Schedule Integrity Analyzer Version 2

project
SOLUTIONS CONSULTING
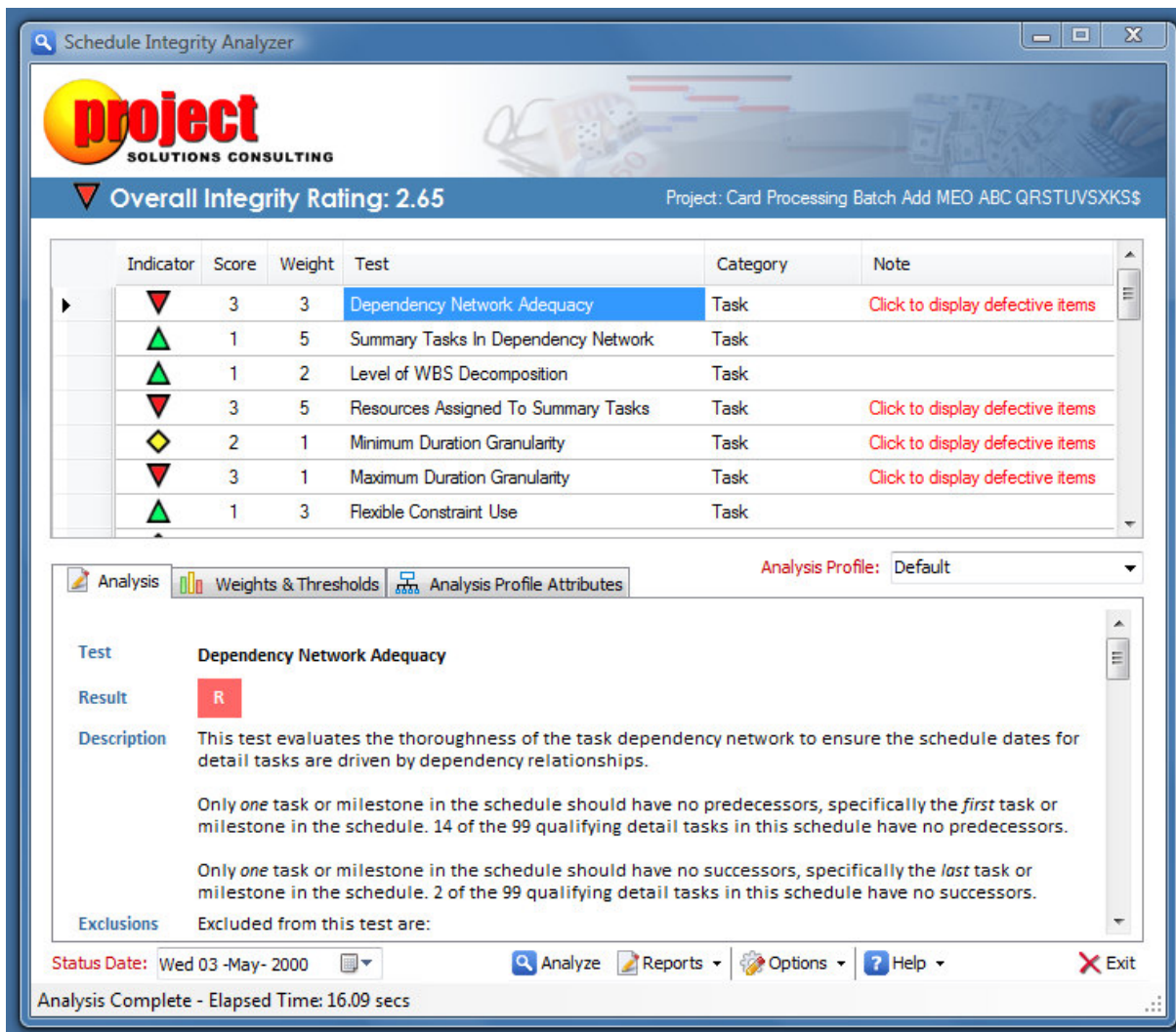
Introduction

Version 2 of the *Schedule Integrity Analyzer* (SIA) for Microsoft Project® represents a substantial increase in functionality and performance over the previous version. This document will speak to the following topics:

- What's New For Version 2?

- For Whom Is The SIA Intended?

- Some Basic Frequently Asked Questions (FAQ)

What's New For Version 2?

The SIA Is Now a Stand-alone Application

In Version 1, we designed the SIA to function as a COM add-in for Microsoft Project. Without getting into all the technical reasons, we decided that the "cons" of that approach outweighed the "pros". Making Version 2 a stand-alone application allows you to:

- Use the SIA tool on all the versions of Microsoft Project presently have installed on your local PC. For example, if you have both Project 2007 and Project 2010 installed on your PC, the SIA will connect to whichever version is running when you activate the SIA tool.

- Start the SIA, even if Microsoft Project is not presently running. If you do so, the SIA tool immediately presents a 'Schedule File Open' dialog requesting you to select one or more schedule files for analysis as illustrated in *Figure 1*:
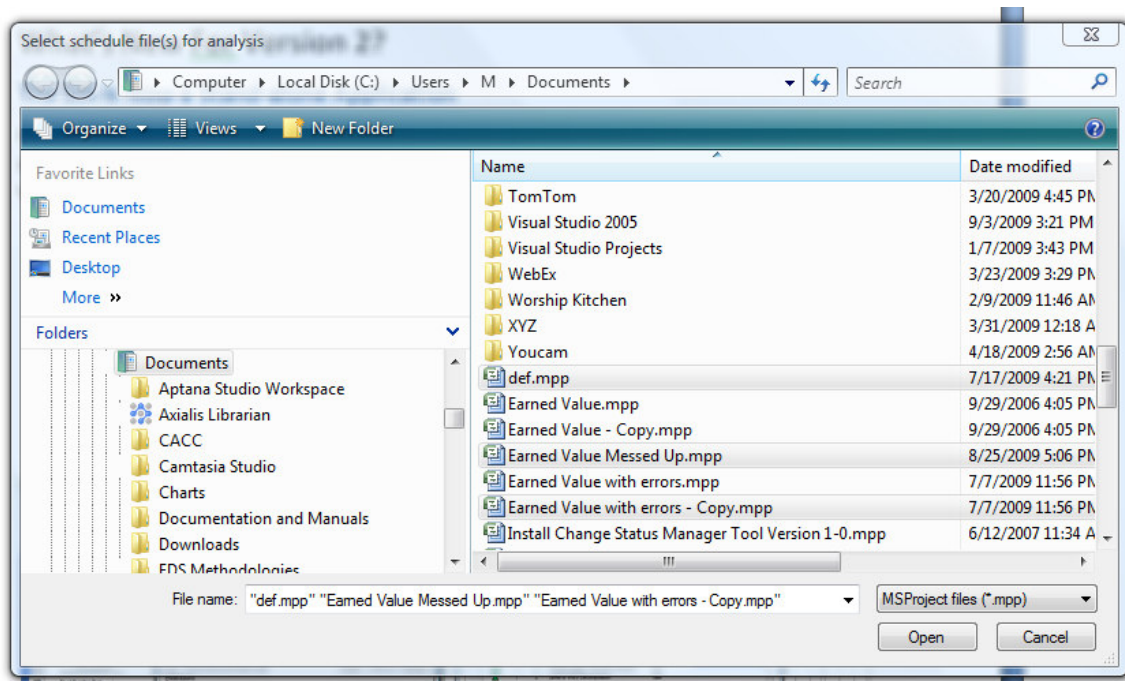
Figure 1

Once you select one or more schedules, the SIA tool activates the most recently installed version of Microsoft Project and begins its analysis of the schedule file(s) selected [there's a good reason why you can select more than one schedule file, but we'll discuss that later in this document].

- Work on your schedule while keeping the SIA tool open. As illustrated in *Figure 2*, after the SIA finished its analysis, the user is able to keep the SIA tool open while proceeding to resolve some of the problems noted during analysis.

Figure 2

Another new feature related to keeping the SIA tool open is being able to repeat either all OR the currently selected test by either:

- …double-clicking on the row for that test OR by…

- …hitting the right mouse button, which offers pop-up menu options to repeat that test, as well as context sensitive help (illustrated in *Figure 3*):

Figure 3

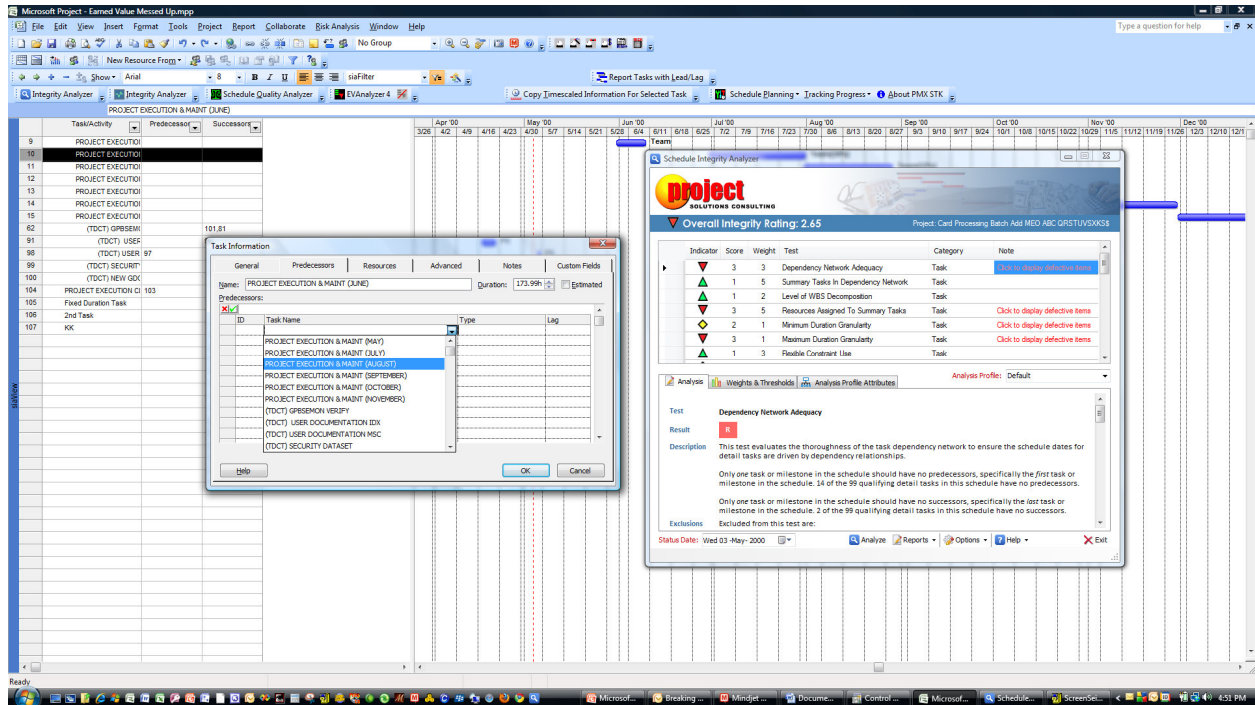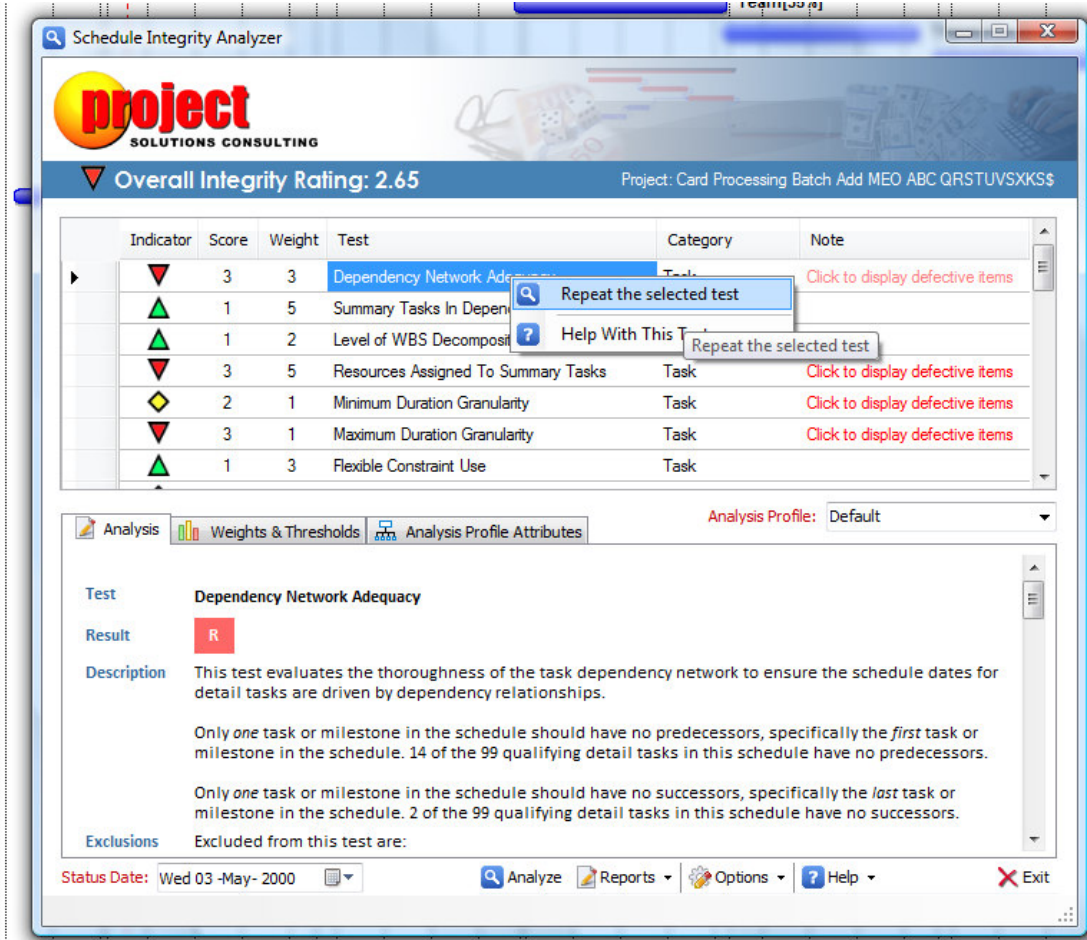## Generation of Detailed Reports

Unlike Version 1 which produced no reports, SIA Version 2 produces detailed analysis reports, opening them either in your default HTML browser or in Microsoft Word® as illustrated in *Figure 4*:
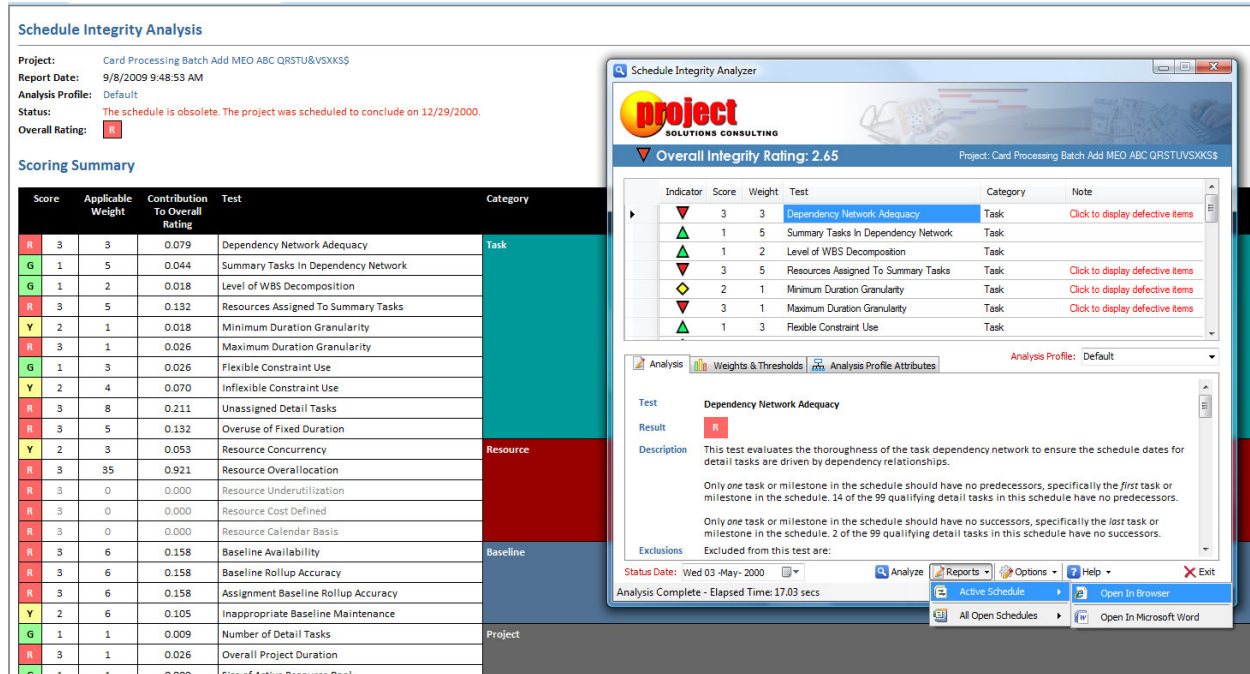
Figure 4

Processing of Multiple Schedules

SIA Version 2 is capable of analyzing all schedules presently open in Microsoft Project[1]. If you lead a program office or engage in PPM consulting, you will particularly like this new 'dash-boarding' feature. Analyzing multiple schedules can be performed in either one of two ways:

- By selecting multiple schedule files when the SIA starts and Microsoft Project is not presently active – The SIA will automatically interpret the selection of more than one schedule as a request to process multiple schedules...

- ... or by selecting 'Reports, All Open Schedules' from the SIA's toolbar if Microsoft Project is already running as shown in *Figure 5*:

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[1] A maximum of 255 schedules may open in Microsoft Project at the same time.
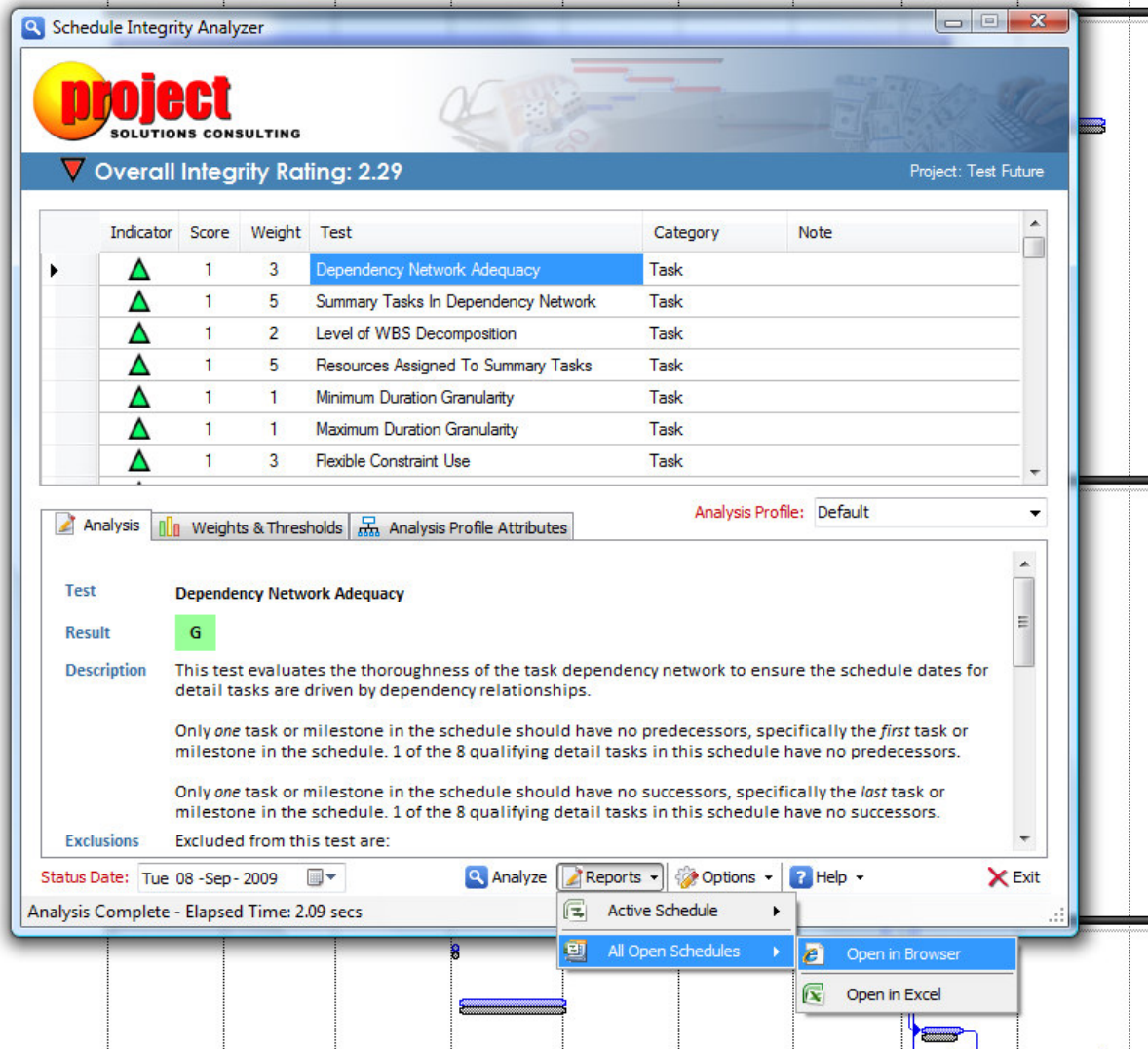
Figure 5

The processing of multiple schedules results in the creation of a dashboard, summarizing each project. Detailed reports (as previously illustrated in *Figure 4*) are also prepared and accessible using the respectively 'drill down' link for each project evaluated. The dashboard may be opened in either your default browser or in Microsoft Excel® as shown in *Figure 6*:

Figure 6

For ease of access, all reports and dashboards are written to your *My Documents* folder under **Schedule Integrity Analyzer\Reports** as shown in *Figure 7*:
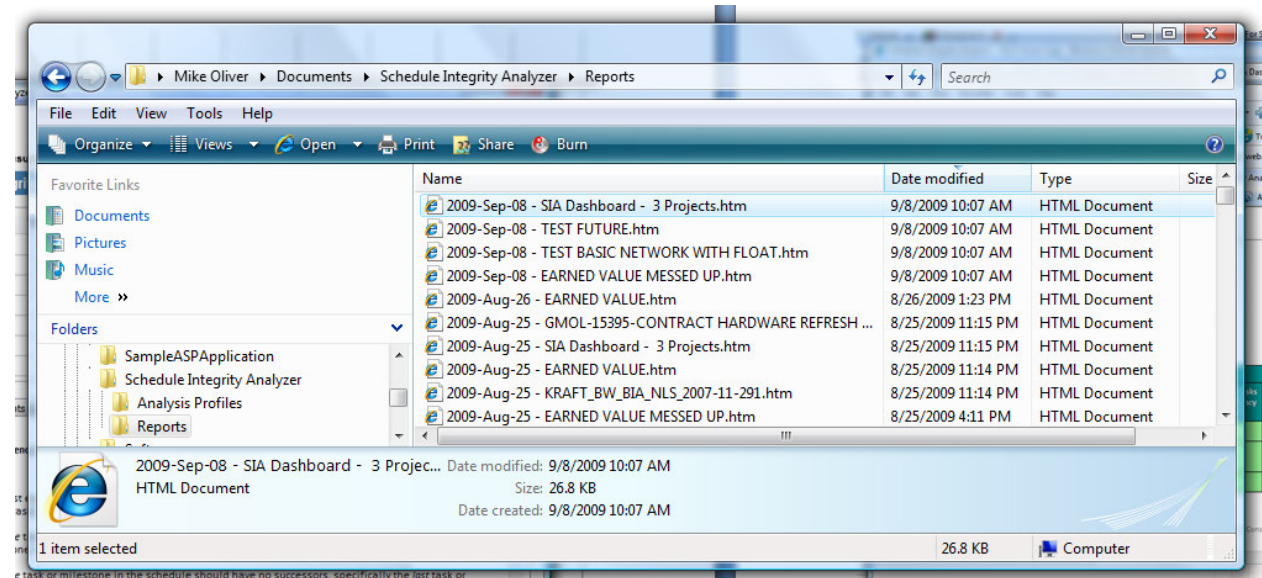
Figure 7

Added New Test to Detect Inappropriate Baseline Maintenance

The Microsoft Project application is rather lenient on ensuring integrity of schedule baselines. Without meticulous task by task visual analysis, it's rather difficult to detect a sit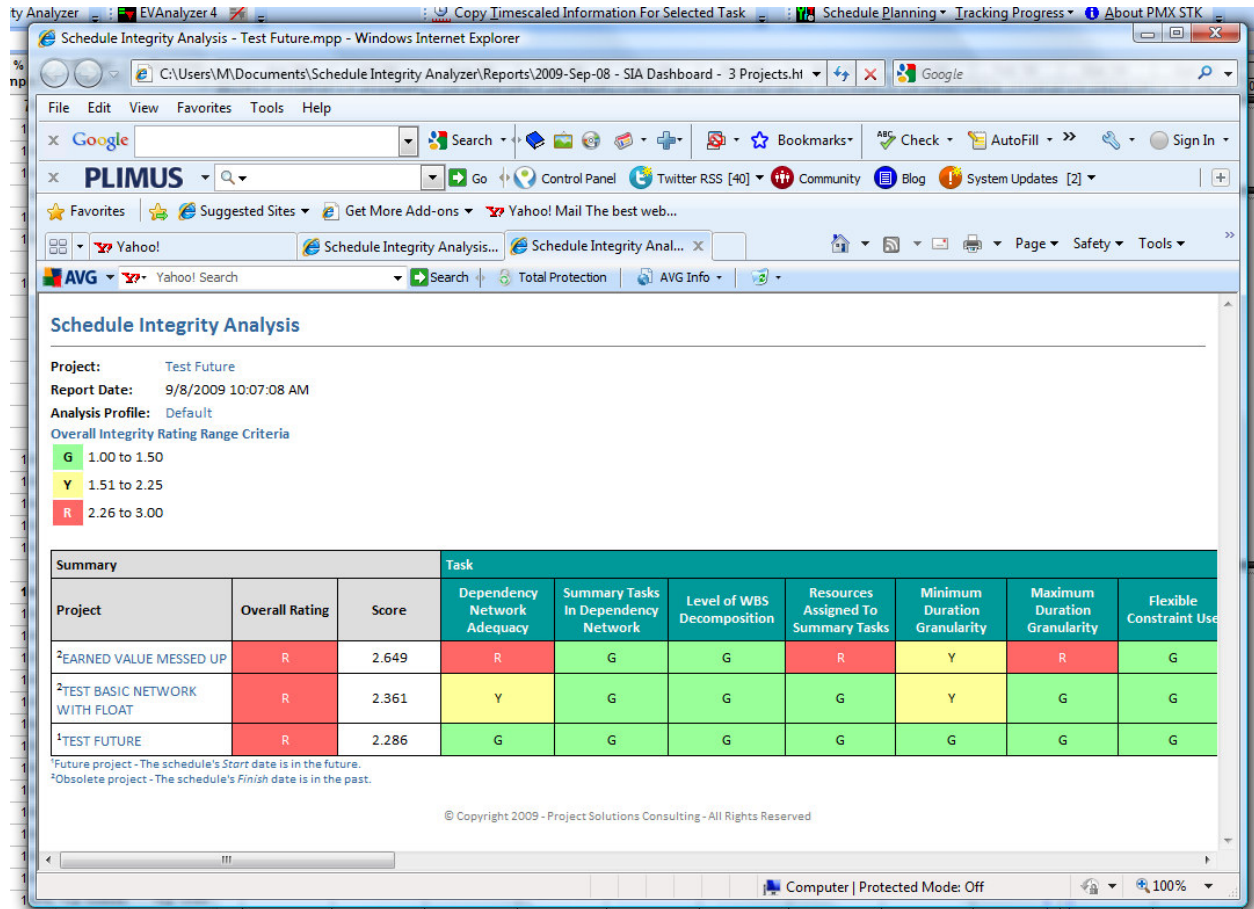uation where someone has either deliberately or inadvertently reset baselines on one or more tasks which have either already completed or are in-progress. SIA Version 2 now includes a new test to detect contexts in which such inappropriate maintenance of baselines may have occurred.

One primary indicator of inappropriate baseline maintenance on completed or in-progress tasks is evidenced by coincidence of task splits with baseline splits as seen from the results filtered by this new test illustrated in *Figure 8*:

Figure 8

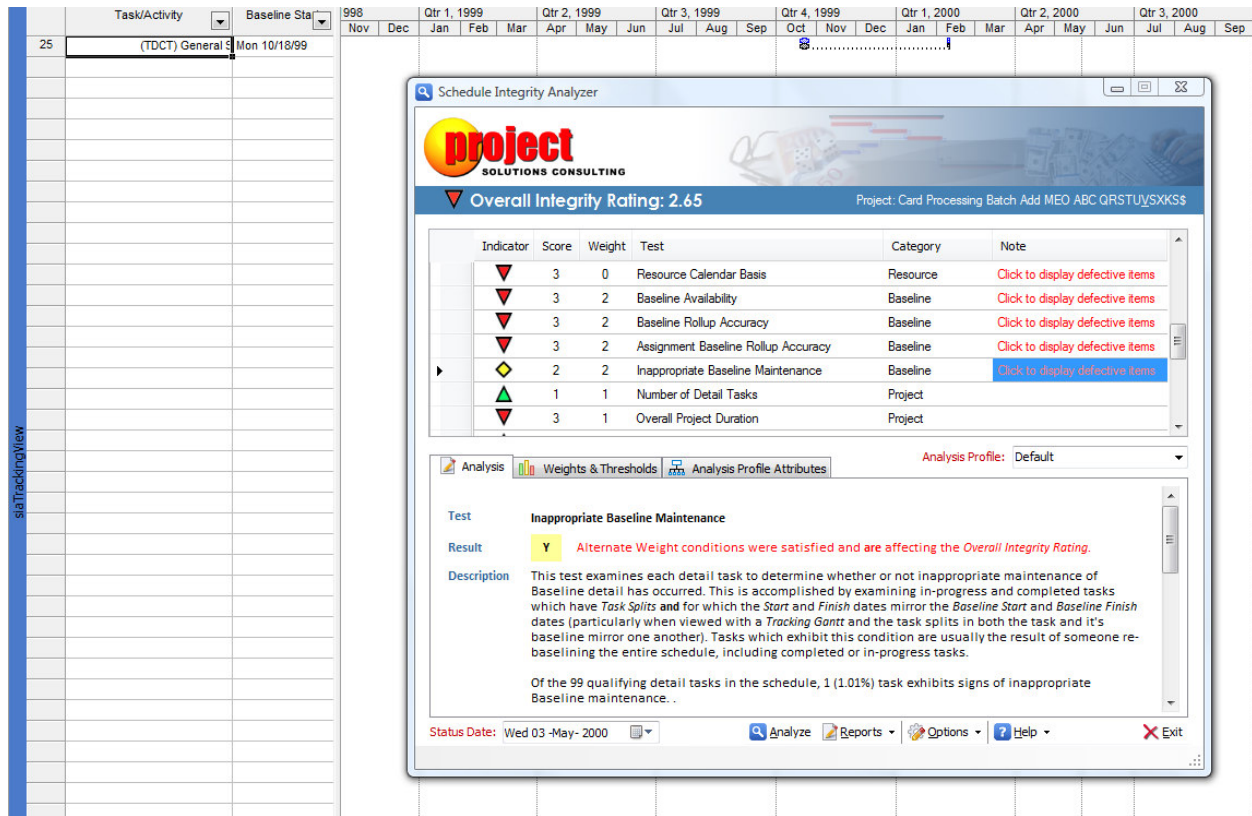Note how the splits for the baselines of the completed Task ID 25 above mirror the task splits of the completed work. It's extremely unlikely that the baselines for this task would coincidentally mirror the completed performance of task work. The only logical explanation is that at some point in the life of this schedule, this completed or in-progress task was completely (and inappropriately) rebaselined.

Added 4 New Tests to Assist with Application Interface Issues

Given the degree of utilization of Microsoft Project with both Project Server and other external applications like project portfolio management, time-tracking, and/or financial systems, issues may ensue on the exchange of information between Microsoft Project and other applications. SIA Version 2 includes a new family of *Interface* consideration tests to reduce the number of issues surrounding inter-application information exchange. Those new tests include:

- *Task Unique Names* – Looks to ensure that each task has a unique name to clearly identify it when seen in reports, time-tracking interfaces, etc. This test also looks to see that task names consist of at least two words.

- *Blank Rows In Tasks and Resources* – Although it's not unusually for schedulers to use blank rows in either Task or Resource Views as a means of visually organizing information, that

practice can on occasion cause problems for external applications with which Microsoft Project is exchanging information, including Project Server. Those blank rows are more than just 'cosmetic'. When you add a blank row to Tasks in a schedule, you're actually creating a null task object (i.e. a task with no properties like Duration, Name, etc.). The SIA will report on the existence of these blank rows (however, we can't filter them out for display since they don't have properties like ID, etc.).

- *Special Characters in Task Names* – If Microsoft Project exchanges information with other applications which are based on SQL server, special characters like **#@!"** (just a few of many) can occasionally cause problems, including with Project Server. The SIA will detect and report these using Microsoft's recommended list of special characters to avoid using in task names when Project Server is used with Microsoft Project.

- *Task Name Length* – While Microsoft Project permits task names to be 255 characters in length, some applications with which you exchange data may have length limits for task names. This test enables the monitoring of the length of task names.

The Means to Exclude One or More Tasks from Some Tests

SIA Version 2 enables you to designate for each Analysis Profile which of the Flag fields in Microsoft Project is being used to indicate when some of the Task tests should be ignored by one or more tasks (see *Figure 9*). To ensure this feature is not being overused, SIA Version 2 also includes a test to evaluate the degree to which tasks are being overridden in the schedule.
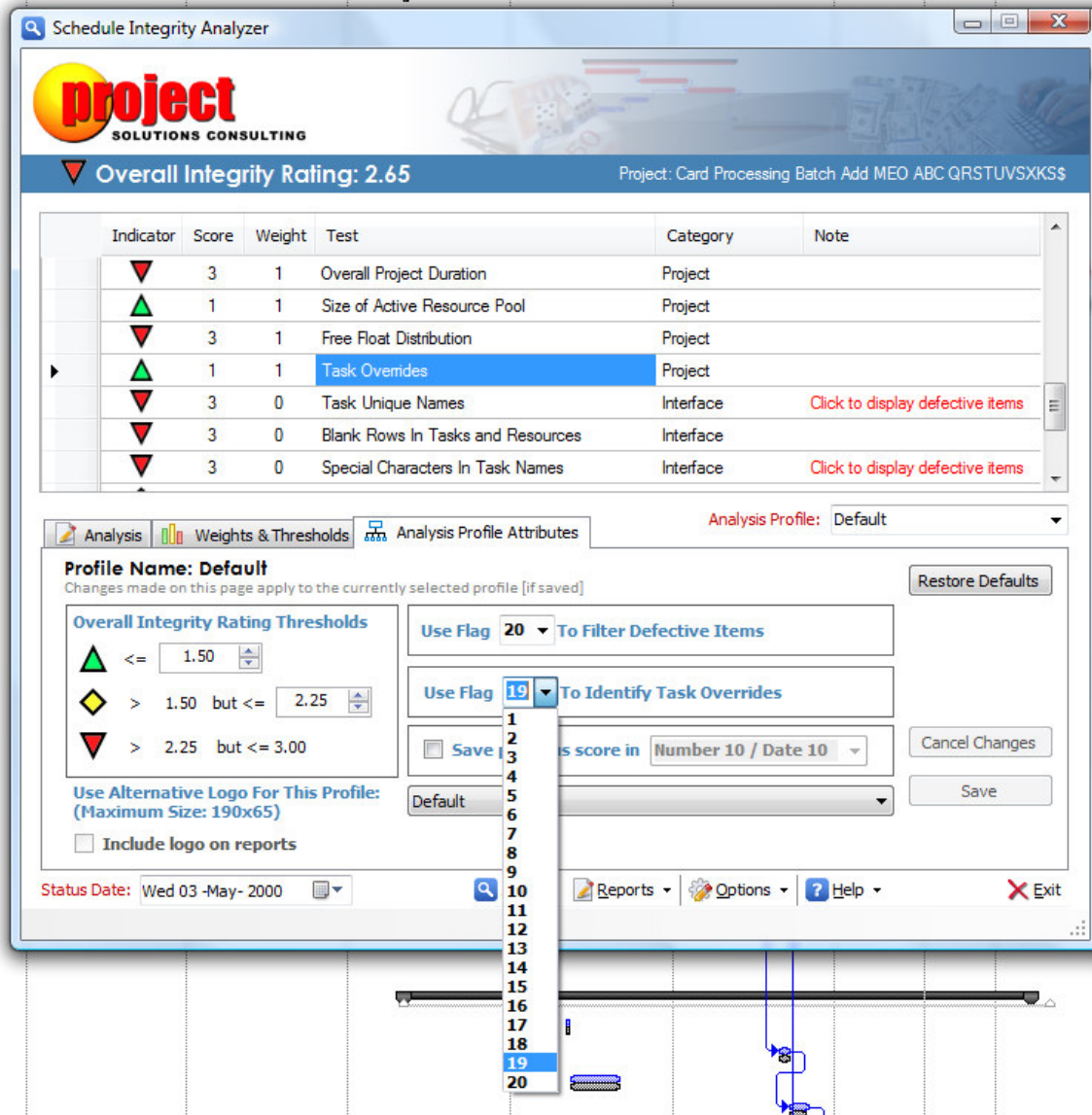
Figure 9

Added 4 New Tests to Assist with Schedule Control

SIA Version 2 includes a new category of *Schedule Control* tests to ensure the schedule is being properly updated and maintained during execution of the project plan. Those new tests include:

- *Accomplishment Currency* – This test, like the others in this category, goes active when the current date is within range of the schedule's overall *Start* and *Finish* dates. It looks to see whether or not "actuals" are being posted against scheduled work and that those updates are at

least within a specified threshold of tolerance of the *Status Date*. It also looks to see that Work is not being recorded in the future.

- *Status Date Currency* – Since Microsoft Project uses the Status Date field to evaluate Earned Value performance (and it's a date field that retains it's most recent setting upon saving the schedule), the SIA evaluates the degree to which the Status Date is being kept 'current' with the current calendar date. This helps guard against conditions where the status reporting information has become stale.

- *Rescheduling of Remaining Work* – From our experiences dealing with a few thousand project schedules for a global information technology solutions firm, we've observed that most folks are unaware of the purpose of the task *Resume* field as a means of rescheduling *Remaining Work*. This test evaluates the degree to which *Remaining Work* on incomplete tasks is being appropriate rescheduled to "resume" within the next legitimate window of calendar availability.

- *Work Progression Sequence* – This test evaluates whether or not tasks are being completed in dependency order sequence. It specifically looks to see whether or not all predecessor tasks are complete for any task on which work is currently being performed. If predecessor tasks are incomplete, work is being performed out of sequence.

Means to Create Custom Analysis Profiles

The means to create custom *Analysis Profiles* is perhaps the most exciting new feature in SIA Version 2:
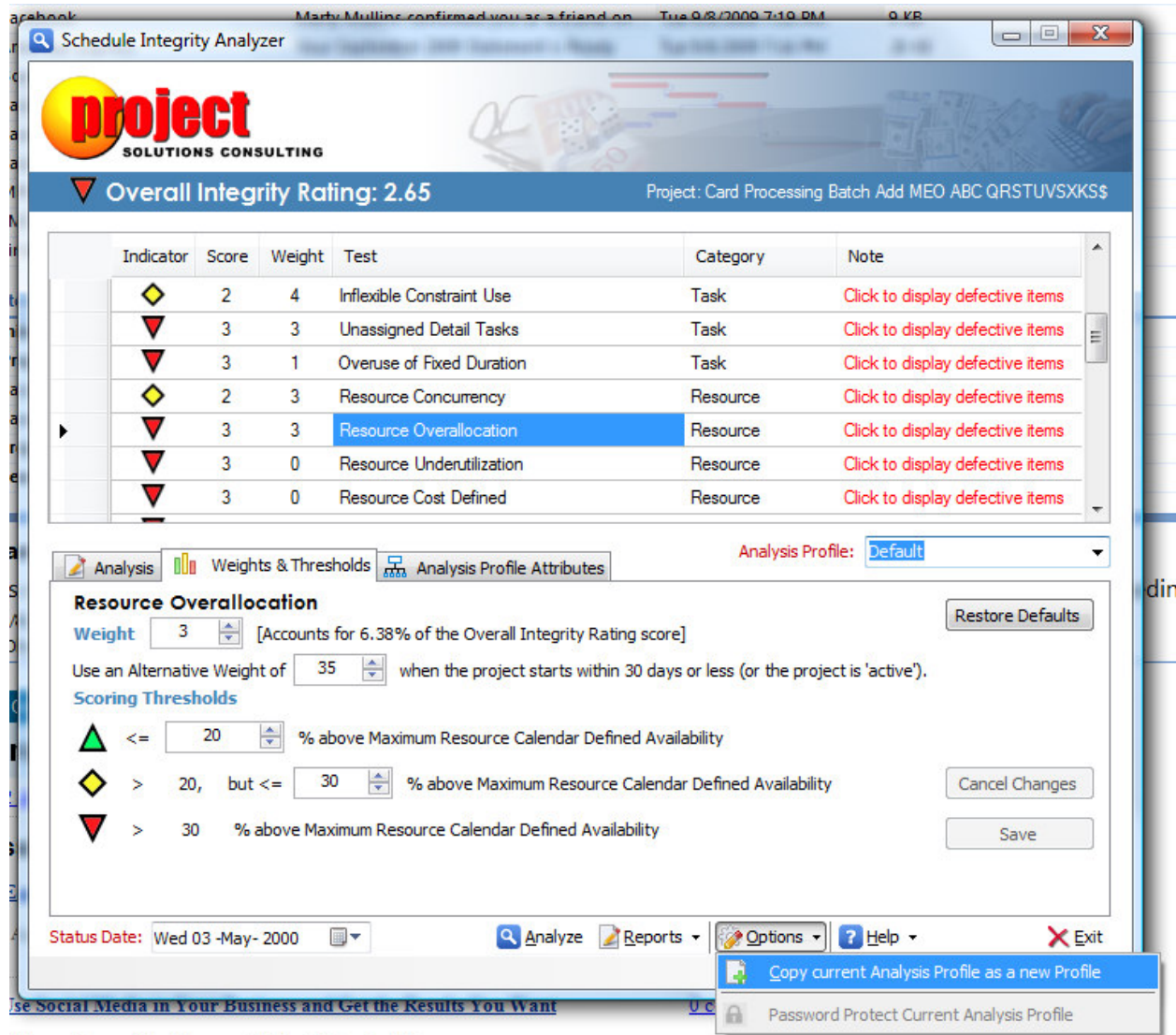
- *Analysis Profiles* make it possible to define custom testing criteria for every test as seen above in *Figure 10*. For example, if you manage a program office, you can define and apply different criteria for different types of projects. If you work as a PPM consultant, you can define specific criteria for respective clients by name.

- *Analysis Profiles* make possible customizing both the SIA user interface and reports with the inclusion of a company logo (and each new profile can have its own logo associated with it) as seen in *Figure 11*.
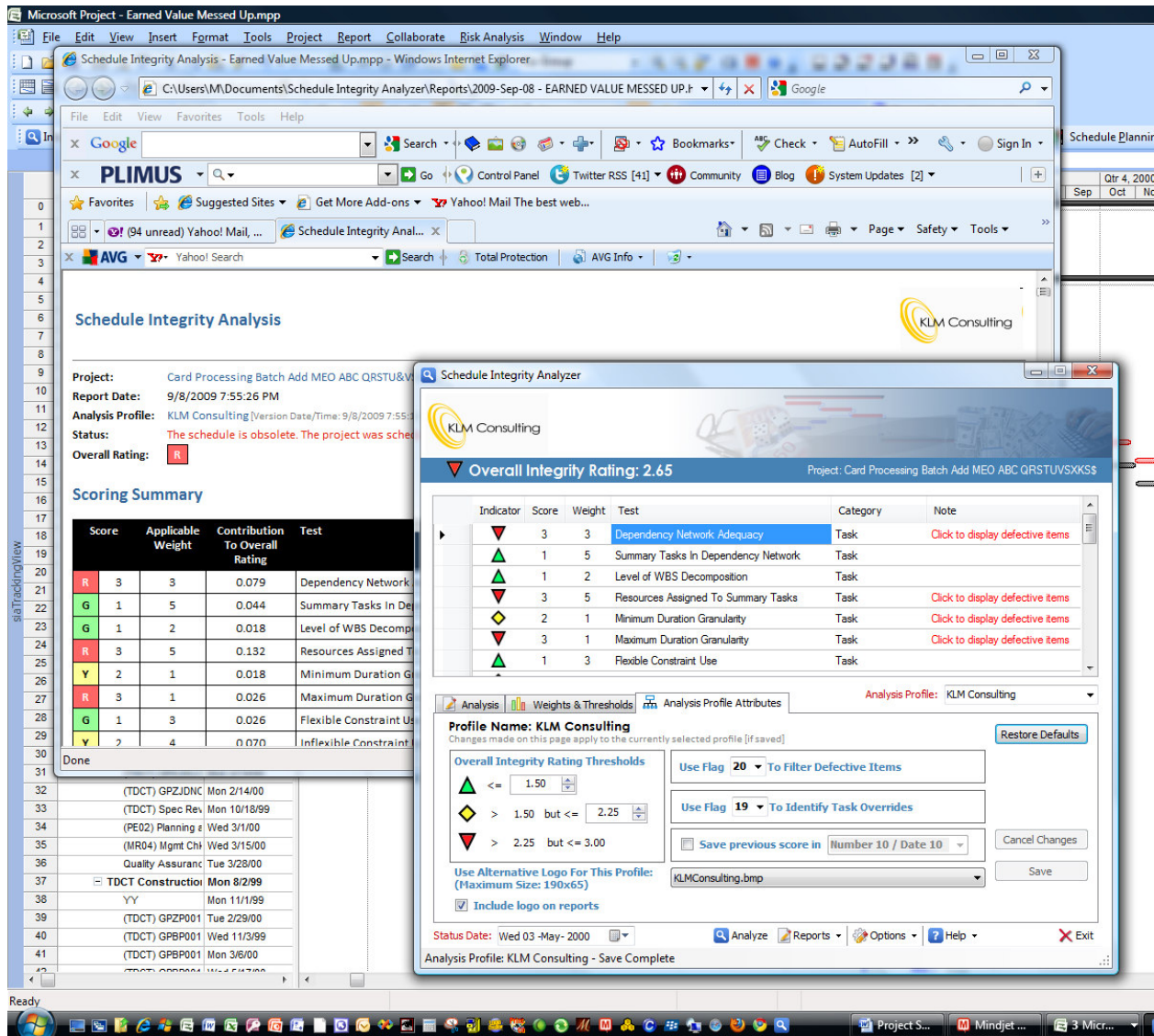
Figure 11

- *Analysis Profiles* may be password protected to prevent their modification as you distribute them for use by your project management community. Furthermore, all Analysis Profiles are encrypted, to ensure some enterprising individual doesn't attempt to alter the profile criteria by other means as illustrated below in *Figure 12*.
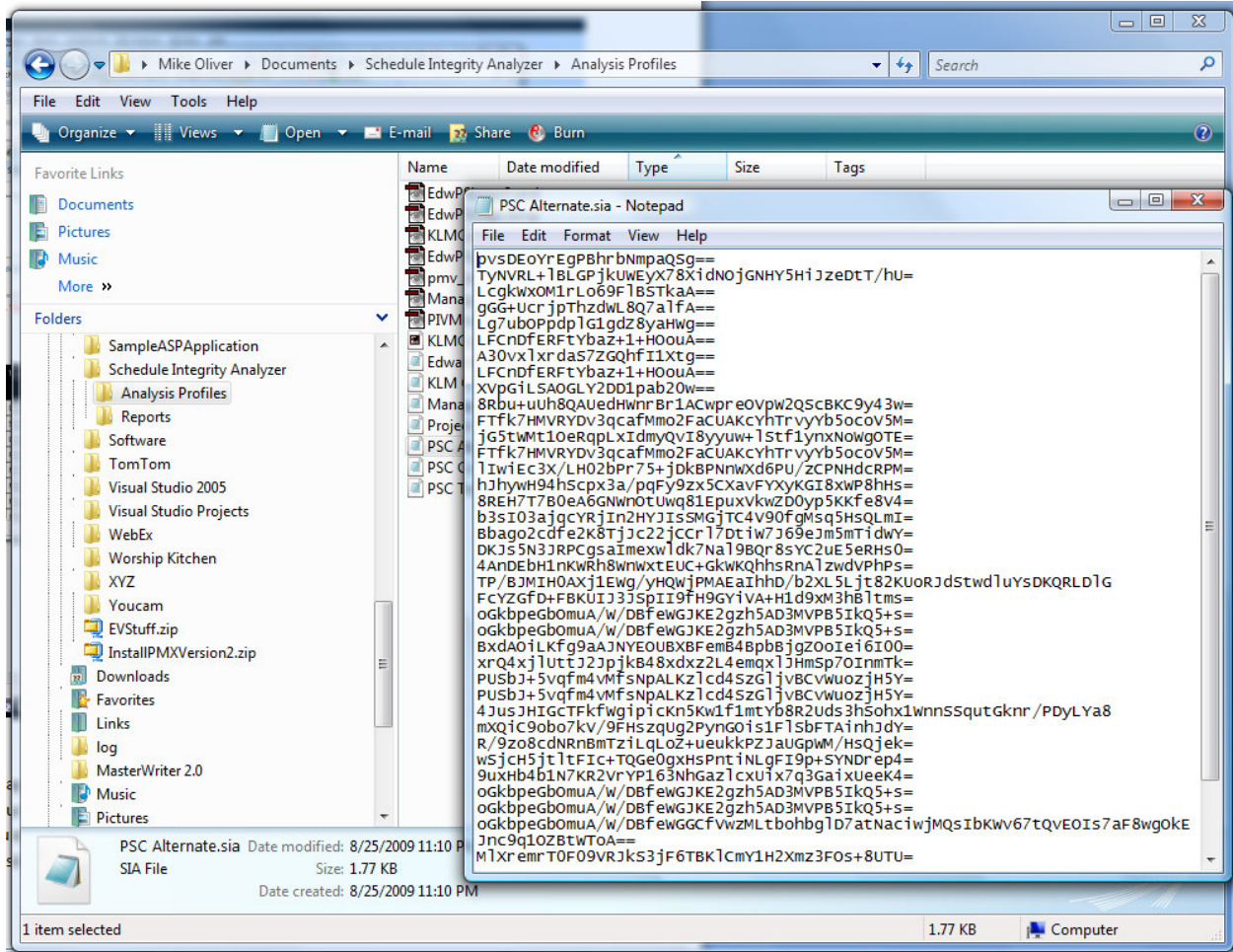
Figure 12

- All *Analysis Profiles* which you create are saved to your "My Documents" folder under **/Schedule Integrity Analyzer/Analysis Profiles**.[2] Furthermore, any *Analysis Profile* file (with the extension *.SIA) sitting in this folder is automatically picked up and accessible to the SIA the next time the application runs. This simplifies having other people in your organization use common *Analysis Profiles*. Simply attach a profile you've created to an email message, along with any logo you might have chosen that profile[3], and send it to your people with instructions to save one or both attachments to this same folder on their PC (the SIA tool automatically creates these folders on first use). The next time they run the SIA against their schedules, they'll have access to the new *Analysis Profile*.

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[2] Any logo you plan to use with an *Analysis Profile* should also be stored in this same folder. This ensures that the SIA can automatically find and use them (as well as list them as being available for use).

[3] A custom logo is *not* required for an Analysis Profile.

Customize the Thresholds and Weights of Every SIA Test

The ability to customize scoring thresholds and weights of every SIA test is another major feature of Version 2. Because the nature of each test is somewhat different, you will see differences in the number of variables which may be customized for that test. For example, in *Figure 13*, you see the typical variables for a test whose underlying nature is simply "Pass/Fail":
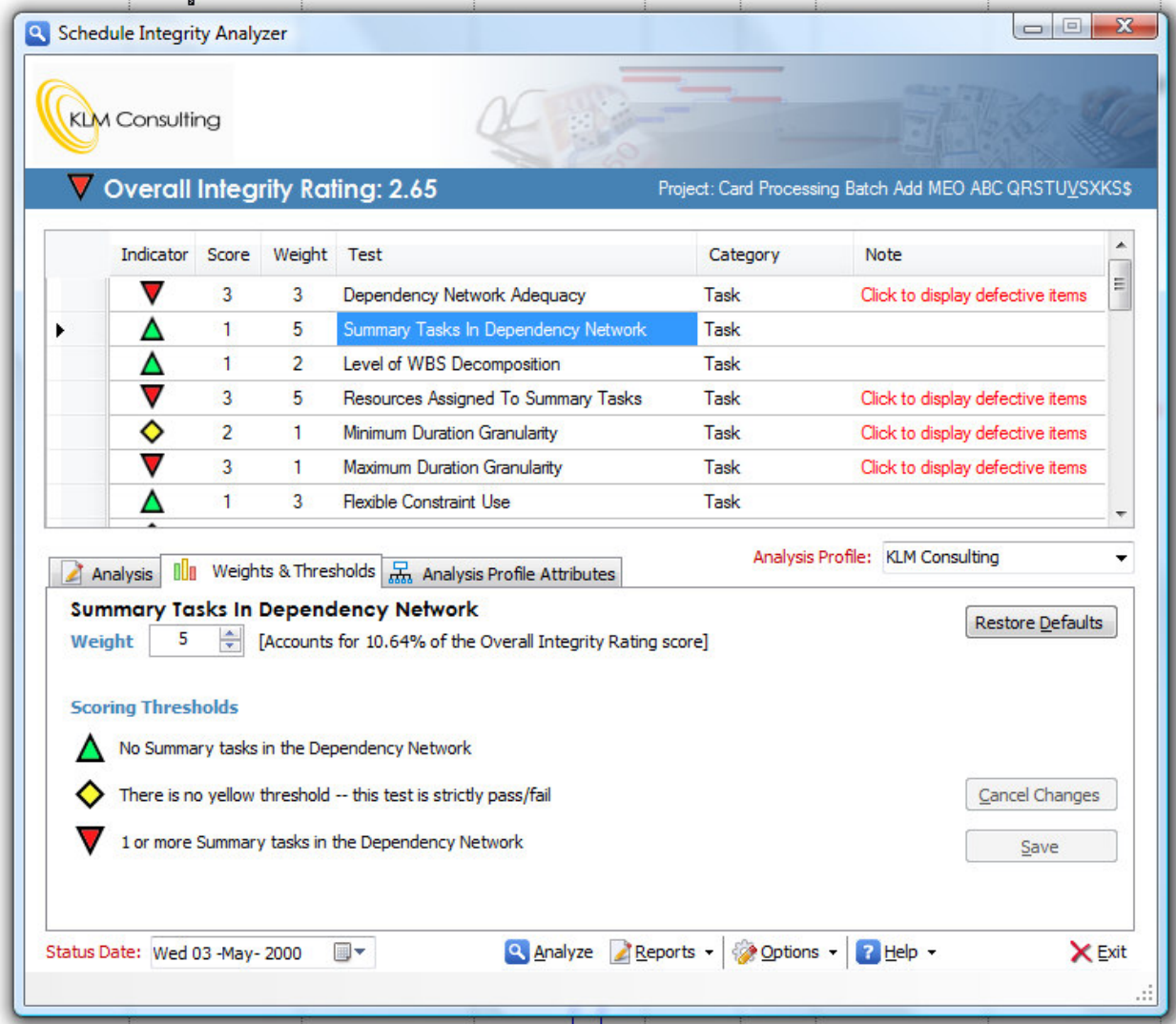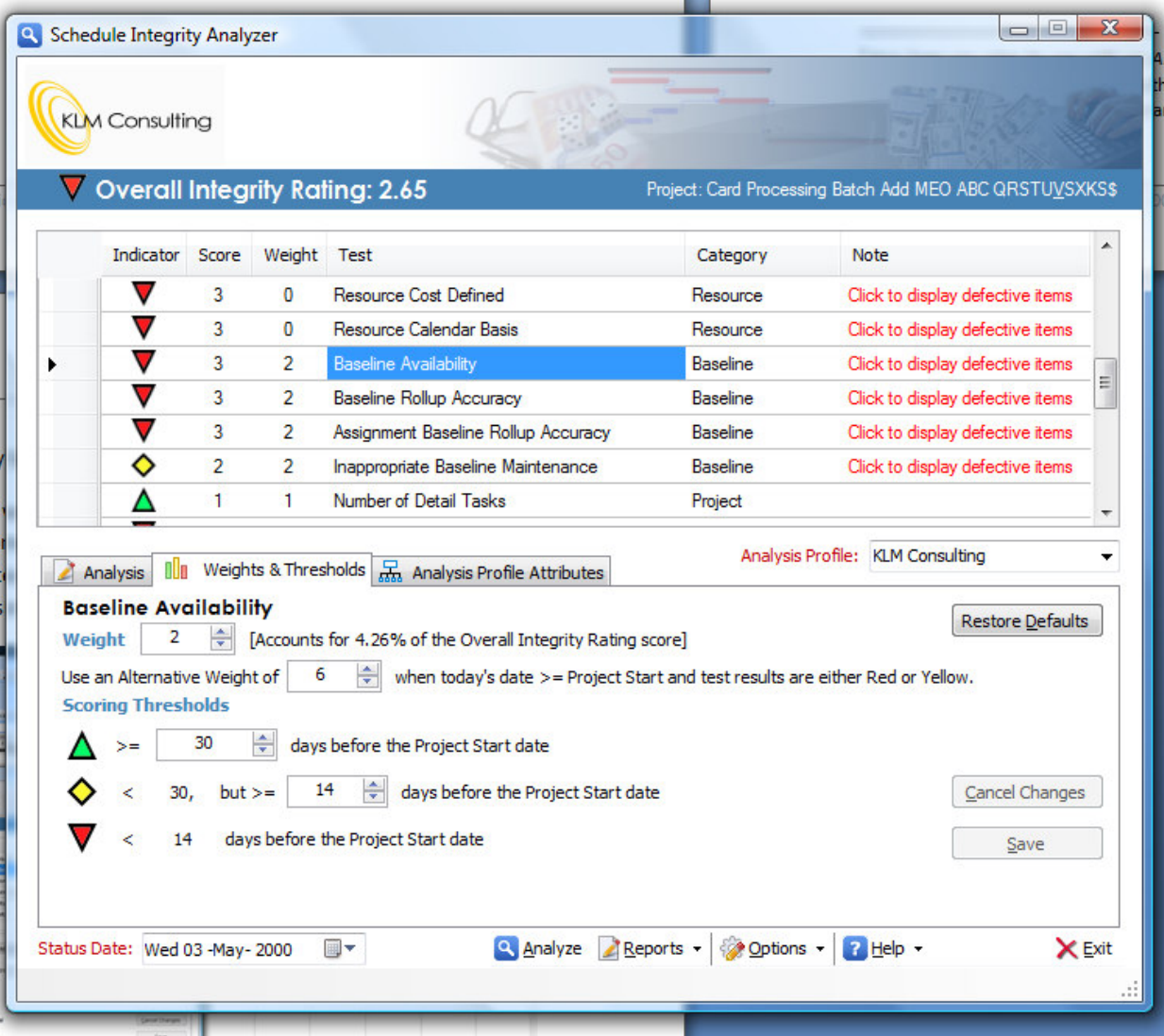

Figure 13

By contrast, the nature of the Baseline Availability test has different criteria for customization, shown below in *Figure 14*:

Figure 14

Some Basic Frequently Asked Questions (FAQ)

Question:

How do I "turn off" a test?

Answer:

Set the *Weight* to '0' (and the *Alternative Weight* to '0' if applicable). The test is still performed, but as the *Analysis Details* tab will indicate (as well as the detailed analysis report), the test is not contributing to the *Overall Integrity Rating*.

Question:

Can I use the SIA while the Microsoft Project desktop application is connected to Project Server?

Answer:

Yes. Be sure to see the Help files for the SIA for additional information about two nuances of which you should be aware when using the SIA in a Microsoft Project Server context.

Question:

Why doesn't the SIA also report on current performance conditions like forecast Finish variance, Cost variance, or Work variance?

Answer:

We wanted the SIA to treat schedule *quality* as a discreet attribute, especially seeing that the SIA's scoring engine produces an *Overall Integrity Rating*. By keeping the evaluation of schedule quality separate from current performance conditions, the *Overall Integrity Rating* serves as a reliability indicator for the validity of all quantitative performance metrics derived from Microsoft Project.