

Welcome to the
Eastwood Harris Pty Ltd
Primavera P6
How Resource Driven
Activities Calculate

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Aim

- The aim of this presentation shows how a P6 Resources Driven Activities calculate,
- We will explore the interaction of the Resource and Task calendars,
- This will demonstrate that P6 calculates differently to other software scheduling software.



Method of Presentation

- Each of the following slides will show how activities calculate with different:
 - Calendars,
 - Activity types and
 - Resources calendar.



Task Dependant Activity without a Resource

- The picture below shows:
 - A ProjectStart at Midnight on Saturday,
 - A 40 hour (5 days) Task Dependent activity,
 - The Task is assigned a 5 day per week and 8 hour per day calendar, and
 - No Resource assignment,
- The activity is starting at 08:00 on Monday which is acknowledging the Task Calendar to calculate the activity Start Date and Time not the Project Start:

Activity Type	Calendar	Orig Dur	Resources	Mar 26							
				Sat	Sun	Mon	Tue	W	Thr	Fri	Sat
Task Dependent	5d/w 8h/d	40h				■	■	■	■	■	



Task Dependant Activity with a Resource

- The picture below shows:
 - A project with a Start at Midnight on Saturday,
 - A 40 hour (5 days) Task Dependent activity,
 - The Task is assigned a 5 d/w and 8 h/d calendar, and
 - A Resource assignment which is assigned a 7day per week and 24 hour per day calendar,
- The activity is starting at 08:00 on Monday, thus acknowledging the Task Calendar to calculate the task Start Date and to calculate the Resource Work.

Activity Type	Calendar	Orig Dur	Resources	Mar 26							
Task Dependent	5d/w 8h/d	40h	24h/d7d/w	Sat	Sun	Mon	Tue	W	Thr	Fri	Sat
						■	■	■	■	■	

▼ Display: Current Project's Resources			▼ Display: Open Projects Only							
Resource ID	Resource Name	Calendar	Mar 26							
			Sat	Sun	Mon	Tue	W	Thr	Fri	Sat
24h/d	24h/d7d/w	7 x 24hr. Days			8	8	8	8	8	
					8	8	8	8	8	
					8	8	8	8	8	



Resource Dependant Activity with a Resource

- The picture below shows:
 - A project with a Start at Midnight on Saturday,
 - A 40 hour (5 days) Resource Dependent activity,
 - The Task is assigned a 5 d/w and 8 h/d calendar, and
 - A Resource assignment which is assigned a 7day per week and 24 hour per day calendar,
- Comments on the next slide:

Activity Type	Calendar	Orig Dur	Resources	Mon Mar 26												Tue Mar 27											
Resource Dependent	5d/w 8h/d	16h	24h/d7d/w	[Gantt chart showing activity bars]																							
Display: Current Project's Resources				Display: Open Projects Only																							
Resource ID	Resource Name	Calendar	Re	Mon Mar 26												Tue Mar 27											
24h/d	24h/d7d/w	7 x 24hr. Days	La	[Resource usage grid]																							



Resource Dependant Activity with a Resource, continued...

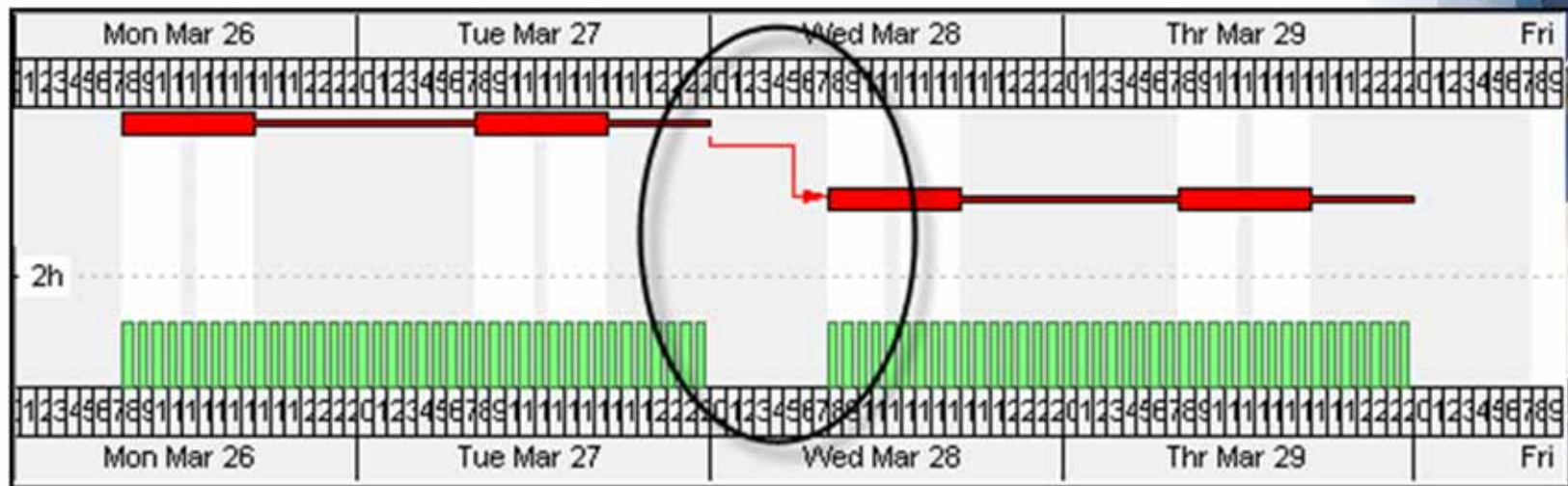
- The activity is starting at 08:00 on Monday which is acknowledging the Task Calendar to calculate the task Start Date, NOT the Resource Calendar as with some other products,
- The Work is being scheduled on the Resource calendar,
- Bar Necking is misleading as it is being displayed on the Task Calendar not the Resource Calendar:

Activity Type	Calendar	Orig Dur	Resources	Mon Mar 26												Tue Mar 27											
Resource Dependent	5d/w 8h/d	16h	24h/d7d/w	[Gantt chart showing activity bars across the calendar grid]																							
▼ Display: Current Project's Resources				▼ Display: Open Projects Only																							
Resource ID	Resource Name	Calendar	Re	Mon Mar 26												Tue Mar 27											
24h/d	24h/d7d/w	7 x 24hr. Days	La	[Resource availability grid with 1s and 2s]																							



Two Linked Resource Dependant Activities with Resources

- When two Linked Resource Dependant Activities:
 - Assigned 5 day per week and 8 hours per day calendar,
 - With Resources assigned a 24 h/d & 7d/w calendar,
- The start of the second task is delayed until the start of the Task Calendar next working period,
- This is a like a "Start Activity on a New Day" function:



Change the Task Calendar to a 24 Hour per Day 7 Days per Week Calendar

- Once the Task Calendar is set to a 24 Hour per Day 7 Days per Week,
- Then the Resource calendars are acknowledged for the start of the work.

Activity Type	Calendar	23	Sat Mar 24	Sun Mar 25	Mon Mar 26	Tue Mar 27
		1111111222220111145678911111111111222220111145678911111111111222220111145678911111111111222220111145678911				
Resource Dependent	7 x 24hr. Days					
Resource Dependent	7 x 24hr. Days					

Two Resources assigned to an Activity with Different Calendars

- When two resources are assigned to a Resource Dependant Task with different calendars:
 - Each resource is scheduled their 40h work according to their own calendar,
 - The Activity Duration (161 hours) is calculated from the first Resource Start Time to the last Resource Finish time.

Activity Type	Calendar	Orig Dur	Resources	Mar 26							
				Fri	Sat	Sun	Mon	Tue	Wed	Thr	Fri
Resource Dependent	7 x 24hr. Days	161h	24h/d7d/w, 5d/w 8h/d,								

Activity ID	Activity Type	Calendar	Orig Dur	Resources
A1000	Resource Dependent	7 x 24hr. Days	161h	24h/d7d/w, 5d/w 8h/d,

Resources			
Resource ID	Calendar	Original Duration	At Completion Units
24h/d	7 x 24hr. Days	40h	40
5d/w 8h/d	5d/w 8h/d	40h	40

Fri	Sat	Sun	Mon	Tue	Wed	Thr	Fri	Sat
	24	16	8	8	8	8	8	8
	24	16						
			8	8	8	8	8	8

Summary

- Task Dependant activities ignore Resource calendars,
- Resource Dependant activities:
 - Will always acknowledge the Task calendar for the start of an activity and may delay the start of an activity. To prevent a delay to an activity start date you may consider making sure the Activity Calendar has longer working hours than the Resources calendars.
 - Resources work is scheduled when the resource is available as determined by the Resource Calendar.
 - Resources work independently of each other and a P3/SureTrak Activity Type of "Meeting", where both resources have to be available for the work to be scheduled, is not available.
 - Necking is displayed using the Task Calendar and NOT Resource Calendars.



Thank you for attending the
Eastwood Harris Pty Ltd
Primavera P6
Version 7

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