



“New” DoD 5000 Series Implications

Executive Summary

**On 12 May 2003 DepSec Def signed the reissued DoDD 5000.1 and DoDI 5000.2
This summary addresses these reissued documents with respect to the previous issue**

Background

- On 30 Oct 2002 DepSECDEF cancelled the DoD 5000 series documents (5000.1, 5000.2 and 5000.2R) and issued interim guidance which was in effect until 12 May 2003
- Additionally, CJCSI 3170B, covering requirements documentation and generation has also been cancelled. Revision C in coordination
- DoD 5000.2-R is to be updated and reissued as a guide (current version is an interim guide)
- Reissued 5000 series documents cover acquisition policy and provide framework for future acquisitions

Reason for Change

- OSD saw the current environment as lacking efficiency, flexibility, creativity and innovation
- Intent is to rapidly deliver affordable, sustainable capability to the warfighter that meets the warfighter’s needs; provide core capability with incremental improvements
- Objectives of revised 5000 series are to encourage innovation and flexibility, focus on end results instead of processes, permit greater judgment in application of acquisition principles and increased emphasis on statutory requirements and less on regulatory requirements

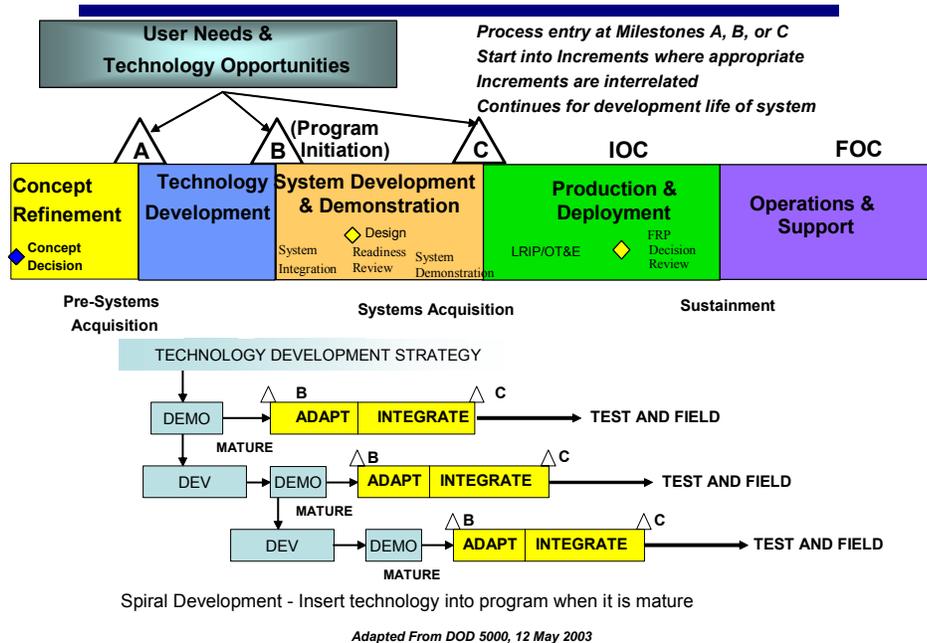
Summary of Changes

- DoDD 5000.1 states management principles and mandatory policies and procedures for managing DoD acquisition programs
- DoDI 5000.2 implements DoDD 5000.1 and establishes a simplified and flexible framework for acquisition of defense systems
- Increased focus on statutory requirements and less on regulatory requirements
- Emphasis on evolutionary acquisition and spiral development
- Concept and Technology Phase split into Concept Refinement and Technology Development
- Concept Decision required to enter Concept Refinement Phase; Milestone A required to enter Technology Development
- Design Readiness Review now required to enter System Demonstration (second portion) of System Development and Demonstration
- Several new documents – Technology Development Strategy (TDS), Initial Capabilities Document (ICD), Capability Development Document (CDD), Capability Production Document (CPD), Software Resources Data Report
- New Joint requirements process with emphasis on capabilities and interoperability (details planned for release this summer)
- Financial Management Enterprise Architecture (now called Business Enterprise Architecture) required by P. L. 107-314, Section 1004 is referenced but implementation specifics not yet available



A More Detailed Summary
Basic Model

THE "New" 5000 MODEL



Pre Systems Acquisition

- Concept Refinement
 - o Purpose is to refine the initial concept and develop a Technology Development Strategy (TDS)
 - o Enter at Concept Decision with approved ICD and analysis of Alternatives (AoA) Plan
 - o Exit when Milestone Decision Authority (MDA) approves the preferred solution and the TDS
- Technology Development
 - o Purpose is to reduce the technology risk and determine the appropriate set of technologies to be integrated into a full system
 - o Enter at Milestone A with an approved TDS; effort guided by ICD and TDS
 - o Exit when an affordable increment of militarily useful capability has been identified, the technology has been demonstrated in a relevant environment and can be produced and fielded in short timeframe

System Acquisition

- System Development and Demonstration
 - o Purpose is to develop a system or an increment of capability; reduce integration and manufacturing risk; ensure operational suitability & reduce the logistics footprint; implement human systems integration; design for producibility; ensure affordability and protection of critical program information; demonstrate system integration, interoperability, safety and utility
 - o Enter at Milestone B with ICD that provides the context in which the capability was determined and approved and a CDD that describes specific program requirements



- Two major efforts – System Integration and System Demonstration
- Complete Design Readiness Review for mid-phase assessment of design maturity to enter System Demonstration effort
- Exit when system demonstrated in intended environment; meets approved requirements; industrial capabilities are reasonably available; system meets or exceeds exit criteria and Milestone C entry requirements
- Production and Deployment
 - Purpose is to achieve an operational capability that satisfies mission needs
 - Enter at Milestone C with approved ICD (if program initiation is at this point), approved CPD; acceptable interoperability; acceptable operational supportability; compliance with the DoD Strategic Plan; and demonstration the system is affordable throughout the life cycle, optimally funded, and properly phased for system acquisition
 - Normally limited to LRIP quantities (for MDAP programs); FRP has additional criteria

Sustainment

- Operations and Support
 - Objective is execution of a support program that meets operational support requirements and sustains the system in the most cost-effective manner over its life cycle
 - Two major efforts – Sustainment and Disposal
 - Sustainment includes supply, maintenance, transportation, training, habitability, survivability, environment, safety, occupational health, protection of critical program information, supportability and interoperability functions
 - Disposal is the demilitarization of the system at the end of its useful life

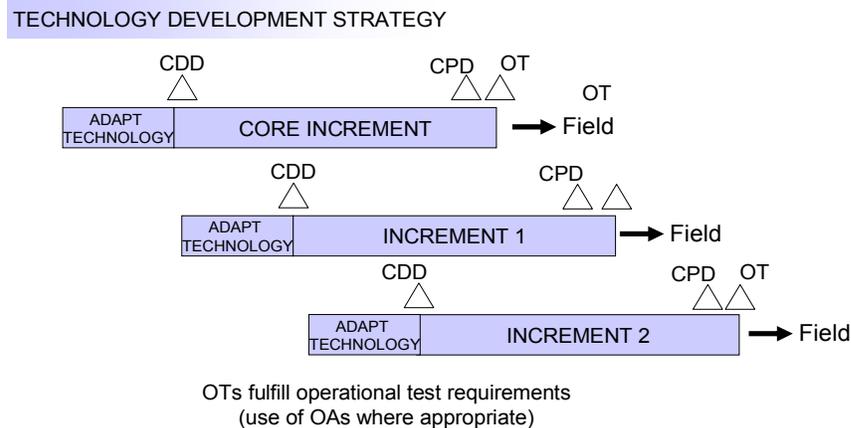
Preferred Approach

Evolutionary Acquisition

- Strategy to provide core capability quickly (60%-80% of full requirement)
- Followed by increments to deliver full capability
- Multiple increments can occur simultaneously
- Not all increments fully determined up front (spiral approach to evolutionary acquisition)
- Each increment based on technologies demonstrated in relevant environments
- Each increment proved to be militarily useful (use of OAs where appropriate)
- Time-phased requirements (CDDs and CPDs for each fielded increment)



Example Program Structure



Two types of development

- Spiral Development (SD) – Process to achieve evolutionary acquisition
 - o Iterative process to develop defined set of capabilities within an increment
 - o End State requirements not known
 - o Firm schedule per increment
 - o Continued flexibility of performance and cost goals
 - o Warfighter has decision to:
 - Field
 - Continue development
 - Or terminate any portion of increment
- Incremental Development – Process when desired capability and end state known up front. Like spiral development, requirement met over time, in several increments

Overall Implications

Requirements revisited as system is developed

Technology insertion opportunities expanded, but require forethought into architecture and when to insert

Emphasis on Systems Engineering important to process in order to be flexible in implementation

Funding and program forecast must coincide with plan or program will stall

Testing strategy must be innovative to provide flexibility and meet Title 10 requirements

While embraced at the senior levels, unless there is buy-in within the rank and file, these changes will be difficult to execute

Specific Issues/Topics

Requirements

- Needs even closer stakeholder relationships than before
- Tendency will be for full solution at first increment, user must trust in later developments



- Requirements changes must be disciplined with good internal process or will be wasted effort (indecision and creep versus flexibility)
- Revised requirements process emphasizes Jointness (more details expected this summer)

Technology

- Expected to be mature prior to each increment's MS B
- Lab goal previously at lower level of maturity. Means programs may have to invest in more maturation before officially putting technology into program
- TDS is plan for maturing technology; it includes rationale for use of evolutionary strategy, program strategy (cost, schedule, performance) and test plan to ensure goals are met

Systems Engineering

- Expect more disciplined approach in order to succeed.
- System architecture, configuration control, interoperability, open systems have increased emphasis

Testing

- Must be considered at every phase - sometimes continuous communications; meet Title 10 requirements
- Else it will not be seamless; will not meet spiral needs

Sustainment

- Flexible support will be stressed as multiple configurations could be fielded and supported concurrently

Business Development

- Need to be able to track requirements evolution
- Track relevant technologies, plan for insertion
- Plan a program that defines evolutionary approach, defining increments and spirals, deals with unknowns
- Increased importance of pre-solicitation exchanges
- More complexity, flexibility, judgment, refinement, dynamics
- Additional Program Office reporting, briefings to OSD, less R&D as integral to acquisition program

Summary

- Changes to 5000 series made to allow more innovative use of acquisition principles, based on evolutionary requirements, development and testing to field capabilities to the warfighter quicker
- Emphasis is on mitigating technical risk by maturing technology before its application to programs
- Recognizes proper systems engineering methods need to be applied to spiral developments

Additional References

DoDD 5000.1, 12 May 2003, <http://dod5000.dau.mil>
DoDI 5000.2, 12 May 2003, <http://dod5000.dau.mil>
DAU Briefing, New Acquisition policy, 20 May 2003, , <http://dod5000.dau.mil>
CJCSI 3170C (draft) <http://teao.saic.com/jfcom/ier/resources/resources.htm>
P. L 107-3114, Section 1004, www.navair.navy.mil/clo/GetDocFile.CFM/107-314.pdf?DID=1327&Filename=107-314.pdf