Introduction to Proactive Scheduling with Microsoft Project

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- Author of “Proactive PPM with Microsoft Project for Project Server and Project Online”
- PMO/Process work in 13 countries and throughout the US
- 19 years of scheduling experience
- 50+ Microsoft Project/Project Server deployments
- PMI Scheduling Professional (PMI-SP)
- Microsoft Certified Professional (MCP)
- Microsoft Certified Trainer (MCT)
- EPM Deployments, Training, Add-on Products and Apps
Agenda

- Proactive Scheduling Analogy & Purpose
  - Project Life Cycle
  - Principles of Proactive Scheduling
  - PMI Practice Standards for WBS and Scheduling

- Project Scheduling Concept (Task Types)

- Developing the Baseline Schedule
  - WBS; Budgeting and Cost Planning; Resources; Effort Estimates; Dependencies; Deadlines; Constraints

- Tracking Actual Work and reviewing Estimate-To-Completion

- Processing Updates & Corrective Action
  - Reviewing and Approving Task Updates
  - Rescheduling Incomplete Work in the Past
  - Identifying Variances and Taking Corrective Action

- Reporting
Proactive Scheduling – Analogy

Printed Directions
Static; out of sync after detour or wrong turns; no update to arrival time or distance

GPS System
Tracks actual progress; reroutes on detours; provides accurate forecast of arrival time
Proactive Scheduling Evolved

Reactive Schedule
Hard coded with artificial dates; no forecasting ability; unreliable; inaccurate actuals; snapshot of a point in time; not actionable

Proactive Schedule
Shows actual progress to date; reflects estimates to completion; predicts completion dates and total cost estimates; enables corrective action and decision making
Purpose of ‘Proactive Scheduling’

- To build and maintain a schedule that reflects the true intention (scope and time) AND actual progress of the project
- Plan and track costs on the project
- Continuously identify and manage staffing needs
- Clearly communicate work and priorities to team members
- Provide accurate forecasting of remaining effort and durations
- Identify variances *before* it is too late for corrective action
Project Life Cycle

Initiation
- Submitting a Project Proposal

Planning
- Developing the Baseline Schedule

Execution
- Collaborating & Tracking Progress
- Preparing Status Reports
- Processing Updates & Corrective Action

Closing
- Closing out the Project
Principles of ‘Proactive Scheduling’

■ Submitting a Project Proposal
  • Generic resources for long-term planning & proposals

■ Developing the Baseline Schedule
  • Deliverable-based Work Breakdown Structure
  • Fully resource-loaded schedule with effort estimates
  • Complete dependency network
  • No ‘Hard-Coded’ target dates (deadlines for commitment dates)
  • No Action Items or To-Do lists in the schedule
Principles of ‘Proactive Scheduling’

- **Collaborating & Tracking Progress**
  - Actuals and Estimates-To-Completion are collected each reporting period

- **Processing Updates & Corrective Action**
  - Schedule is updated with accurate status each reporting period
  - No ‘Planned Work’ in the past
Aligning with PMI

- PMI’s Practice Standard for Work Breakdown Structure
  - The WBS provides the foundation for defining work as it relates to project objectives.

- PMI’s Practice Standard for Scheduling
  - Describes scheduling methods generally recognized as good practice for “most projects most of the time”.

  - Describes the hallmarks of a sound and effective project scheduling methodology and provides “quantifiable means for assessing” a schedule against the standard.
Project Scheduling Concept

- **Work vs. Duration vs. Units**
  - Work is the effort a resource spends on a task
  - Duration is the number of business days to perform a task
  - Units is the number of resources or materials

- **Project will attempt to calculate one of 3 values**
  - Enter two values to calculate the third, e.g.:
    - Work/Units = Duration
    - Duration * Units = Work
    - Work/Duration = Units
Project Scheduling Concept

- Example: 3 loads of laundry
  - 30 minutes per load to fill machines and fold
  - 90 minutes per load for washer and dryer

- Questions
  - Q: What’s the total ‘Work’ (effort)?
    - A:

  - Q: What’s the total ‘Duration’?
    - A:

  - Q: What’s the ‘Units’?
    - A:
Task Types

- **Fixed Work**
  - This setting assumes work doesn’t change, even after changing durations or adding people. Use this setting if you want to control the duration of tasks by adding or removing people.

- **Fixed Duration**
  - This setting assumes duration doesn’t change, even when more people are assigned to the task. Use this setting if you have a duration in mind for a task before you know other information about the task.

- **Fixed Units**
  - This setting assumes the number of people assigned to the task (units) is known and you don’t want it to change, even if duration changes. When the work changes on a task, the duration changes, but not the number of people.

  - Definitions from Microsoft Project Help Files
Developing the Baseline Schedule

- Set Project Start Date
- Complete Project Custom Fields
- Complete Project WBS
- Budgeting and Cost Planning
- Build Team
- Assign Resources
- Estimate Effort
- Identify Dependencies
- Set Deadlines
- Identify Constraints
- Level Resource Workload
- Set Project Baseline
- Save & Publish to Project Server
Developing the Baseline Schedule

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Definition of Work Breakdown Structure (WBS)

- The WBS represents a clear description of the project’s deliverables and scope – the “what” of the project. Focused on describing the project’s outcome or scope.

- The WBS organizes and defines the total scope of the project. The WBS subdivides the project work into smaller, more manageable pieces of work, with each descending level of the WBS representing an increasingly detailed definition of the project work.

- The planned work contained in the lowest level WBS components (work packages) can be scheduled, cost estimated, monitored and controlled.

WBS format

Work Breakdown Structure (WBS)

- Phase (optional)
  - Deliverable
    - Detailed Task
    - Detailed Task
    - Detailed Task
    - Milestones
WBS – “Rules”

- **100% Rule**
  - WBS includes 100% of the work defined by the project scope
  - Applies to all levels within the hierarchy: the sum of the work at the “child” level must equal 100% of the work represented by the “parent” and the WBS should not include any work that falls outside the actual scope of the project.

- **Deliverable-oriented**
  - Identify the final products of the project – what must be delivered to achieve project success.

- **Detailed Tasks**
  - Action-oriented, verb-driven, specific (“Unit Test” vs. “Perform Unit Test on Module X”)
  - Unique within the WBS and can be interpreted by team members without seeing the context of the hierarchy
Budgeting and Cost Planning

■ Budgeting
  • Enter high level budgets at the project level
  • Budget Cost Resources (Hardware, Software, Training, Internal Labor, External Labor)

■ Cost Planning
  • Plan your spending throughout the schedule
  • Expense Cost Resources (Hardware, Software, Training, Internal Labor, External Labor)

■ Cost Tracking
  • Track actuals as money is spent
    • ‘Actual Cost’ field
Resource Allocation to Projects

Johnny Eager
Max Units 80%

Project X
50%

Project Y
30%
Estimates – Changing the conversation

Commitment to effort estimates

Team Members

Project Managers
Commitment to dates from effort & allocation

Resource Managers
Commitment to allocation
“What drives the work?”

- Dependencies are not about chronology, but about cause and effect
- Question to ask: “Which task drives the other task?”
- 4 Relationships:
  - Finish-Start (FS); Start-Start (SS); Finish-Finish (FF); Start-Finish (SF)
- Rules
  - All detailed tasks and milestones MUST be included in the dependency network
    - no ‘orphan’ detailed tasks or milestones.
  - Summary tasks should NEVER have dependencies on them.
“Commitments & Restrictions?”

• Deadline (commitment date)
  • Contract dates
  • Dates given to the PM by sponsor, executive or client

• Constraint
  • Scheduling restriction
  • External dependency

• Avoid Constraints whenever possible, use Deadlines instead

• A Proactive Project Model has few or no constraints in it
Actual Work and Estimate-To-Completion

- Track “Actual Work”
  - Historical information / Accounting

- Review “Remaining Work” (Estimate-To-Completion)
  - Updated Forecasting
Processing Updates and Corrective Action

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FREE to first 25 USA based followers to follow us on Twitter @SenseiPPM

E-mail info@senseiprojectsolutions.com to receive your copy. US addresses only.

- Subject: “Proactive PPM Book – 5/22 webinar”

Proactive PPM with Microsoft Project 2013 for Project Server and Project Online

The only Microsoft Project learning guide in full color. Screenshots and illustrations come to life for enhanced learning and comprehension.

This book focuses on project management best practices with Microsoft Project and enabling project managers to build solid schedules that will reflect the true scope of the project and continuously forecast status through completion.

This book is closely aligned with industry standards from the Project Management Institute® (PMI®):


The overall goal is to teach project managers a practical approach to how they should be using the tools in the context of industry best practices. As such, the book emphasizes the features of Microsoft Project and Project Web App that help facilitate Proactive Project and Portfolio Management (PPM).
Webinar PDU Information

Program Title: Proactive Scheduling
PDU Category (PMI Component): Category A
PMIWDC’s Component ID (Provider ID): C046
Activity Meeting Number: 052214WB
Date of Completion: 2014/05/22
PDUs Earned (Contact Hours): 1
### What is most important about webinars?
- Topic: 91.0% (61)
- Presenter: 4.48% (3)
- Webinar Schedule: 4.48% (3)
- No Vote

### Do you Currently Use Project Server?
- Yes: 20.5% (14)
- No: 79.4% (54)
- No Vote

### What version of Microsoft Project are you using?
- Project 2003: 2.90% (2)
- Project 2007: 20.2% (14)
- Project 2010: 53.6% (37)
- Project 2013: 10.1% (7)
- Not using Project: 13.0% (9)
- Other: 0% (0)
- No Vote

### What Industry/business do you work?
- Information Technology: 39.3% (26)
- Health Care: 4.55% (3)
- Civilian Government: 33.3% (22)
- Military: 0% (0)
- Construction: 1.52% (1)
- Financial: 3.03% (2)
- Education: 1.52% (1)
- Other: 16.6% (11)
- No Vote

### Have you had formal training with Microsoft Project?
- Yes: 50% (33)
- No: 50% (33)
- No Vote

**Proactive Scheduling Webinar**
- Introduction to Proactive Scheduling
- PMI - Washington DC
- May 22, 2014
- Noon – 1pm