

### Increase Team Productivity with Parasoft® GRS

Parasoft GRS (Group Reporting System) is a decision support system that provides metrics and measurements to help you identify whether your projects are on-track to meet schedule and quality targets. GRS finds problem areas in your code and processes, provides details to pinpoint their root causes, and then monitors improvements. GRS helps development teams deliver new projects in less time with existing resources.

Where do these metrics and measurements come from? GRS gathers data from your source control, bug tracking, and requirements management systems, as well as your Parasoft testing solutions and third party tools. It correlates data from these sources to provide comprehensive and objective insight into application quality, team productivity, and project risk factors – helping you make informed decisions about project scheduling, resource allocation and readiness. GRS helps you:

- **Improve productivity through process improvement.** With the comprehensive metrics that GRS provides, you can track productivity, identify what parts of your process could be improved to increase productivity, check whether your team is following the process improvements measures you requested, and monitor their impact on productivity. Deployed as part of the Parasoft automated infrastructure, GRS has a track record of enabling productivity that far exceeds industry averages; for example, one particular project has 30 million lines of code under management by 110 developers in 5 development centers around the globe.
- **Obtain comprehensive and objective insight into your development process on demand.** Without a comprehensive regression test suite that is run daily, it is impossible to know whether the product works. For a more holistic assessment of the project, it is also critical to keep close tabs on requirements, design, and build issues that can significantly impact product quality and readiness. That is why GRS's dashboards provide instant alerts about emerging problems across all aspects of your project. Drilling down helps you identify the root cause of the problem, which must be removed to prevent future occurrences of the same problem. You can customize dashboards and reports to suit your own priorities and preferences.
- **Meet goals predictably.** The information that GRS delivers by correlating data from various sources can tell you where your project stands and help you determine how to get it on track. This same information can also help you determine how your different process improvement strategies really impact product quality and team productivity so that you can fine-tune your process accordingly – enabling you to evolve a sustainable process that delivers predictable outcomes.
- **Manage distributed development.** Distributed development – where projects involve outsourcers, contractors, or remote “internal” employees – is now more common than ever. GRS establishes a centralized, non-intrusive system for tracking projects that might involve developers around the globe, providing objective status information that bridges the many potential communication gaps. Using GRS for distributed development projects helps the manager ensure that all team members are working together toward common project goals and objectives.

### Managing Code Quality and Milestones with Metrics and Measurements

GRS enables managers to effectively define project quality and milestones. GRS empowers developers and QA engineers to effectively adhere to such quality and milestone definitions. Defining quality and milestones in GRS facilitates project and team management because it provides support for tracking the following critical project elements from definition all the way through testing:

- Problem Reports
- Feature Requirements
- Tests
- Unit testing
- Coding standards
- Confidence factor
- Efficiency

GRS helps you spot potential problems within any of these project elements right away, allowing you the opportunity to take strategic action.

DATA SHEET

Project:		BPEL Maestro 2.5		Total Score		4.6		
	Status on 2006-09-29			Trend	Diff.	Score components	Project Release	Score
						ETA	2006-09-29	
PR	1 [1%]	71 [99%]	72	↕	↓	2006-03-30	183 days before	4.9
FR	1 [2%]	39 [98%]	40	↕	↓	2006-08-16	105 days before	4.9
Tests	71	581	652	↕	↑	2006-08-22	38 days before	4.3
UT	0	9	9	↕	↓	2006-08-25	35 days before	4.3
CS		154		↕	↓	2006-10-20	21 days after	2.8
CF	61.222	1 days to timeline		↕	↓	2006-08-29	31 days before	4.8
Efficiency	309.6K	6	51.6K	-425.3				

Figure 1: Manager Dashboard

## Features

- System runs in the background and automatically reports on your existing process.
- Built-in and custom adaptors allow GRS to connect to any common infrastructure that exists, including Parasoft Jtest, C++test, Insure++, WebKing, .TEST, SOAtest, and BPEL Maestro families of automated software analysis solutions.
- GRS Data Collector stores data for statistical analysis and historical system behavior to provide role-based reports to managers, architects, developers, and QA.
- Data mining and data correlation.
- Reports can be made available to the entire company, divisions, sub-divisions, or groups.

## Benefits

- Provides visibility into the software development lifecycle (SDLC) without requiring adoption of any new processes or affecting existing processes.
- Allows for modification and improvement to existing processes.
- Correlates SDLC information from existing sources – both Parasoft and non-Parasoft.
- Provides objective values enabling objective management decisions and ability to become a more effective manager.
- Builds intuition and data-reading proficiency.
- Delivers new information with data that might be deemed insignificant on its own.
- Keeps anybody within the hierarchy of the organization up-to-date on projects.
- Connects to ERP systems.

## Supported Platforms

- Web-based system

## Tracking Status

GRS provides a high-level overview of your development projects so that you can get the status of each element without running loads of reports from various system components, and then correlating the data into meaningful information yourself. Instead, GRS accomplishes this significant work automatically, for example, it shows you how efficiently your developers are working by tracking the number of code lines and developers assigned to the project at hand, and then calculating those numbers so that you can see the average number of code lines per developer and the increase of the total number of code lines per day.

## Spotting Trends

With all the data tracking that it does, GRS is able to evaluate the progress of each element that comprises a project. At a glance, you can see whether each element is progressing as it should – for instance, looking at coding standards in Figure 1, you can tell right away that the number of exposed violations is decreasing because of the positive trend.

## Diagnosing Differentials

For each element of your project, GRS measures the differences between drops, which are blocks of code that are checked in to source control by internal developers, contractors, or outsourcers. Specifically, GRS measures the differences between the last two drops, the last drop and the tenth drop, and the last drop and the thirtieth drop. These differences are reflected by an easy-to-read indicator so that you can assess whether the tendency of each element is positive, negative, or constant, for instance, a positive tendency for feature requirements would mean that more feature requirements are being resolved than reported.

## Estimating Time to Arrival

Parasoft GRS gathers so much data that it is able to pinpoint the date on which each element of a project will be ready if development progress continues at the same rate. If any portion of a project slips – like coding standards did in Figure 1, for example – GRS highlights the set milestone date and estimates how many more days are needed to reach the set milestone.

## Evaluating Readiness

GRS calculates project scores based on trend, differential, and ETA data so that you know instantly where this project stands – both overall and per project element.

[www.parasoft.com](http://www.parasoft.com)

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