ZACOM

Lethality, Survivability, Mobility and Sustainment for America's Army

Briefing For: 40mm Industry Day
18-19 September 2003

40 mm TDPs

Review, Clean and 3D

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Introduction

Objective: To provide an overview of the ongoing technical review of the 40mm Technical Data Packages. The technical reviews will include the generation of Detailed Specifications and have a third dimensional feature added to the drawing.

Goal: To complete the TDPs by 30 April 2004.

TDPs Affected

- High Velocity (MK19 Mod3 GMG)
  - M385A1 Practice
  - M918 Practice ("Flash-Bang")
  - M430A1 High Explosive Dual Purpose (H
- Low Velocity (M203/M79)
  - M781 Practice ("Orange Dye")
  - M583A1 White Star Parachute ("Illumination")
  - M433 High Explosive Dual Purpose (HEDP)

Outline

A. Review the TDP
   1. Drawings
   2. Specifications (Standardize Testing)
   3. Packaging Requirements
B. Generate DTL Specifications as required
C. Generate 3D drawings

Review the TDP

- Check drawings
  - Hierarchy (WBS)
  - Notes
  - Dimensions and Tolerances
  - Drawing Methods
  - Specifications (Standardize Testing When Possible)
  - Qualified source of supply
  - Distribution Statements

Examples

- Hierarchy
  - Is there a COAI drawing?
  - Is a DTL Spec. attached to the top drawing?
  - Are the Packaging drawings correct and called out?
- Notes
  - Are they clear and understandable?
  - Do they make sense and are they necessary?
- Dimensions and Tolerances
  - Are the dimensions correct?
  - Are they called out correctly using the right symbols?
  - Does the tolerances make sense?

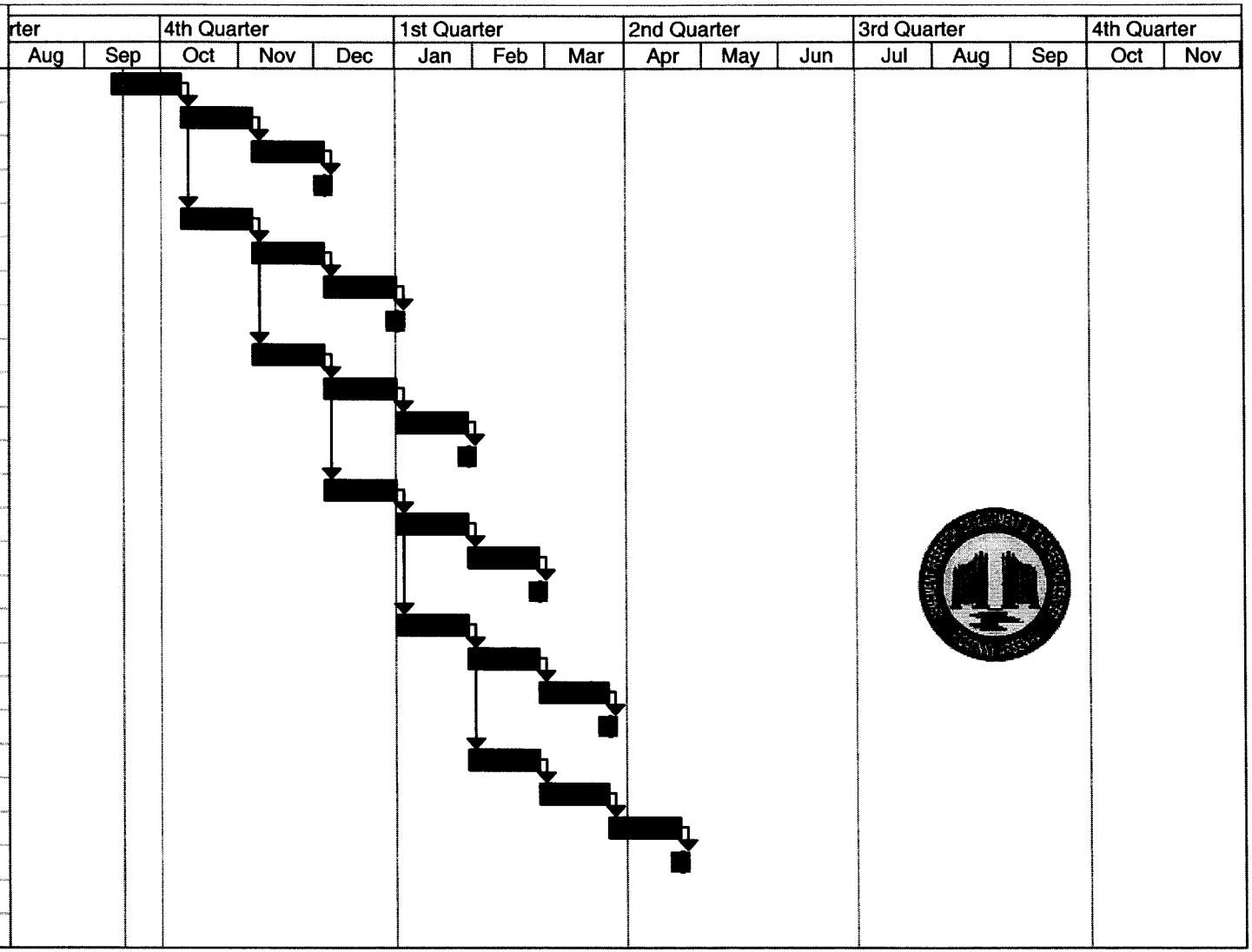
Examples cont.

- Drawing Methods
  - Ansi-Y14.5 or DOD-100?
  - Are the proper symbols used?
  - Are the datum's correct?
  - Are the depiction correct?

- Qualified Source of supply
  - Are there qualified sources?
  - Are they still making the item?

- Distribution Statement
  - Is the statement correct?
  - Is it missing?

ID		Task Name
2		M385 TDP SCRUB
3		M385 3D Drawings
4		M385 ECP Routing
5		ERR M385
6		M918 TDP SCRUB
7		M918 3D Drawings
8		M918 ECP Routing
9		ERR M918
10		M430A1 TDP Scrub
11		M430A1 3D Drawings
12		M430A1 ECP Routing
13		ERR M430A1
14		M433 TDP Scrub
15		M433 3D Drawings
16		M433 ECP Routing
17		ERR M433
18		M583 TDP Scrub
19		M583 3D Drawings
20		M583 ECP Routing
21		ERR M583
22		M781 TDP Scrub
23		M781 3D Drawings
24		M781 ECP Routing
25		ERR M781



Detailed Specifications

- Effort is underway to convert 14 Mil-Specs to DTL specs
- Some items (i.e., M433) have more than one Mil-Spec – plan is to combine into one DTL spec, if feasible
- Includes Links, Packaging, Fuze Test Vehicles and M169 Cartridge Case

Detail Specifications

- Schedule calls for completion of conversion effort by February 2004
- ECPs and ERRs by May 2004
- MAJOR RISK: to date, not enough manpower – only 7 of 14 specs conversion underway. Working this issue.

DTL Generic Schedule

• Obtain Active MIL-SPEC	
• Conduct ECP search	
• Review ECPs relevant to SPEC	
• Obtain QED Template format for DTL Specs	
• Prepare/Convert MIL SPEC into text format	August 2003
• Complete Section 1	
• Complete Section 2	
• Conduct Status Review	September 2
• Complete Section 3	October 2003
• Complete Section 4	
• Conduct Status Review	October 2003
• Complete Section 5	
• Complete Section 6	November 2003
• Conduct Status Review	December 2003
• Conduct Internal Review	Dec/Jan 2004
• Incorporate Comments from Internal Review	Feb/March 2004
• Submit DTL to QED Detail Spec Review Board	March 2004
• Write ECP to incorporate DTL into TDP	March 2004
• Board ECPs	April 2004
• ERR Appropriate DTL Spec ECP	April/May 2004

Future Planned Improvements 2003-2008

- Across the Board Programs
  - Vigorous Cost Reduction Effort
  - O-Ring Study
  - M2 Replacement
  - M9 Replacement
  - IM effort
  - M55 and M59 Green Material Replacement
    - (4 Qtr 07)
  - Lead Free Primer

Future Planned Improvements 2003-2008 Cont.

- M385
  - No planned improvements
- M918
  - Reduce the cost. (Single Chamber CC,
    - 3 yr program Unfunded
- M430A1
  - Self Destruct Fuze (4th Qtr 2005)
  - IM PAX-2A (2nd Qtr 2005)
  - Lead Free Primer/Detonator (4th Qtr 2007)
  - Single Chamber CC (Unfunded 2 year effort)

Future Planned Improvements 2003-2008 Cont.

- M781
  - M9 Propellant Replacement
  - Replace LP-2 with Alternate Material or O-Ring
  - Cooperative Research and Development Agreement
    - CRADA with MAST Technology
    - CRADA with M.E.I.
- M433
  - CRADA with American Ordnance
  - LP2 Replacement/O-Ring (1 Qtr 05)
  - Zirconium Liner (1Qtr 2006)
  - Improved Dispersion (4 Qtr 06)
  - Improved Trajectory (4Qtr 07)

Future Planned Improvements 2003-2008 Cont.

- M583 White Star
  - Redesign of the cartridge case to incr
    length to ease difficulties with extractio
  (4 Qtr 05)

What This Means

- A better TDP set-up for a System type contract.
- Up-to-date Detailed Specifications
- Better understanding and improved visualization through 3d.
- Reduced number of ECPs and RFDs and RFWs.

Conclusions

- No TDP is perfect
- TDPs are living documents that are constantly changing. (For the better)
- If there is errors in the TDPs let me kno and I will get them incorporated.

Questions

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