A Planning Revolution

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Agenda

• Project Planning & Control
• The Distributed Planning Process
• Distributed Planning vs. Centralized Planning
• Tool for Distributed Planning
• Summary
Project Planning & Control

- Schedule work
- Manage key interfaces and product development
- Monitor progress towards milestones & completion of products
- Manage resources
- Manage risk
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Distributed Planning Process

- Ownership and responsibility of plans remain with the Cognizant Individuals (Cog-Is)
- Process is product-oriented
- Individual's plans and schedules are **not** micro-managed by the Project
  - Only agreements on deliverables between work packages are managed, not entire schedules
- Deliverables are H/W, S/W, Data, Docs, Decisions, etc.
Distributed Planning Process

Manage Schedule Interface Agreements

Schedule A

Schedule B

Schedule C

A1 → A2 → A3

Agreements are the glue that hold a project together.

Agreements concern the “what” & “when” of schedule interfaces.
Distributed Planning Process

Distributed Planning--How to...

- Remove centralized scheduling staff
- Make Cog-Is responsible for:
  - maintaining schedules
  - negotiating interim deliverables with other Cog-Is
  - establishing agreements
- Use metrics based on these interim deliverables
- Don’t integrate schedules into large, unmanageable networks
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Problems with Centralized

- The cost of the central scheduling staff itself
- Diluting the responsibility for planning each task between Cog-I and scheduling staff adds confusion about accountability
Advantages of Distributed

- Much lower staffing cost
- Responsibility stays clearly in hands of Cog-Is
- Performance is measured objectively by product delivery, not subjectively by progress of activity
Distributed vs. Centralized

Why Not Distributed Planning?

• Lack of tools to manage agreements

• Lack of understanding, especially by Cog-Is
  – Think they’ll inherit more work instead having control over their own work
  – Actually eliminates double bookkeeping and confusion of Cog-I’s schedule and central schedule

• Change is difficult; entrenched in old ways
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Distributed Planning Tool

- The RecDel* System has been created at JPL
  - Web-based
  - Intuitive user interface
  - Immediate report capability
    - Includes Metric Reports

- Has been used successfully by such projects as the Cassini Mission to Saturn
  - Delivered on time
  - Built under budget

*RecDel = Receivable / Deliverable
System Purpose

- Maintain details of schedule interface agreements not easily maintained with network schedules
- Provide immediate reporting capabilities for users
- Facilitate & track negotiations of RecDels
- Allow the Cog-Is to retain "ownership" of their RecDels and schedules
- Accommodate changes to plans.
Key Elements

• The RecDel itself (product-oriented)
  – RecDel is a negotiated product—deliverable—between work packages (task elements) of a Project
    • Product definitions are negotiated, then agreed upon
    • Delivery dates are negotiated, then agreed upon

• The Cog-Is of task elements (distributed)
  – Cog-Is are the Receivers and Deliverers of the RecDels
  – Maintain ownership of their plans
  – *The RecDel System* empowers Receivers and Deliverers to work together to negotiate their schedule interfaces
  – Only Receiver of RecDel authorized to status delivery as received
The RecDel System provides Receivers and Deliverers with a tool to initiate, agree to and close RecDels.

- Either party can initiate a RecDel
- A RecDel is “Reconciled” only when both parties agree to:
  - The product definition
  - The delivery date
- RecDels can be statused by only Receivers as either:
  - completed
  - undelivered
Report Features

- Reports enable Project managers and Cog-Is to monitor and assess progress
  - Planned vs Actual metrics
  - Critical RecDel reports
  - Gantt Charts
  - etc.

- Project staff quickly and easily determines whether delivery obligations are met
System Features

- Sends Receivers, Deliverers and Managers automated e-mail notification of:
  - RecDel changes
  - RecDels coming due and past due
  - RecDels in need of statusing

- System can be customized on many parameters to meet projects’ needs
  - Work Breakdown Structure
  - Timing of automated e-mail notifications
  - etc.

10/11/99
Time-Saving Features

- Contact information provided for both parties involved in a RecDel allows Cog-Is to quickly discuss RecDels
  - Displays phone numbers
  - Has \textit{mailto:} link on name for e-mail connection
- Convenient bookmarking of data & reports
System / Process Benefits

- Minimizes time needed to establish schedule baseline
- Eliminates time delay between statusing and reporting
- Encourages good planning techniques
- Facilitates communication on distributed projects
- Provides visibility to progress at all levels
Further Development Needed

• Tie in with:
  – Financial systems
    • Earned Value system
  – Desktop network scheduling tool such as MS Project

• Dependency information
  – critical path
  – float (currently available, but not reported)
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Summary

- Distributed Planning involves managing interfaces
  - As agreements
  - Not unilateral dictates

- *The RecDel System* provides environment
  - Manage schedule interfaces
  - Accommodate change

- For more information visit our website
System Software Application

- The RecDel System is a web application available world wide and can be accessed by:
  - PCs
  - Macs
  - Unix

- The RecDel System uses Secure Sockets Layer for added security

- The RecDel System utilizes
  - Database server
  - Application server
  - Web server

- The RecDel System is a distributed, object-based, multi-tiered application
Example of E-mail Reminder to the Deliverer

Date: Thu, 4 Feb 1999 00:31:07 -0800 (PST)
From: "CMIS Administrator" <Cmis-Admin@jpl.nasa.gov>
To: <Cate.Heneghan@jpl.nasa.gov>
Subject: MO&DA RecDels Due Within 14 Days
X-MimeOLE: Produced By Microsoft MimeOLE V4.72.2106.4

You are scheduled to deliver the MO&DA RecDel(s) listed below on or before 2/18/1999. To view or edit any of these MO&DA RecDels, use the links provided.

RecDel: 30946 - Implement Final WBS for Replan FY99
Due Date: 2/5/1999
Receiver: Reed Wilcox
Link: https://cmis.jpl.nasa.gov/cgi-bin/CMIS/Cassini/RecDel/GetDetail?RDID=30946

RecDel: 31284 - Upgrade Code Doc & Architecture Diagrams (ISO)
Due Date: 2/15/1999
Receiver: Reed Wilcox
Link: https://cmis.jpl.nasa.gov/cgi-bin/CMIS/Cassini/RecDel/GetDetail?RDID=31284

NOTE: This is an automatically generated message. Email replies to this message are NOT processed. Please call Alexandria Wiercigroch at 354-3625 with questions.