Appendix A

Outline of Systems Engineering Documents

Problem Situation or Mission Element Needs Statement (MENS)

A. History of the Problem and the Present System
B. Stakeholders
    1. Bill Payers
    2. Owners (if different than bill payers)
    3. Users
    4. Operators
    5. Victims
    6. Systems Engineers
    7. Manufacturers
    8. Deployers
    9. Trainers
    10. Maintainers
C. System Context and Environment
    1. System Context (social, economic, environmental)
    2. External Systems
D. Major System Objectives

Systems Engineering Management Plan (SEMP)

1.0   Integration
2.0   Technical Program Planning and Control
2.1   Responsibilities and Authority
2.2   Standards, Procedures, and Training
2.3   Program Risk Analysis
2.4   Work Breakdown Structure
2.5   Program Reviews
2.6   Technical Reviews
2.7   Technical Performance Measurement
2.8   Change Control Procedures
2.9   Engineering Program Integration
2.10 Interface Control
2.11 Milestones and Schedule
2.12 Other Plans and Controls
3.0   Systems Engineering Process
4.0   Engineering Specialty and Integration Plans and Procedures
4.1   Integration Design Plans
4.2   Integration System Qualification Plans

Stakeholders' Requirements Document (StkhldrsRD)

1.0   System Overview
2.0   Applicable Documents
3.0   Requirements
3.1   Development Phase (Programmatic) Requirements
    3.1.1   Input/Output Requirements for Development
    …
    3.1.4   Test Requirement for Development
3.2   Manufacturing Phase Requirements
…
3.3   Deployment Phase Requirements
…
3.4   Training Phase (if present) Requirements
…
3.5   Operational Phase Requirements
    3.5.1   Input/Output Requirements for Operations
        3.5.1.1   Input Requirements for Operations
        3.5.1.2   Output Requirements for Operations
        3.5.1.3   External Interface Requirements for Operations
        3.5.1.4   Functional Requirements for Operations
    3.5.2   System-wide/Technology Requirements for Operations
    3.5.3   Trade-off Requirements for Operations
    3.5.4   Test Requirements for Operations
3.6   System Improvement/Upgrade Phase Requirements

…
3.7   Retirement Phase Requirements

…
3.8   Overall Trade-off Requirement
Appendix A. Operational Concepts by Phase Appendix
Appendix B. External System Diagrams by Phase

System Requirements Document (SRD)

1.0   System Overview
2.0   Applicable Documents
3.0   Requirements
3.1   Development Phase (Programmatic) Requirements
    3.1.1   Input/Output Requirements for Development
    …
    3.1.4   Test Requirement for Development
3.2   Manufacturing Phase Requirements
3.3   Deployment Phase Requirements
3.4   Training Phase (if present) Requirements
3.5   Operational Phase Requirements
    3.5.1   Input/Output Requirements for Operations
        3.5.1.1   Input Requirements for Operations
        3.5.1.2   Output Requirements for Operations
        3.5.1.3   External Interface Requirements for Operations
        3.5.1.4   Functional Requirements for Operations
    3.5.2   System-wide/Technology Requirements for Operations
    3.5.3   Trade-off Requirements for Operations
    3.5.4   Test Requirements for Operations
3.6   System Improvement/Upgrade Phase Requirements
3.7   Retirement Phase Requirements
3.8   Overall Trade-off Requirement
Appendix A. Operational Concepts by Phase Appendix
Appendix B. External System Diagrams by Phase

System Requirements Validation Document (SRVD)

1. Development Phase (Programmatic) Requirements Validation
2. Manufacturing Phase Requirements Validation
3. Deployment Phase Requirements Validation
4. Training Phase (if present) Requirements Validation
5. Operational Phase Requirements Validation
6. System Improvement/Upgrade Phase Requirements Validation
7. Retirement Phase Requirements Validation
8. Overall Requirements Validation

System Description Document (SDD)

1. Top-Level System/Component Description
2. Stakeholders' Requirements
3. Design Constraints
4. Performance Objectives
5. Issues & Decisions
6. Risk Management
7. Functional Behavior Models
8. Item Dictionary
9. Components
10. Derived Interfaces
11. Logical/Physical Interfaces
12. Verification Cross-Reference Matrix
13. Requirements Traceability Matrix