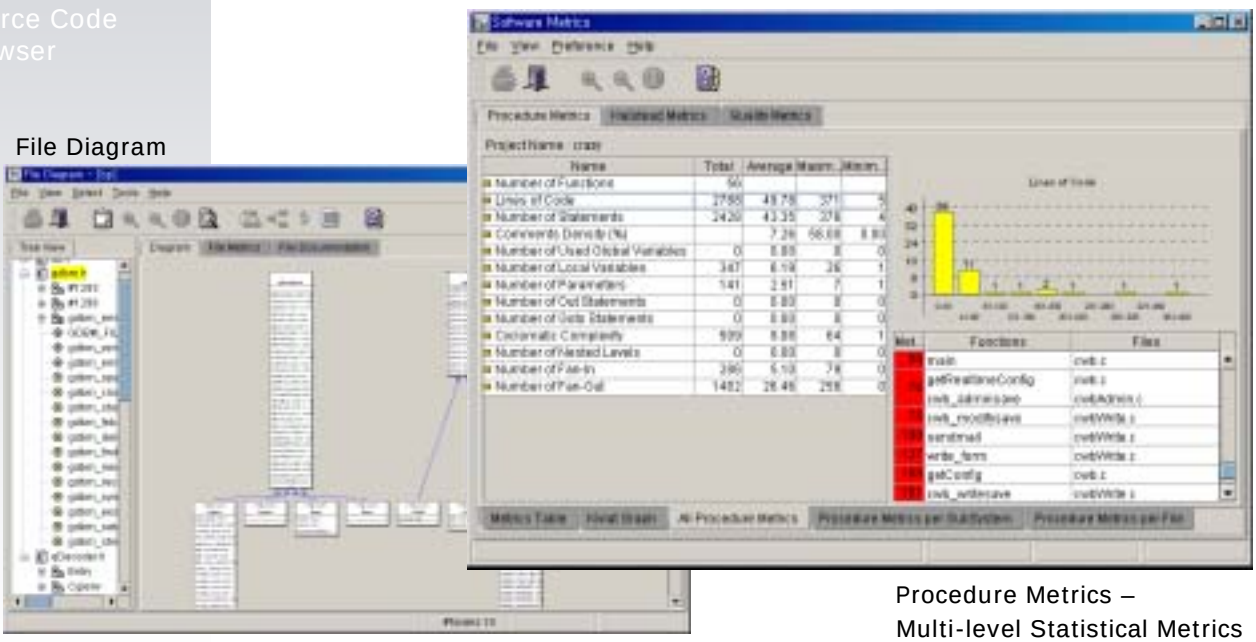
❑ Features

- Hybrid reverse engineering approach combining UML diagram/graph and procedure metrics
- Automatic UML diagrams/graphs generation from file to function level
- Supporting 100+ software metrics such as size and structure metrics
- Measure and evaluate software quality such as Procedure, Halstead and maintainability characteristic in ISO 9126-3
- Direct to Diagram (navigation)/Code(highlighting)
- Reporting multi-level statistical metrics for product management

❑ Benefits

- Understand both the design and architecture of the software system
- Identify and prevent software design problems early in the development cycle
- Assist to achieve the software quality goals
- Improve understandability, maintainability and performance quickly
- Enable project(IT&QA) managers to control software quality
- Reduce software development, testing and maintenance costs

File Diagram



Procedure Metrics –
Multi-level Statistical Metrics

RESORT for C(Pro*C) – Code Checker Tool

❑ ***Code Checker Solutions***

- Multi-level Code Audit
  - -File
  - -Function
  - -MISRA-C:2004
- Multi-level Statistical Violation
  - -Project
  - -Subsystem
  - -File
  - -Function

❑ ***Visualization (Inspection Monitoring)***

- All Audit
- File Audit
- Function Audit
- MISRA Audit

Code Checker Tool automatically identifies C(Pro*C)-code defects by applying widely accepted coding standards and MISRA-C:2004.

Code checker detects the potential and fatal defects in language implementation as well as source code issues involving standards compliance, programming practices and performance to enable fast, efficient development of truly robust software.

MISRA-C:2004 is a document that establishes guidelines(141 rules) for the use of the C language in critical systems. The Motor Industry Software Reliability Association (MISRA) has been widely adopted by companies in the automotive sector, as well as those in rail, aerospace, medical and other industries.

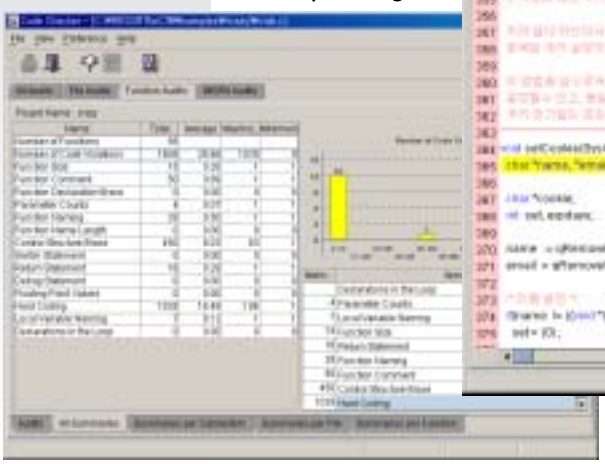
❑ Features

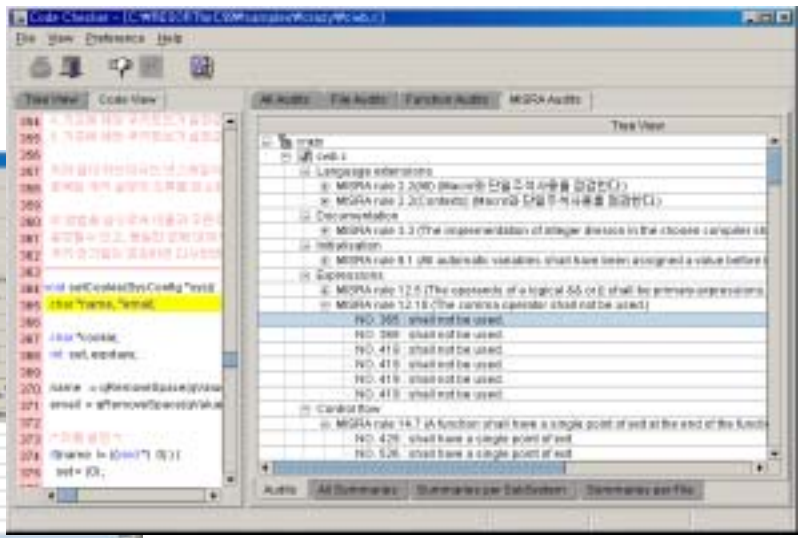
- Detecting code defects of the C (Pro*C) code including MISRA-C: 2004
- Detecting architecture (Framework, Metadata) compliance
- Detecting fatal defects such as divide by zero
- Detecting security vulnerability and forbidden function
- Supporting 350+ rules
- IEC 61508 Industry Standards (SIL 1~4 Measures)
- Highlighting the detected code
- Customizing UI-based coding rules
- Reporting multi-level statistical violation for product management

❑ Benefits

- Identify source code problems(fatal defects) early in the development cycle
- Prevent compile, run-time and programming errors
- Improve code readability, maintainability, performance and Reliability quickly
- Enable code inspections to found 70-90% of the errors before test
- Enforce a project's own programming standard
- Enable developers to improve their C knowledge and programming capabilities
- Enable project(IT&QA) managers to control code quality
- Reduce software development, testing and maintenance costs

Code Checker –
Statistical Violation Reporting





Code Checker –
Code Violation Detection and Highlighting

RESORT for Java(JSP) – SW Quality Tool

❑ ***Software Quality Solutions***

- Multi-level Quality Statistical Metrics
  - -Project
  - -Package
  - -Class
- Multi-level Automatic Visualization
  - -Package
  - -Class
  - -Method

❑ ***Visualization (Quality Evaluation)***

- OO Metrics
- Package Metrics
- Halstead Metrics
- Quality Metrics
- System Metrics

❑ ***Visualization (Reverse Engineering)***

- Class(Package) Diagram
- Sequence(Collaboration) Diagram
- Control Flow Graph
- Data Flow Graph
- Source Code Browser

SW Quality Tool is a suit of tightly integrated reverse engineering and software metrics measurement.

Reverse Engineering Tool supports a comprehensive visualization and OO metrics solution that analyzes a software system to identify its current modules and dependencies, to extract and create system abstraction and design information.

SW Metrics Tool provides a quantitative basis for the development and validation of models of the software development and maintenance process. Software metrics helps you identify, diagnose and resolve potential problems to improve software quality and productivity.

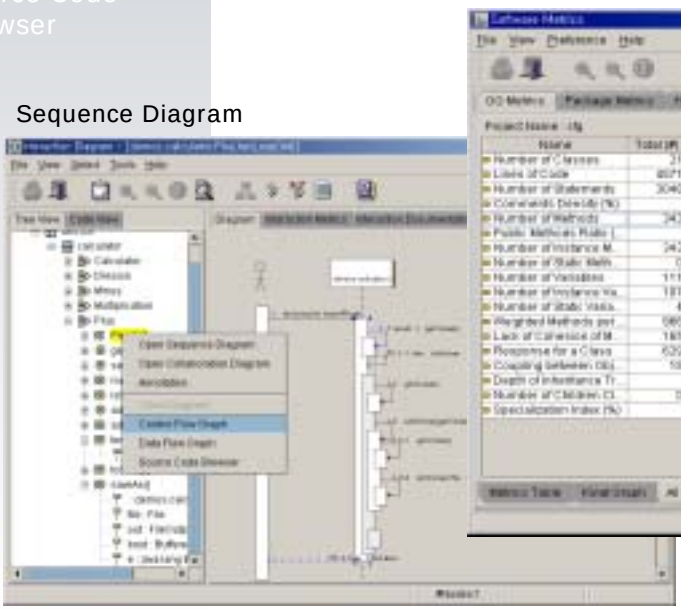
❑ Features

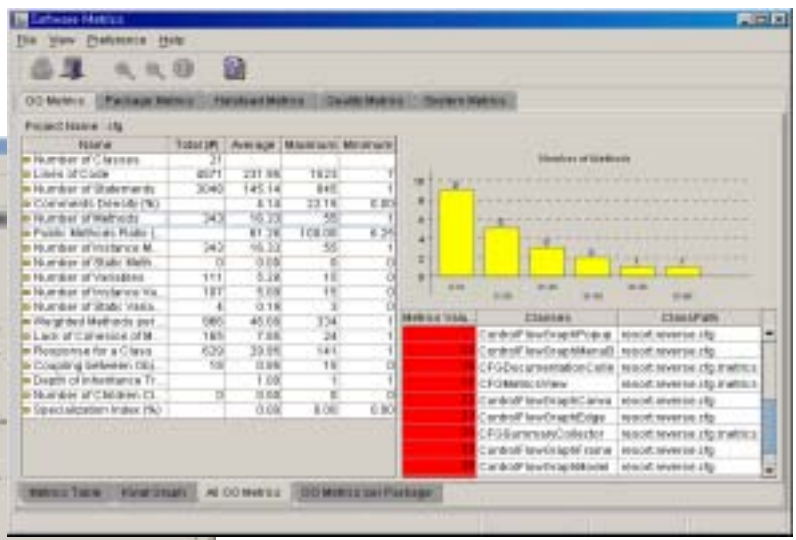
- Hybrid reverse engineering approach combining UML diagram/graph and OO metrics
- Automatic UML diagram/graph generation from package to method level
- SW Architecture Analysis for SQL Development Standard and SW&DB Impact Analysis
- Supporting 100+ software metrics such as size, structure and OO metrics
- Measure and evaluate software quality such as OO, Halstead, System and maintainability characteristic in ISO 9126-3
- Direct to Diagram (navigation)/Code(highlighting)
- Reporting multi-level statistical metrics for product management

❑ Benefits

- Understand both the design and architecture of the software system
- Identify and prevent software design problems early in the development cycle
- Assist to achieve the software quality goals
- Improve understandability, maintainability and performance quickly
- Enable project(IT&QA) managers to control software quality
- Reduce software development, testing and maintenance costs

Sequence Diagram





OO Metrics –
Multi-level Statistical Metrics

RESORT for Java(JSP, Flex) – Code Checker Tool

❑ ***Code Checker Solutions***

- Multi-level Code Audit
  - -File
  - -Class
  - -Method
- Multi-level Statistical Violation
  - -Project
  - -Package
  - -File
  - -Class
  - -Method

❑ ***Visualization (Inspection Monitoring)***

- All Audit
- File Audit
- Class Audit
- Method Audit

Code Checker Tool automatically identifies Java(JSP, Flex)-code defects by applying widely accepted coding standards and DB interfaces guidelines.

Code checker detects the potential and fatal defects in language implementation as well as source code issues involving standards compliance, programming practices, and performance to enable fast, efficient development of truly robust software.

DB interface coding guideline is rules for the use of DB resource release to eliminate cause of memory/resource leaks that WAS or BDMS can be stopped.

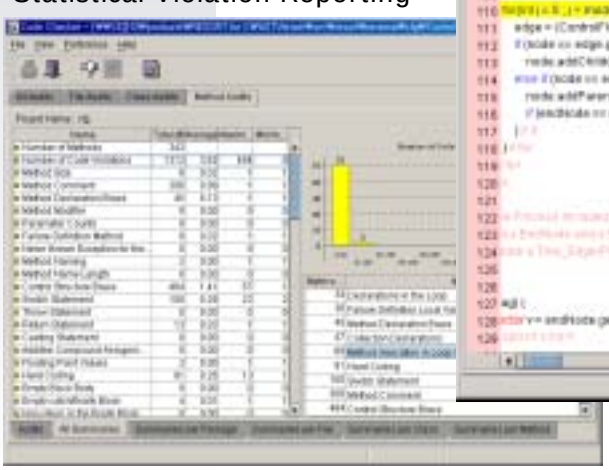
❑ Features

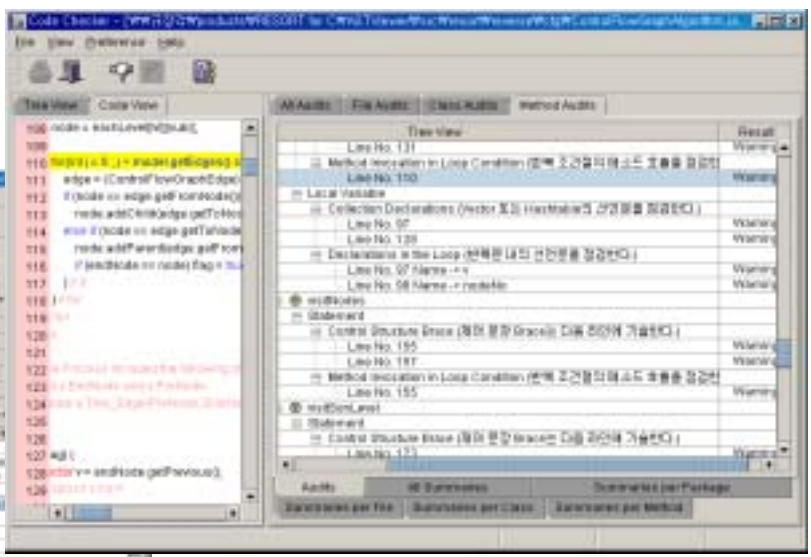
- Detecting code defects of the Java(JSP, Flex) code including EJB, JDBC, BC4J
- Detecting architecture (Framework, Metadata) compliance
- Detecting fatal defects such as divide by zero
- Detecting security vulnerability and forbidden method
- Supporting 250+ rules
- IEC 61508 Industry Standards (SIL 1~4 Measures)
- Highlighting the detected code
- Customizing UI-based coding rules
- Reporting multi-level statistical violation for product management

❑ Benefits

- Identify source code problems(fatal defects) early in the development cycle
- Prevent compile, run-time and programming errors
- Improve code readability, maintainability, performance and Reliability quickly
- Enable code inspections to found 70-90% of the errors before test
- Enforce a project's own programming standard
- Enable developers to improve their Java(JSP, Flex) knowledge and programming capabilities
- Enable project(IT&QA) managers to control code quality
- Reduce software development, testing and maintenance costs

Code Checker –
Statistical Violation Reporting





Code Checker –
Code Violation Detection and Highlighting

RESORT for Java – Unit/Integration Testing

❑ ***Testing Solutions***

- Static Testing
- Test Case Design
  - -Test Drivers
  - -Code Instrumentation
- Test Results Analysis
- Multi-level Statistical Coverage
  - -Project
  - -Package
  - -Class

❑ ***Visualization***

- Test Case Design
  - -Test Case
  - -Test Suit
  - -Test Scenario
- Unit-level Monitoring
  - -Control Flow Testing
  - -Data Flow Testing
- Integration-level Monitoring
  - -Sequence Testing

Unit/Integration Testing Tool supports a combination of static, white-box and black-box testing solution for identifying, understanding and eliminating defects and non-compliance problems, improving the overall quality of your software. Used in building Java and Web applications, this helps you quickly detect, diagnose and resolve software errors, enhance code performance, and ensure optimum code coverage.

✓Test Plan & Test Case Design

- Basis path, ME(message execution) path, boolean table, test data set
- Advanced test case, suit and scenario design(class/package/system)

✓Test Results Analysis

- Test case analysis(pass/fail/error message)
- Test coverage analysis
  - Statement, Branch, All-DU-Path, All-C-Uses, All-P-Uses coverage
  - Method, Class, Message-send(call-pair) coverage
- Performance analysis(run/time)

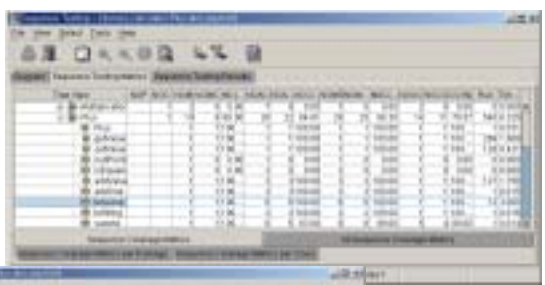
❑ Features

- Hybrid testing approach combining OO diagram/graph and testing solution
- Automatic test case template generation from source code
- Automatic, error-free test driver or JUnit driver generation
- Provide graphical representations(monitoring) of selected historical test results
- Support error recoding and tracking
- Identify bottlenecks
- Reporting multi-level statistical coverage for product management
- Highlighting the tested code

❑ Benefits

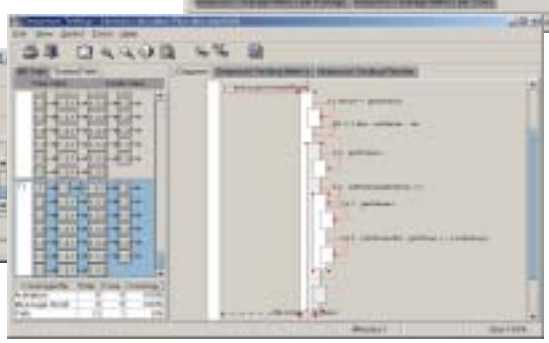
- Provide simplify test planning and test case design, and more testing flexibility
- Help to trace execution status and find logic/interface errors on graph/code
- Improve testing productivity and OO software quality
- Reduce testing and debugging time/effort

Test Case Design



Test Coverage–Sequence Coverage

Test Case Analysis



Interface Error Monitoring

RESORT for Java(JSP)FP – Function Point

❑ ***Function Point Solutions***

- Function Point Count
- Software Cost Estimate
- Productivity & Cost Estimate

❑ ***Visualization***

- Data Function Size
- Transaction Function Size
- Function Point Estimator
- Function Point Counter

Java(JSP) Function Point Tool supports a combination of reverse engineering, software metrics and function point count solution for measuring, estimating and analyzing the data and transaction functionality from Java application or at project planning phase. This helps automate the function point count, software development and maintenance size, and software productivity and cost analysis using standard IFPUG CPM 4.2.

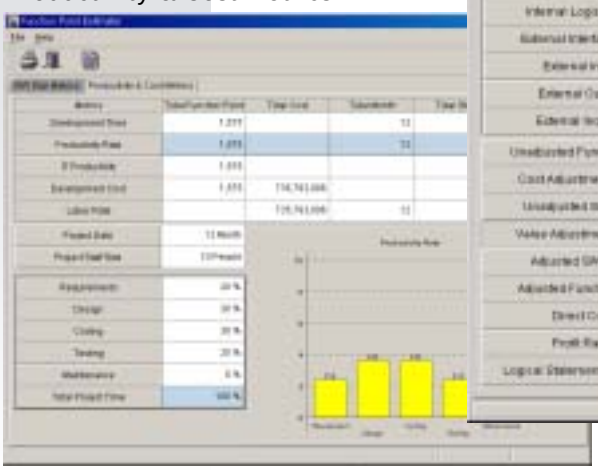
❑ Features

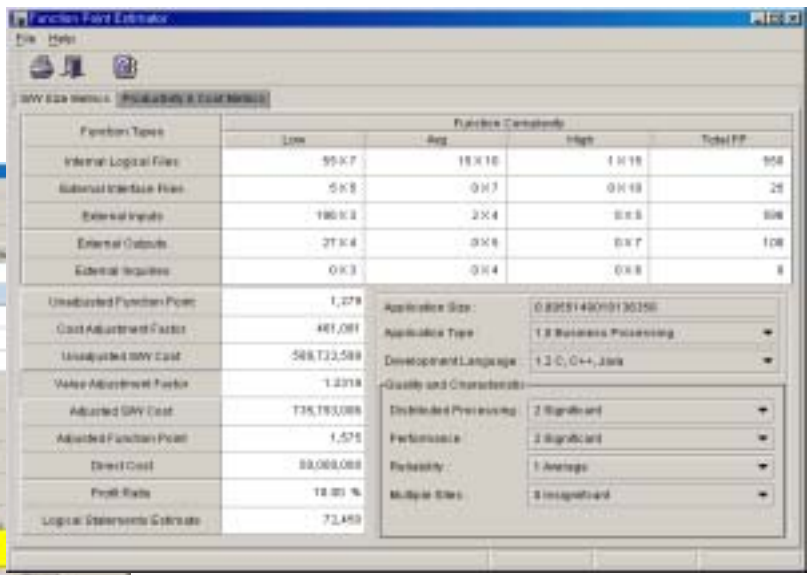
- Measure function point size from Java code or at project planning phase
- Analyze data and transaction functionality from the user's viewpoint
- Visualize various UML diagrams(class & sequence) to measure data and transaction functionality
- Analyze unadjusted function point, adjusted function point and software productivity and cost
- Converting function point to SLOC(Source Lines of Code)
- Reporting multi-level statistical metrics for product management
- Documentation summary
  - Adjusted function point estimate report
  - Software productivity and cost analysis report
  - Delivered data and transaction functionality report

❑ Benefits

- Measure software size based on the user's point of view
- Understand and analyze software functionality
- Calculate development project, enhancement project and application function points
- Support the whole software life cycle
- Help to estimate software productivity and cost as per software life cycle
- Improving project and IT organization management
- Improving software process – necessary for CMMI 3 and higher
- Reduce function point counting time/effort

Function Point Estimator – Productivity & Cost Metrics





Function Point Estimator - SW Size Metrics

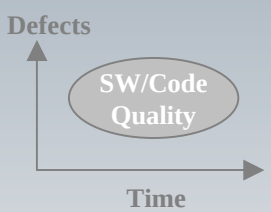
RESORT for Quality Management

❑ ***Quality Management Solutions***

- Automatic Quality Management
  - -Quality Manage
  - -Quality Control
  - -Quality Monitoring
- Multi-level Quality Statistical Reports
  - -Daily
  - -Monthly
  - -Summary
  - -Comparison

❑ ***Reporting (Quantitative Quality Management)***

- Project Comparison Reports
- Project Reports
- Inspection Reports
- Metrics Reports



Quality Management Tool synthetically manages and controls the results of software quality managements and code inspection per project. The tool provides real-time quality analysis services for quality assurance or quality control in monitoring the defect trends.

Inspection reports provide project statistical information on source code defect trends as well as coding rule observation ratio daily or monthly. The reports help you control and monitor source code defects.

Metrics reports provide project statistical information on complex (greater (or less) than the threshold) quality trend as well as metrics observation ratio daily or monthly. The reports help you identify and improve potential problems of software size and structure qualities.

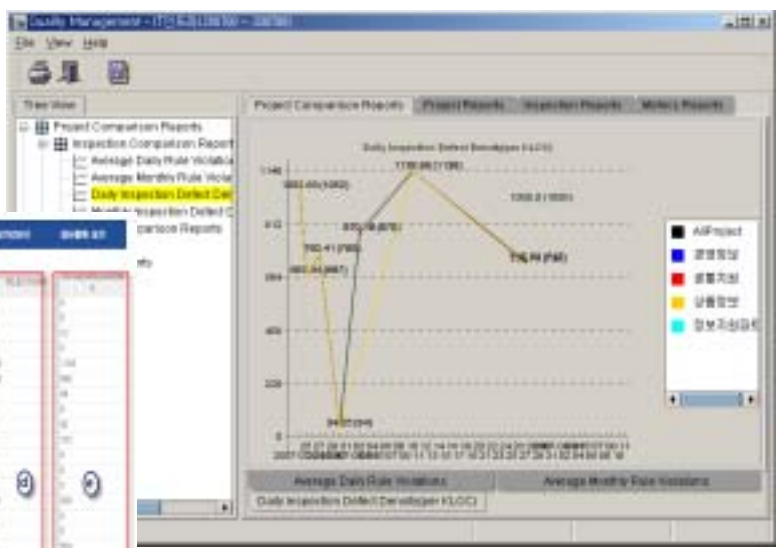
❑ Features

- Centralized, web-based enterprise UI console for reporting and monitoring code defects and managing software quality across multiple projects
- Comparison of quality (defects density, etc.) between projects
- Supporting reports and graphs for source code defects as daily or monthly
- Monitoring code defects density per KLOC (File) in inspection reports
- Supporting reports and graphs for complex quality trend daily or monthly
- Monitoring bad metrics per KLOC (File) in metrics reports
- Interface configuration/change management tool

❑ Benefits

- Support automatic quality management environment to develop high-quality applications
- Achieve higher levels of SW process maturity and control
- Managing multiple project quality standard management
- Sharing the code defects between QA manager and developers
- Project's quantitative source quality management and control
- Save QA's manpower, cost and time
- Estimating development productivity

Web-based Inspection Reports –
Defect Type Distribution



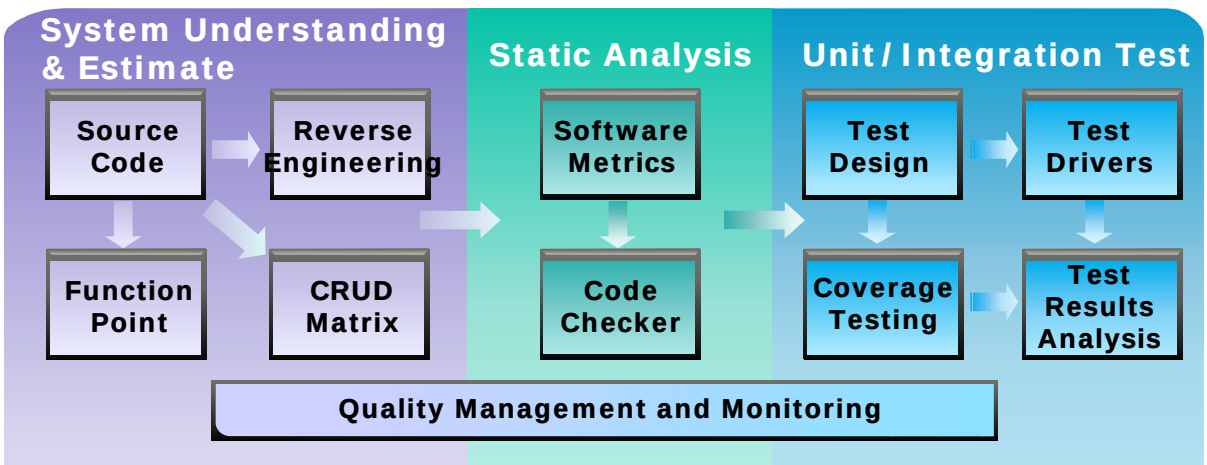
Project Comparison Reports –
Monthly Defect Chart per Defect/KLOC

Soft4Soft Solution Map

❑ Soft4Soft Solutions for Automatic Software Quality

RESORT is a suit of tightly integrated reverse engineering, code quality, software quality, testing and function point count tools for software applications and maintenance using Java, JSP, C, C++ or C# in the software development life cycle – from implementation to testing. This helps automate the software quality process, quickly visualize and analyze software documents, analyze source code, derive the highest quality software, design and execute test case, and measure, estimate and analyze function point from a common interface. RESORT enables organizations to improve quality, while significantly reducing time-to-market and overall costs.

- ✓ Detailed analysis and understanding of existing system
- ✓ Identify code defects(potential, actual, fatal) early in the development cycle
- ✓ Centralized, web-based enterprise UI console for reporting and monitoring code defects and managing software quality across multiple projects
- ✓ Project's quantitative source quality management and control
- ✓ Save QA's manpower, cost and time
- ✓ IDE Eclipse Plug-in



❑ Soft4Soft Products

- ✓ RESORT for Java(JSP)
- ✓ RESORT for C(Pro*C)
- ✓ RESORT for Java(JSP)FP
- ✓ RESORT for Flex
- ✓ RESORT for Quality Management(Server Option)
- ✓ RESORT for C++ (scheduled to release)
- ✓ RESORT for ABAP (scheduled to release)

❑ Platform

- ✓ Java Platform: Windows higher, Linux (Red Hat 7.3 higher), UNIX
- ✓ System Requirement: SUN JDK 1.5.x or higher

❑ Application Areas

- ✓ SW Development and Audit, Commercial and IT Sector, Electronics, Telecommunications, Automotive, Military, Aerospace and Financial Industries, IT Educational Center
- ✓ Corporation to adopting verification processes that are described by international standards such as CMMI, ISO 9126, IEC 61508 or 9001
- ✓ Educational Purpose
- ✓ Outsourcing Software Management

Soft4Soft Co., Ltd.

Soft4Soft is a leading Korean venture firm that researches and develops new products for software quality, code inspection, quality management and function point count solutions under the RESORT brand for multi-language.

Customer Support & Services

Soft4Soft is a leading provider of software products and services that help IT organizations build better software quality. We provide our clients with the highest quality service and products.

- ✓ **E-mail support**
- ✓ **Upgrade service**
- ✓ **Training**
- ✓ **Testing/Quality consultancy**

For more information about Soft4Soft, please visit www.soft4soft.com

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