

Schedule Management

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The schedule is the most representative element of a project, and the Gantt chart is its most recognizable visual representation. The schedule is the blueprint of the project—it represents the tasks and deliverables that need to be completed to deliver the project on time. In addition, the schedule provides project teams with a map for project execution and delivers a baseline for tracking progress and managing change.

Most employees in any organization manage projects as part of their day-to-day responsibilities. For example, a marketing manager might not be trained or officially recognized as a certified project manager, but often will be simultaneously executing a number of projects, such as running a campaign and planning an event. Today, many organizations have both occasional and professionally certified project managers—Project Management Professionals (PMPs), for example—executing initiatives and using different tools and techniques to build and manage both simple and complex schedules.

Adopting best-practice scheduling methodologies and tools helps organizations achieve the following:

- **Support both occasional and professional project managers.** Schedules range in complexity from a simple list of activities to project plans with thousands of lines. Organizations require a scheduling solution that is easy for occasional project managers to use, but which can also provide the required rigor to support professional managers.
- **Create and update schedules from the desktop or online.** With geographically dispersed teams and a mobile workforce, project managers need the flexibility to build and edit project schedules on their computer desktop or on the Web—wherever they are working.
- **Get started quickly and use best practices.** Creating a schedule can be a time-consuming process. Establishing schedule management standards and using best-practice templates makes it easier for project managers to get started, and saves valuable time.
- **Effectively control and analyze schedules.** Complex and lengthy project schedules can be hard to manage and even harder to analyze. Project managers need effective tools to reduce the complexity of interrelated tasks, provide early-warning indicators, and make the schedule easier to control.
- **Easily communicate schedule information.** The Gantt chart is the universal symbol of project management, but it might not be the most intuitive view for communicating schedule information to stakeholders. Project managers need an easy way to communicate key phases and milestones with simple timeline views.

The Microsoft Enterprise Project Management (EPM) Solution provides organizations with a comprehensive scheduling system with familiar and flexible capabilities to support both the occasional and the professional project manager. The Microsoft® Fluent™ Ribbon interface in Microsoft® Project Professional 2010 and Microsoft® Project Server 2010 provides a consistent experience and ensures that the tools managers need to plan and manage projects are always at their fingertips.

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The new user-controlled scheduling feature of Project Professional 2010 blends the ease of use of a tool like Microsoft® Excel 2010 with the powerful Project 2010 scheduling engine to provide flexible planning solutions for any project manager. Project Server 2010 empowers the mobile workforce by bringing the power of Project Professional 2010 to the browser with Web-based project scheduling. Managers can take advantage of Web-based project scheduling to quickly build both simple and complex schedules online and conveniently edit the project in the browser from any location.

The EPM Solution further simplifies managing and controlling schedules with improved analysis and visual tools, so that project managers can focus on deliverables and spend less time manipulating the project schedule. Similar to the spelling checker in Microsoft Word, potential issues and inefficiencies in the schedule are visually identified by red and green wavy underlines. Project managers can use the improved Task Inspector to diagnose and overcome identified issues. Multi-Level Undo and Change Highlighting are now available in the Web-based schedule to help managers model schedule changes, online or from the desktop, with minimal risk and to quickly see all affected tasks. Using Project Professional 2010, managers can easily generate a Timeline view that gives a high-level view of the major activities in the schedule, and which managers can copy into other Office applications like Microsoft Outlook® and Microsoft PowerPoint® to share with stakeholders and team members.

Flexible, Intuitive, and Powerful Scheduling Tools

Project Professional 2010 offers improved and innovative scheduling capabilities to help project managers at all levels get started quickly and be more productive.

Project Professional 2010 includes the new Ribbon to provide a consistent and familiar experience and ensure that the tools that managers need to plan and manage projects are customizable and are always at their fingertips. Project Professional 2007 is a flexible project management tool, but many of its powerful features are not as easy to find in menus or dialog boxes. The Ribbon interface in Project Professional 2010 includes task-oriented tabs that make finding and performing activities easier and faster (see Figure 1). Contextual menus reveal the powerful features of Project Professional 2010, reducing training requirements for occasional project managers and better displaying useful tools that professional project managers regularly use.

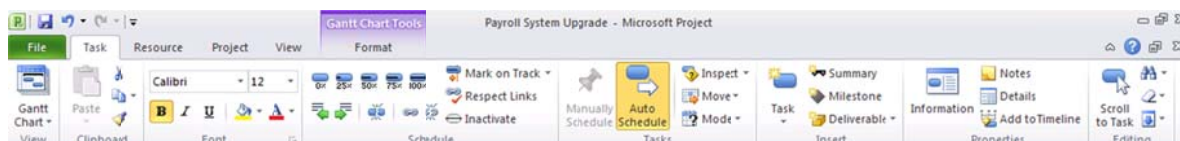


Figure 1. Project Professional 2010 – The Ribbon

The EPM Solution supports informal project scheduling in addition to the full rigor of project management best practices and techniques. Today, many occasional project managers choose to use tools like Excel 2010, Microsoft® SharePoint® Foundation 2010, and Microsoft® SharePoint® Server 2010 to build simple schedules. In addition, experienced project managers who already use Project Professional require additional flexibility. The new user-controlled scheduling in Project Professional

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2010 makes scheduling simpler while providing more flexibility and support for top-down and rolling-wave planning for project managers and organizations that need more complexity (see Figure 2).

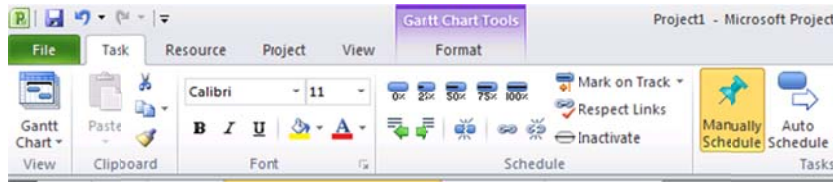


Figure 2. Project Professional 2010 – Manually Schedule and Auto Schedule buttons on the Task tab

User-controlled scheduling gives project managers the flexibility to schedule tasks using Manually Scheduled task mode or Automatically Scheduled task mode. By choosing to manually schedule tasks, managers maintain full control of the project schedule, bypassing the effects of additions or changes to the schedule, but they can simply switch back to Automatically Scheduled task mode to use best-practice planning at any time. In Manually Scheduled task mode, Project 2010 does not fill in missing information and, as in Excel, managers enter data only when they have it. As shown in Figure 3, when a new manually scheduled task is added to a project, corresponding cells are blank; Project Professional 2010 does not assume a duration or start and end dates. Managers can add the data for each task when it becomes available (see Figure 3). For example, a manager can add:

- **A start date without a duration value:** Project 2010 displays an open bracket in the Gantt Chart view. This is useful when the manager knows when an activity starts but does not have a definitive duration.
- **A duration value without a known start and end date:** Project 2010 displays the tasks in light blue on the Gantt chart to denote that additional information is required. This is useful for tracking task-level estimates.
- **Text reminders:** A task’s duration might not be known—the manager can add a note (for example, "Ask Bob") in any cell as a reminder to add the correct value when it becomes available.

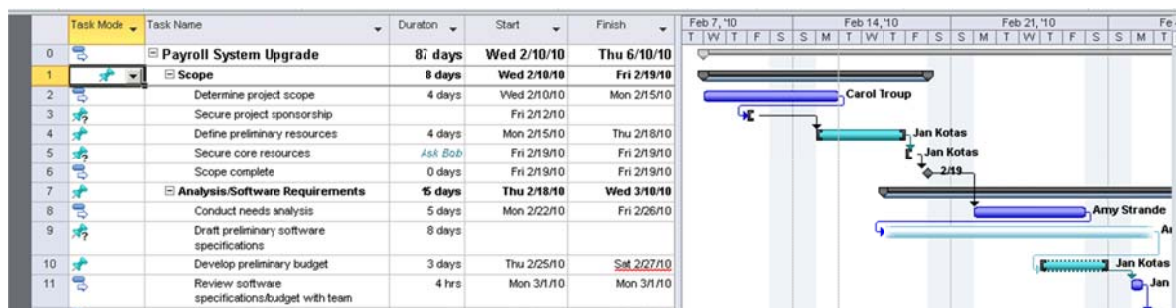


Figure 3. Project Professional 2010 – Manually Scheduled task mode

Typically, in the early planning stages of a project the manager makes high-level “napkin” estimates. User-controlled scheduling techniques help project managers take control of the schedule. In addition, Manually Scheduled task mode in Project Professional 2010 enhances support for top-down planning. In Project Professional 2007, summary tasks simply display data aggregated from underlying activities. By

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using the Manually Scheduled task mode in Project Professional 2010, managers can specify duration, and start and end dates for summary tasks, while continuing to add and finalize the details of activities within the phase. This flexibility allows a manager to communicate phase-level estimates while finalizing lower-level activities within the schedule. As indicated in Figure 4, the manager can intuitively compare the phase estimate with the sum of the duration of the underlying tasks.



Figure 4. Project Professional 2010 – Improved top-down scheduling

A manager can choose to revert from Manually Scheduled task mode to Automatically Scheduled task mode at any time by selecting the task and clicking the **Auto Schedule** button on the **Task** tab in the Ribbon.

Project Professional 2010 includes a number of usability enhancements designed to make the tool easier to use and to increase the productivity of project and business managers. The new Excel-like experience in Project Professional 2010 ensures that managers can eliminate laborious formatting by turning on text wrapping, enter data faster by using auto-complete, and easily mine data by filtering and grouping columns. With Project Professional 2010 it is also simpler and quicker to add a new column to the schedule. As shown in Figure 5, the manager can simply start typing values in an undesignated column (labeled *Add New Column*) and the tool dynamically assigns the correct column format and performs the required data validation.

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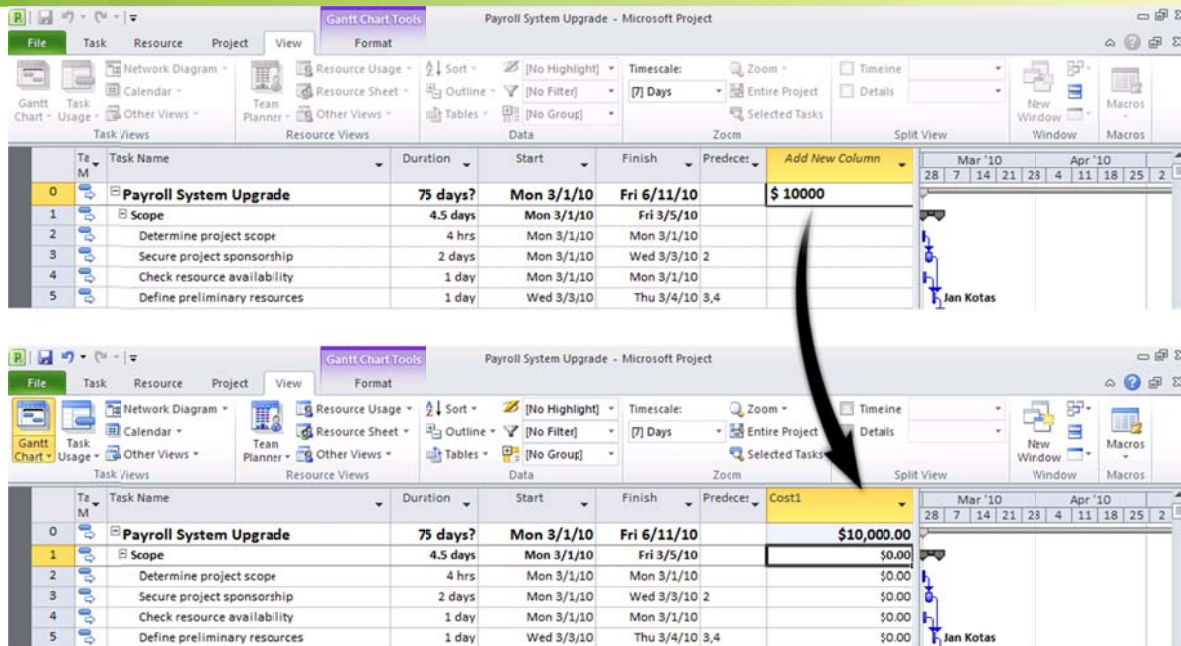


Figure 5. Project Professional 2010 – Adding a new column is easy

Project Professional 2010 makes it easy to get started. Many schedules begin their life as a hallway or e-mail conversation, or a set of bullets captured during a meeting. Project managers need an efficient way to use this information to kick-start a project schedule. Enhanced copy-and-paste capabilities in Project Professional 2010 ensure that managers can conveniently copy formatted lists from other Office applications like Word or Outlook into a blank project plan, while maintaining formatting and data fidelity (see Figure 6).

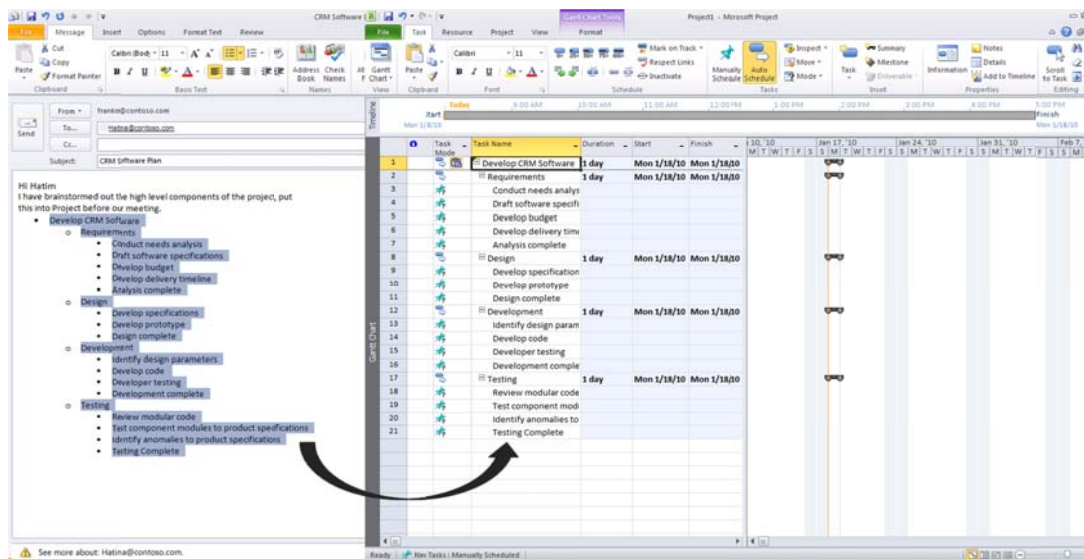


Figure 6. Project Professional 2010 – Get started quickly with enhanced copy-and-paste function

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Project management offices (PMOs) can continue to use project plan templates to package best practices and reduce the time it takes to build complex project schedules. Project plan templates provide a best-practice blueprint for a type of project—a Customer Relationship Management (CRM) rollout or marketing campaign, for example—based on empirical data (see Figure 7). The templates include all summary tasks, granular-level activities, and generic resource assignments to provide a quick-start framework that the project manager can easily extend.

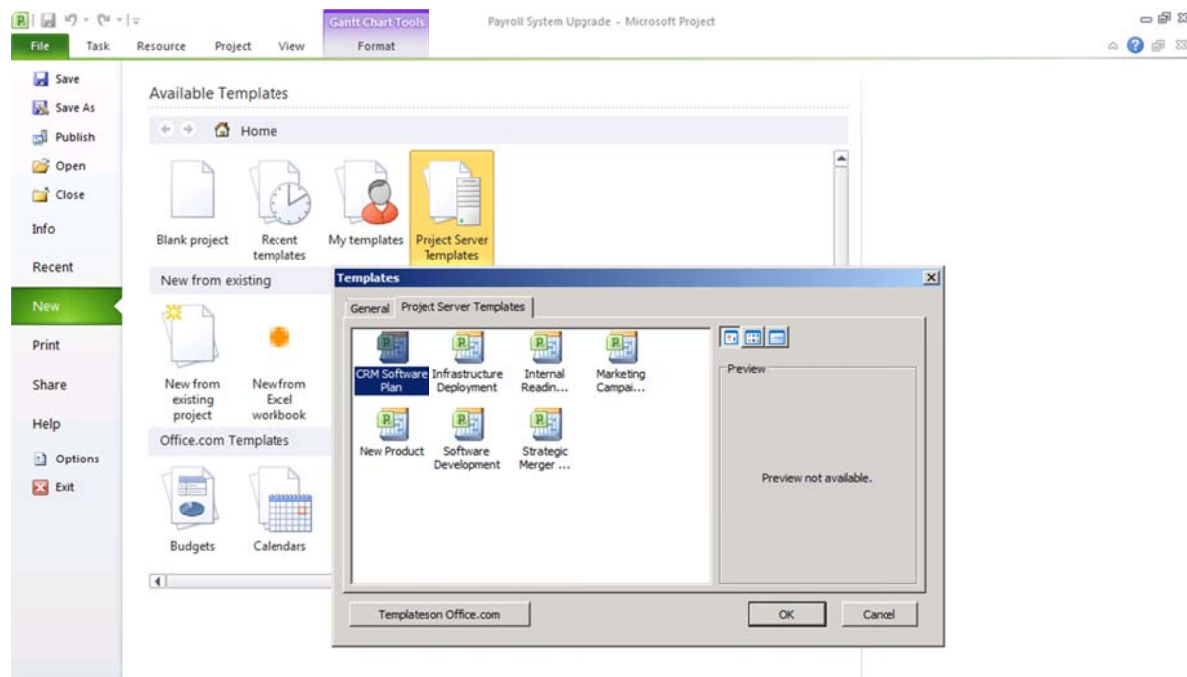


Figure 7. Project Professional 2010 – Available project plan templates

Flexible, Web-Based Scheduling

Project Server 2010 empowers a mobile workforce by bringing the flexibility of Project Professional 2010 to the browser with Web-based project editing. In addition, managers can quickly build both simple and complex project schedules online and conveniently edit the project from any location over the Internet.

Project Server 2007 supports the online creation of lightweight schedules, up to 100 tasks; one resource can be assigned to each task. Using Project Server 2010 managers can create complex schedules online and assign multiple resources to each task. Project Server 2010 incorporates the Ribbon interface, which provides a familiar and consistent experience regardless of whether the project manager builds the schedule on their desktop or on the Web (see Figure 8).

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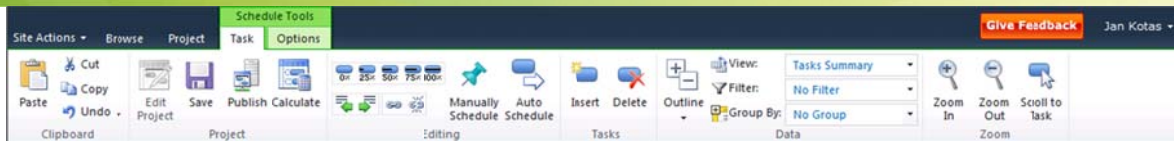


Figure 8. Project Server 2010 – The Ribbon

The new schedule view no longer requires an ActiveX® download and integrates usability improvements, including dragging to move columns, support for tabbing between cells, and more (see Figure 9). New user-controlled scheduling capabilities are available in the browser, so project managers have the flexibility to switch between Manually Scheduled and Automatically Scheduled task modes. Multi-Level Undo and Change Highlighting functions are now included within the browser to help managers safely model changes to the schedule and quickly identify all affected tasks.

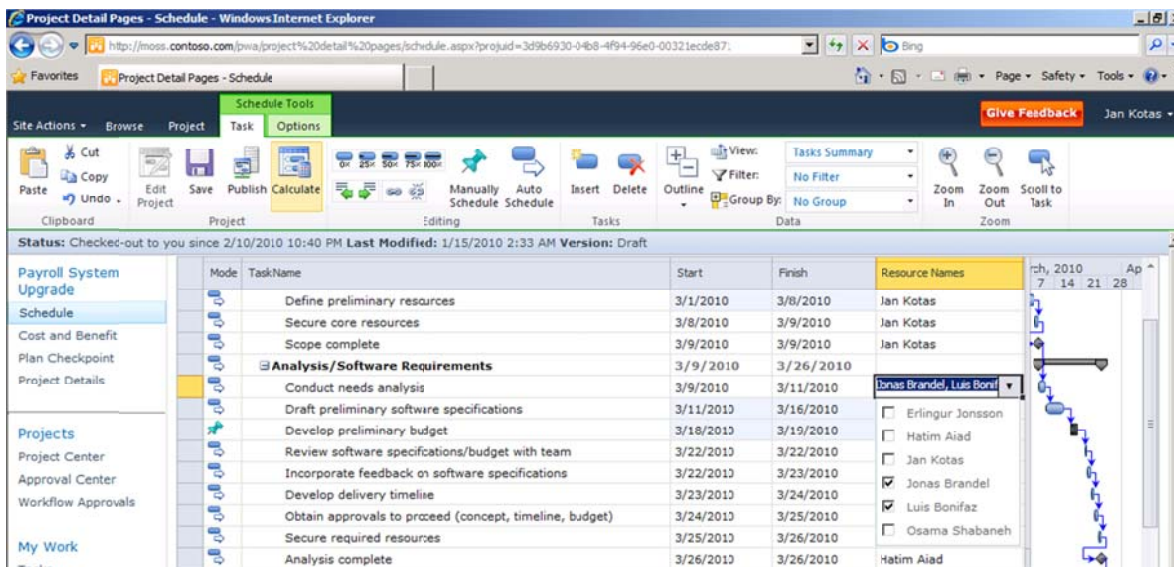


Figure 9. Project Server 2010 – Editable Web-based schedules

Microsoft recognizes that the scheduling requirements of occasional and professional project managers are different, and that they need different solutions. Web-based project editing in Project 2010 gives all project managers the flexibility they need—to create and manage a schedule online, or to simply make edits to a detailed plan, at any time, from anywhere.

Proactively Analyze and Control the Schedule

Detailed project schedules can be hard to control and even harder to analyze. Project managers need effective tools to reduce the complexity of interrelated tasks, manage inter-project dependencies, provide early-warning indicators, and make the schedule easier to control.

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Task Inspector

The Task Inspector in Project Professional 2010 builds on the Task Driver feature in Project Professional 2007, to provide a deeper understanding of task interdependencies, scheduling concerns, and resource conflicts. This powerful diagnostic tool helps project managers proactively highlight an issue, quickly identify the root cause, and resolve the problem immediately (see Figure 10).

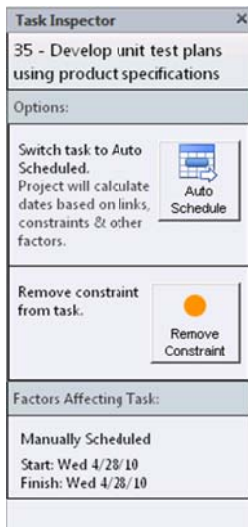


Figure 10. Project Professional 2010 – Improved Task Inspector

Used in tandem with Manually Scheduled task mode, Project 2010 Task Inspector guides the occasional project manager by visually identifying scheduling concerns and recommending scheduling efficiencies. Much like the spelling checker in Word, Task Inspector highlights issues using wavy red underlines beneath start or end date fields. As shown in Figure 11, a red wavy underline denotes a potential scheduling problem—for example, an underlying task exceeds the duration of a summary task—and a green wavy underline is a scheduling suggestion that indicates that the schedule can be optimized—for example, a task has slack time and could potentially start earlier in the schedule. Project managers can choose to ignore these warnings, or choose from a number of repair options listed in Task Inspector.



Figure 11. Project Professional 2010 – Task Inspector indicators

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Multi-Level Undo and Change Highlighting

Performing what-if analysis to model the impact of changes to a complex schedule can be a daunting task. The powerful Multi-Level Undo, Change Highlighting, Active and Inactive task modes, and Compare Projects features in Project Professional 2010 make it easier than ever to analyze the schedule.

Multi-Level Undo and Change Highlighting analysis tools (see Figure 12) are now included in Project Server 2010. Multi-Level Undo ensures that a project manager can quickly make changes to a schedule and easily reverse edits to safely return to a previous state. The Change Highlighting function visually identifies all tasks that are affected by an amendment to the schedule, to help the project manager assess the effect on the plan.

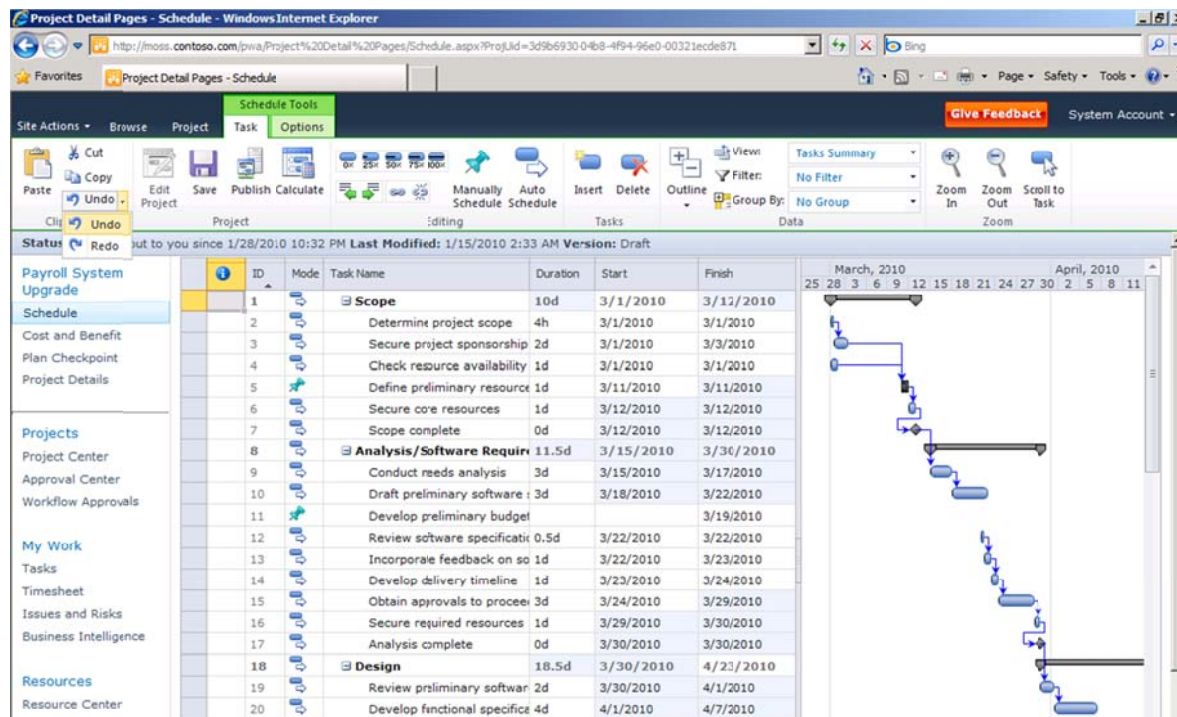


Figure 12. Project Server 2010 – Change Highlighting and Multi-Level Undo

Managing Scope Using Active and Inactive Tasks

Using Inactive task mode in Project Professional 2010, project managers can simply remove and then restore tasks in the schedule, to see the effect of removing the task on the rest of the project plan (see Figure 13). In earlier versions of Project Professional, if project managers wanted to assess the impact of removing tasks they had to delete the tasks from the schedule. Toggling between Active and Inactive task modes gives managers the flexibility to model changes to scope simply by right-clicking to make a task or group of tasks inactive, right in the schedule. If required, the manager can restore these tasks date simply by toggling to make them active tasks.

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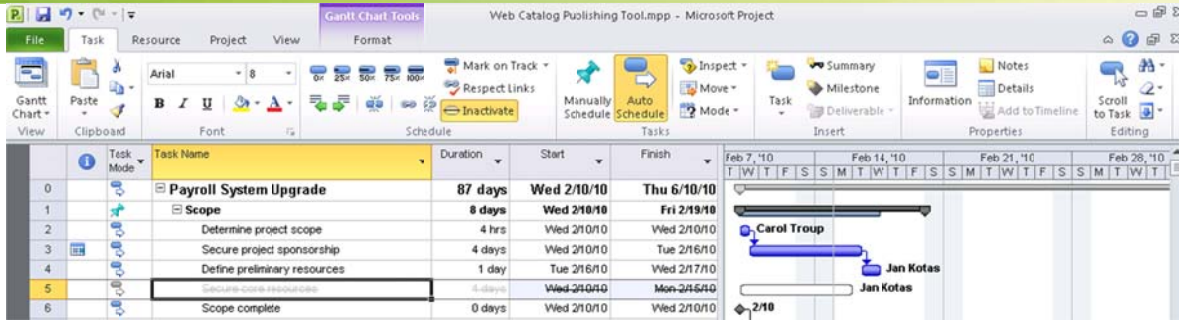
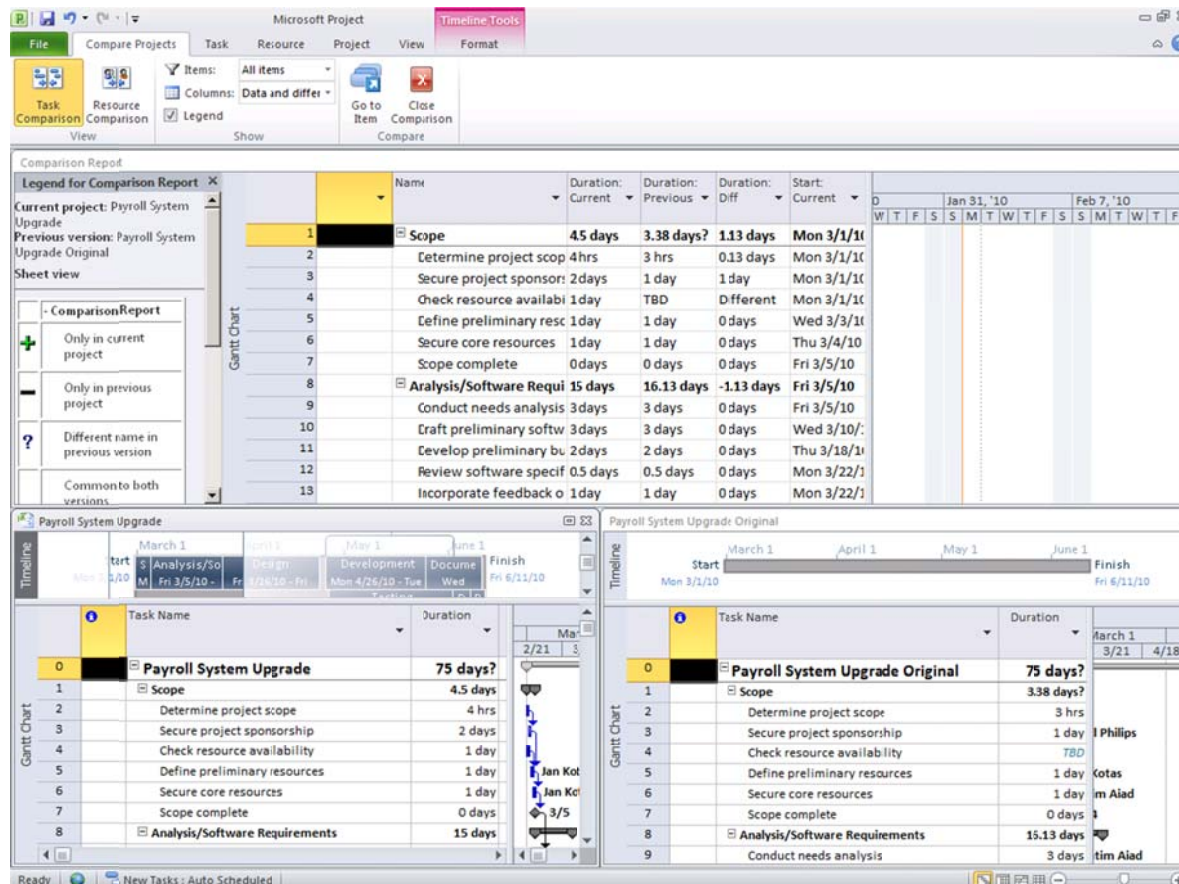


Figure 13. Project Professional 2010 – Active and Inactive task modes

Compare Projects

Project Professional 2010 helps make it easier to effectively analyze project plans and highlight differences by using the improved Compare Projects function. With Compare Projects managers can effectively model changes to the schedule and visually assess the effect of those changes on tasks and resources. Managers simply save a copy of the project plan, then make changes to the plan and use the Compare Projects feature to assess the change. The Task Comparison Report highlights the differences between different versions of the plan; a manager can simply switch between tasks and resource views (see Figure 14).



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Figure 14. Project Professional 2010 – Compare Projects, Task Comparison Report

Set Baselines and Track Dependencies

With the flexibility of setting multiple baselines in Project Professional 2010, project managers can quickly compare budget versus actual versus forecasted values to measure an initiative's progress. Effectively comparing actual progress to the approved baseline helps managers analyze progress and manage change.

In addition to monitoring the relationships between tasks within a project, project managers need to assess the impact of inter-project dependencies that could affect their initiative. Project 2010 ensures that project managers can quickly link dependent tasks between projects or publish key deliverables. Managers can publish deliverables to a collaborative Project Site so that other project managers can be aware of key dates and establish a soft dependency in their own plans. If deliverable dates change, the affected project managers are notified the next time they open their project.

Effectively Communicate Schedule to Team and Stakeholders

Although the Gantt chart might be the universal symbol of project management, it is limited in its effectiveness in communicating schedule information to stakeholders. The new Timeline view in Project Professional 2010 gives project managers an easy and intuitive way to share key phases and milestones, with minimal overhead and effort, to stakeholders that require less detail. Project managers select the tasks and milestones they want to include, and with one click simply generate a concise Timeline view. As demonstrated in Figure 15, the Timeline view provides a manageable overview of the main activities in the schedule. Using the options available on the **Format** tab in the Ribbon, project managers can quickly customize the Timeline by changing the bar colors or rearranging tasks as callouts.

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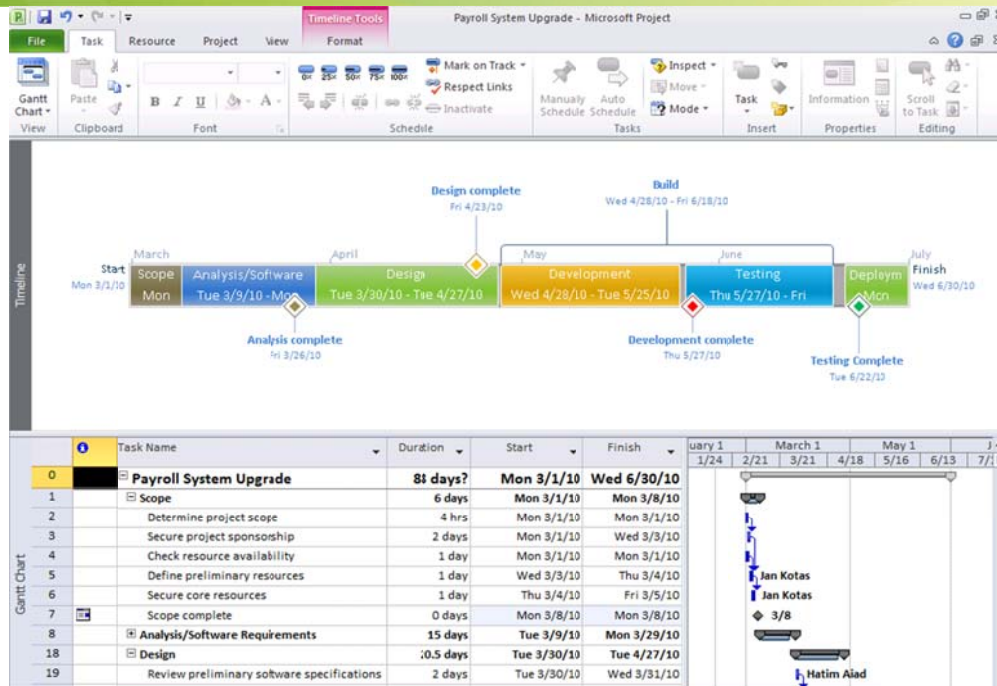


Figure 15. Project Professional 2010 – Timeline view

After creating and customizing the Timeline, project managers can simply copy the graphic and paste into Outlook, PowerPoint, and other Office applications. With a few clicks, project managers can create, customize, and share the powerful Timeline view with team members and key stakeholders.

Additional Resources

Additional Resources

For expanded help, step-by-step guides, and video training on how to get the most of Project Server 2010 and the Microsoft EPM Solution, visit [Microsoft Project](#).

To learn more about Project 2010 and the Microsoft EPM Solution, refer to the following list of related links:

Product information

[MSDN Project 2010 Beta](#)

[Project 2010 Blog](#)

[Project Team Blog](#)

Interactive content - Videos & Sessions & Webcast

[Project 2010 Video Showcase](#)

[Enterprise Project Management Microsoft Events](#)

[Project Developer Center](#)

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