

# CALS EXPO '95

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*Maturing, Migrating, Merging, or  
Mixing ? The Future of the Dod  
IETM Specifications*

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# *Presentation*

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- *Original Concept to Spec IETMs*
- *The DoD IETM Specs Roadmap*
- *Impact of the “Perry Memo”*
- *Current Plans for Specifications*
- *Legacy Data Requirements*
- *Some Recommendations*
- *Harmonization with Other Standards*

# *Original Concept for Full Specification of IETMs*

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- *5 Specification Areas for New Acquisition of Interactive Electronic Technical Manuals (IETMs)*
  - *General Spec including Style, Format, and User Interaction Standards*
  - *Source Data Base Data Model (SGML)*
  - *View Package of Data Base Information*
  - *Electronic Display System (H/W, S/W)*
  - *Overall Quality Assurance Program*

## *3 MIL-SPECS Issued - Nov 1992*

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- *MIL-M-87268 - General Look & Feel*
- *MIL-D-87269 - Data Base*
- *MIL-Q-87270 - QA*
- *Wait-for-Technology-to-Emerge approach taken for View Package*
- *No Hardware Specification - Each Service had a Different Approach for Display Device Standardization*

# *DoD IETM Standards Roadmap*

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- *Last Revised 4/94*
- *Tri-Service Plan to Revise and Update IETM Specs & Handbooks*
- *Planned Handbooks for EDS and VP*
- *Planned Program for Tutorials*
- *No Funding Available FY-95*
- *Implementation of Roadmap Delayed*
- *Issued Amendment 1 to MIL-D-89269*

# *Impact of the “Perry Memo”*

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- *DoD Secretary Perry issued Memorandum canceling MIL-SPECS*
- *Spec Work (including IETM Specs) throughout DoD put on Hold*
- *Alternatives were sought and not found in the Private Sector*
- *Navy has obtained 2-Year Waiver for MIL-M-87268 and MIL-D-87269*

# *Current Plans for 3 IETM Specs*

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- *Preparing Activity (Air Force) requested Project to convert 87268 and 87269 to Performance Specs*
- *EDS Hardware Guidance Document was Issued (No Official Status)*
- *Recommendation to Convert 87270 (QA) to Handbook - Not funded*
- *Navy R&D View Package (MID)*
  - *Available but not coordinated or tested*

# *Legacy Data Requirements for IETM Specification Suite*

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- *IETMs were designed for New-Start Programs*
- *Existing Programs want Electronic Technical Manuals (ETMs) also*
- *Resulting Additional Requirements:*
  - *Specs for Legacy-Data Based ETM/IETMs*
  - *Overarching Information Standard to Allow Disparate ETM/IETMs to Interoperate*



# *Classes of Emerging Legacy-Data-Based ETMs*

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- ***Class 1 - Electronic Full Page Image Systems***
  - *Navy ATIS using NIRS/NIFF*
  - *Adobe Acrobat using PDF*
  
- ***Class 2 - Electronic Scrolling Test/Graphic Hypertext Systems***
  - *Using Simplified SGML DTDs*
  - *Use Off-the-Shelf Browsers*

# *Legacy-Data IETMs*

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- *Class 3 - Enhanced Class 2 Systems with Tagging by Subject-Matter Experts and Employing Interactive Dialogs (i.e., 87268 Functionality without a 89269 Modeled Data-Base as a Starting Point)*
  - *There are many different approaches to adding this additional functionality*
  - *Usually requires some extension/adaptation of the off-the-shelf browser*

# *IETM Spec-Compliant IETMs*

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- *Class 4 IETMs*
  - *Conform to MIL-M-87268*
  - *Generated from a MIL-D-87269 Conforming Data Base*
  - *Typically Require Reauthoring of the Information*

# *Some Other Recommendations*

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- *The following recommendations have been suggested or proposed in some manner within the DoD Community*
- *None are adequately resourced*
- *Biggest hole: Overall Standards to Allow the Disparate IETM/ETM Systems to coexist, interact, and Interoperate within and across Military Platforms*

# *Recommendations (con'd)*

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- *Perform a revision of MIL-M-87268 when it is converted to a Performance Specification*
  - *Retain Look-and-Feel Requirements*
  - *Style Issues could be included in a new handbook to support MIL-PRF-87268*
  - *State-of-the-Art of GUIs is such that much of the GUI portions of the Specification could be eliminated.*

## *Recommendations (con'd)*

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- *Expand Scope of MIL-PRF-87269, when converted, to include entire Electronic Support System for a Weapon system including Information to Support Training, Logistics Support Data Not in TM, Operating Data, and Historical Logs and Records Data*
  - *Add Content Specific DTDs for these functions*
  - *Generic Level DTD does not need revision*

# *Recommendations (con'd)*

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- *Convert MIL-Q-87270 (IETM QA) into a Useful Handbook As Soon as Possible*
  - *While Government Specified Quality Assurance Procedure may not be Allowed, the Requirement for QA in an All Electronic Product is a Great as Ever.*
  - *Ultimately, it is much more important that Weapon System Support Information be Accurate, than it is to be Optimally Displayed*

# *Recommendations (con'd)*

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- *Institute a Standard for the View Packaging of Information Extracted from a Data Base for the Purpose of Displaying Interactively to a User.*
  - *The Navy Metafile for Interactive Documents (MID) is a Candidate*
  - *If not MID than Something Equivalent is Needed*
  - *Should Integrate All Classes of IETM/ETMs*
  - *Can Become the Run-Time Standard*



# *Recommendations (con'd)*

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- *Develop a SGML Content Tagged Indexing Standard for PDF Files that Associates an Accessible Information Structure with the Objects in a PDF File*
  - *Minimum is a TOC reference to Pages but a lot more detail is desirable*
  - *SGML Content Structure needed to interoperate with Class 2,3, and 4 Data which is SGML Based (DoD Information Standard)*

# *Harmonizing IETMs with Other Interactive Document Standards*

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- *Standards being looked at include:*
  - *All use SGML DTD's*
  - *Most Overlap/similarity at Class 2/3 Level*
  - *AECMA 1000D (NATO Procurement)*
  - *ATA 2100 (Commercial Airlines)*
  - *J2008 (Automobile Service Manuals)*
  - *World Wide Web (HTML DTD's)*
  - *PREMO Standard for Multimedia Objects*