MSD Project Reviews

- Objectives of the Project Review
- Proposed Review Structure
- Student Presentations
- Example Presentation
- Presentation Tips
Project Review Objectives

• Formally assess project status and communicate to Senior Mgt (usually at the end of each Phase: e.g. a Phase Gate Review)
  – State of design
  – Schedule
  – Budget
  – Conformance to product development process

• Confirm project consistent with current company priorities

• Documentation to comply with Product Development Process and support Design History File

• Project reviews are not:
  – Technical design reviews
  – A review of all activities that have occurred during product development
Proposed Project Review Structure

- Title Slide: Project title, Team members / roles, Sponsor
- Project Description / High Level Customer Needs / Eng Specs
- Concept Description and Rationale (MSD I)
  Concept Summary (MSD II)
- System Architecture
- High Risk Assessment (MSD I)
  Design Summary (MSD II)
- Current State of Design: performance/budget/schedule (MSD I)
  System Testing Results (MSD II)
- Milestone Schedule for next quarter (MSD I)
  Objective Project Evaluation: Success and Failure (MSD II)
Student Presentations

• Two teams present for 2 minutes each
  – Title Slide: Project Title, Team members and Sponsor
  – Project Description / High level customer needs
  – Selected concept
• 3 minute critique by guides and class

Do not attempt to cover your entire presentation in 2 minutes!
Proceed at your normal pace.
P08907: Portable Beverage Opening Device with Integrated BAC Monitoring

Dr. B.R. Bellie  Project Manager
B.D. Weiser  Marketing
H.N. Kinn  Test Engineer
M.K. Lobe  Mechanical Engineer
S. Adams  Electrical Engineer

Sponsor: Anheuser-Busch

Note: This is a hypothetical project and is not sponsored nor endorsed by Anheuser-Busch
Project Description

- Device to open bottle beverage containers
- Market: Males age 21-32
- Key high level customer needs / engineering specs:
  - Portable (carry in pocket)
    - Size < 8cm x 3cm x 1cm
    - Weight < 3 oz
    - Batteries for 100 tests
    - Drop of at least 2 meters
  - Universal (beer or EANABs)
    - Caps from 2.5-3cm O.D.
    - Soda can tab lifter
  - Built in breathalyzer
    - Range: 0.500 % BAC
    - Resolution: ± 0.01 % BAC
  - No training required
    - Digital display
Design Concept

- Mouthpiece for Breathalyzer
- BAC display
- Convenience
- Key Ring
- Titanium Case
- Bottle Opener
- Soda Can Tab Opener

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Technical Risk Assessment

• Risk: Breathalyzer accuracy with variable “blow” rates
  – Breadboard alcohol sensor and test with air saturated with fixed % alcohol at flow rates from 0.1 to 5 liters/min
  – Accuracy of 0.01% requires flow rate in excess of 2 liters/min
  – Sensing technology acceptable at all required environmental conditions and BAC levels

• Reviewed results with project team and customer

• Mitigations:
  – Flow sensor to measure flow rate of air
  – Test results invalidated for flow rates below 2 liters/min
  – Display will flash for user feedback (links to “no training required” customer need)
Current State of Design

• Design meets all customer needs
• Design meets engineering specifications for full system and subsystems except:
  – Battery life ~ 80 tests
  – Weight 3.5 oz
• On target to meet project budget of $1200 except for overrun on cost of goods
  – Budget COG (ea) = $120
  – Actual COG (ea) = $200
• Schedule: three weeks behind schedule on power system design
• Moderate confidence in drop specification
• Mitigations:
  – Battery life and weight minimal impact to business case → accepted
  – COG changes marketing plan: Need approval or reduction in features
  – Finalize design over Fall/Winter break to regain schedule slip
Product Development Process Phase

Phase 0: Planning

Phase 1: Concept Development

Phase 2: System Level Design

Phase 3: Detailed Design

Phase 4: Testing and Refinement

MSD I

MSD II

Alpha Prototype

Current Phase of Development

0 1 2 3 4

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R-I-T
MSD II Project Schedule Milestones

• Dec 3: Design finalized and all parts on order (MSD I milestone)
• Jan 14: Functional alpha prototype (full featured)
• Jan 28: Design verification testing complete, initiate design revisions
• Feb 11: Design Verification Testing Results Complete
• Feb 15: Documentation Finalized: DHF, Formal Paper, Poster
• Feb 20: Project Review - Phase 4 Completion
Presentation Tips

- Formal PowerPoint presentation
- Keep background simple → audience focus on content
- Avoid animations unless functional
- Use colors that show up well (e.g. avoid yellow on white)
- Make text large (never < 18 point) including figures!
- Bring hardcopy handouts for audience (5 copies)
- Limit number of speakers
  - All team members should speak → break at logical locations
  - Avoid “round robin” organization (i.e. speak only once)
- Dress professionally
- Practice in front of other teams
  - Time < 20 minutes + 5 minutes questions