

The Future for Data Management

Looking at the Challenges Ahead

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AGENDA

- The 50K foot view
 - Current Status
- DM activities accomplished
- DM activities underway
- Context
 - DM FYP updated
- Remaining and Emerging Challenges for DM
- Summary



The 50K Foot View

Current Status

- DM has a standard which addresses the digital data realm and the challenges of acquisition excellence
- DM has a handbook to implement the standard
- Training and Institutionalization has begun
 - New job series, new perspectives for DM role
- The DMBok and the DMCoP are up and running
- Associated efforts are asking for DM assistance and inclusion

Progress Has Occurred



Past Activities

- Produced ANSI-859
- Produced Handbook 859
- Performed outreach and communication
- Reviewed associated initiatives with OSD
- Provided integration and communication between industry and government
- Created harmonization for SE, CM, DM, and Logistics processes and objectives
- Created and supported a web-based DM community of practice
- Gained recognition and acknowledgement of the data stewardship gains that DM provides
 - Definition of a pathway and development of inroads to those disciplines



DM Activities Underway

- Handbook 859 is through the comments adjudication process
 - We had ~100 comments to resolve*
 - Vast majority of them concerned how DM applies CM to other than product delivery data
 - Business data, other configurable data
 - Timeline for handbook development was very aggressive
 - Perspective: something out there to implement ANSI-859 is more important than having something “perfect” out there
 - The handbook has been edited per accepted comments and has been submitted to GEIA for publishing
- Performing outreach and communication, now
 - CoP development and use
 - DAU course development
- DM is supporting 927/836 efforts to create a data model
 - Our contribution is the business objects for data, and the business rules for exchanging and using data

* *Curiously, criticism continues to be of the “you didn’t go far enough” variety*



DM Activities Underway (2)

- DM has been asked to support modeling and simulation goals and objectives
 - Roles and relationships are evolving
 - Capturing data during the architecture trades phase is incorporating DM much earlier in the life cycle than before
 - Knowing what to do with that data is the focus of our ongoing efforts, in this area



Data Management Five Year Outlook: Current Status

GFY 03 04 *Today* 05 06 07

✓ GEIA 859

✓ GEIA 859 outreach and communications

✓ DM Handbook (complete)

Enterprise CDM Task Support ?

We are here

→ Training and Certification

859 standard (familiarization)

- Introductory Level

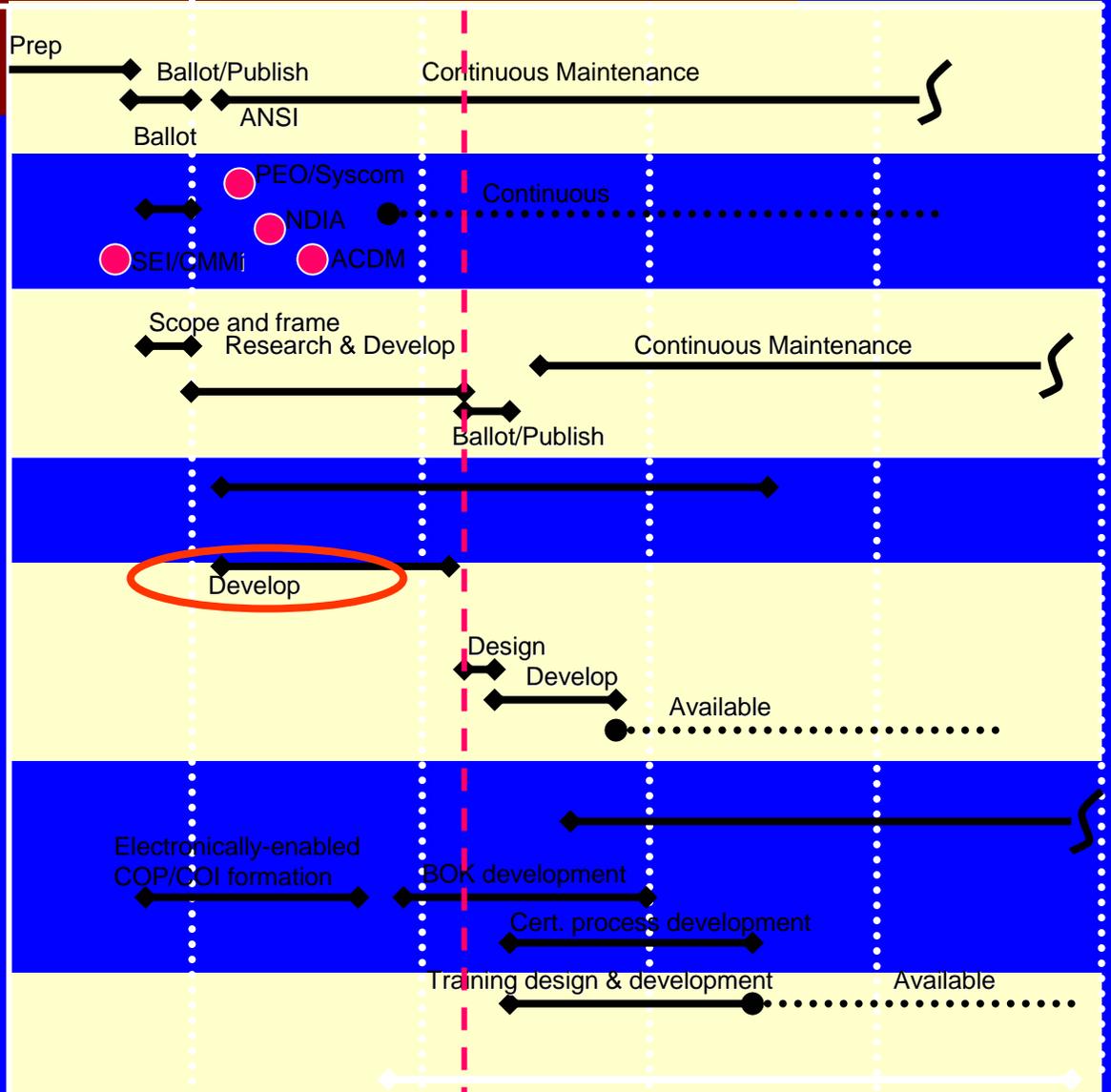
859 handbook (Distance learning)

- Subject Matter Expert Level

Coordination for SE, CM, DM, and LOG processes

✓ DM-Body of Knowledge (DM-BOK) – the Community of Practice (continuing support)

Standards Harmonization



Remaining and Emerging Issues & Challenges for DM



Remaining/Emerging Issues

- ANSI-859 does not address data formats or business rules for data exchange*
- Comments received from both ANSI-859 and HB 859 indicate strongly that both documents must be revised very soon
 - Data formats continue to be unaddressed and unresolved
 - DM business objects (enterprise business and technical data) are not yet modeled in an exchange protocol (XML, etc)
 - Business rules for data exchange are not addressed elsewhere

** Early scoping of 859 determined that we should initially focus on reinventing The practice and methods of DM, first, through new principles*



Remaining/Emerging Issues

- DM is the logical entity and function to lead data exchange planning and address enterprise data
 - DM is at the beginning, during, and at the end of the lifecycle/data/development process
 - CM is historically focused on deliverable product data, primarily – until we can get it to focus at the overall enterprise level
 - SE, T&E (SE partners for DM) are involved in developing the data and determining what data is needed to support the development effort
 - DM is the organizational steward for the organization's data needs – the “data conduit”
- M&S, logistics, technical data packages all require data
 - Formats, exchange protocols, data protection, business rules, data retention ...



Emerging Challenges

Look Ahead to the Future

- Modeling and simulation support
 - Agreement in principle that much is common, and mutual support is desirable and advantageous to both DM and M&S process and outcome
- GEIA-927 data model debut
 - 927 PM has said that extensive work and understanding with the DM realm will be critical to success
- Enterprise data task is emerging within GEIA
 - Provenance and traceability on organizational decision pathways
 - Treating the organization as a configuration item
 - Understanding the process of “change” and prior decisions on action pathways
 - DM has been leading the way in establishing future direction of enterprise focus and scope
 - NASA, NSA, DHS are cooperating and participating



Emerging Challenges

Look Ahead to the Future (2)

- Revision of ANSI-859 and HB 859
- Re-integration of CM and DM
- Definition of enterprise data processes
 - Refining the relationships between SE and others
- Further work to develop the DM job series
 - Industry and government are beneficiaries
- Supporting 827-836 efforts to create a data model that includes DM business objects and business rules



Proposed Solution Pathway

- DM continues to be the glue that keeps acquisition, technology, and logistics elements in the life cycle together
- We address the challenges of data business rules across the enterprise
- We support ongoing efforts between SE, CM, and Logistics to provide context and traction



Summary

- Building on progress made, so far
- Pushing “progress” into “practice” requires a multi-faceted approach
 - Training
 - Industry and government outreach
 - Specific examples (M&S, etc) to show the applicability of principles no matter the context
- Continuing into the future as the catalyst for cooperation, understanding, and communication across the enterprise

