

Unified Software Project Management Using Rational ProjectConsole to Collect Microsoft Project Metrics

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Rational Software White Paper



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Table of Contents

Introduction.....	1
Traditional Metrics using Microsoft Project	1
Project Summary Report	2
Task Entry Report	2
Quantitative Risk Analysis Report.....	3
Cost Variance Report	3
Schedule Variance Report	4
Work Hours Variance Report.....	5
Task Schedule Report.....	6
Task Summary Report	7
Task Tracking Report.....	8
Resource Sheet	9
Resource Allocation Report	10
Earned Value Report	11
Incorporating MS Project Metrics Reporting into Rational ProjectConsole	12
Current Limitations of MS Project Metrics Reporting with ProjectConsole	12
Creating Microsoft Project Web Reports in ProjectConsole	13
Creating Microsoft Project Metrics Charts & Graphs in ProjectConsole	14
Sample MS Project Metrics using ProjectConsole.....	14
ProjectConsole Web Reports.....	15
Task Entry Web Report.....	15
Cost Variance Web Report	16
Schedule Variance Web Report.....	16
Late Tasks Web Report.....	18
Milestone Tasks Web Report	18
Late Milestone Tasks Web Report	19
Work Hours Variance Web Report.....	19
Task Summary Web Report	20
Task Tracking Web Report	21
Task Assignment Web Report	23
Earned Value Web Report.....	23
Microsoft Project Trend Reports.....	25
Actual vs. Budgeted Costs Trend Analysis Report	25
Actual vs. Planned Duration Trend Analysis Report	26
Actual vs. Planned Work Hours Trend Analysis Report.....	27
Actual Cost of Work Performed vs. Budgeted Cost of Work Performed Trend Analysis Report.....	27
Budgeted Cost of Work Planned vs. Budgeted Cost of Work Scheduled Trend Analysis Report	28
Earned Value vs. Budgeted Cost Trend Analysis Report	29
Completed Milestones by Collection Date Trend Analysis Report.....	30
Completed Milestones by Baseline Finish Date Trend Analysis Report	31
Completed Milestone Tasks Trend Analysis Report	32
Number of Tasks vs. Completed Tasks Trend Analysis Report.....	33
Late Tasks Trend Analysis Report.....	34
Late Milestone Tasks Trend Analysis Report	34
Summary.....	35
References.....	36

Introduction

This document has been written for Rational® ProjectConsole end-users to help them incorporate Microsoft Project data into a data collection and then be able to automatically generate ongoing up-to-date project progress metrics reports, charts and graphs. Stakeholders want easy accessibility to project progress information and are interested in reviewing metrics that indicate that the rate of newly identified work is declining as the end of the project approaches. Based on where a project stands at any given point in time, there are different data points to see the status of the project. This paper provides a sampling of key project metrics reports, charts and graphs that can be derived from a MS Project plan.

Key Project Stakeholders include Upper Level Management, Department Managers, Project Managers, Product Managers, Development Managers, Technical Managers, and Project Team Members. All of these types of stakeholders want an easy and efficient way to gather and disseminate project team status and metrics information. Key Project Stakeholders are interested in going to a centralized location to view current project status metrics. Project Team Members want an efficient way to report current status to their managers and a centralized location where they can be kept up-to-date on current project status and where they can access current project artifacts.

The project tracking metrics shown in this paper are not meant to be comprehensive, but are meant to serve as an example of the types of metrics that can be generated using MS Project data with Rational ProjectConsole. As you become more comfortable with Rational ProjectConsole, you can expand upon this set of metrics. Our experience shows that you typically are much better off starting small and then expanding, rather than trying to adopt a large number of metrics from the beginning.

There are more possible measurable objects and attributes that come from MS Project than can be covered in this paper. Furthermore, each organization has distinct and different needs with regard to project progress tracking data. This white paper begins by presenting some basic project reporting metrics that are typically generated using Microsoft Project to monitor the ongoing progress of a project. Then, the process is explained on how to create an MS Project data collection using Rational ProjectConsole in order to generate a set of similar, but automatically updated, set of MS Project progress reports, graphs and charts. Finally, some sample metrics reports, charts and graphs are presented based on an MS Project data collection using ProjectConsole.

Traditional Metrics using Microsoft Project

This section describes and shows traditional types of metrics reports that are used to measure project progress using MS Project. Most Microsoft Project reports are printed in a table view format. The only exception to the table view is the printing of Gant and PERT/Network Diagram reports that reflect the project data seen in the more common table format reports. Traditional MS Project Metrics Reports include the Task Entry Report, the Task Cost Report, the Task Schedule Report, the Task Summary Report, the Task Tracking Report, the Task Schedule Variance Report, the Task Work Report, the Earned Value Report, the Project Summary Report, and a Quantitative Risk Analysis Report.

Project Summary Report

The Project Summary Report shows a Project, Duration, Work, and Cost Summary Variance information showing Planned, Baseline, Actual, and Baseline-to-Actual Variance information. Additionally, Task and Resource Summary information is shown at the bottom of the report. The purpose of this report is to give key project stakeholders a quick summary of all of the key indicators of the project's progress.

<p align="center">detail_inception_iteration Rational Software Corporation as of Tue 5/1/01</p>			
Dates			
Start:	Mon 5/3/99	Finish:	Thu 8/5/99
Baseline Start:	Mon 5/3/99	Baseline Finish:	Mon 8/2/99
Actual Start:	Mon 5/3/99	Actual Finish:	NA
Start Variance:	0 days	Finish Variance:	2.2 days
Duration			
Scheduled:	68.2 days	Remaining:	51.17 days
Baseline:	66 days	Actual:	17.03 days
Variance:	2.2 days	Percent Complete:	25 %
Work			
Scheduled:	1,985.92 hrs	Remaining:	1,487.83 hrs
Baseline:	1,929.92 hrs	Actual:	498.08 hrs
Variance:	56 hrs	Percent Complete:	25 %
Costs			
Scheduled:	\$113,825.60	Remaining:	\$82,569.20
Baseline:	\$109,425.60	Actual:	\$31,056.40
Variance:	\$4,200.00		
Task Status		Resource Status	
Tasks not yet started:	15	Work Resources:	28
Tasks in progress:	103	Overallocated Work Resources:	6
Tasks completed:	9	Material Resources:	0
Total Tasks:	127	Total Resources:	34

Task Entry Report

The Task Entry Report shows a list of defined Tasks with their corresponding Task ID, % Completion, Task Duration, Work Hours, Start Date, Finish Date, Predecessors, and Assigned Resources. This report is used as a basic starting point for reviewing and identifying all high-level and detailed project tasks along with their associated planned durations, work hours, assigned resources, and planned start and finish dates. % Completion is also included to give stakeholders a quick status of the progress of each task when they are interested in more detail about the project's progress.

	% Comp	Task Name	Duration	Work Hours	Start	Finish	Pred.	Resource Names
2	42%	Project Management	88.2 days	528 hrs	Mon 5/3/99	Thu 8/5/99		
3	100%	Conceive New Project	3 days	48 hrs	Mon 5/3/99	Wed 5/5/99		
4	100%	Identify and Assess Risks	2 days	16 hrs	Mon 5/3/99	Tue 5/4/99		Project Manager
5	100%	Develop Business Case	1 day	8 hrs	Tue 5/4/99	Tue 5/4/99	4	Project Manager
6	100%	Initiate Project	1 day	8 hrs	Wed 5/5/99	Wed 5/5/99	5	Project Manager
7	100%	Project Approval Review	1 day	8 hrs	Wed 5/5/99	Wed 5/5/99	6FF	Project Reviewer
8	100%	Evaluate Project Scope and Risk	3 days	32 hrs	Thu 5/6/99	Mon 5/10/99	4,3	
9	100%	Identify and Assess Risks	3 days	24 hrs	Thu 5/6/99	Mon 5/10/99		Project Manager
10	100%	Develop Business Case	1 day	8 hrs	Fri 5/7/99	Fri 5/7/99	9	Project Manager
11	75%	Develop Software Development Plan	18.2 days	164 hrs	Mon 5/31/99	Mon 6/14/99	5,255,8	
12	75%	Develop Measurement Plan	5 days	40 hrs	Mon 5/31/99	Mon 6/7/99		Project Manager
13	75%	Develop Risk Management Plan	1 day	8 hrs	Tue 6/1/99	Mon 6/7/99	12	Project Manager
14	75%	Develop Product Acceptance Plan	1 day	8 hrs	Wed 6/2/99	Tue 6/8/99	13	Project Manager
15	75%	Develop Problem Resolution Plan	1 day	8 hrs	Thu 6/3/99	Wed 6/9/99	14	Project Manager
16	75%	Define Project Organization and Staffing	1 day	8 hrs	Fri 6/4/99	Wed 6/9/99	15	Project Manager
17	75%	Define Monitoring & Control Processes	1 day	8 hrs	Mon 6/7/99	Thu 6/10/99	16	Project Manager
18	75%	Plan Phases and Iterations	1 day	8 hrs	Tue 6/8/99	Fri 6/11/99	17	Project Manager
19	75%	Complete Software Development Plan	1 day	8 hrs	Wed 6/9/99	Mon 6/14/99	18	Project Manager
20	75%	Project Planning Review	1 day	8 hrs	Wed 6/9/99	Mon 6/14/99	19FF	Project Reviewer
21	25%	Plan for Next Iteration	3 days	24 hrs	Mon 6/14/99	Thu 6/17/99	19	
22	25%	Develop Iteration Plan	1 day	8 hrs	Mon 6/14/99	Tue 6/15/99		Project Manager
23	25%	Develop Business Case	1 day	8 hrs	Tue 6/15/99	Wed 6/16/99	22	Project Manager
24	25%	Iteration Plan Review	1 day	8 hrs	Wed 6/16/99	Thu 6/17/99	23	Project Reviewer
25	25%	Manage Iteration	26 days	208 hrs	Thu 6/17/99	Thu 7/15/99	24	
26	25%	Acquire Staff	5 days	40 hrs	Thu 6/17/99	Thu 6/24/99		Project Manager
27	25%	Initiate Iteration	5 days	40 hrs	Thu 6/24/99	Thu 7/1/99	26	Project Manager
28	25%	Assess Iteration	5 days	40 hrs	Thu 7/1/99	Thu 7/8/99	27FF,2	Project Manager

Quantitative Risk Analysis Report

The Quantitative Risk Analysis Report shows a list of identified Project Risks with their corresponding Risk ID, Risk Condition Description, Risk Consequence, Estimated Impact on the Project, Estimated Probability of occurring, the calculated Exposure based on Impact X Probability, and Suggested Risk Mitigation Strategy. This report provides stakeholders with a detailed listing of all identified project risks, consequences of each risk, estimated risk exposure and suggested risk mitigation. Risks should be prioritized based on their identified exposure. High exposure risks identify risks that have a high impact to the project and a high probability of occurring during the course of the project. High exposure risks need to be monitored very closely and mitigated as soon as possible.

Risk ID	Risk Condition	Risk Consequence	Impact	Probability	Exposure	Suggested Mitigation	
1	Requirements continue to be added during Construction	Move out Implementation Date	0.9	0.8	0.72	Defer all new requirements	1
2	QA Environment needs to be setup	Testing cannot be done until setup	0.7	0.5	0.35	Get QA Environment setup ASAP	
3	Too many major system changes at one time	Makes QA Test Time Difficult	0.9	0.9	0.81	Minimize system changes until after Imp.	
4	Lack of repeatable installation process	Code in various Env. Does not match	0.5	0.6	0.3	Complete Install programs ASAP	
5	Decrease in available resources for QA	Timelines will continue to stretch	0.7	0.7	0.49	Hire needed resources ASAP	
6	Lack of repeatable unit testing process	Increased test phase due to poor code quality	0.9	0.8	0.72	Hold Developers Accountable for Unit testing	

Cost Variance Report

The Cost Variance Report shows a list of defined Tasks with their corresponding Task ID, Fixed Cost, Fixed Cost Accrual, Total Cost, Baseline Cost, Cost Variance, Actual Cost, and Remaining Budgeted Cost. This report

provides stakeholders with the status of high-level, as well as detailed budgeted vs. actual costs of the project. Project costs include both Fixed Costs and Variable Costs. Examples of Fixed Costs include materials, equipment, and tools that must be purchased for the project. Variable Costs are the resource costs related to completing each identified task. Resource costs are classified as variable costs because the cost is dependent on the number of hours required to complete each task and resources are normally charged against the project for each hour of work performed. Total Cost is the sum of all identified fixed and variable costs. Cost Variance is determined based on the difference between the original Baseline (Planned) Cost and the Actual Total Cost to date. Actual Cost is based on the number of Actual Work Hours to date plus any prorated Fixed Costs. Remaining Cost is determined based on the Total Cost minus Actual Costs to date.

	Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline	Variance	Actual	Remaining
2	Project Management	\$0.00	Prorated	\$40,500.00	\$36,300.00	\$4,200.00	\$17,825.00	\$22,675.00
3	Conceive New Project	\$0.00	Prorated	\$2,800.00	\$2,200.00	\$600.00	\$2,800.00	\$0.00
4	Identify and Assess Risks	\$0.00	Prorated	\$1,200.00	\$600.00	\$600.00	\$1,200.00	\$0.00
5	Develop Business Case	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$600.00	\$0.00
6	Initiate Project	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$600.00	\$0.00
7	Project Approval Review	\$0.00	Prorated	\$400.00	\$400.00	\$0.00	\$400.00	\$0.00
8	Evaluate Project Scope and Risk	\$0.00	Prorated	\$2,400.00	\$1,200.00	\$1,200.00	\$2,400.00	\$0.00
9	Identify and Assess Risks	\$0.00	Prorated	\$1,800.00	\$600.00	\$1,200.00	\$1,800.00	\$0.00
10	Develop Business Case	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$600.00	\$0.00
11	Develop Software Development Plan	\$0.00	Prorated	\$7,600.00	\$5,200.00	\$2,400.00	\$5,700.00	\$1,900.00
12	Develop Measurement Plan	\$0.00	Prorated	\$3,000.00	\$600.00	\$2,400.00	\$2,250.00	\$750.00
13	Develop Risk Management Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$450.00	\$150.00
14	Develop Product Acceptance Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$450.00	\$150.00
15	Develop Problem Resolution Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$450.00	\$150.00
16	Define Project Organization and Staffing	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$450.00	\$150.00
17	Define Monitoring & Control Processes	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$450.00	\$150.00
18	Plan Phases and Iterations	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$450.00	\$150.00
19	Compile Software Development Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$450.00	\$150.00
20	Project Planning Review	\$0.00	Prorated	\$400.00	\$400.00	\$0.00	\$300.00	\$100.00
21	Plan for Next Iteration	\$0.00	Prorated	\$1,600.00	\$1,600.00	\$0.00	\$400.00	\$1,200.00
22	Develop Iteration Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$150.00	\$450.00
23	Develop Business Case	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$150.00	\$450.00
24	Iteration Plan Review	\$0.00	Prorated	\$400.00	\$400.00	\$0.00	\$100.00	\$300.00
25	Manage Iteration	\$0.00	Prorated	\$13,000.00	\$13,000.00	\$0.00	\$3,250.00	\$9,750.00
26	Acquire Staff	\$0.00	Prorated	\$3,000.00	\$3,000.00	\$0.00	\$750.00	\$2,250.00
27	Initiate Iteration	\$0.00	Prorated	\$3,000.00	\$3,000.00	\$0.00	\$750.00	\$2,250.00
28	Assess Iteration	\$0.00	Prorated	\$3,000.00	\$3,000.00	\$0.00	\$750.00	\$2,250.00

Schedule Variance Report

The Schedule Variance Report shows a list of defined Tasks with their corresponding Task ID, Start Date, Finish Date, Baseline Start Date, Baseline Finish Date, Start Variance, and Finish Variance. This report provides stakeholders information related to whether or not the project and specific tasks are on schedule. High-level, as well as, detailed tasks are shown with their respective current start and finish dates, original baseline (planned) start and finish dates, and the start and finish variances of each planned task. Start Variance is based on the difference between the Current Start Date and the Baseline Start Date. Finish Variance is based on the difference between the Current Finish Date and the Baseline Finish Date.

	Task Name	Start	Finish	Baseline Start	Baseline Finish	Start Var.	Finish Var.
2	Project Management	Mon 5/3/99	Thu 6/5/99	Mon 5/3/99	Mon 6/2/99	0 days	2.2 days
3	Conceive New Project	Mon 5/3/99	Wed 5/5/99	Mon 5/3/99	Wed 5/5/99	0 days	0 days
4	Identify and Assess Risks	Mon 5/3/99	Tue 5/4/99	Mon 5/3/99	Mon 5/3/99	0 days	1 day
5	Develop Business Case	Tue 5/4/99	Tue 5/4/99	Tue 5/4/99	Tue 5/4/99	0 days	0 days
6	Initiate Project	Wed 5/5/99	Wed 5/5/99	Wed 5/5/99	Wed 5/5/99	0 days	0 days
7	Project Approval Review	Wed 5/5/99	Wed 5/5/99	Wed 5/5/99	Wed 5/5/99	0 days	0 days
8	Evaluate Project Scope and Risk	Thu 5/6/99	Mon 5/10/99	Thu 5/6/99	Fri 5/7/99	0 days	1 day
9	Identify and Assess Risks	Thu 5/6/99	Mon 5/10/99	Thu 5/6/99	Thu 5/6/99	0 days	2 days
10	Develop Business Case	Fri 5/7/99	Fri 5/7/99	Fri 5/7/99	Fri 5/7/99	0 days	0 days
11	Develop Software Development Plan	Mon 5/31/99	Mon 6/14/99	Mon 5/31/99	Wed 6/3/99	0 days	2.2 days
12	Develop Measurement Plan	Mon 5/31/99	Mon 6/7/99	Mon 5/31/99	Mon 5/31/99	0 days	4.5 days
13	Develop Risk Management Plan	Tue 6/1/99	Mon 6/7/99	Tue 6/1/99	Tue 6/1/99	0 days	4 days
14	Develop Product Acceptance Plan	Wed 6/2/99	Tue 6/8/99	Wed 6/2/99	Wed 6/2/99	0 days	3.5 days
15	Develop Problem Resolution Plan	Thu 6/3/99	Wed 6/9/99	Thu 6/3/99	Thu 6/3/99	0 days	3.1 days
16	Define Project Organization and Staffing	Fri 6/4/99	Wed 6/9/99	Fri 6/4/99	Fri 6/4/99	0 days	2.8 days
17	Define Monitoring & Control Processes	Mon 6/7/99	Thu 6/10/99	Mon 6/7/99	Mon 6/7/99	0 days	2.55 days
18	Plan Phases and Iterations	Tue 6/8/99	Fri 6/11/99	Tue 6/8/99	Tue 6/8/99	0 days	2.35 days
19	Compile Software Development Plan	Wed 6/9/99	Mon 6/14/99	Wed 6/9/99	Wed 6/9/99	0 days	2.2 days
20	Project Planning Review	Wed 6/9/99	Mon 6/14/99	Wed 6/9/99	Wed 6/9/99	0 days	2.2 days
21	Plan for Next Iteration	Mon 6/14/99	Thu 6/17/99	Thu 6/10/99	Mon 6/14/99	2.2 days	2.2 days
22	Develop Iteration Plan	Mon 6/14/99	Tue 6/15/99	Thu 6/10/99	Thu 6/10/99	2.2 days	2.2 days
23	Develop Business Case	Tue 6/15/99	Wed 6/16/99	Fri 6/11/99	Fri 6/11/99	2.2 days	2.2 days
24	Iteration Plan Review	Wed 6/16/99	Thu 6/17/99	Mon 6/14/99	Mon 6/14/99	2.2 days	2.2 days
25	Manage Iteration	Thu 6/17/99	Thu 7/15/99	Tue 6/15/99	Mon 7/12/99	2.2 days	2.2 days
26	Acquire Staff	Thu 6/17/99	Thu 6/24/99	Tue 6/15/99	Mon 6/21/99	2.2 days	2.2 days
27	Initiate Iteration	Thu 6/24/99	Thu 7/1/99	Tue 6/22/99	Mon 6/28/99	2.2 days	2.2 days
28	Assess Iteration	Thu 7/1/99	Thu 7/8/99	Tue 6/29/99	Mon 7/5/99	2.2 days	2.2 days

Work Hours Variance Report

The Work Hours Variance Report shows a list of defined Tasks with their corresponding Task ID, Planned Work Hours, Baseline Work Hours, Work Hour Variance, Actual Work Hours, Remaining Work Hours, % Work Hours Completed. Work Hours are synonymous with the effort required to complete the project and individual tasks. This report provides stakeholders with information related to the current status of the work effort involved in completing the project and individual tasks. The Work field shows the total amount of work required to complete each task. The Baseline Work field shows the number of originally planned work hours to complete each task. The Variance field is based on the difference between current Work hours required to complete each task and the original Baseline Work hours. The Actual field identifies the number of Actual Work Hours worked on each task. The Remaining field is the difference between current Work hours and Actual Work hours. % Work Complete is based on the number of Actual work hours divided by the Total Work hours.

	Task Name	Work	Baseline Work	Variance	Actual	Remaining	% Wt. Comp.
2	Project Management	588 hrs	532 hrs	56 hrs	253 hrs	335 hrs	43%
3	Conceive New Project	48 hrs	32 hrs	8 hrs	48 hrs	8 hrs	100%
4	Identify and Assess Risks	16 hrs	8 hrs	8 hrs	16 hrs	0 hrs	100%
5	Develop Business Case	8 hrs	8 hrs	0 hrs	8 hrs	0 hrs	100%
6	Initiate Project	8 hrs	8 hrs	0 hrs	8 hrs	0 hrs	100%
7	Project Approval Review	8 hrs	8 hrs	0 hrs	8 hrs	0 hrs	100%
8	Evaluate Project Scope and Risk	32 hrs	16 hrs	16 hrs	32 hrs	8 hrs	100%
9	Identify and Assess Risks	24 hrs	8 hrs	16 hrs	24 hrs	0 hrs	100%
10	Develop Business Case	8 hrs	8 hrs	0 hrs	8 hrs	0 hrs	100%
11	Develop Software Development Plan	194 hrs	72 hrs	32 hrs	78 hrs	26 hrs	75%
12	Develop Measurement Plan	40 hrs	8 hrs	32 hrs	30 hrs	10 hrs	75%
13	Develop Risk Management Plan	8 hrs	8 hrs	0 hrs	6 hrs	2 hrs	75%
14	Develop Product Acceptance Plan	8 hrs	8 hrs	0 hrs	6 hrs	2 hrs	75%
15	Develop Problem Resolution Plan	8 hrs	8 hrs	0 hrs	6 hrs	2 hrs	75%
16	Define Project Organization and Staffing	8 hrs	8 hrs	0 hrs	6 hrs	2 hrs	75%
17	Define Monitoring & Control Processes	8 hrs	8 hrs	0 hrs	6 hrs	2 hrs	75%
18	Plan Phases and Iterations	8 hrs	8 hrs	0 hrs	6 hrs	2 hrs	75%
19	Complete Software Development Plan	8 hrs	8 hrs	0 hrs	6 hrs	2 hrs	75%
20	Project Planning Review	8 hrs	8 hrs	0 hrs	6 hrs	2 hrs	75%
21	Plan for Next Iteration	24 hrs	24 hrs	0 hrs	6 hrs	18 hrs	25%
22	Develop Iteration Plan	8 hrs	8 hrs	0 hrs	2 hrs	6 hrs	25%
23	Develop Business Case	8 hrs	8 hrs	0 hrs	2 hrs	6 hrs	25%
24	Iteration Plan Review	8 hrs	8 hrs	0 hrs	2 hrs	6 hrs	25%
25	Manage Iteration	200 hrs	200 hrs	0 hrs	58 hrs	158 hrs	25%
26	Acquire Staff	40 hrs	40 hrs	0 hrs	10 hrs	30 hrs	25%
27	Initiate Iteration	40 hrs	40 hrs	0 hrs	10 hrs	30 hrs	25%
28	Assess Iteration	40 hrs	40 hrs	0 hrs	10 hrs	30 hrs	25%

Task Schedule Report

The Task Schedule Report shows a list of defined Tasks with their corresponding Task ID, Start Date, Finish Date, Late Start Date, Late Finish Date, Free Slack Time, and Total Slack Time. This report provides stakeholders with Late Start and Finish, as well as Free and Total Slack information related to high-level and detailed project tasks. Free Slack is the amount of time that a task can be delayed without delaying the start date of a successor task. Total Slack is the amount of time that a task can be delayed without delaying the project end date. Tasks on the critical path are identified by having a Total Slack equal to zero days. Non-critical path tasks have a Total Slack of greater than zero days.

	Task Name	Start	Finish	Late Start	Late Finish	Free Slack	Total Slack
2	Project Management	Mon 5/3/99	Thu 8/5/99	Mon 5/3/99	Thu 8/5/99	0 days	0 days
3	Conceive New Project	Mon 5/3/99	Wed 5/5/99	Mon 5/3/99	Wed 5/5/99	0 days	0 days
4	Identify and Assess Risks	Mon 5/3/99	Tue 5/4/99	Mon 5/3/99	Tue 5/4/99	0 days	0 days
5	Develop Business Case	Tue 5/4/99	Tue 5/4/99	Tue 5/4/99	Tue 5/4/99	0 days	0 days
6	Initiate Project	Wed 5/5/99	Wed 5/5/99	Wed 5/5/99	Wed 5/5/99	0 days	0 days
7	Project Approval Review	Wed 5/5/99	Wed 5/5/99	Wed 5/5/99	Wed 5/5/99	0 days	0 days
8	Evaluate Project Scope and Risk	Thu 5/6/99	Mon 5/10/99	Thu 5/6/99	Mon 5/10/99	0 days	0 days
9	Identify and Assess Risks	Thu 5/6/99	Mon 5/10/99	Thu 5/6/99	Mon 5/10/99	0 days	0 days
10	Develop Business Case	Fri 5/7/99	Fri 5/7/99	Fri 5/7/99	Fri 5/7/99	0 days	0 days
11	Develop Software Development Plan	Mon 5/31/99	Mon 6/14/99	Mon 5/31/99	Thu 6/24/99	0 days	3.75 days
12	Develop Measurement Plan	Mon 5/31/99	Mon 6/7/99	Mon 5/31/99	Wed 6/23/99	0 days	11.7 days
13	Develop Risk Management Plan	Tue 6/1/99	Mon 6/7/99	Tue 6/1/99	Wed 6/23/99	0 days	11.45 days
14	Develop Product Acceptance Plan	Wed 6/2/99	Tue 6/8/99	Wed 6/2/99	Wed 6/23/99	0 days	11.2 days
15	Develop Problem Resolution Plan	Thu 6/3/99	Wed 6/8/99	Thu 6/3/99	Wed 6/23/99	0 days	10.85 days
16	Define Project Organization and Staffing	Fri 6/4/99	Wed 6/8/99	Fri 6/4/99	Thu 6/24/99	0 days	10.4 days
17	Define Monitoring & Control Processes	Mon 6/7/99	Thu 6/10/99	Mon 6/7/99	Thu 6/24/99	0 days	9.9 days
18	Plan Phases and Iterations	Tue 6/8/99	Fri 6/11/99	Tue 6/8/99	Thu 6/24/99	0 days	9.35 days
19	Complete Software Development Plan	Wed 6/9/99	Mon 6/14/99	Wed 6/9/99	Thu 6/24/99	0 days	8.75 days
20	Project Planning Review	Wed 6/9/99	Mon 6/14/99	Wed 6/9/99	Thu 6/24/99	0.75 days	0.75 days
21	Plan for Next Iteration	Mon 6/14/99	Thu 6/17/99	Mon 6/14/99	Tue 6/29/99	0 days	8 days
22	Develop Iteration Plan	Mon 6/14/99	Tue 6/15/99	Mon 6/14/99	Fri 6/25/99	0 days	8.5 days
23	Develop Business Case	Tue 6/15/99	Wed 6/16/99	Tue 6/15/99	Mon 6/28/99	0 days	8.25 days
24	Iteration Plan Review	Wed 6/16/99	Thu 6/17/99	Wed 6/16/99	Tue 6/29/99	8 days	8 days
25	Manage Iteration	Thu 6/17/99	Thu 7/16/99	Thu 6/17/99	Tue 8/3/99	0 days	13.45 days
26	Acquire Staff	Thu 6/17/99	Thu 6/24/99	Thu 6/17/99	Mon 7/5/99	0 days	7.5 days
27	Initiate Iteration	Thu 6/24/99	Thu 7/1/99	Thu 6/24/99	Fri 7/9/99	0 days	6.25 days
28	Assess Iteration	Thu 7/1/99	Thu 7/8/99	Thu 7/1/99	Thu 7/15/99	0 days	5 days

Task Summary Report

The Task Summary Report shows a list of defined Tasks with their corresponding Task ID, Duration, Start Date, Finish Date, % Completion, Cost, and Work Hours. This report provides stakeholders with a view of % Completion, Cost to date and Work effort to date for the project and individual tasks.

	Task Name	Duration	Start	Finish	% Comp.	Cost	Work
2	Project Management	66.2 days	Mon 5/3/99	Thu 8/5/99	42%	\$40,500.00	568 hrs
3	Conceive New Project	3 days	Mon 5/3/99	Wed 5/5/99	100%	\$2,800.00	40 hrs
4	Identify and Assess Risks	2 days	Mon 5/3/99	Tue 5/4/99	100%	\$1,200.00	16 hrs
5	Develop Business Case	1 day	Tue 5/4/99	Tue 5/4/99	100%	\$600.00	8 hrs
6	Initiate Project	1 day	Wed 5/5/99	Wed 5/5/99	100%	\$600.00	8 hrs
7	Project Approval Review	1 day	Wed 5/5/99	Wed 5/5/99	100%	\$400.00	8 hrs
8	Evaluate Project Scope and Risk	3 days	Thu 5/6/99	Mon 5/10/99	100%	\$2,400.00	32 hrs
9	Identify and Assess Risks	3 days	Thu 5/6/99	Mon 5/10/99	100%	\$1,800.00	24 hrs
10	Develop Business Case	1 day	Fri 5/7/99	Fri 5/7/99	100%	\$600.00	8 hrs
11	Develop Software Development Plan	10.2 days	Mon 5/31/99	Mon 6/14/99	75%	\$7,600.00	104 hrs
12	Develop Measurement Plan	5 days	Mon 5/31/99	Mon 6/7/99	75%	\$3,000.00	40 hrs
13	Develop Risk Management Plan	1 day	Tue 6/1/99	Mon 6/7/99	75%	\$600.00	8 hrs
14	Develop Product Acceptance Plan	1 day	Wed 6/2/99	Tue 6/8/99	75%	\$600.00	8 hrs
15	Develop Problem Resolution Plan	1 day	Thu 6/3/99	Wed 6/9/99	75%	\$600.00	8 hrs
16	Define Project Organization and Staffing	1 day	Fri 6/4/99	Wed 6/9/99	75%	\$600.00	8 hrs
17	Define Monitoring & Control Processes	1 day	Mon 6/7/99	Thu 6/10/99	75%	\$600.00	8 hrs
18	Plan Phases and Iterations	1 day	Tue 6/8/99	Fri 6/11/99	75%	\$600.00	8 hrs
19	Compile Software Development Plan	1 day	Wed 6/9/99	Mon 6/14/99	75%	\$600.00	8 hrs
20	Project Planning Review	1 day	Wed 6/9/99	Mon 6/14/99	75%	\$400.00	8 hrs
21	Plan for Next Iteration	3 days	Mon 6/14/99	Thu 6/17/99	25%	\$1,600.00	24 hrs
22	Develop Iteration Plan	1 day	Mon 6/14/99	Tue 6/15/99	25%	\$600.00	8 hrs
23	Develop Business Case	1 day	Tue 6/15/99	Wed 6/16/99	25%	\$600.00	8 hrs
24	Iteration Plan Review	1 day	Wed 6/16/99	Thu 6/17/99	25%	\$400.00	8 hrs
25	Manage Iteration	20 days	Thu 6/17/99	Thu 7/15/99	25%	\$13,000.00	200 hrs
26	Acquire Staff	5 days	Thu 6/17/99	Thu 6/24/99	25%	\$3,000.00	40 hrs
27	Initiate Iteration	5 days	Thu 6/24/99	Thu 7/1/99	25%	\$3,000.00	40 hrs
28	Assess Iteration	5 days	Thu 7/1/99	Thu 7/8/99	25%	\$3,000.00	40 hrs

Task Tracking Report

The Task Tracking Report shows a list of defined Tasks with their corresponding Task ID, Actual Start Date, Actual Finish Date, % Completion, Actual Duration, Remaining Duration, Actual Cost, and Actual Work Hours. This report provides stakeholders with Actuals information for Start Date, Finish Date, Duration, Cost, and Work effort to date for the project and individual tasks.

	Task Name	Act. Start	Act. Finish	% Comp.	Act. Dur.	Rem. Dur.	Act. Cost	Act. Work
2	Project Management	Mon 5/3/99	NA	42%	28.79 days	19.41 days	\$17,825.00	253 hrs
3	Conceive New Project	Mon 5/3/99	Wed 5/5/99	100%	3 days	0 days	\$2,000.00	40 hrs
4	Identify and Assess Risks	Mon 5/3/99	Tue 5/4/99	100%	2 days	0 days	\$1,200.00	16 hrs
5	Develop Business Case	Tue 5/4/99	Tue 5/4/99	100%	1 day	0 days	\$600.00	8 hrs
6	Initiate Project	Wed 5/5/99	Wed 5/5/99	100%	1 day	0 days	\$600.00	8 hrs
7	Project Approval Review	Wed 5/5/99	Wed 5/5/99	100%	1 day	0 days	\$400.00	8 hrs
8	Evaluate Project Scope and Risk	Thu 5/6/99	Mon 5/10/99	100%	3 days	0 days	\$2,400.00	32 hrs
9	Identify and Assess Risks	Thu 5/6/99	Mon 5/10/99	100%	3 days	0 days	\$1,800.00	24 hrs
10	Develop Business Case	Fri 5/7/99	Fri 5/7/99	100%	1 day	0 days	\$600.00	8 hrs
11	Develop Software Development Plan	Mon 5/31/99	NA	75%	7.65 days	2.55 days	\$5,700.00	78 hrs
12	Develop Measurement Plan	Mon 5/31/99	NA	75%	3.75 days	1.25 days	\$2,250.00	30 hrs
13	Develop Risk Management Plan	Tue 6/1/99	NA	75%	0.75 days	0.25 days	\$450.00	6 hrs
14	Develop Product Acceptance Plan	Wed 6/2/99	NA	75%	0.75 days	0.25 days	\$450.00	6 hrs
15	Develop Problem Resolution Plan	Thu 6/3/99	NA	75%	0.75 days	0.25 days	\$450.00	6 hrs
16	Define Project Organization and Staffing	Fri 6/4/99	NA	75%	0.75 days	0.25 days	\$450.00	6 hrs
17	Define Monitoring & Control Processes	Mon 6/7/99	NA	75%	0.75 days	0.25 days	\$450.00	6 hrs
18	Plan Phases and Iterations	Tue 6/8/99	NA	75%	0.75 days	0.25 days	\$450.00	6 hrs
19	Complete Software Development Plan	Wed 6/9/99	NA	75%	0.75 days	0.25 days	\$450.00	6 hrs
20	Project Planning Review	Wed 6/9/99	NA	75%	0.75 days	0.25 days	\$300.00	6 hrs
21	Plan for Next Iteration	Mon 6/14/99	NA	25%	0.75 days	2.25 days	\$400.00	6 hrs
22	Develop Iteration Plan	Mon 6/14/99	NA	25%	0.25 days	0.75 days	\$150.00	2 hrs
23	Develop Business Case	Tue 6/15/99	NA	25%	0.25 days	0.75 days	\$150.00	2 hrs
24	Iteration Plan Review	Wed 6/16/99	NA	25%	0.25 days	0.75 days	\$100.00	2 hrs
25	Manage Iteration	Thu 6/17/99	NA	25%	5 days	15 days	\$3,250.00	50 hrs
26	Acquire Staff	Thu 6/17/99	NA	25%	1.25 days	3.75 days	\$750.00	10 hrs
27	Initiate Iteration	Thu 6/24/99	NA	25%	1.25 days	3.75 days	\$750.00	10 hrs
28	Assess Iteration	Thu 7/1/99	NA	25%	1.25 days	3.75 days	\$750.00	10 hrs

Resource Sheet

The Resource Sheet shows a list of available Project Resources with their corresponding Resource ID, Resource Type, Material Label (If Type = Material), Initials, Maximum Unit Allocation, Standard Pay Rate, Overtime Pay Rate, Cost per Use, Accrual Type, and Base Calendar. This report provides stakeholders with a list of all resources that have been assigned to the project along with Pay Rate, Overtime Rate, and Cost per Use information for each resource. Any resources highlighted in Red are currently being over-allocated on the project. Resource Leveling should be done to resolve any resource over-allocations. Resource Leveling is important to insure that the project plan is realistic.

	Resource Name	Type	Material Label	Initials	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar
32	Any Worker	Work		AW	100%	\$25.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
1	Architect	Work		A	100%	\$75.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
30	Architectsys	Work		AS	100%	\$75.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
2	Architecture Reviewer	Work		AR	100%	\$50.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
4	Business Designer	Work		BD	100%	\$50.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
5	Business-Model Reviewer	Work		BMR	100%	\$50.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
3	Business-Process Analyst	Work		BPA	100%	\$55.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
31	Change Control Manager	Work		CCM	100%	\$70.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
6	Code Reviewer	Work		CR	100%	\$45.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
7	Configuration Manager	Work		CM	100%	\$70.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
8	Course Developer	Work		CD	100%	\$40.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
9	Database Designer	Work		DD	100%	\$75.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
10	Deployment Manager	Work		DM	100%	\$60.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
11	Design Reviewer	Work		DR	100%	\$45.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
12	Designer	Work		D	100%	\$50.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
13	Implementer	Work		I	100%	\$45.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
14	Integration Tester	Work		IT	100%	\$45.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
15	Performance Tester	Work		PT	100%	\$60.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
16	Process Engineer	Work		PE	100%	\$65.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
17	Project Manager	Work		PM	100%	\$75.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
29	Project Reviewer	Work		PR	100%	\$50.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
18	Requirements Reviewer	Work		RFR	100%	\$45.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
33	Software Architect	Work		SAR	100%	\$65.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
19	Stakeholder	Work		S	100%	\$75.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
20	System Administrator	Work		SAD	100%	\$40.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
21	System Analyst	Work		SAH	100%	\$55.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
22	System Integrator	Work		SI	100%	\$45.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
23	System Tester	Work		ST	100%	\$45.00/hr	\$0.00/hr	\$0.00	Prorated	Standard

Resource Allocation Report

The Resource Allocation Report shows a list of available Project Resources with their corresponding Resource ID and the allocation of assigned Work Hours per Week or per Day based on the Tasks that each Resource is assigned to. This report provides stakeholders with a detailed list of Tasks that have been assigned to each resource along with a breakdown of task and work hour assignments per week. Any resources highlighted in Red in the left-hand column are currently being over-allocated. The weekly work hours assigned on the right that are highlighted in Red identify where the over-allocations are occurring. Resource Leveling should be done in order to resolve any over-allocation of resources. Resource Leveling is important to insure that the project plan is realistic.

Resource Name	Work	Details	May 11	May 21	June 1	June 11	June 21	July 1	July 11			
			5/5	5/15	5/23	5/30	6/6	6/13	6/20	6/27	7/4	7/11
6 Code Reviewer	0 hrs	Work										
7 Configuration Manager	168 hrs	Work						22.4h	44.8h	40h	40h	4.8h
8 Course Developer	0 hrs	Work										
9 Database Designer	0 hrs	Work										
10 Deployment Manager	0 hrs	Work										
11 Design Reviewer	0 hrs	Work										
12 Designer	0 hrs	Work										
13 Implementer	0 hrs	Work										
14 Integration Tester	0 hrs	Work										
15 Performance Tester	0 hrs	Work										
16 Process Engineer	40 hrs	Work	8h					24h				
17 Project Manager	448 hrs	Work	8h			40.8h	44.8h	32h	40h	40h	40h	40h
18 Requirements Reviewer	64 hrs	Work				6.4h	33.6h	24h				
19 Stakeholder	0 hrs	Work										
20 Systems Administrator	40 hrs	Work						13.2h	20.8h			
21 System Analyst	237.82 hrs	Work	40h	40h	31.82h	34.48h	39.6h	15.82h				
22 Systems Integrator	200 hrs	Work					5.6h	37.6h	40h	40h	40h	36.8h
23 Systems Tester	0 hrs	Work										
24 Technical Writer	6 hrs	Work					0.8h	7.2h				
25 Test Designer	16 hrs	Work				8h	0.8h	7.2h				
26 Tool Smith	0 hrs	Work										
27 Use-Case Specifier	64 hrs	Work						17.6h	43.2h	3.2h		
28 User Interface Designer	72 hrs	Work					0.8h	24.8h	43.2h	3.2h		
29 Project Reviewer	144 hrs	Work					6.4h	9.6h		14.4h	40h	26.8h
30 Architects	0 hrs	Work										
31 Change Control Manager	104 hrs	Work	8h					14.4h	40h	40h	1.8h	
32 Any Worker	168 hrs	Work					2.4h	22.4h	40h	40h	26.4h	36.8h
33 Software Architect	160 hrs	Work				24h	0.8h	29.6h	40h	40h	25.6h	

Earned Value Report

The Earned Value Report shows a list of defined Tasks with their corresponding Task ID, Planned Budget, Earned Value, Actual Cost, Cost Variance, Schedule Variance, Cost Performance Index, Schedule Performance Index, Earned Value at Completion, Variance at Completion. This report provides stakeholders with insight into the current Earned Value of the project. Earned Value analysis is useful in that it focuses on schedule and budget performance as compared to baseline plans. The purpose of earned value analysis is to measure the project's progress, and help predict its outcome. Earned value analysis addresses the question: For the current performance results we are getting on the project, are we getting our money's worth? Earned value analysis allows stakeholders to determine two important things: 1) the true cost of project results to date, and 2) the performance trend that is likely to continue for the remainder of the project.

The Planned Budget column is defined as BCWS (Budgeted Cost of Work Scheduled), the portion of the project's originally planned budget that to be spent as of the report status date. The Earned Value column is defined as BCWP (Budgeted Cost of Work Performed), the budgeted cost of tasks that have been completed to date. The Actual Cost field is defined as ACWP (Actual Cost of Work Performed), the actual costs of tasks that have been completed to date. The Cost Variance column is the difference between the Earned Value to date and Actual Costs that have been incurred for each task. The Schedule Variance column is the difference between the original Planned Budget and the Earned Value to date of each task. The CPI (Cost Performance Index) column is the ratio of budgeted to actual cost – $CPI = BCWP / ACWP$. The SPI (Schedule Performance Index) column is the ratio of performed to scheduled work – $SPI = BCWP / BCWS$. The EVC (Earned Value at Completion) column is the same as the Total Cost field, which is the total estimated cost at the completion of the project. The VAC (Cost Variance at Completion) column is the difference between the Baseline Budgeted Cost and the Estimated Cost at Completion (EAC).

Task Name	Planned Budget	Earned Value	Actual Cost	Cost Variance	Schedule Variance	CP	SP	EV	VAC
Project Management	\$26,300.00	\$14,325.00	\$17,825.00	(\$3,500.00)	(\$22,075.00)	0	0	\$40,500.00	(\$14,300.00)
Conceive New Project	\$2,200.00	\$2,200.00	\$2,000.00	(\$200.00)	\$0.00	0	0	\$2,000.00	(\$200.00)
Identify and Assess Risks	\$600.00	\$600.00	\$1,200.00	(\$600.00)	\$0.00	0.5	1	\$1,200.00	(\$600.00)
Develop Business Case	\$600.00	\$600.00	\$600.00	\$0.00	\$0.00	1	1	\$600.00	\$0.00
Initiate Project	\$600.00	\$600.00	\$600.00	\$0.00	\$0.00	1	1	\$600.00	\$0.00
Project Approval Review	\$400.00	\$400.00	\$400.00	\$0.00	\$0.00	1	1	\$400.00	\$0.00
Evaluate Project Scope and Risk	\$1,200.00	\$1,200.00	\$2,000.00	(\$800.00)	\$0.00	0	0	\$2,000.00	(\$800.00)
Identify and Assess Risks	\$600.00	\$600.00	\$1,200.00	(\$600.00)	\$0.00	0.33	1	\$1,200.00	(\$600.00)
Develop Business Case	\$600.00	\$600.00	\$600.00	\$0.00	\$0.00	1	1	\$600.00	\$0.00
Develop Software Development	\$5,200.00	\$3,900.00	\$5,200.00	(\$1,300.00)	(\$1,300.00)	0	0	\$7,000.00	(\$2,400.00)
Develop Measurement Plan	\$600.00	\$450.00	\$2,250.00	(\$1,800.00)	(\$150.00)	0.2	0.75	\$3,000.00	(\$2,400.00)
Develop Risk Management Plan	\$600.00	\$450.00	\$450.00	\$0.00	(\$150.00)	1	0.75	\$600.00	\$0.00
Develop Product Acceptance Plan	\$600.00	\$450.00	\$450.00	\$0.00	(\$150.00)	1	0.75	\$600.00	\$0.00
Develop Problem Resolution Plan	\$600.00	\$450.00	\$450.00	\$0.00	(\$150.00)	1	0.75	\$600.00	\$0.00
Define Project Organization and Staffs	\$600.00	\$450.00	\$450.00	\$0.00	(\$150.00)	1	0.75	\$600.00	\$0.00
Define Monitoring & Control Processes	\$600.00	\$450.00	\$450.00	\$0.00	(\$150.00)	1	0.75	\$600.00	\$0.00
Plan Phases and Iterations	\$600.00	\$450.00	\$450.00	\$0.00	(\$150.00)	1	0.75	\$600.00	\$0.00
Compile Software Development Plan	\$600.00	\$450.00	\$450.00	\$0.00	(\$150.00)	1	0.75	\$600.00	\$0.00
Project Planning Review	\$400.00	\$300.00	\$300.00	\$0.00	(\$100.00)	1	0.75	\$400.00	\$0.00
Plan for Next Iteration	\$1,600.00	\$400.00	\$400.00	\$0.00	(\$1,200.00)	0	0	\$1,600.00	\$0.00
Develop Iteration Plan	\$600.00	\$150.00	\$150.00	\$0.00	(\$450.00)	1	0.25	\$600.00	\$0.00
Develop Business Case	\$600.00	\$150.00	\$150.00	\$0.00	(\$450.00)	1	0.25	\$600.00	\$0.00
Iteration Plan Review	\$400.00	\$100.00	\$100.00	\$0.00	(\$300.00)	1	0.25	\$400.00	\$0.00
Manage Iteration	\$13,000.00	\$3,250.00	\$3,250.00	\$0.00	(\$9,750.00)	0	0	\$13,000.00	\$0.00
Acquire Staff	\$3,000.00	\$750.00	\$750.00	\$0.00	(\$2,250.00)	1	0.25	\$3,000.00	\$0.00
Initiate Iteration	\$3,000.00	\$750.00	\$750.00	\$0.00	(\$2,250.00)	1	0.25	\$3,000.00	\$0.00
Assess Iteration	\$3,000.00	\$750.00	\$750.00	\$0.00	(\$2,250.00)	1	0.25	\$3,000.00	\$0.00

Incorporating MS Project Metrics Reporting into Rational ProjectConsole

This section describes the process for importing current MS Project data into a ProjectConsole Data Collection and then describe types of MS Project Metrics Charts, Graphs, and Indicators that can be automatically generated and published to a ProjectConsole website.

Current Limitations of MS Project Metrics Reporting with ProjectConsole

Our experience with the initial version of ProjectConsole shows that there are some limitations that currently must be worked around in order to obtain the desired results. Over time, all of these limitations will be corrected in subsequent releases of the product.

For example, currently in order to collect data from Microsoft Project, a data transformation script must be run post collection to convert data from string data into the proper integer, cost, and date formats that ProjectConsole needs in order to properly identify Measures. This data transformation script can be written in the Perl scripting language and setup to automatically run post-data collection. For more information on data transformation scripts, refer to the Rational ProjectConsole Dashboard Designer Documentation.

Another current limitation includes the fact that Microsoft Project contains several custom Date (Date1 .. Date10), Number (Number1 .. Number10), and Cost (Cost1 .. Cost10) fields. Currently, these custom fields are not contained with the Microsoft Project RSE Adapter, and therefore, reports, graphs, and charts cannot be created in ProjectConsole that include these fields. If custom fields are not being used in Microsoft Project, then this would not be an issue.

Creating Microsoft Project Web Reports in ProjectConsole

To create Microsoft Project Web Reports using ProjectConsole, the following steps must be performed:

First, you must have a Microsoft Project Plan that has been created with a number of identified tasks from which project data will be collected. Basic planning fields must be identified for each field such as, Duration, Resources, Predecessors, Cost Per Resource and Established Baselines. After establishing a Baseline, the plan must be maintained on an on-going basis to reflect current progress in terms of Actual Work Hours Performed and/or Percent Completion of each task. The following is an example of a basic MS Project Plan:

	% Comp	Task Name	Duration	Work Hours	Start	Finish	Prod.	Resource Names
2	42%	Project Management	58.2 days	568 hrs	Mon 5/3/99	Thu 6/5/99		
3	100%	Conceive New Project	3 days	48 hrs	Mon 5/3/99	Wed 5/5/99		
4	100%	Identify and Assess Risks	2 days	16 hrs	Mon 5/3/99	Tue 5/4/99		Project Manager
5	100%	Develop Business Case	1 day	8 hrs	Tue 5/4/99	Tue 5/4/99	4	Project Manager
6	100%	Initiate Project	1 day	8 hrs	Wed 5/5/99	Wed 5/5/99	5	Project Manager
7	100%	Project Approval Review	1 day	8 hrs	Wed 5/5/99	Wed 5/5/99	6FF	Project Reviewer
8	100%	Evaluate Project Scope and Risk	3 days	32 hrs	Thu 5/6/99	Mon 5/10/99	4.3	
9	100%	Identify and Assess Risks	3 days	24 hrs	Thu 5/6/99	Mon 5/10/99		Project Manager
10	100%	Develop Business Case	1 day	8 hrs	Fri 5/7/99	Fri 5/7/99	9	Project Manager
11	75%	Develop Software Development Plan	19.2 days	164 hrs	Mon 5/31/99	Mon 6/14/99	5255.8	
12	75%	Develop Measurement Plan	5 days	40 hrs	Mon 5/31/99	Mon 6/7/99		Project Manager
13	75%	Develop Risk Management Plan	1 day	8 hrs	Tue 6/1/99	Mon 6/7/99	12	Project Manager
14	75%	Develop Product Acceptance Plan	1 day	8 hrs	Wed 6/2/99	Tue 6/8/99	13	Project Manager
15	75%	Develop Problem Resolution Plan	1 day	8 hrs	Thu 6/3/99	Wed 6/9/99	14	Project Manager
16	75%	Define Project Organization and Staffing	1 day	8 hrs	Fri 6/4/99	Wed 6/9/99	15	Project Manager
17	75%	Define Monitoring & Control Processes	1 day	8 hrs	Mon 6/7/99	Thu 6/10/99	16	Project Manager
18	75%	Plan Phases and Iterations	1 day	8 hrs	Tue 6/8/99	Fri 6/11/99	17	Project Manager
19	75%	Complete Software Development Plan	1 day	8 hrs	Wed 6/9/99	Mon 6/14/99	18	Project Manager
20	75%	Project Planning Review	1 day	8 hrs	Wed 6/9/99	Mon 6/14/99	19FF	Project Reviewer
21	25%	Plan for Next Iteration	3 days	24 hrs	Mon 6/14/99	Thu 6/17/99	11	
22	25%	Develop Iteration Plan	1 day	8 hrs	Mon 6/14/99	Tue 6/15/99		Project Manager
23	25%	Develop Business Case	1 day	8 hrs	Tue 6/15/99	Wed 6/16/99	22	Project Manager
24	25%	Iteration Plan Review	1 day	8 hrs	Wed 6/16/99	Thu 6/17/99	23	Project Reviewer
25	25%	Manage Iteration	26 days	208 hrs	Thu 6/17/99	Thu 7/15/99	24	
26	25%	Acquire Staff	5 days	40 hrs	Thu 6/17/99	Thu 6/24/99		Project Manager
27	25%	Initiate Iteration	5 days	40 hrs	Thu 6/24/99	Thu 7/1/99	26	Project Manager
28	25%	Assess Iteration	5 days	40 hrs	Thu 7/1/99	Thu 7/8/99	27FF	Project Manager

The next step is to create Microsoft Project Templates using the ProjectConsole Template Builder for each desired web report. Each template defines the data and the format for each defined web report.

Each web report template needs to be saved in both MS Word format and Saved as a Web Page from within the Template Builder program.

Once saved, both the MS Word and HTML document versions need to be moved into the ProjectConsole MS Project Templates directory.

After moving the template files into the ProjectConsole Template directory, the ProjectConsole Administration program can be used to create a menu of MS Project Web Reports that can be run on an on demand basis.

Please refer to the ProjectConsole Template Builder and Administration documentation for details on how to perform each of the steps identified above.

Creating Microsoft Project Metrics Charts & Graphs in ProjectConsole

To create metrics charts and graphs based on Microsoft Project data, a data collection must first be generated. To run a Microsoft Project data collection with ProjectConsole the following steps must be performed:

1. First, you must have a Microsoft Project Plan that has been created with a number of identified tasks from which project data will be collected. Basic planning fields must be identified for each task such as, Duration, Resources, Predecessors, Cost Per Resource and Established Baselines. After establishing a Baseline, the plan must be maintained on an on-going basis to reflect current progress in terms of Actual Work Hours Performed and/or Percent Completion of each task.
2. Next, use ProjectConsole Dashboard Designer to create a Microsoft Project Source Template defining all of the desired Microsoft Project fields to be collected.
3. Define the desired Dimension and Measure tables in which data is to be collected.
4. Define the data mappings from the created Dimension and Measure tables to the Source Template fields.
5. Create a Scheduled Collection Task.
6. Run the Scheduled Collection Task.
7. Don't forget to run the post collection data conversion script.
8. After an MSP Data Collection has been created, the ProjectConsole Dashboard can be used to create the desired Charts and Graphs based on the data that has been collected from the Microsoft Project plan.

Please refer to the ProjectConsole Dashboard Designer, Dashboard, and Administration documentation for details on how to perform each of the steps identified above.

Sample MS Project Metrics using ProjectConsole

This section describes and shows a wide range of sample MS Project trend analysis metrics reports that can be generated using ProjectConsole.

ProjectConsole can be used to produce either current Microsoft Project Web Based Reports, which represent the status of the project at any point in time, or Graphical Trend Analysis and Distribution Charts that show the progress of selected project metrics over a period of time.

To produce the desired web based reports, templates are created using the ProjectConsole Template Builder. To produce the desired graphs and charts a data collection source template must be created using the Dashboard Designer component of ProjectConsole.

The difference between these two types of templates is that the ProjectConsole Template Builder creates templates to read data from the Microsoft Project file and produce a formatted report. Whereas, the Dashboard Designer Source Template creates a template to read data from a Microsoft Project file and puts the data into a data collection database from which the ProjectConsole Dashboard can use to generate Charts and Graphs based on the collected data.

Examples of current Web Based Reports representing any given point in time include Task Entry Reports, Work Hours Variance Reports, Task Summary Reports, Task Tracking Reports, Task Assignment by Resource Reports, Cost Variance Reports, Earned Value Reports, Late Tasks Reports, Schedule Variance Reports, Late Milestone Tasks Reports, and Milestone Tasks Reports.

Examples of Graphical Trend Analysis and Distribution Charts representing the progress of the project over time include trends of Actual Work Hours vs. Planned Work Hours, Actual Cost vs. Budgeted Cost, % Completion over

Time, Actual Duration vs. Planned Duration, Earned Value vs. Budgeted Cost, Actual Cost of Work Performed vs. Budgeted Cost of Work Performed, and Budgeted Cost of Work Performed vs. Budgeted Cost of Work Scheduled.

ProjectConsole Web Reports

Task Entry Web Report

The Task Entry Web Report shows a list of defined Tasks with their corresponding Task ID, % Completion, Task Duration, Work Hours, Start Date, Finish Date, Predecessors, and Assigned Resources. This report is used as a basic starting point for reviewing and identifying all high-level and detailed project tasks along with their associated planned durations, work hours, assigned resources, and planned start and finish dates. % Completion is also included to give stakeholders who interested in more detail about the project's progress a quick status of the progress of each task.

Task Entry Report								
Project Name: detail_inception_iterapp								
Task ID	% Complete	Task Name	Duration	Work Hours	Start Date	Finish Date	Pred	Resource
1	14%	Inception Phase	68.2 days	1983.92 hrs	1999-05-03 08:00:00 Monday	1999-05-03 09:36:00 Thursday		
2	23%	Project Management	68.2 days	388 hrs	1999-05-03 08:00:00 Monday	1999-05-03 09:36:00 Thursday		
3	100%	Conceive New Project	3 days	40 hrs	1999-05-03 08:00:00 Monday	1999-05-03 17:00:00 Wednesday		
4	100%	Identify and Assess Risks	2 days	16 hrs	1999-05-03 08:00:00 Monday	1999-05-04 17:00:00 Tuesday		Project Manager
5	100%	Develop Business Case	1 day	8 hrs	1999-05-04 08:00:00 Tuesday	1999-05-04 17:00:00 Tuesday	4	Project Manager
6	100%	Initiate Project	1 day	8 hrs	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	5	Project Manager
7	100%	Project Approval Review	1 day	8 hrs	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	6	Project Reviewer
8	100%	Evaluate Project Scope and Risk	3 days	32 hrs	1999-05-06 08:00:00 Thursday	1999-05-10 17:00:00 Monday	4	Project Manager
9	100%	Identify and Assess Risks	3 days	24 hrs	1999-05-06 08:00:00 Thursday	1999-05-10 17:00:00 Monday	3	Project Manager
10	100%	Develop Business Case	1 day	8 hrs	1999-05-07 08:00:00 Friday	1999-05-07 17:00:00 Friday	9	Project Manager
11	33%	Develop Software Development Plan	10.2 days	104 hrs	1999-05-31 08:00:00 Monday	1999-06-14 09:36:00 Monday	52	
12	20%	Develop Measurement Plan	3 days	40 hrs	1999-05-31 08:00:00 Monday	1999-06-07 12:00:00 Monday	8	Project Manager
13	65%	Develop Risk Management Plan	1 day	8 hrs	1999-06-01 08:00:00 Tuesday	1999-06-07 17:00:00 Monday	12	Project Manager
14	70%	Develop Product Acceptance Plan	1 day	8 hrs	1999-06-02 08:00:00 Wednesday	1999-06-08 12:00:00 Tuesday	13	Project Manager
15	55%	Develop Problem Resolution Plan	1 day	8 hrs	1999-06-03 08:00:00 Thursday	1999-06-09 08:48:00 Wednesday	14	Project Manager
16	40%	Define Project Organization and Staffing	1 day	8 hrs	1999-06-04 08:00:00 Friday	1999-06-09 15:24:00 Wednesday	15	Project Manager

Cost Variance Web Report

The Cost Variance Web Report shows a list of defined Tasks with their corresponding Task ID, Fixed Cost, Fixed Cost Accrual, Total Cost, Baseline Cost, Cost Variance, Actual Cost, and Remaining Budgeted Cost. This report provides stakeholders with the status of high-level, as well as detailed budgeted vs. actual costs of the project. Project costs include both Fixed Costs and Variable Costs. Examples of Fixed Costs include materials, equipment, and tools that must be purchased for the project. Variable Costs are the resource costs related to completing each identified task. Resource costs are classified as variable costs because the cost is dependent on the number of hours required to complete each task and resources are normally charged against the project for each hour of work performed. Total Cost is the sum of all identified fixed and variable costs. Cost Variance is determined based on the difference between the original Baseline (Planned) Cost and the Actual Total Cost to date. Actual Cost is based on the number of Actual Work Hours to date plus any prorated Fixed Costs. Remaining Cost is determined based on the Total Cost minus Actual Costs to date.

Project Name: detail_inception_iter.mpp								
Task ID	Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline Cost	Cost Variance	Actual Cost	Remaining Cost
1	Inception Phase	\$0.00	Prorated	\$113,625.00	\$109,425.00	\$4,200.00	\$17,596.56	\$96,029.04
2	Project Management	\$0.00	Prorated	\$40,500.00	\$36,300.00	\$4,200.00	\$10,680.00	\$29,820.00
3	Conceive New Project	\$0.00	Prorated	\$2,800.00	\$2,200.00	\$600.00	\$2,800.00	\$0.00
4	Identify and Assess Risks	\$0.00	Prorated	\$1,200.00	\$600.00	\$600.00	\$1,200.00	\$0.00
5	Develop Business Case	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$600.00	\$0.00
6	Initiate Project	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$600.00	\$0.00
7	Project Approval Review	\$0.00	Prorated	\$400.00	\$400.00	\$0.00	\$400.00	\$0.00
8	Evaluate Project Scope and Risk	\$0.00	Prorated	\$2,400.00	\$1,200.00	\$1,200.00	\$2,400.00	\$0.00
9	Identify and Assess Risks	\$0.00	Prorated	\$1,800.00	\$600.00	\$1,200.00	\$1,800.00	\$0.00
10	Develop Business Case	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$600.00	\$0.00
11	Develop Software Development Plan	\$0.00	Prorated	\$7,600.00	\$3,200.00	\$2,400.00	\$2,710.00	\$4,890.00
12	Develop Measurement Plan	\$0.00	Prorated	\$3,000.00	\$600.00	\$2,400.00	\$600.00	\$2,400.00
13	Develop Risk Management Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$390.00	\$210.00
14	Develop Product Acceptance Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$420.00	\$180.00
15	Develop Problem Resolution Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$330.00	\$270.00
16	Define Project Organization and Staffing	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$270.00	\$330.00
17	Define Monitoring & Control Processes	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$210.00	\$390.00
18	Plan Phases and Iterations	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$210.00	\$390.00
19	Complete Software Development Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$180.00	\$420.00
20	Project Planning Review	\$0.00	Prorated	\$400.00	\$400.00	\$0.00	\$100.00	\$300.00
21	Plan for Next Iteration	\$0.00	Prorated	\$1,600.00	\$1,600.00	\$0.00	\$160.00	\$1,440.00
22	Develop Iteration Plan	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$60.00	\$540.00
23	Develop Business Case	\$0.00	Prorated	\$600.00	\$600.00	\$0.00	\$60.00	\$540.00
24	Iteration Plan Review	\$0.00	Prorated	\$400.00	\$400.00	\$0.00	\$40.00	\$360.00
25	Manage Iteration	\$0.00	Prorated	\$13,000.00	\$13,000.00	\$0.00	\$1,300.00	\$11,700.00
26	Acquire Staff	\$0.00	Prorated	\$3,000.00	\$3,000.00	\$0.00	\$300.00	\$2,700.00
27	Initiate Iteration	\$0.00	Prorated	\$3,000.00	\$3,000.00	\$0.00	\$300.00	\$2,700.00
28	Assess Iteration	\$0.00	Prorated	\$3,000.00	\$3,000.00	\$0.00	\$300.00	\$2,700.00
29	Iteration Evaluation Criteria Review	\$0.00	Prorated	\$2,000.00	\$2,000.00	\$0.00	\$200.00	\$1,800.00

Schedule Variance Web Report

The Schedule Variance Web Report shows a list of defined Tasks with their corresponding Task ID, Start Date, Finish Date, Baseline Start Date, Baseline Finish Date, Start Variance, and Finish Variance. This report provides stakeholders information related to whether or not the project and specific tasks are on schedule. High-level, as well as, detailed tasks are shown with their respective current start and finish dates, original baseline (planned) start and finish dates, and the start and finish variances of each planned task. Start Variance is based on the difference between the Current Start Date and the Baseline Start Date. Finish Variance is based on the difference between the Current Finish Date and the Baseline Finish Date.

Schedule Variance Report

Project Name: detail_inception_iter.mpp

Task ID	Task Name	Start Date	Finish Date	Baseline Start Date	Baseline Finish Date	Start Variance	Finish Variance
1	Inception Phase	1999-05-03 08:00:00 Monday	1999-08-05 09:36:00 Thursday	1999-05-03 08:00:00 Monday	1999-08-02 17:00:00 Monday	0 days	2.2 days
2	Project Management	1999-05-03 08:00:00 Monday	1999-08-05 09:36:00 Thursday	1999-05-03 08:00:00 Monday	1999-08-02 17:00:00 Monday	0 days	2.2 days
3	Conceive New Project	1999-05-03 08:00:00 Monday	1999-05-05 17:00:00 Wednesday	1999-05-03 08:00:00 Monday	1999-05-05 17:00:00 Wednesday	0 days	0 days
4	Identify and Assess Risks	1999-05-03 08:00:00 Monday	1999-05-04 17:00:00 Tuesday	1999-05-03 08:00:00 Monday	1999-05-03 17:00:00 Monday	0 days	1 day
5	Develop Business Case	1999-05-04 08:00:00 Tuesday	1999-05-04 17:00:00 Tuesday	1999-05-04 08:00:00 Tuesday	1999-05-04 17:00:00 Tuesday	0 days	0 days
6	Initiate Project	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	0 days	0 days
7	Project Approval Review	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	0 days	0 days
8	Evaluate Project Scope and Risk	1999-05-06 08:00:00 Thursday	1999-05-10 17:00:00 Monday	1999-05-06 08:00:00 Thursday	1999-05-07 17:00:00 Friday	0 days	1 day
9	Identify and Assess Risks	1999-05-06 08:00:00 Thursday	1999-05-10 17:00:00 Monday	1999-05-06 08:00:00 Thursday	1999-05-06 17:00:00 Thursday	0 days	2 days
10	Develop Business Case	1999-05-07 08:00:00 Friday	1999-05-07 17:00:00 Friday	1999-05-07 08:00:00 Friday	1999-05-07 17:00:00 Friday	0 days	0 days
11	Develop Software Development Plan	1999-05-31 08:00:00 Monday	1999-06-14 09:36:00 Monday	1999-05-31 08:00:00 Monday	1999-06-09 17:00:00 Wednesday	0 days	2.2 days
12	Develop Measurement Plan	1999-05-31 08:00:00 Monday	1999-06-07 12:00:00 Monday	1999-05-31 08:00:00 Monday	1999-05-31 17:00:00 Monday	0 days	4.5 days
13	Develop Risk Management Plan	1999-06-01 08:00:00 Tuesday	1999-06-07 17:00:00 Monday	1999-06-01 08:00:00 Tuesday	1999-06-01 17:00:00 Tuesday	0 days	4 days
14	Develop Product Acceptance Plan	1999-06-02 08:00:00 Wednesday	1999-06-08 12:00:00 Tuesday	1999-06-02 08:00:00 Wednesday	1999-06-02 17:00:00 Wednesday	0 days	3.5 days

Late Tasks Web Report

The Late Tasks Web Report shows a list of defined Tasks where the Finish Date is now beyond the Originally Planned Baseline Finish Date with their corresponding Task ID, Start Date, Finish Date, Baseline Start Date, Baseline Finish Date, Start Variance, and Finish Variance. This report provides stakeholders information related to tasks that are currently behind schedule along with the current variance of the late tasks. Start Variance is based on the difference between the Current Start Date and the Baseline Start Date. Finish Variance is based on the difference between the Current Finish Date and the Baseline Finish Date.

Late Tasks Report							
Project Name: detail_inception_iter.mpp							
Task ID	Task Name	Start Date	Finish Date	Baseline Start Date	Baseline Finish Date	Start Variance	Finish Variance
1	Inception Phase	1999-05-03 08:00:00 Monday	1999-08-03 09:36:00 Thursday	1999-05-03 08:00:00 Monday	1999-08-02 17:00:00 Monday	0 days	2.2 days
2	Project Management	1999-05-03 08:00:00 Monday	1999-08-03 09:36:00 Thursday	1999-05-03 08:00:00 Monday	1999-08-02 17:00:00 Monday	0 days	2.2 days
11	Develop Software Development Plan	1999-05-31 08:00:00 Monday	1999-06-14 09:36:00 Monday	1999-05-31 08:00:00 Monday	1999-06-09 17:00:00 Wednesday	0 days	2.2 days
12	Develop Measurement Plan	1999-05-31 08:00:00 Monday	1999-06-07 12:00:00 Monday	1999-05-31 08:00:00 Monday	1999-05-31 17:00:00 Monday	0 days	4.5 days
13	Develop Risk Management Plan	1999-06-01 08:00:00 Tuesday	1999-06-07 17:00:00 Monday	1999-06-01 08:00:00 Tuesday	1999-06-01 17:00:00 Tuesday	0 days	4 days
14	Develop Product Acceptance Plan	1999-06-02 08:00:00 Wednesday	1999-06-08 12:00:00 Tuesday	1999-06-02 08:00:00 Wednesday	1999-06-02 17:00:00 Wednesday	0 days	3.5 days
15	Develop Problem Resolution Plan	1999-06-03 08:00:00 Thursday	1999-06-09 08:48:00 Wednesday	1999-06-03 08:00:00 Thursday	1999-06-03 17:00:00 Thursday	0 days	3.1 days
16	Define Project Organization and Staffing	1999-06-04 08:00:00 Friday	1999-06-09 15:34:00 Wednesday	1999-06-04 08:00:00 Friday	1999-06-04 17:00:00 Friday	0 days	2.8 days
17	Define Monitoring & Control Processes	1999-06-07 08:00:00 Monday	1999-06-10 13:34:00 Thursday	1999-06-07 08:00:00 Monday	1999-06-07 17:00:00 Monday	0 days	2.55 days
18	Plan Phases and Iterations	1999-06-08 08:00:00 Tuesday	1999-06-11 10:48:00 Friday	1999-06-08 08:00:00 Tuesday	1999-06-08 17:00:00 Tuesday	0 days	2.35 days
19	Compile Software Development Plan	1999-06-09 08:00:00 Wednesday	1999-06-14 09:36:00 Monday	1999-06-09 08:00:00 Wednesday	1999-06-09 17:00:00 Wednesday	0 days	2.2 days
20	Project Planning Review	1999-06-09 08:00:00 Wednesday	1999-06-14 09:36:00 Monday	1999-06-09 08:00:00 Wednesday	1999-06-09 17:00:00 Wednesday	0 days	2.2 days
21	Plan for Next Iteration	1999-06-14 09:36:00 Monday	1999-06-17 09:36:00 Thursday	1999-06-10 08:00:00 Thursday	1999-06-14 17:00:00 Monday	2.2 days	2.2 days

Milestone Tasks Web Report

The Milestone Tasks Web Report shows a list of Tasks that are defined to be Milestone Tasks with their corresponding Task ID, Start Date, Finish Date, Baseline Start Date, Baseline Finish Date, Start Variance, and Finish Variance. This report provides stakeholders information related to the status of milestone tasks along with their % Completion status, Duration and Work Hours along with the currently project Finish Date, which is relevant for unfinished tasks.

Milestone Tasks Report

Project Name: detail_inception_iter.mpp

Task ID	Milestone	% Complete	Task Name	Duration	Work Hours	Start Date	Finish Date
1	True	11%	Inception Phase	68.2 days	1935.92 hrs	1999-05-03 08:00:00 Monday	1999-08-03 09:36:00 Thursday
4	True	100%	Identify and Assess Risks	2 days	16 hrs	1999-05-03 08:00:00 Monday	1999-05-04 17:00:00 Tuesday
5	True	100%	Develop Business Case	1 day	8 hrs	1999-05-04 08:00:00 Tuesday	1999-05-04 17:00:00 Tuesday
6	True	100%	Initiate Project	1 day	8 hrs	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday
7	True	100%	Project Approval Review	1 day	8 hrs	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday

Late Milestone Tasks Web Report

The Late Milestone Tasks Web Report shows a list of Milestone Tasks in which the Finish Date is now beyond the Originally Planned Baseline Finish Date with their corresponding Task ID, Start Date, Finish Date, Baseline Start Date, Baseline Finish Date, Start Variance, and Finish Variance. This report provides stakeholders information related to the status of Late Milestone tasks that are not yet finished along with their % Completion status, projected Finish Date, and current Finish Variance.

Late MilestoneTasks Report

Project Name: detail_inception_iter.mpp

Task ID	Milestone	% Complete	Task Name	Start Date	Finish Date	Baseline Finish Date	Finish Variance
1	True	11%	Inception Phase	1999-05-03 08:00:00 Monday	1999-08-03 09:36:00 Thursday	1999-08-02 17:00:00 Monday	2.2 days

Work Hours Variance Web Report

The Work Hours Variance Web Report shows a list of defined Tasks with their corresponding Task ID, Planned Work Hours, Baseline Work Hours, Actual Work Hours, Work Hour Variance, Remaining Work Hours, % Work Hours Completed. Work Hours are synonymous with the effort required to complete the project and individual tasks. This report provides stakeholders with information related to the current status of the work effort involved in completing the project and individual tasks. The Work field shows the total amount of work required to complete each task. The Baseline Work field shows the number of originally planned work hours to complete each task. The Variance field is based on the difference between current Work hours required to complete each task and the original Baseline Work hours. The Actual field identifies the number of Actual Work Hours worked on each task. The Remaining field is the difference between current Work hours and Actual Work hours. % Work Complete is based on the number of Actual work hours divided by the Total Work hours.

Work Hours Variance Report

Project Name: detail_inception_iter.mpp

Task ID	Task Name	Work Hours	Baseline Work Hours	Actual Work Hours	Work Hours Variance	Remaining Work Hours	% Complete Work Hours
1	Inception Phase	1935.92 hrs	1929.92 hrs	277.4 hrs	36 hrs	1708.53 hrs	14%
2	Project Management	588 hrs	532 hrs	150 hrs	56 hrs	438 hrs	26%
3	Conceive New Project	40 hrs	32 hrs	40 hrs	8 hrs	0 hrs	100%
4	Identify and Assess Risks	16 hrs	8 hrs	16 hrs	8 hrs	0 hrs	100%
5	Develop Business Case	8 hrs	8 hrs	8 hrs	0 hrs	0 hrs	100%
6	Initiate Project	8 hrs	8 hrs	8 hrs	0 hrs	0 hrs	100%
7	Project Approval Review	8 hrs	8 hrs	8 hrs	0 hrs	0 hrs	100%
8	Evaluate Project Scope and Risk	32 hrs	16 hrs	32 hrs	16 hrs	0 hrs	100%
9	Identify and Assess Risks	24 hrs	8 hrs	24 hrs	16 hrs	0 hrs	100%
10	Develop Business Case	8 hrs	8 hrs	8 hrs	0 hrs	0 hrs	100%
11	Develop Software Development Plan	104 hrs	72 hrs	36.8 hrs	32 hrs	67.2 hrs	35%
12	Develop Measurement Plan	40 hrs	8 hrs	8 hrs	32 hrs	32 hrs	20%
13	Develop Risk Management Plan	8 hrs	8 hrs	5.2 hrs	0 hrs	2.8 hrs	65%
14	Develop Product Acceptance Plan	8 hrs	8 hrs	5.6 hrs	0 hrs	2.4 hrs	70%
15	Develop Problem Resolution Plan	8 hrs	8 hrs	4.4 hrs	0 hrs	3.6 hrs	55%
16	Define Project Organization and Staffing	8 hrs	8 hrs	3.6 hrs	0 hrs	4.4 hrs	45%
17	Define Monitoring & Control Processes	8 hrs	8 hrs	2.8 hrs	0 hrs	5.2 hrs	35%
18	Plan Phases and Iterations	8 hrs	8 hrs	2.8 hrs	0 hrs	5.2 hrs	35%
19	Compile Software Development Plan	8 hrs	8 hrs	2.4 hrs	0 hrs	5.6 hrs	30%
20	Project Planning Review	8 hrs	8 hrs	2 hrs	0 hrs	6 hrs	25%
21	Plan for Next Iteration	24 hrs	24 hrs	2.4 hrs	0 hrs	21.6 hrs	10%
22	Develop Iteration Plan	8 hrs	8 hrs	0.8 hrs	0 hrs	7.2 hrs	10%
23	Develop Business Case	8 hrs	8 hrs	0.8 hrs	0 hrs	7.2 hrs	10%
24	Iteration Plan Review	8 hrs	8 hrs	0.8 hrs	0 hrs	7.2 hrs	10%
25	Manage Iteration	200 hrs	200 hrs	20 hrs	0 hrs	180 hrs	10%
26	Acquire Staff	40 hrs	40 hrs	4 hrs	0 hrs	36 hrs	10%
27	Initiate Iteration	40 hrs	40 hrs	4 hrs	0 hrs	36 hrs	10%
28	Assess Iteration	40 hrs	40 hrs	4 hrs	0 hrs	36 hrs	10%
29	Iteration Evaluation Criteria Review	40 hrs	40 hrs	4 hrs	0 hrs	36 hrs	10%
30	Iteration Acceptance Review	40 hrs	40 hrs	4 hrs	0 hrs	36 hrs	10%
31	Monitor and Control Project	180 hrs	180 hrs	18 hrs	0 hrs	162 hrs	10%
32	Schedule and Assign Work	40 hrs	40 hrs	4 hrs	0 hrs	36 hrs	10%

Task Summary Web Report

The Task Summary Web Report shows a list of defined Tasks with their corresponding Task ID, Duration, Start Date, Finish Date, % Completion, Cost, and Work Hours. This report provides stakeholders with a view of % Completion, Cost to date and Work effort to date for the project and individual tasks.

Task Summary Report

Project Name: detail_inception_iter.mpp

Task ID	Task Name	Duration	Start Date	Finish Date	% Complete	Cost	Work Hours
1	Inception Phase	68.2 days	1999-05-03 08:00:00 Monday	1999-08-03 09:36:00 Thursday	14%	\$113,623.60	1985.92 hrs
2	Project Management	68.2 days	1999-05-03 08:00:00 Monday	1999-08-03 09:36:00 Thursday	23%	\$40,900.00	588 hrs
3	Conceive New Project	3 days	1999-05-03 08:00:00 Monday	1999-05-03 17:00:00 Wednesday	100%	\$2,800.00	40 hrs
4	Identify and Assess Risks	2 days	1999-05-03 08:00:00 Monday	1999-05-04 17:00:00 Tuesday	100%	\$1,200.00	16 hrs
5	Develop Business Case	1 day	1999-05-04 08:00:00 Tuesday	1999-05-04 17:00:00 Tuesday	100%	\$600.00	8 hrs
6	Initiate Project	1 day	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	100%	\$600.00	8 hrs
7	Project Approval Review	1 day	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	100%	\$400.00	8 hrs
8	Evaluate Project Scope and Risk	3 days	1999-05-06 08:00:00 Thursday	1999-05-10 17:00:00 Monday	100%	\$2,400.00	32 hrs
9	Identify and Assess Risks	3 days	1999-05-06 08:00:00 Thursday	1999-05-10 17:00:00 Monday	100%	\$1,800.00	24 hrs
10	Develop Business Case	1 day	1999-05-07 08:00:00 Friday	1999-05-07 17:00:00 Friday	100%	\$600.00	8 hrs
11	Develop Software Development Plan	10.2 days	1999-05-31 08:00:00 Monday	1999-06-14 09:36:00 Monday	33%	\$7,600.00	104 hrs
12	Develop Measurement Plan	5 days	1999-05-31 08:00:00 Monday	1999-06-07 12:00:00 Monday	20%	\$3,000.00	40 hrs
13	Develop Risk Management Plan	1 day	1999-06-01 08:00:00 Tuesday	1999-06-07 17:00:00 Monday	63%	\$600.00	8 hrs
14	Develop Product Acceptance Plan	1 day	1999-06-02 08:00:00 Wednesday	1999-06-08 12:00:00 Tuesday	70%	\$600.00	8 hrs
15	Develop Problem Resolution Plan	1 day	1999-06-03 08:00:00 Thursday	1999-06-09 08:48:00 Wednesday	53%	\$600.00	8 hrs
16	Define Project Organization and Staffing	1 day	1999-06-04 08:00:00 Friday	1999-06-09 15:24:00 Wednesday	43%	\$600.00	8 hrs

Task Tracking Web Report

The Task Tracking Web Report shows a list of defined Tasks with their corresponding Task ID, Actual Start Date, Actual Finish Date, % Completion, Actual Duration, Remaining Duration, Actual Cost, and Actual Work Hours. This report provides stakeholders with Actuals information for Start Date, Finish Date, Duration, Cost, and Work effort to date for the project and individual tasks.

Task Tracking Report

Project Name: detail_inception_iter.mpp

Task ID	Task Name	Actual Start Date	Actual Finish Date	% Complete	Actual Duration	Remaining Duration	Actual Cost	Actual Work Hours
1	Inception Phase	1999-05-03 08:00:00 Monday	NA	14%	9.57 days	38.63 days	\$17,596.56	277.4 hrs
2	Project Management	1999-05-03 08:00:00 Monday	NA	23%	16.92 days	51.28 days	\$10680.00	150 hrs
3	Conceive New Project	1999-05-03 08:00:00 Monday	1999-05-05 17:00:00 Wednesday	100%	3 days	0 days	\$2,800.00	40 hrs
4	Identify and Assess Risks	1999-05-03 08:00:00 Monday	1999-05-04 17:00:00 Tuesday	100%	2 days	0 days	\$1,200.00	16 hrs
5	Develop Business Case	1999-05-04 08:00:00 Tuesday	1999-05-04 17:00:00 Tuesday	100%	1 day	0 days	\$600.00	8 hrs
6	Initiate Project	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	100%	1 day	0 days	\$600.00	8 hrs
7	Project Approval Review	1999-05-05 08:00:00 Wednesday	1999-05-05 17:00:00 Wednesday	100%	1 day	0 days	\$400.00	8 hrs
8	Evaluate Project Scope and Risk	1999-05-06 08:00:00 Thursday	1999-05-10 17:00:00 Monday	100%	3 days	0 days	\$2,400.00	32 hrs
9	Identify and Assess Risks	1999-05-06 08:00:00 Thursday	1999-05-10 17:00:00 Monday	100%	3 days	0 days	\$1,800.00	24 hrs
10	Develop Business Case	1999-05-07 08:00:00 Friday	1999-05-07 17:00:00 Friday	100%	1 day	0 days	\$600.00	8 hrs
11	Develop Software Development Plan	1999-05-31 08:00:00 Monday	NA	33%	3.61 days	6.59 days	\$2,710.00	36.8 hrs
12	Develop Measurement Plan	1999-05-31 08:00:00 Monday	NA	20%	1 day	4 days	\$600.00	8 hrs
13	Develop Risk Management Plan	1999-06-01 08:00:00 Tuesday	NA	63%	0.65 days	0.35 days	\$390.00	5.2 hrs

Task Assignment Web Report

The Task Assignment Web Report shows a list of Assigned Tasks grouped by Resource Name with their corresponding Task ID, Assigned Work Hours, Actual Work Hours, Remaining Work Hours, Budgeted Cost, Actual Cost, and Remaining Cost. This report is useful in identifying what tasks have been assigned to which resource and tracking Actual Works and Costs to date per assigned task and Remaining Work Hours and Costs per assigned task.

Task Assignment Resource Report

Project Name: detail_inception_iter.mpp

Resource Name: Project Manager

Task ID	Task Name	Work Hours	Actual Work Hours	Remaining Work Hours	Budgeted Cost	Actual Cost	Remaining Cost
37	Identify and Assess Risks	16 hrs	16 hrs	0 hrs	\$1,300.00	\$1,300.00	\$0.00
39	Develop Business Case	8 hrs	8 hrs	0 hrs	\$600.00	\$600.00	\$0.00
42	Initiate Project	8 hrs	8 hrs	0 hrs	\$600.00	\$600.00	\$0.00
44	Identify and Assess Risks	24 hrs	24 hrs	0 hrs	\$1,800.00	\$1,800.00	\$0.00
43	Develop Business Case	8 hrs	8 hrs	0 hrs	\$600.00	\$600.00	\$0.00
47	Develop Measurement Plan	40 hrs	8 hrs	32 hrs	\$3,000.00	\$600.00	\$2,400.00
48	Develop Risk Management Plan	8 hrs	5.2 hrs	2.8 hrs	\$600.00	\$390.00	\$210.00
45	Develop Product Acceptance Plan	8 hrs	5.6 hrs	2.4 hrs	\$600.00	\$430.00	\$170.00
52	Develop Problem Resolution Plan	8 hrs	4.4 hrs	3.6 hrs	\$600.00	\$330.00	\$270.00
51	Define Project Organization and Staffing	8 hrs	3.6 hrs	4.4 hrs	\$600.00	\$270.00	\$330.00
50	Define Monitoring & Control Processes	8 hrs	2.8 hrs	5.2 hrs	\$600.00	\$210.00	\$390.00
49	Plan Phases and Iterations	8 hrs	2.8 hrs	5.2 hrs	\$600.00	\$210.00	\$390.00
48	Compile Software Development Plan	8 hrs	2.4 hrs	5.6 hrs	\$600.00	\$180.00	\$420.00
53	Develop Iteration Plan	8 hrs	0.8 hrs	7.2 hrs	\$600.00	\$60.00	\$540.00
57	Develop Business Case	8 hrs	0.8 hrs	7.2 hrs	\$600.00	\$60.00	\$540.00
60	Acquire Staff	40 hrs	4 hrs	36 hrs	\$3,000.00	\$300.00	\$2,700.00
59	Initiate Iteration	40 hrs	4 hrs	36 hrs	\$3,000.00	\$300.00	\$2,700.00
58	Assess Iteration	40 hrs	4 hrs	36 hrs	\$3,000.00	\$300.00	\$2,700.00
67	Schedule and Assign Work	40 hrs	4 hrs	36 hrs	\$3,000.00	\$300.00	\$2,700.00
66	Monitor Project Status	20 hrs	2 hrs	18 hrs	\$1,500.00	\$150.00	\$1,350.00
65	Report Status	40 hrs	4 hrs	36 hrs	\$3,000.00	\$300.00	\$2,700.00
70	Handle Exceptions and Problems	40 hrs	4 hrs	36 hrs	\$3,000.00	\$300.00	\$2,700.00
75	Identify and Assess Risks	4 hrs	0.4 hrs	3.6 hrs	\$300.00	\$30.00	\$270.00
74	Develop Business Case	4 hrs	0.4 hrs	3.6 hrs	\$300.00	\$30.00	\$270.00

Earned Value Web Report

The Earned Value Web Report shows a list of defined Tasks with their corresponding Task ID, Baseline Total Cost, Budgeted Cost of Work Performed (BCWP), Budgeted Cost of Work Scheduled (BCWS), Actual Work Hours to Date, Actual Cost to Date, and Actual Cost of Work Performed (ACWP). The BCWP column is synonymous with the current Earned Value of the Project. This report provides stakeholders with insight into the current Earned Value of the project. Earned Value analysis is useful in that it focuses on schedule and budget performance as compared to baseline plans. The purpose of earned value analysis is to measure the project's progress, and help predict its outcome. Earned value analysis addresses the question: For the current performance results we are getting on the project, are we getting our money's worth? Earned value analysis allows stakeholders to determine two important things: 1) the true cost of project results to date, and 2) the performance trend that is likely to continue for the remainder of the project.

The Baseline Cost column is the originally planned Total Cost for the project and each individual task. The Earned Value column is defined as BCWP (Budgeted Cost of Work Performed), the budgeted cost of tasks that have been completed to date. The BCWS (Budgeted Cost of Work Scheduled) column is the portion of the project's originally planned budget that should have been spent as of the report status date. The Actual Cost field is based on the cost of Actual Work Hours performed on each task to date. The ACWP (Actual Cost of Work Performed) column is defined as the actual costs of tasks that have been completed to date.

Earned Value Report

Project Name: detail_inception_001.mpp

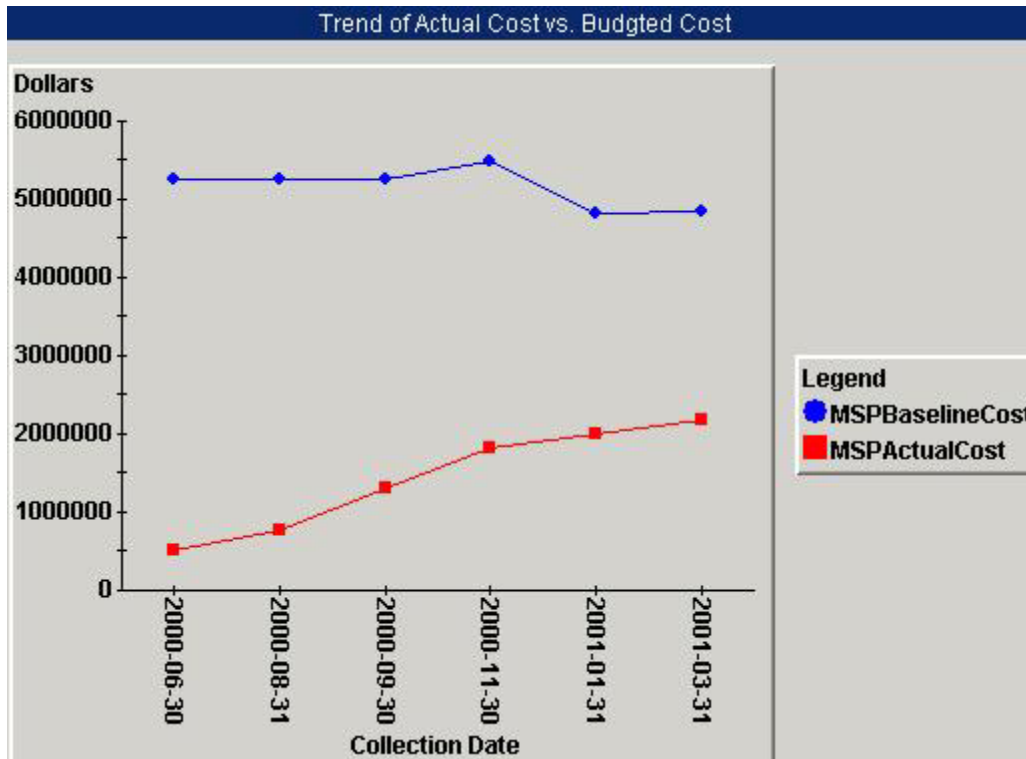
Task ID	Task Name	Baseline Cost	Budgeted Cost of Work Planned (BCWP)	Budgeted Cost of Work Scheduled (BCWS)	Actual Work Hours	Actual Cost	Actual Cost of Work Performed (ACWP)
1	Inception Phase	\$109425.60	\$15,316.56	\$109425.60	277.4 hrs	\$17,596.56	\$17,596.56
2	Project Management	\$36,300.00	\$8,400.00	\$36,300.00	150 hrs	\$10680.00	\$10680.00
3	Conceive New Project	\$2,200.00	\$2,200.00	\$2,200.00	40 hrs	\$2,800.00	\$2,800.00
4	Identify and Assess Risks	\$600.00	\$600.00	\$600.00	16 hrs	\$1,200.00	\$1,200.00
5	Develop Business Case	\$600.00	\$600.00	\$600.00	8 hrs	\$600.00	\$600.00
6	Initiate Project	\$600.00	\$600.00	\$600.00	8 hrs	\$600.00	\$600.00
7	Project Approval Review	\$400.00	\$400.00	\$400.00	8 hrs	\$400.00	\$400.00
8	Evaluate Project Scope and Risk	\$1,200.00	\$1,200.00	\$1,200.00	32 hrs	\$2,400.00	\$2,400.00
9	Identify and Assess Risks	\$600.00	\$600.00	\$600.00	24 hrs	\$1,800.00	\$1,800.00
10	Develop Business Case	\$600.00	\$600.00	\$600.00	8 hrs	\$600.00	\$600.00
11	Develop Software Development Plan	\$5,200.00	\$2,230.00	\$5,200.00	36.8 hrs	\$2,710.00	\$2,710.00
12	Develop Measurement Plan	\$600.00	\$120.00	\$600.00	8 hrs	\$600.00	\$600.00
13	Develop Risk Management Plan	\$600.00	\$390.00	\$600.00	5.2 hrs	\$390.00	\$390.00
14	Develop Product Acceptance Plan	\$600.00	\$420.00	\$600.00	5.6 hrs	\$420.00	\$420.00
15	Develop Problem Resolution Plan	\$600.00	\$330.00	\$600.00	4.4 hrs	\$330.00	\$330.00
16	Define Project Organization and Staffing	\$600.00	\$270.00	\$600.00	3.6 hrs	\$270.00	\$270.00
17	Define Monitoring & Control Processes	\$600.00	\$210.00	\$600.00	2.8 hrs	\$210.00	\$210.00
18	Plan Phases and Iterations	\$600.00	\$210.00	\$600.00	2.8 hrs	\$210.00	\$210.00
19	Compile Software Development Plan	\$600.00	\$180.00	\$600.00	2.4 hrs	\$180.00	\$180.00
20	Project Planning Review	\$400.00	\$100.00	\$400.00	2 hrs	\$100.00	\$100.00
21	Plan for Next Iteration	\$1,600.00	\$160.00	\$1,600.00	2.4 hrs	\$160.00	\$160.00
22	Develop Iteration Plan	\$600.00	\$60.00	\$600.00	0.8 hrs	\$60.00	\$60.00
23	Develop Business Case	\$600.00	\$60.00	\$600.00	0.8 hrs	\$60.00	\$60.00
24	Iteration Plan Review	\$400.00	\$40.00	\$400.00	0.8 hrs	\$40.00	\$40.00
25	Manage Iteration	\$13,000.00	\$1,300.00	\$13,000.00	20 hrs	\$1,300.00	\$1,300.00
26	Acquire Staff	\$3,000.00	\$300.00	\$3,000.00	4 hrs	\$300.00	\$300.00
27	Initiate Iteration	\$3,000.00	\$300.00	\$3,000.00	4 hrs	\$300.00	\$300.00

Microsoft Project Trend Reports

All of the Trend Charts and Graphs shown below were generated using Rational ProjectConsole from a Microsoft Project Data Collection.

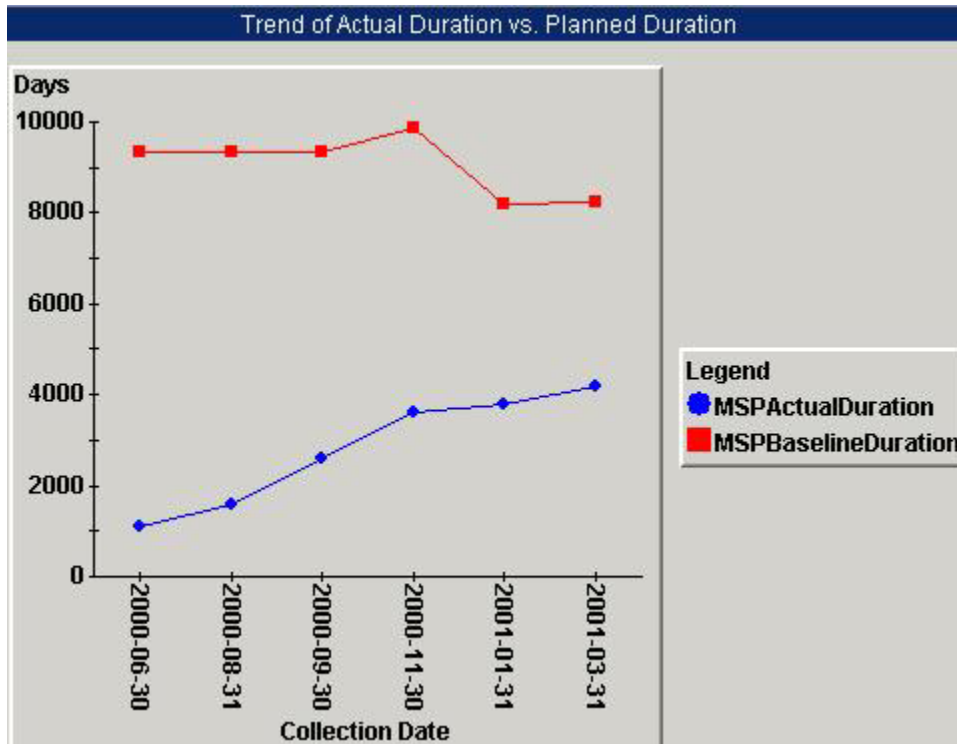
Actual vs. Budgeted Costs Trend Analysis Report

The Actual vs. Budgeted Costs Trend Analysis Report shows the trend of Actual Costs vs. Originally Planned Total Costs over the life of the project. As the project progresses, the trend of Actual Costs should get closer but not exceed the original Budgeted Costs if the project is to remain within budget.



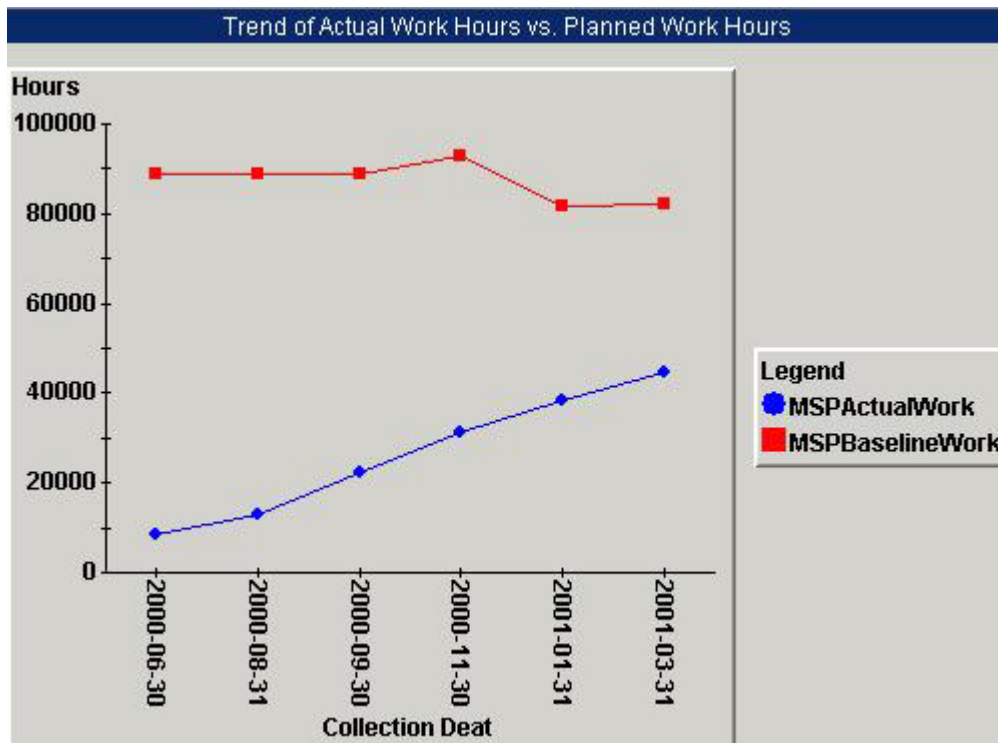
Actual vs. Planned Duration Trend Analysis Report

The Actual vs. Planned Duration Trend Analysis Report shows the trend of Actual Duration vs. Planned Duration over the life of the project. As the project progresses, the Actual Duration will get close to, but should not exceed the Planned Duration if the project is to remain on schedule.



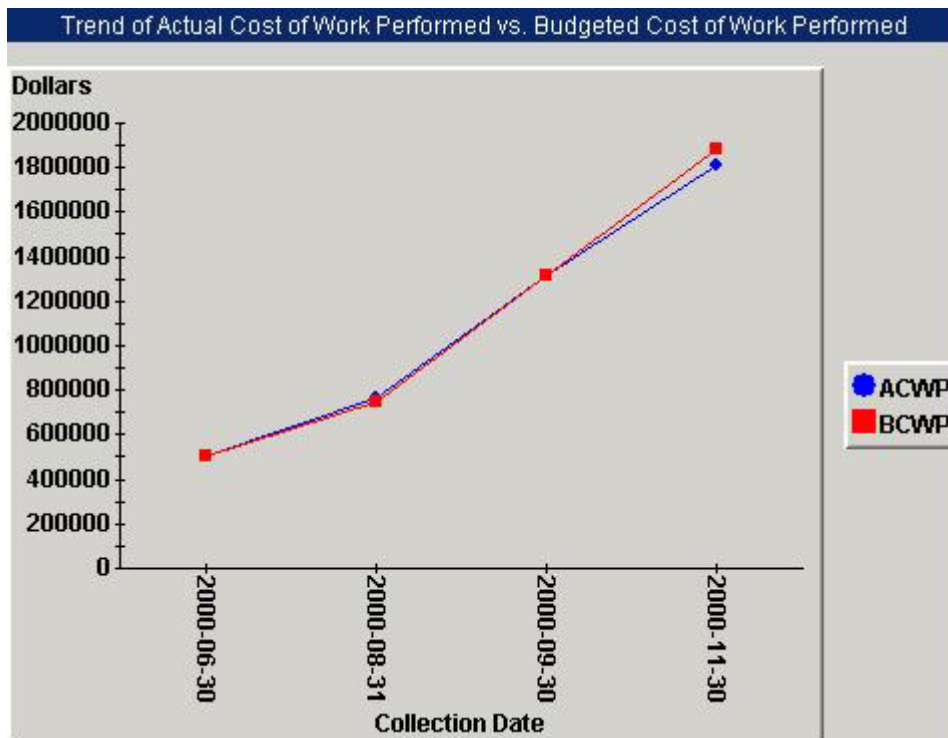
Actual vs. Planned Work Hours Trend Analysis Report

The Actual vs. Planned Work Hours Trend Analysis Report shows a trend of Actual Work Hours vs. Originally Planned Work Hours over the lifetime of the project. As the project progresses, the number of Actual Work Hours will get close to, but should not exceed the number of originally Planned Work Hours if the project is to remain on schedule and within budget. If the Actual Work Hours begin to exceed the number of Planned Work Hours, this would signal that a Change Order is required in order to continue the project.



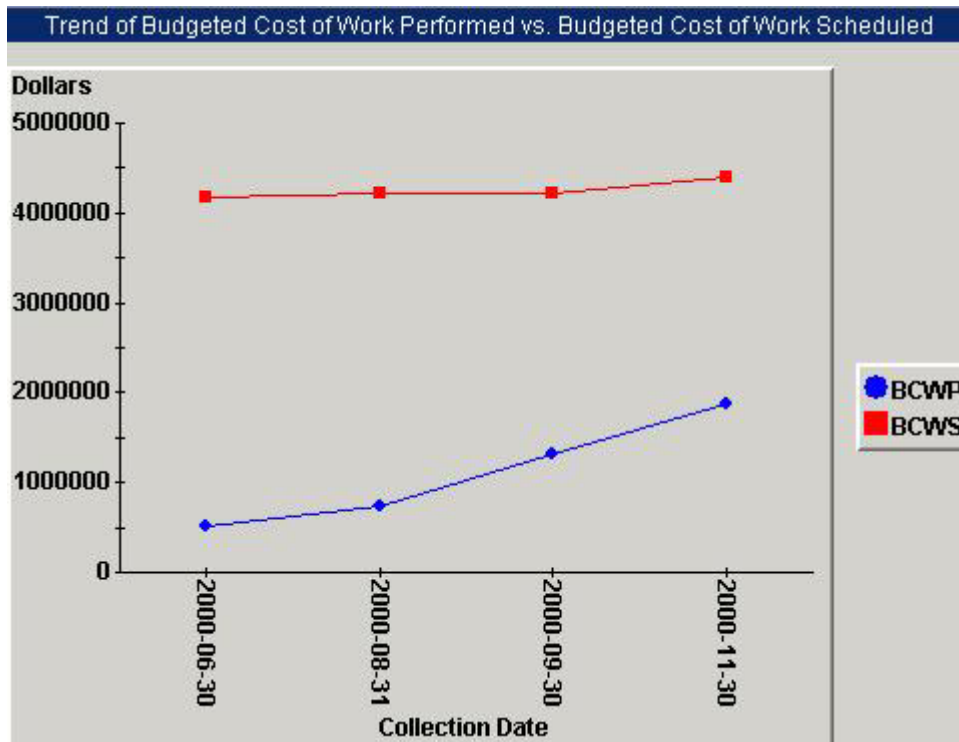
Actual Cost of Work Performed vs. Budgeted Cost of Work Performed Trend Analysis Report

The Actual Cost of Work Performed (ACWP) vs. Budgeted Cost of Work Performed (BCWP) Trend Analysis Report shows the trend of ACWP and BCWP over the life of the project. As the project progresses the ACWP will get close to, but should not exceed the BCWP. If the ACWP does exceed the BCWP, this would indicate that a Change Order might be required in order to continue the project.



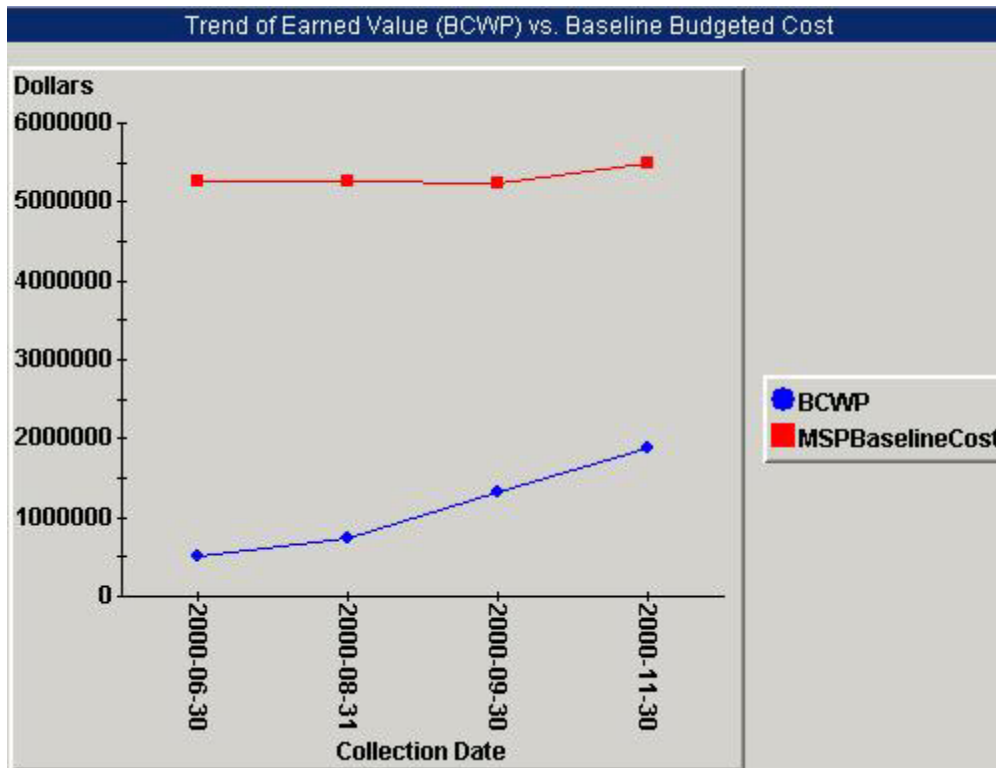
Budgeted Cost of Work Planned vs. Budgeted Cost of Work Scheduled Trend Analysis Report

The Budgeted Cost of Work Planned (BCWP) vs. Budgeted Cost of Work Scheduled (BCWS) Trend Analysis Report shows the trend of BCWP vs. BCWS over the life of the project. As the project progresses, the BCWP will become closer, but should never exceed the BCWS. If the BCWP does exceed the BCWS this would be an indication that a Change Order is required for additional budgeted work hours in order to finish the project.



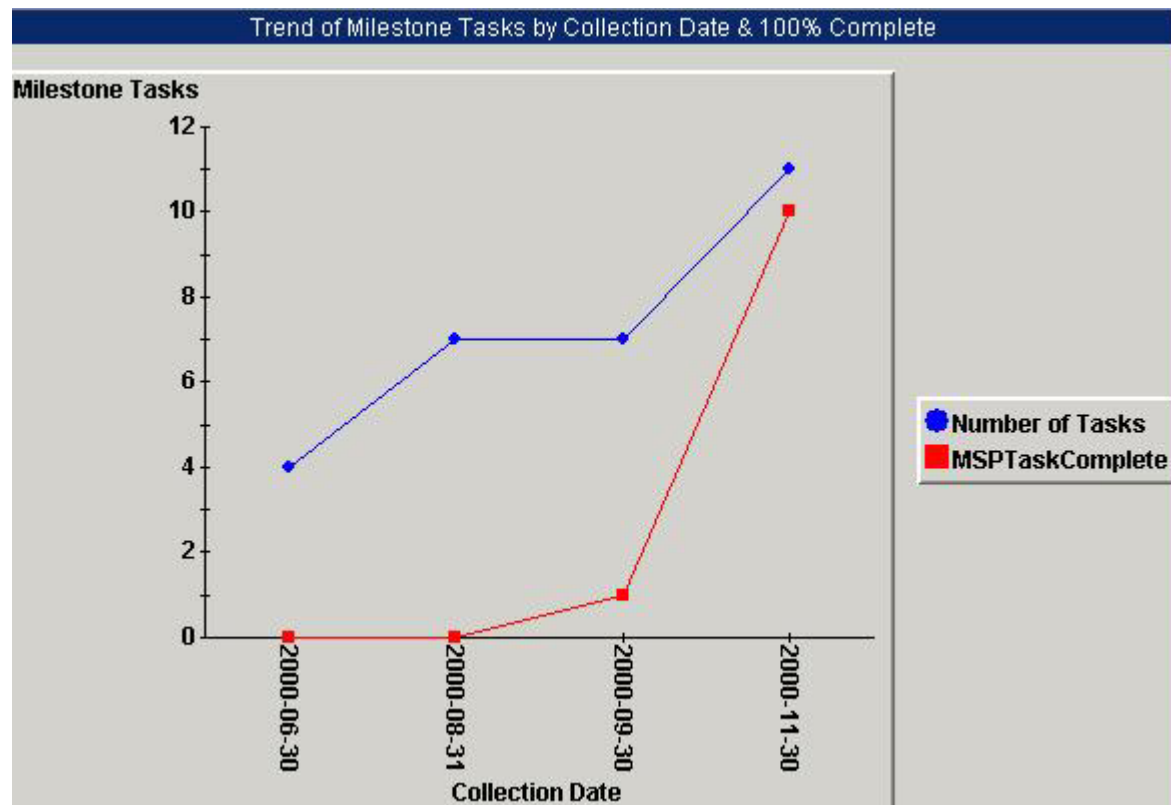
Earned Value vs. Budgeted Cost Trend Analysis Report

The Earned Value (BCWP) vs. Baseline Budgeted Cost Trend Analysis Report shows the trend of Earned Value vs. the Original Baseline Budgeted Cost over the life of the project. BCWP is used synonymously with Earned Value. Over the course of the project, the Earned Value will approach but should not exceed the Original Budgeted Cost. If the Earned Value does exceed the Baseline Budgeted Cost, this is an indication that a Change Order is required for additional funding in order to finish the project.



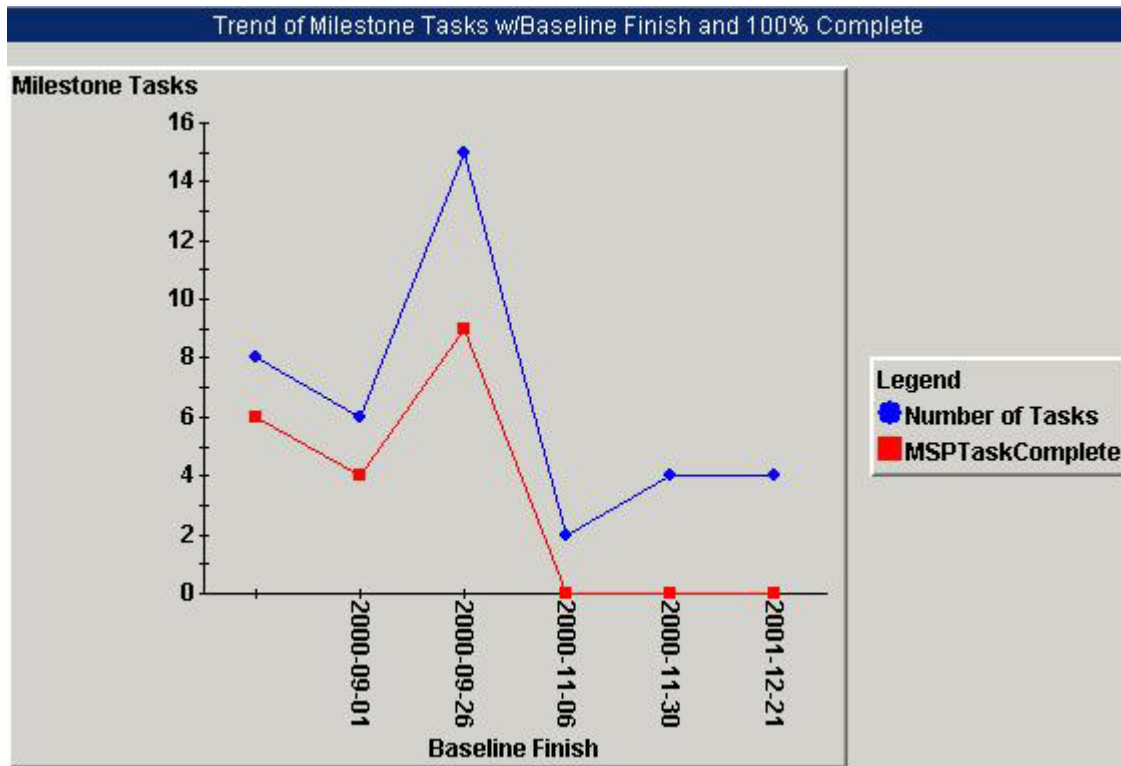
Completed Milestones by Collection Date Trend Analysis Report

The Completed Milestones by Collection Date Trend Analysis Report shows a trend of the total number of Milestone Tasks and Completed Number of Milestone Tasks by Collection Date.



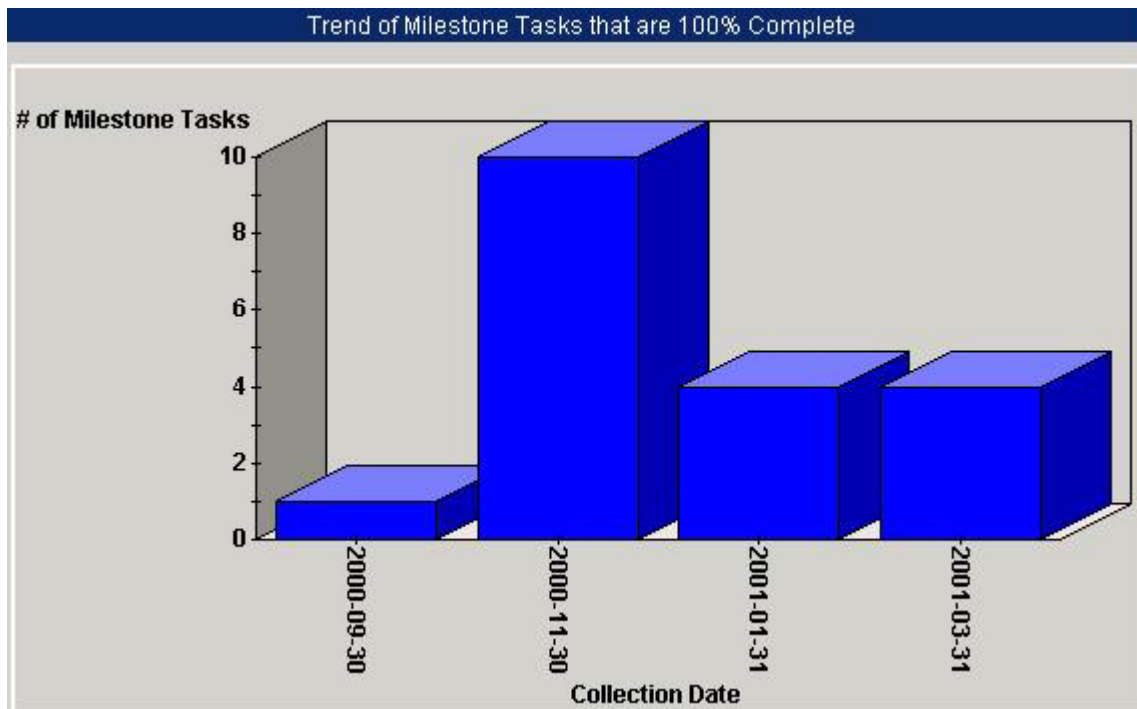
Completed Milestones by Baseline Finish Date Trend Analysis Report

The Completed Milestones by Baseline Finish Date Trend Analysis Report shows the number of Total number of Milestone Tasks and Completed Milestone Tasks by Baseline Finish Date. There is a subtle difference between this chart and the previous chart. The subtlety is that this chart is based on the Baseline Finish Date and projects a trend out into the future. Whereas, in the previous chart is based on Collection Date and shows a trend of historical data only. Notice that in this chart, the number of completed Milestone Tasks drops to zero with the 11/6/2000 data point. This trend is showing that all data points after 11/6 are in the future.



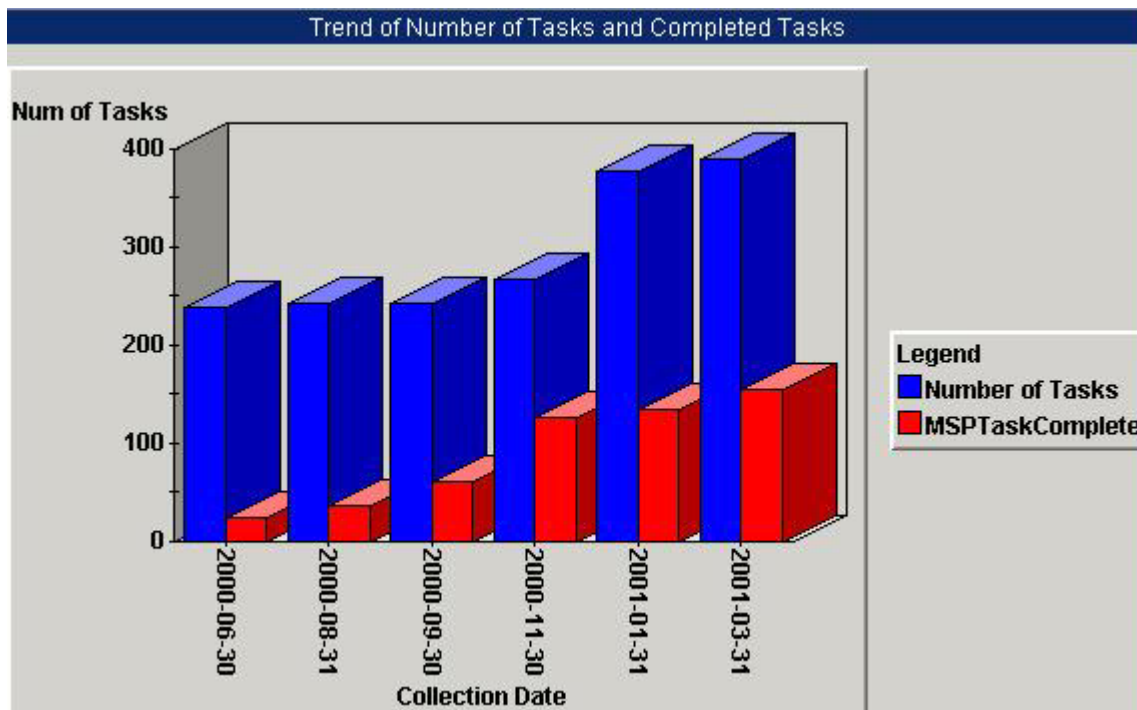
Completed Milestone Tasks Trend Analysis Report

The Completed Milestone Tasks Trend Analysis Report shows the trend of Completed Milestone Tasks by Collection Date.



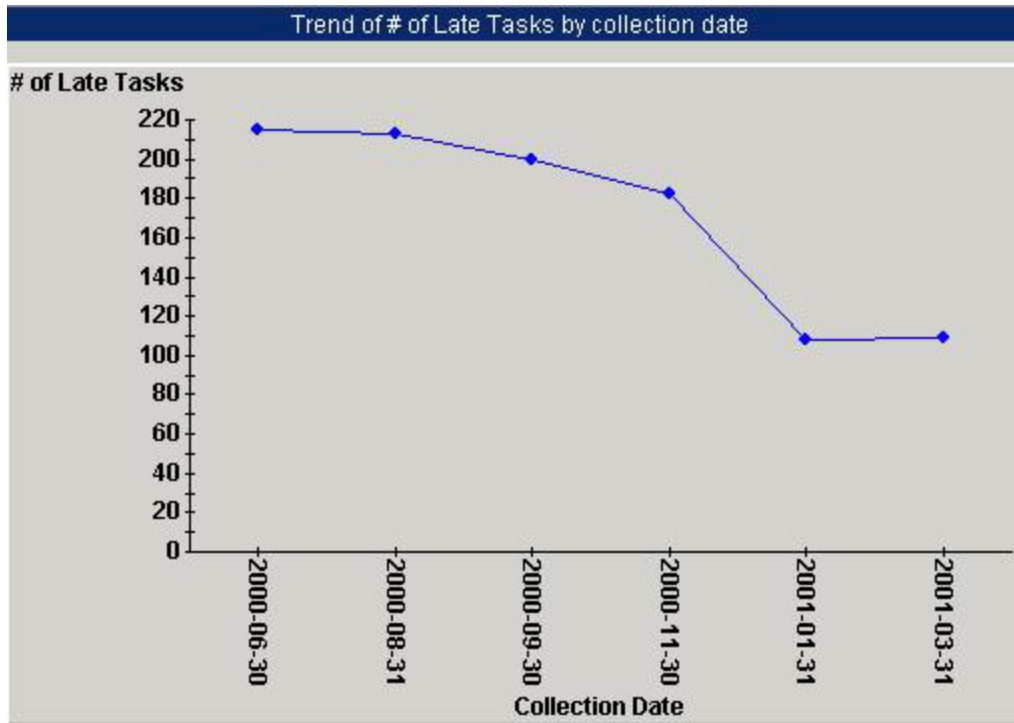
Number of Tasks vs. Completed Tasks Trend Analysis Report

The Number of Tasks vs. Completed Tasks Trend Analysis Report shows the trend of the Total number of project plan Tasks and the trend of Completed Tasks by Collection Date.



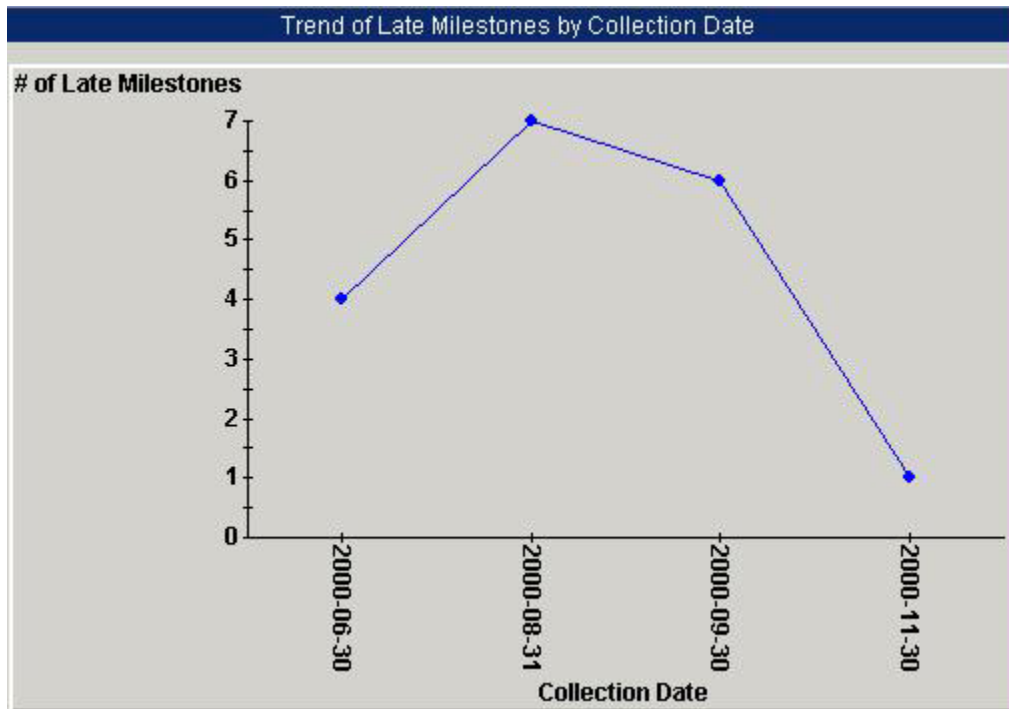
Late Tasks Trend Analysis Report

The Late Tasks Trend Analysis Report shows a trend of the number of Late Tasks by Collection Date. A Late Task is defined as a task in which the current Finish Date is beyond the originally planned Baseline Finish Date.



Late Milestone Tasks Trend Analysis Report

The Late Milestone Tasks Trend Analysis Report shows the trend of the number of Late Milestone Tasks by Collection Date. A Late Milestone Task is defined as a Task that is identified as a Milestone Task where the current Finish Date is beyond the originally planned Baseline Finish Date.



Summary

This paper introduces key metrics that can be used to measure the progress of a project using data from an MS Project plan.

Project metrics examples shown within this paper were generated, initially from Microsoft Project, and subsequently using Rational ProjectConsole, which is part of the Rational Suite®. Rational ProjectConsole can gather information from any Rational Suite tool, from text files, and from Microsoft Project. Therefore, to achieve the goal of having necessary information visible in ProjectConsole, the information must come from one of those sources.

Rational ProjectConsole enables a software development team to automatically quantify the current project status and assess development trends of their project with up-to-date metrics. On a specified scheduled or on-demand basis, metrics data is collected from the Rational Suites' development environment, and from selected 3rd party tools, and then stored in the metrics warehouse. The resulting analysis is then visually presented in graphs, charts and gauges to indicate project status at a glance.

By viewing charts and indicators, team members can quickly understand the true status of the progress and quality of their project. ProjectConsole provides all members with the ability to analyze the individual discipline metrics, low-level details, planned-versus-actual metrics, historic data, trend charts or cross discipline metrics to get a better view across the entire project. These capabilities enable the software development team to take prompt corrective actions, realize the cause for late deliverables, set realistic project expectations, forecast future project milestones, and ultimately, put the entire team in a better position to objectively and accurately measure project progress and quality.

References

- [1] – Royce, W., *Software Project Management A Unified Framework*, Addison Wesley, 1998
- [2] – Chatfield, C. & Johnson, T., *Microsoft Project 2000 Step-by-Step*, Microsoft Press, 2000
- [3] – Rational ProjectConsole Software and User Documentation version 2001A
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