DOD-HDBK-287, TAILORING GUIDE FOR DOD-STD-2167A, DEFENSE SYSTEM SOFTWARE DEVELOPMENT

Daniel J. Kvenvold

Air Force Logistics Command (HQ AFLC/MMEC)
Wright-Patterson Air Force Base OH, 45433-5001

ABSTRACT

This paper will present some of the background as to why and how the handbook was developed, the role of industry in its development, what it contains, and when it will be published. It will explain why tailoring of DOD-STD-2167A is needed, briefly how to tailor the standard, and it will address the requirements in DOD-STD-2167A for development of software and for quality evaluations. Additionally, the paper will describe the role of the software support organization during the acquisition phase in the development of software for mission critical computer resources (MCCR), and briefly, how AFLC performs software support to MCCR. Finally, a few paragraphs will be dedicated to the projects in process by the Joint Logistics Commanders' Computer Software Management and Post Deployment Software Support Subgroups.

DOD-HDBK-287, A TAILORING GUIDE FOR
DOD-STD-2167A

WITH EMPHASIS ON SOFTWARE SUPPORT

(GRAPHICS AND PICTURES NOT INCLUDED HERE. WILL BE
SHOWN DURING PRESENTATION)

BRIEFER: DANIEL KVENVOLD
HQ AFLC/MMEC

DOD-HDBK-287, A TAILORING GUIDE FOR DOD-STD-2167A

0 - OVERVIEW

- 0 - WHY THE HANDBOOK WAS DEVELOPED
- 0 - HOW IT WAS DEVELOPED
- 0 - WHAT IT CONTAINS
- 0 - TAILORING DOD-STD-2167A FOR SUPPORT
- 0 - AFLC MCCR SOFTWARE CHANGE PROCESS
- 0 - CONCLUSIONS

DOD-HDBK-287, A TAILORING GUIDE FOR DOD-STD-2167A

0 - WHY THE HANDBOOK WAS DEVELOPED

- 0 - DOD POLICY TO TAILOR STDs AND DATA ITEM DESCRIPTIONS (DIDs)
- 0 - DOD-STD-2167A IS A MAX STD
 - 0 - MUST BE TAILORED OR DEVELOPMENT COSTS WILL BE EXCESSIVE
 - 0 - ALL STDs AND DIDS REFERRED TO IN STD MUST BE TAILORED
- 0 - TO PROVIDE GUIDANCE ON HOW TO TAILOR DOD-STD-2167A

HOW DOD-HDBK-287 WAS DEVELOPED

0 - THE JOINT LOGISTICS COMMANDERS' COMPUTER SOFTWARE MANAGEMENT GROUP (CSM)

- 0 - AFLC, AFSC, ARMY/AMC AND NAVY/SPAWAR REPRESENTATIVES
- 0 - CSM REWROTE 2167 AT CSM MEETING, AND IN THE ATLANTA AIRPORT
- 0 - COORDINATED WITH INDUSTRY AND GOVERNMENT
 - 0 - OVER 5000 COMMENTS
 - 0 - COMMENTS RESOLVED IN AN INDUSTRY AND GOVERNMENT WORKSHOP IN WASH DC
- 0 - FINAL MEETING WITH CODSIA IN WASH DC, RESULT WAS PLAN FOR 2167A
- 0 - PUBLISHED IN JUN 85

HOW DOD-HDBK-287 WAS DEVELOPED (CONT)

0 - HANDBOOK WAS PART OF THE DOD-STD-2167 PACKAGE

- 0 - INCLUDED THE STD, DIDS, HANDBOOK AND TRAINING COURSE
 - 0 - ALL WERE COMPLETED BEFORE JUN 85 EXCEPT THE HANDBOOK
- 0 - HANDBOOK WAS IN DRAFT IN JUN 85 BUT NOT REVIEWED OR COORDINATED

0 - KEY CONCEPTS OF DOD-STD-2167A	0 - DOCUMENT IN CRLCMP
0 - FEATURES THAT SUPPORT TAILORING	0 - ASSIGN A DPML AND AN SPM
0 - "SHELL" REQUIREMENTS	-----
0 - ADDRESSES:	SUPPORT ACTIVITIES DURING ACQUISITION (CONT)
0 - COMPATIBILITY OF STD WITH ADA	0 - ACTIVITIES DURING DEM VAL
0 - DESIGN METHODOLOGIES	0 - ASSIST IN IV&V DECISION
0 - RELATED DATA ITEM DESCRIPTIONS	0 - DETERMINE SUPPORT RESOURCES REQUIREMENTS
-----	0 - INCLUDE IN CRLCMP
WHAT THE HANDBOOK CONTAINS (CONT)	0 - INTERACT WITH CONTRACTOR THROUGH THE SPO
0 - OVERVIEW OF TAILORING	0 - DEFINE SUPPORT REQUIREMENTS AND TOOLS
0 - WHY TAILOR	0 - CONTRACTOR DOCUMENTS IN CRISD
0 - WHO PERFORMS TAILORING	0 - ASSIST IN TAILORING DOD-STD-2167A AND 2168 FOR FSD
0 - WHERE TAILORING DECISIONS ARE SPECIFIED	-----
-----	SUPPORT ACTIVITIES DURING ACQUISITION (CONT)
WHAT THE HANDBOOK CONTAINS (CONT)	0 - ACTIVITIES DURING FSD
0 - KEY CONSIDERATIONS IN TAILORING DOD-STD-2167A	0 - PARTICIPATE IN PROGRAM REVIEWS
0 - SYSTEM LIFE CYCLE PHASES	0 - PERFORM IV&V
0 - ACQUISITION AND NEW DEVELOPMENT	0 - MEMBER OF TEST TEAMS DURING DT&E AND OT&E
0 - ACQUISITION AND SUPPORT REQUIREMENTS	0 - HELP FINALIZE CRLCMP
0 - DELIVERABLE AND NON-DELIVERABLE SOFTWARE	0 - DEVELOP A SOFTWARE SUPPORT ENVIRONMENT
0 - DOCUMENTATION AND ENGINEERING DATA	-----
0 - WHY IT IS NEEDED BY THE SUPPORT AGENCY	SUPPORT ACTIVITIES DURING ACQUISITION (CONT)
0 - OTHER IMPOSED REQUIREMENTS AND POLICIES	0 - OBJECTIVE: DEVELOP MCCR SOFTWARE THAT IS:
-----	0 - FLEXIBLE (CAN BE ENHANCED OR MODIFIED)
WHAT THE HANDBOOK CONTAINS (CONT)	0 - MAINTAINABLE (EASE OF CHANGE)
0 - DETAILED TAILORING PROCEDURES	0 - PORTABLE (USED IN MULTIPLE ENVIRONMENTS)
0 - SOFTWARE QUALITY	0 - REUSABLE (CAN BE INSERTED INTO NEW SYSTEMS)
0 - DOD-STD-2168 SOFTWARE QUALITY PROGRAM	0 - USABLE (EASILY LEARNED)
0 - DOD-STD-2167A QUALITY PLAN	-----
0 - DOD-STD-2167A EVALUATION CRITERIA	HOW AFLC SUPPORTS SOFTWARE
-----	-----
SUPPORT ACTIVITIES DURING ACQUISITION	(PICTURE OF A 1950S WAREHOUSE)
0 - ACTIVITIES DURING CONCEPT EXPLORATION	-----
0 - PARTICIPATE IN DEV OF SUPPORT CONCEPT	SOFTWARE COSTS
0 - PARTICIPATE IN DEV OF SORD	(PIE CHART)

MCCR SUPPORT PROCESS

THE SUM OF ALL ACTIVITIES THAT TAKE PLACE TO ENSURE THAT THE IMPLEMENTED AND FIELDIED SOFTWARE CONTINUES TO FULLY SUPPORT THE OPERATIONAL MISSION OF THE SYSTEM.

- 0 - HARDWARE MODIFICATIONS
- 0 - SOFTWARE CHANGES
- 0 - HARDWARE AND SOFTWARE

(8 OR 9 PICTURES OF AFLC SUPPORT FACILITIES)

TAILORING DOD-STD-2167A FOR SOFTWARE SUPPORT CONTRACTS

- 0 - A DIFFERENT APPROACH FROM ACQUISITION
 - 0 - GOVERNMENT FURNISHED SOFTWARE (GFS)
 - 0 - CORRECT ERRORS
 - 0 - MODIFY OR CHANGE GFS
 - 0 - BLOCK CHANGES
 - 0 - ENHANCE GFS - (NEW DEVELOPMENT)
 - 0 - CHANGES MUST BE RESPONSIVE
 - 0 - CHANGING DIDS
 - 0 - KINDS OF SUPPORT CONTRACTS
-

CATEGORIES OF SOFTWARE SUPPORTED

- 0 - AVIONICS SOFTWARE (ALSO CALLED OPERATION FLIGHT SOFTWARE)
 - 0 - AIRBORNE ELECTRONIC WARFARE
 - 0 - GROUND ELECTRONIC WARFARE
 - 0 - AUTOMATIC TEST EQUIPMENT
 - 0 - COMMUNICATIONS-ELECTRONICS
 - 0 - TRAINING DEVICES
 - 0 - MISSILES
 - 0 - SMART MUNITIONS
-

SOFTWARE SUPPORT FUNCTIONS

- 0 - CORRECT DESIGN ERRORS (SOFTWARE, HARDWARE, DOCUMENTATION)

- 0 - DEVELOP CHANGES (ENHANCEMENTS, NEW CAPABILITY, EFFICIENCY)

- 0 - INTERFACE WITH OTHER SYSTEMS
 - 0 - DELETE UNNEEDED CAPABILITY
 - 0 - ENGINEERING (CIRCUIT DESIGN)
 - 0 - MAINTAIN DOCUMENTATION
 - 0 - SOFTWARE DISTRIBUTION AND SECURE STORAGE
 - 0 - SUPPORT ACQUISITION COMMAND AND USING COMMANDS
 - 0 - TESTING (INTEGRATION, SIMULATION, ANECHOIC, RETOK)
-

AFLC SOFTWARE SUPPORT PROCESS REASONS FOR CHANGING MCCR SOFTWARE

(PIE CHART)

AFLC SOFTWARE CHANGE PROCESS

(THREE FLOW CHARTS ILLUSTRATING RECEIPT OF CHANGE TO COMPLETION)

CONCLUSION

- 0 - TAILOR ALL STDs AND DIDs
 - 0 - DOD-STD-2167A IS A MAX STD AND MUST BE TAILORED
 - 0 - SUPPORT PHASE IS LONGER THAN DEVELOPMENT
 - 0 - DESIGN SYSTEMS FOR SUPPORTABILITY
 - 0 - SOFTWARE DEVELOPMENT AND SUPPORT ENVIRONMENTS VERY COSTLY
 - 0 - USE EXISTING SUPPORT AGENCY ENVIRONMENT
 - 0 - THERE IS LITTLE SOFTWARE KNOWLEDGE TRANSITIONED TO SUPPORT AGENCY
 - 0 - DO GOOD DOCUMENTATION DURING DEVELOPMENT
-