

# Software Engineering Process Group Conference Overview:

Focus on Project Management & CMMI



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# Sessions to be Discussed

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- ✍ CMMI Transition Approaches Panel Introduction – Various Organizations
- ✍ Behavioral Clues to Organizational Process Maturity – Judah Mogilensky, Process Enhancements Partners, Inc.
- ✍ Executive Responsibilities in SPI – Bill Curtis, Teraquest
- ✍ Reference Only: It's The Organization, Stupid! - Bill Curtis, Teraquest



# CMMI Transition Approaches Panel Introduction – Various Organizations

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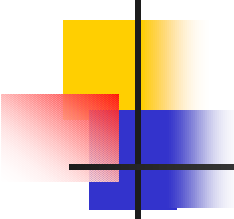
- ✍ Organizations Represented by Panelists
  - ✍ Harris Corporation
  - ✍ Lockheed Martin Enterprise Information Systems
  - ✍ Raytheon
  - ✍ Lockheed Martin Management & Data Systems
  - ✍ Lockheed Martin Mission Systems



# CMMI Transition Approaches Panel Introduction – Various Organizations

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- ✍ Each panelist covered following:
  - ✍ Overall CMMI transition strategy
  - ✍ Factors influencing their approaches to CMMI (how these effected their transition)
    1. Maturity model(s) in use
    2. Current process improvement life cycle stage
    3. Overall process maturity
    4. Organizational attributes
      - ✍ Demographics (number of programs, etc.)
      - ✍ Application domain
      - ✍ Organizational process improvement objectives
    5. CMMI transition drivers



# CMMI Transition Approaches Panel Introduction – Various Organizations

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## ✍ Harris Corporation

### ✍ Lessons Learned

- ✍ Start early!!!
  - ✍ Understand models and methods
  - ✍ Id gaps and establish action plans
  - ✍ Don't underestimate learning curve
- ✍ Continue current improvement based on legacy models
  - ✍ What makes sense
  - ✍ Investment migrates naturally to CMMI
- ✍ Consider opportunities to implement integrated engineering assets
  - ✍ Policies, processes, training, metrics
  - ✍ Reinforce with templates, checklists, etc.
- ✍ Use a variety of assessment methods (Class A, B, C methods)
  - ✍ Mini-assessments, quick looks, etc.
  - ✍ Class A (SCAMPI) assessments not always best



# CMMI Transition Approaches Panel Introduction – Various Organizations

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- ✍ Lockheed Martin Enterprise Information Systems
  - ✍ Organizational infrastructure and support keys to success
  - ✍ Synchronize process effort with internal initiatives
  - ✍ Carefully develop transition approach based on current maturity state
  - ✍ Keep It Simple Stupid (KISS)



# CMMI Transition Approaches Panel Introduction – Various Organizations

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## Raytheon

- ✍ Model Facts
  - ✍ CMMI is larger and not as specific as previous SW-CMM
  - ✍ Broad scope of org & project roles addressed
- ✍ Assessment (SCAMPI) Facts
  - ✍ Requires more knowledgeable leadership and team knowledge than CPA IPI (SW-CMM assessment method)
  - ✍ Larger assessment teams required for all roles
  - ✍ Takes more time & effort (note various methods & choose accordingly)
- ✍ Organizational Impact Facts
  - ✍ More involvement from sponsors and management needed
  - ✍ Collaboration and integration of functions and processes
- ✍ Coordination & Planning Facts
  - ✍ Model more effective but requires broad, multidisciplinary experience, mgt and process deployment expertise, and enterprise knowledge <sup>7</sup>



# CMMI Transition Approaches Panel Introduction – Various Organizations

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- ✍ Lockheed Martin Management & Data Systems
  - ✍ Understand CMMI requirements & integrated corporate processes
  - ✍ Refine goals and objectives form CMMI
  - ✍ Gap analysis
  - ✍ Risk Analysis
  - ✍ Plan & execute plans (feedback actions)



# CMMI Transition Approaches Panel Introduction – Various Organizations

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## ✍ Lockheed Martin Mission Systems

✍ CBA-IPI (SW-CMM assessment method) vs CAM (CMMI assessment method)

### ✍ CBA-IPI

- ✍ Perform process improvement
- ✍ Conduct appraisal
- ✍ Receive maturity level rating & strengths/weaknesses

### ✍ CAM

- ✍ Perform process improvement
- ✍ Conduct appraisal & identify deficiencies
- ✍ Correct deficiencies
- ✍ Re-appraise corrected deficiencies
- ✍ Re-examine objective evidence at the end
- ✍ Receive “target” maturity level if all deficiencies corrected
- ✍ Continue to appraise all programs in org



# Behavioral Clues to Organizational Process Maturity – Judah Mogilensky, Process Enhancements Partners, Inc.

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- ✍ Indicators to determine maturity based on staff behavior (before or during an assessment)
  - ✍ Who calls for help and what they say
  - ✍ Who shows up for meetings and sessions
  - ✍ What order do they enter room
  - ✍ Where they sit and body language
  - ✍ Who calls between sessions or meetings and what are future session/meeting commitments



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- ✍ Mature behavior is difficult to fake
- ✍ Recognizable behavioral patterns that characterize maturity levels
- ✍ May “raise doubts” about official assessment ratings



# Behavioral Clues to Organizational Process Maturity – Judah Mogilensky, Process Enhancements Partners, Inc.

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- **Official Data**

- ✍ Maturity  
Questionnaires
- ✍ Project  
Briefings
- ✍ Document  
Reviews
- ✍ Interview Data
- ✍ Draft Findings  
Feedback

- **Unofficial Data**

- ✍ Management  
Behavior
- ✍ Participant  
Behavior
- ✍ Assessment  
Team Member  
Behavior



# Behavioral Clues to Organizational Process Maturity – Judah Mogilensky, Process Enhancements Partners, Inc.

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## ✍ Typical Level 1 Behaviors

- ✍ Repeated assertion that they know better (We're different, we don't need that many people, we don't need that much time,...)
- ✍ Unstable schedule for assessment (lots of replans and postponements)
- ✍ Assessment used as wine and cheese session
- ✍ Wall of Cluelessness (why should we do it that way?...)
- ✍ Sessions/Meetings start late & some participants show up even later



# Behavioral Clues to Organizational Process Maturity – Judah Mogilensky, Process Enhancements Partners, Inc.

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- ✍ Typical Level 2/3 Behaviors
  - ✍ Schedule stable once agreed
  - ✍ Organization suggests training without prompting
  - ✍ Managers take time during planning and training
  - ✍ Assessments used to describe processes with pride and enthusiasm
  - ✍ Confident in process value
  - ✍ Almost all meetings start on time and those late apologize profusely



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## ✍ Typical Level 4/5 Behaviors

- ✍ Data reused from previous assessments to plan current one
- ✍ Involvement of senior managers in process strong
- ✍ Every meeting/sessions has new stories about process improvements
- ✍ Causal analysis spontaneous
- ✍ Widespread awareness



# Executive Responsibilities in SPI – Bill Curtis, Teraquest

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- ✍ Executive Role
  - ✍ Accept personal responsibility
  - ✍ Set goals & expectations
  - ✍ Establish SPI project
  - ✍ Empower quality assurance
  - ✍ Align management
  - ✍ Involve customers
  - ✍ Involve developers
  - ✍ Manage change
  - ✍ Review progress
  - ✍ Reward role models
  - ✍ Reinforce under stress



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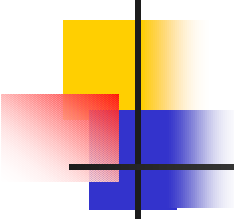
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## Why Don't Executives Lead?

-  Lack confidence in mature processes
  -  No experience in mature orgs
  -  Prior success through heroics
  -  Belief they must underbid to win
-  Only understand low maturity leadership
  -  Can't envision how org will operate
  -  Don't know how to change leadership style
  -  Revert to habitual behaviors under stress
  -  Don't want to break bond with middle managers

They are leading

but they are not leading change



# It's The Organization, Stupid! - Bill Curtis, Teraquest

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- ✍ Visit [www.teraquest.com](http://www.teraquest.com) to look at slides
- ✍ Worth taking a few minutes