



Managing Projects with MS Project 2010



Session: 3

Scheduling



Objectives

- ◆ Define a project calendar
- ◆ Describe how to set calendar options and working times
- ◆ Describe how to choose the right calendar
- ◆ Describe how to work with Task calendars
- ◆ Explain the use of Resource calendars
- ◆ Describe how to create custom calendar templates
- ◆ Explain how to copy calendars to other projects

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Introduction

- ◆ A project manager schedules and manages a project using calendars focusing on tasks of the day.
- ◆ Calendars help identify the resources working on tasks, whether there is any schedule or effort variance, and whether there are any pending tasks to be completed.
- ◆ Accordingly, project managers can schedule the tasks using resources for successful completion of a project.

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Defining a Project Calendar

- ◆ MS Project 2010 provides the following three types of calendars:

Base
calendar

Resource
calendar

Task
calendar



Base Calendar 1-6

- ◆ The base calendar, also known as the standard calendar, is the basic calendar that is used for all scheduling calculations in MS Project.
- ◆ All other calendars are built on this calendar.
- ◆ To configure calendar settings for a project, on the **Project** tab, in the **Properties** group, click **Change Working Time**.
- ◆ The **Change Working Time** dialog box facilitates a user to select either a calendar or a resource from the **For calendar** drop-down list.
- ◆ The **Create New Calendar** button provides an option either to create a new base calendar or copy from any existing calendars.
- ◆ Clicking the day to see its working times section displays a calendar.
- ◆ The **Legend** section on the left displays the color codes for working and nonworking times, exception day, and nondefault work week.



Base Calendar 2-6

- ◆ The **Change Working Time** dialog box is shown in the following figure:

Change Working Time

For calendar: **Standard (Project Calendar)** Create New Calendar ...

Calendar 'Standard' is a base calendar.

Legend:

- ☐ Working
- ☒ Nonworking
- 31** Edited working hours

On this calendar:

- 31** Exception day
- 31** Nondefault work week

Click on a day to see its working times:

October 2011

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

30 October 2011 is nonworking.

Based on:
Default work week on calendar 'Standard'.

Exceptions **Work Weeks**

Name	Start	Finish

Details... Delete

Help Options... OK Cancel



Base Calendar 3-6

- ◆ To add exceptions in the calendar, perform the following steps:

In the table on the **Exceptions** tab, in the **Change Working Time** dialog box, enter the name of the exception setting in the **Name** box.

Enter the **Start** and **Finish** dates for which the exception day and work hours need to be configured.

After entering the exception data, select the row and click **Details**. This opens the **Details** dialog box, where one can specify the nonworking and working hours.

Click **Nonworking** to specify the day as a full holiday. For example, for the anniversary day exception, the entire day would be nonworking.

Select appropriate recurrence pattern, for example, **Yearly**, in the current scenario.

Click **OK** to close the **Exception Details** dialog box



Base Calendar 4-6

- ◆ Following figure shows the details set for the exception:

Change Working Time

For calendar: **Standard (Project Calendar)** Create New Calendar ...

Calendar 'Standard' is a base calendar.

Legend:

- ☐ Working
- ☐ Nonworking
- 31** Edited working hours

On this calendar:

- 31** Exception day
- 31** Nondefault work week

Click on a day to see its working times:

March 2011

S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

March 23, 2011 is nonworking.

Details for 'SSU Anniversary'

Set working times for these exceptions

☒ Nonworking
☐ Working times:

	From	To

Recurrence pattern

☐ Daily
☐ Weekly
☐ Monthly
☒ Yearly

☒ On
☐ The of

Range of recurrence

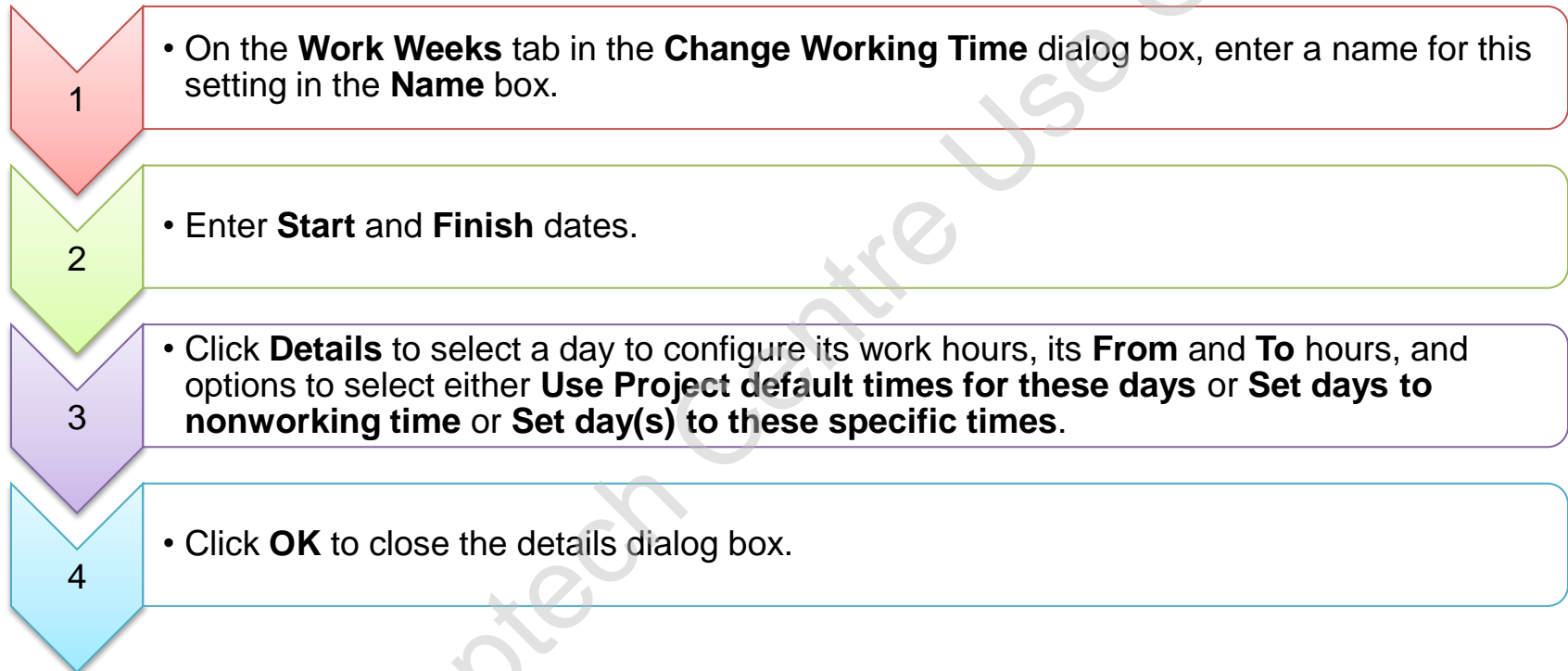
Start: ☐ End after: occurrences
☒ End by:

Help Options... OK Cancel



Base Calendar 5-6

- ◆ To configure the work weeks, perform the following steps:



- ◆ The **Options** button in the **Change Working Time** dialog box opens the **Project Options** dialog box.



Base Calendar 6-6

- ◆ Following figure depicts the details for Work Week in the **Change Working Time** dialog box:

Change Working Time

For calendar: Standard (Project Calendar) Create New Calendar ...

Calendar 'Standard' is a base calendar.

Legend:

- ☐ Working
- ☐ Nonworking
- ☒ Edited working hours

On this calendar:

- ☒ Exception day
- ☒ Nondefault work week

Click on a day to see its working times:

January 2010

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Working times for 27 January 2010:

- 08:00 to 12:00
- 13:00 to 17:00

Based on:

Work week 'Audit week' on calendar 'Standard'.

Exceptions

	Name	Start	Finish
1	[Default]	NA	NA
2	Audit week	27-01-2010	03-02-2010

Details for 'Audit week'

Set working time for this work week

Select day(s):

- ☐ Use times from default work week for these days.
- ☒ Set days to nonworking time.
- ☐ Set day(s) to these specific working times:

	From	To

Help OK Cancel



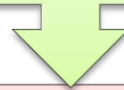
Resource Calendar 1-2

- ◆ Users can specify work hours and workdays for a specific project resource.
- ◆ Resource calendars are calendars customized for specific scheduling requirements for individual resource groups.
- ◆ Users can modify this setting in the **Resource Information** dialog box for an individual resource or for a resource group.
- ◆ To modify settings in a resource calendar, perform the following steps:

Select the **Resource** tab present on the **Ribbon** and click the top part of the **Team Planner** option.



Select the resource or resource group for which workdays or work times need to be configured and click the **Details** option in the **Properties** section on the **Resource** tab.



Click **Change Working Time** in the **Resource Information** dialog box to display options for configuring work times and workdays for the selected resource.



Resource Calendar 2-2

- ◆ Following figure display options for configuring work times and workdays for the selected resource in the **Change Working Time** dialog box:

Change Working Time

For calendar: Architect

Base calendar: Standard

Create New Calendar ...

Legend:

- ☐ Working
- ☐ Nonworking
- ☒ Edited working hours
- ☒ Exception day
- ☒ Nondefault work week

On this calendar:

- ☒ Exception day
- ☒ Nondefault work week

Click on a day to see its working times:

November 2011

S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

November 12, 2011 is nonworking.

Based on:
Default work week on calendar 'Standard'.

Exceptions Work Weeks

Name	Start	Finish

Help Options... OK Cancel



Task Calendar 1-4

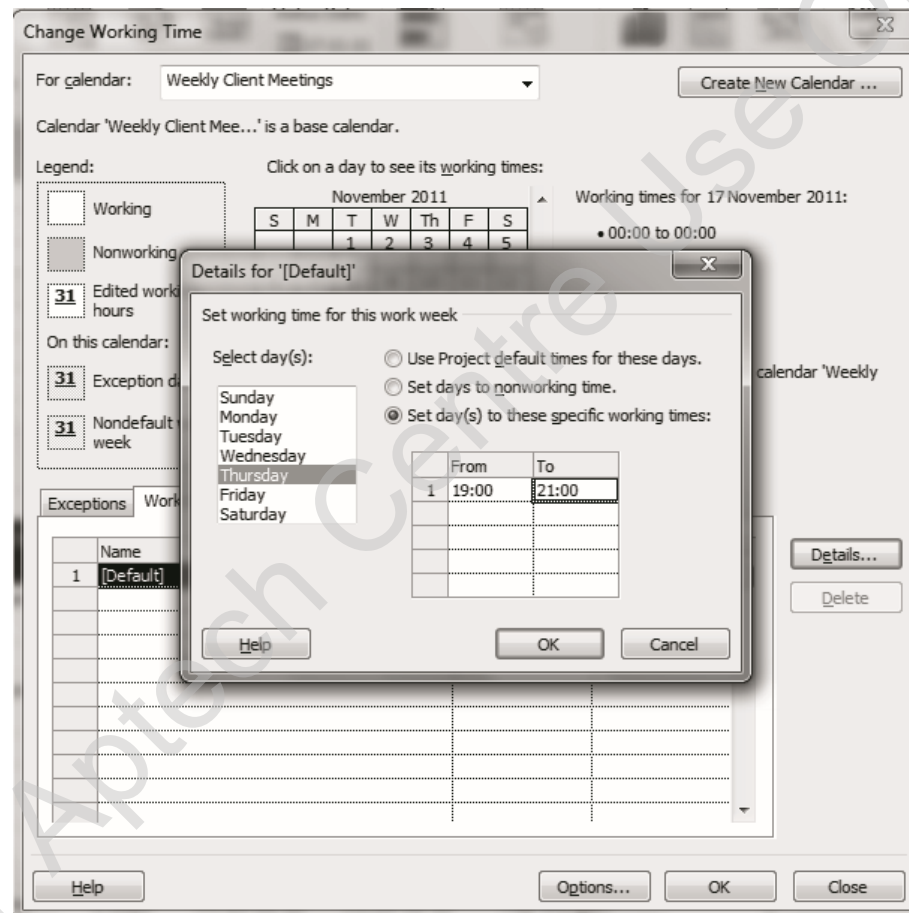
- ◆ Similar to resource calendar, a task calendar can be used to create calendars with specific scheduling requirements for a particular task.
- ◆ Steps to create a new calendar for the task schedule are as follows:

- 1 • On the **Project** tab, click the **Change Working Time** dialog box to display the **Change Working Time** dialog box.
- 2 • Click the **Create New Calendar** button to create a new calendar, **Weekly Client Meetings**. The new calendar can be a copy of an existing calendar or a new base calendar.
- 3 • Click **OK** to create the new calendar and return to the **Change Working Time** dialog box.
- 4 • Then, click the **Work Weeks** tab on this dialog box and select the row in the table with the default schedule for the calendar.
- 5 • Click the **Details** button to specify the work days and time for tasks in this calendar.
- 6 • From the **Select day(s):** list box, select **Thursday** as the day on which the weekly meetings will be scheduled. Select the **Set day(s) to these specific working times:** option and specify the meeting hours as 19:00 P.M. to 21:00 P.M.



Task Calendar 2-4

- ◆ Following figure shows the calendar settings:



7

- Click **OK** in all the open dialog boxes to save the calendar settings.



Task Calendar 3-4

- ◆ The new task calendar needs to be assigned to the task. This can be done using the following steps:

From the **Gantt Chart** table, select the task from the **Task Name** column.

In the **Properties** group on the **Task** tab, click the **Information** option to display the **Task Information** dialog box for the selected task.

In this dialog box, select the **Advanced** tab and from the **Calendar** drop-down list, select the new calendar, **Weekly Client Meetings**.

Click **OK** to assign the calendar to the selected task.



Task Calendar 4-4

- ◆ The **Task Information** dialog box is shown in the following figure:

Task Information

General | Predecessors | Resources | Advanced | Notes | Custom Fields

Name: Review software specifications/budget with team Duration: 4 hrs ☐ Estimated

Constrain task

Deadline: Wed 20-01-10

Constraint type: As Soon As Possible Constraint date: Thu 21-01-10

Task type: Fixed Units ☒ Effort driven

Calendar: None ☐ Scheduling ignores resource calendars

WBS code: None

Earned value method: Copy of 24 Hours

☐ Mark task as milestone

None
24 Hours
Copy of 24 Hours
Night Shift
SSU_Standard Calendar
SSU_Standard Calendar_Mobile_Dev
Standard
Weekly Client Meetings

Help OK Cancel



Project Calendar Options

- ◆ A project manager, when scheduling tasks, should set the working times depending on the complexity of the project, timelines, resources, and budget.
- ◆ MS Project provides calendars and work hours for scheduling tasks by setting calendar options and customizing work hours.
- ◆ When creating tasks and assigning resources, MS Project 2010 schedule tasks based on the standard calendar.
- ◆ By default, according to MS Project, one workday has eight work hours.
- ◆ A project manager should also check working time and make sure that any specific nonworking days are updated for the project.

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Adjusting Project Calendar Options 1-2

- ◆ To modify the calendar options, click the **File** tab and select **Options** from the **Backstage** view.
- ◆ This displays the **Project Options** dialog box. Here, from the options in the left pane, select **Schedule**.
- ◆ The same settings are displayed by clicking the **Options** in the **Change Working Time** dialog box.
- ◆ Following figure depicts an example of adjusting calendar options:

The screenshot shows the 'Project Options' dialog box with the 'Schedule' tab selected. The left pane lists various options: General, Display, Schedule (selected), Proofing, Save, Language, Advanced, Customize Ribbon, Quick Access Toolbar, Add-Ins, and Trust Center. The main area is titled 'Change options related to scheduling, calendars, and calculations.' and contains the following settings:

- Calendar options for this project:** SoftwareDevPlan(3)
- Week starts on:** Sunday
- Fiscal year starts in:** January
- ☐ Use starting year for FY numbering
- Default start time:** 08:00
- Default end time:** 17:00
- Hours per day:** 8
- Hours per week:** 40
- Days per month:** 20
- Schedule**
 - ☒ Show scheduling messages
 - Show assignment units as a:** Percentage
- Scheduling options for this project:** SoftwareDevPlan(3)
 - New tasks created:** Manually Scheduled
 - Auto scheduled tasks scheduled on:** Project Start Date
 - Duration is entered in:** Days
 - Work is entered in:** Hours
 - Default task type:** Fixed Units

A note on the right side of the dialog states: 'These times are assigned to tasks when you enter a start or finish date without specifying a time. If you change this setting, consider matching the project calendar using the Change Working Time command on the Project tab in the ribbon.'



Adjusting Project Calendar Options 2-2

- ◆ A manager can configure or adjust the project calendar options using the following steps:

1

- Start by specifying whether the settings will apply to the current project or to all projects.

2

- Specify settings to indicate the beginning and ending day of a workweek, the start and end time of a workday, the number of work hours per day and per week, and the number of working days per month.

3

- Click **OK** to save the calendar settings.

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Setting Schedule Options 1-2

- ◆ Managers can specify custom scheduling options depending on the project needs.
- ◆ After configuring the project calendar to the project requirements, the next step is to specify scheduling options.
- ◆ Scheduling options can be specified as follows:

Click the **Project Information** option from the **Project** tab and set the project calendar.

Enter the **Start date** if the project is scheduled from a specific date to start or enter the **End date** if the project has to be completed on a specific end date.

Select the **Current date**, which by default, displays computer clock settings that can be modified by the user.

Optionally, specify a **Status date**. The **Status date** helps the project manager to track the progress of the project on that specific status date.

Specify a value for **Priority** box. Priority is useful if multiple projects that are linked among each other exist in an organization.



Setting Schedule Options 2-2

- ◆ Following figure shows an example of configuring project schedules in the **Project Information** dialog box:

The screenshot shows the 'Project Information' dialog box for a project named 'SoftwareDevPlan(3)'. The dialog contains several date and scheduling fields:

- Start date:** Mon 04-01-10
- Current date:** Tue 15-11-11
- Finish date:** Tue 01-06-10
- Status date:** Thu 20-05-10
- Schedule from:** Project Start Date
- Calendar:** Standard
- Priority:** 500
- Enterprise Custom Fields:** A section with a 'Department' dropdown and a table for custom fields.

Custom Field Name	Value

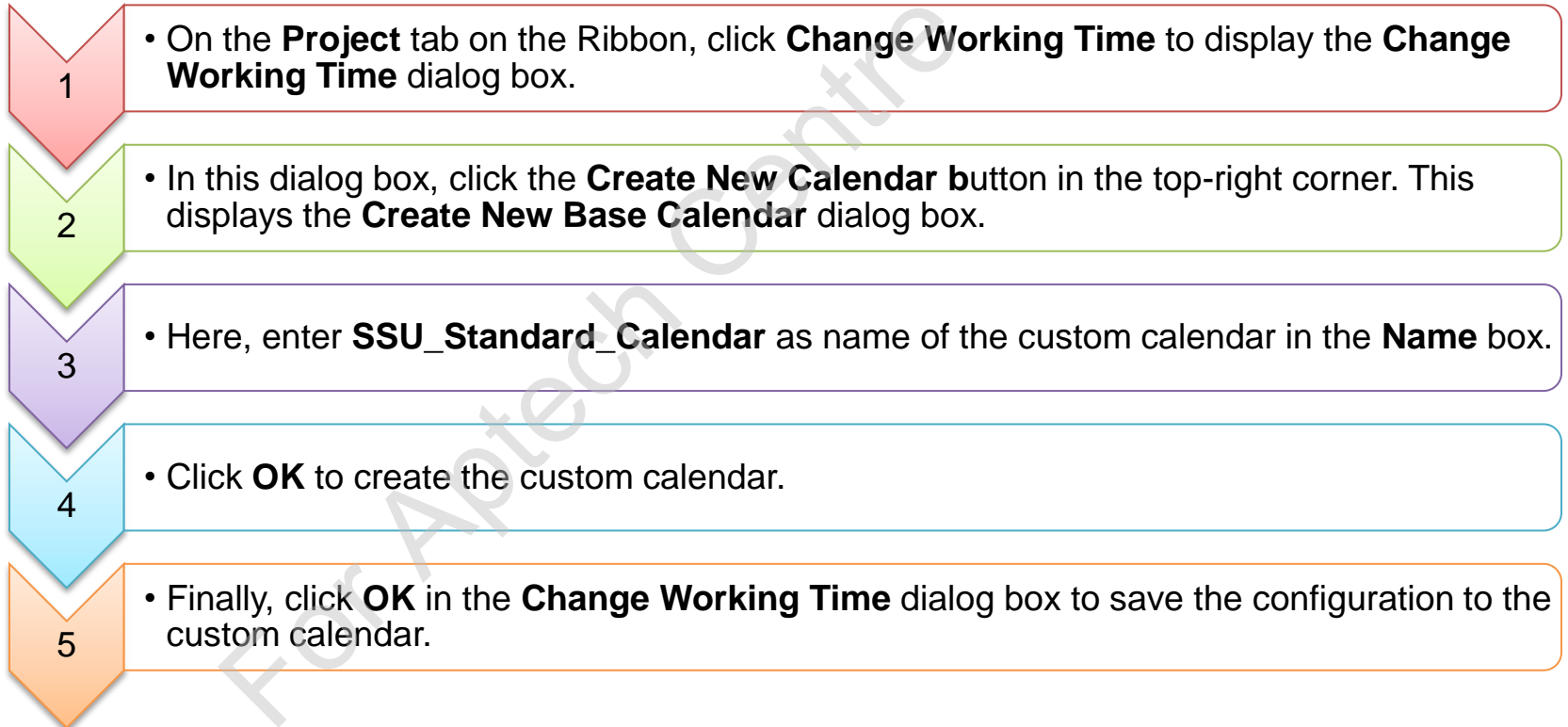
At the bottom of the dialog are buttons for 'Help', 'Statistics...', 'OK', and 'Cancel'. The text 'All tasks begin as soon as possible.' is displayed in the center of the dialog.

- ◆ MS Project 2010 includes a user-controlled scheduling feature that helps schedule projects in less time and to control all the phases of project life cycle.
- ◆ User-controlled scheduling is done in two modes:
 - ◆ Manually Scheduled
 - ◆ Auto Scheduled



Creating a Custom Calendar 1-2

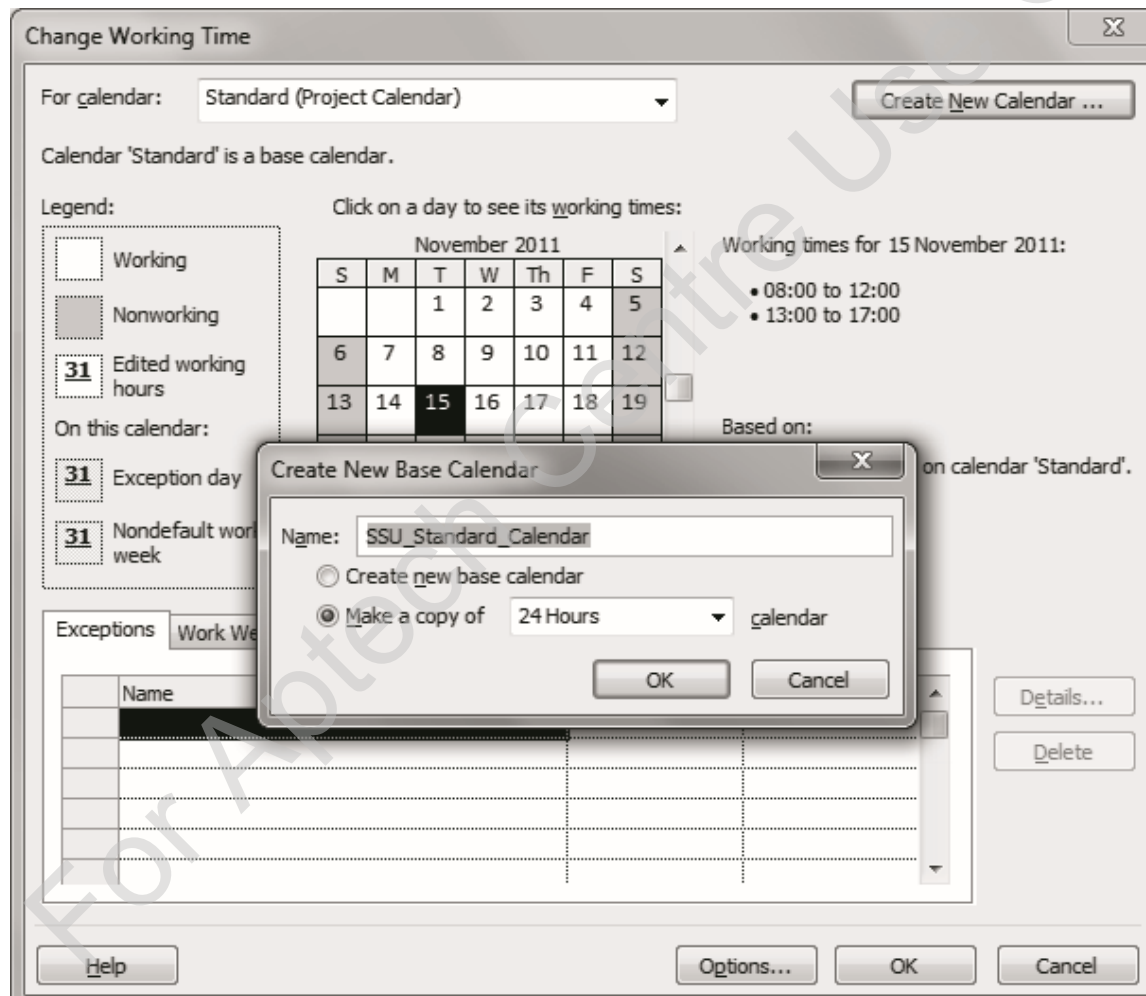
- ◆ The MS Project based calendars do not have any holidays marked up.
- ◆ For accurate scheduling tasks including details such as organization specific holidays, it is suggested to create custom calendars for projects.
- ◆ To create a custom calendar, perform the following steps:





Creating a Custom Calendar 2-2

- ◆ Following figure illustrates creating a custom calendar based on the 24 Hours calendar:





Sharing Calendars 1-3

- ◆ Calendars can be shared across all projects using the **Organizer** feature in MS Project 2010.
- ◆ Organizer is the control center for custom calendars in project files.
- ◆ Managers can copy custom calendars into a global template file, **Global.MPT**.
- ◆ The settings and customizations available in this template will be available across all projects.
- ◆ This method is especially useful when all the project managers in a company use a consistent calendar across all projects.

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Sharing Calendars 2-3

- ◆ To make a calendar available across all projects:

1

- Open the project that contains the custom calendar.

2

- On the **File** tab, select the **Info** option.

3

- Next, click the **Organizer** button in the **Backstage** view. This displays the **Organizer** dialog box.

4

- In this dialog box, click the **Calendars** tab. The list box on the left displays calendars available in the global template, Global.MPT, which are available across all projects.

5

- From the list box on the left, select the custom calendar that is required across all projects and click **Copy** to copy between the two list boxes.

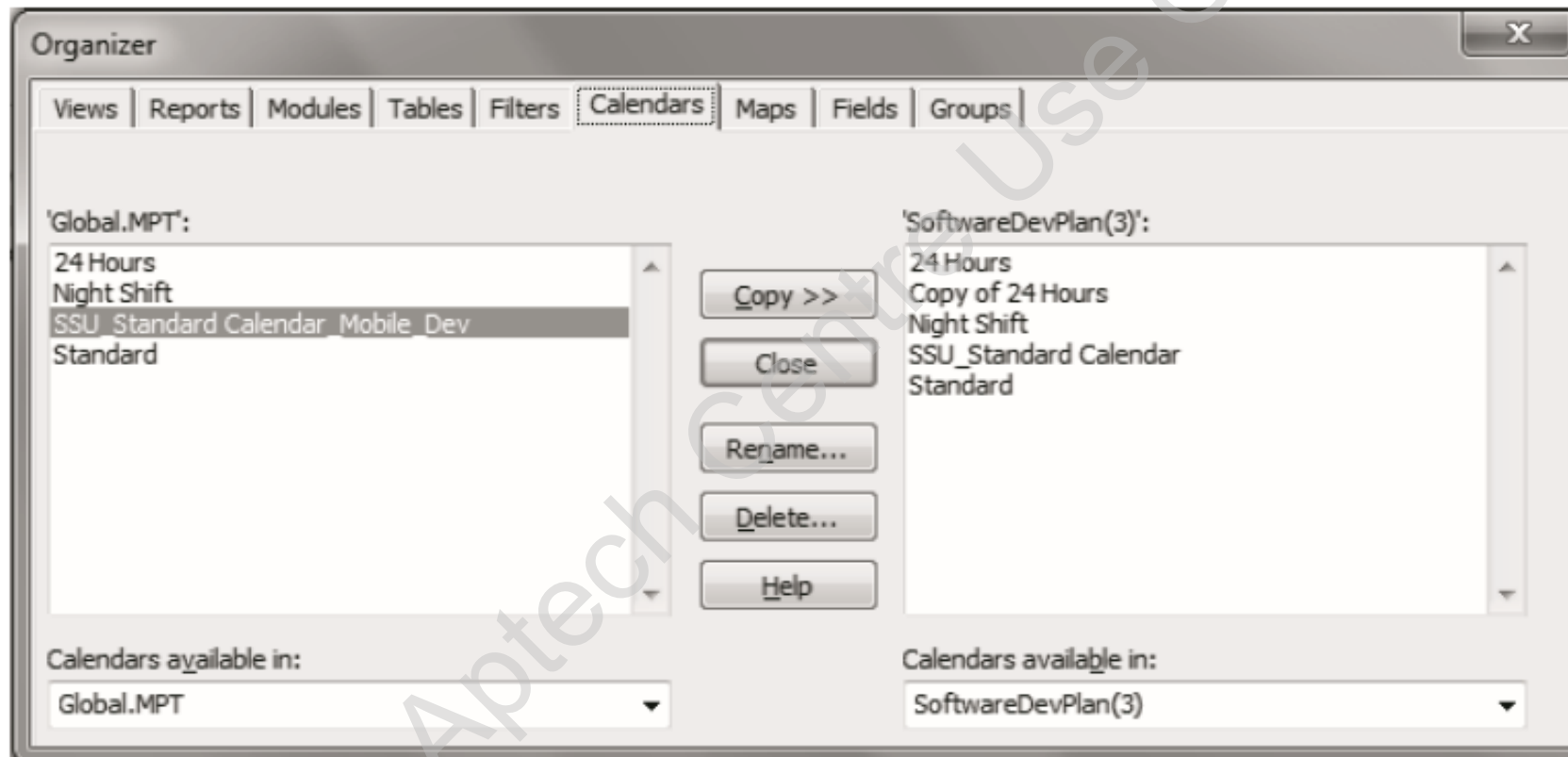
6

- Finally, close the **Organizer** dialog box to apply the changes.



Sharing Calendars 3-3

- ◆ Following figure illustrates an example of sharing calendars across all projects:





Summary

- ◆ Calendars help schedule tasks and resources efficiently and track their progress.
- ◆ MS Project 2010 provides three types of calendars, namely, base calendar, resource calendar, and task calendar.
- ◆ The base calendar or the standard calendar is the basic calendar template with a five-day week from Monday to Friday and eight working hours from 8 A.M. to 5 P.M.
- ◆ Two additional templates available for scheduling based on the organization or project work times are 24 Hours and Night Shift.
- ◆ Project managers can select any of the calendar templates and configure the work weeks and hours according to the project and organization requirements.
- ◆ Project managers can configure scheduling requirements for a specific project resource or task in the resource calendar and task calendar respectively.
- ◆ Project managers can create as well as share custom calendars across multiple projects.

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