

January 1, 2012

Re: IETM: Interactive Electronic Technical Manuals

FAA Operator's Manual Human Factors in Aviation Maintenance, 4/17/06:
Aviation maintenance personnel spend from 25%-%40 of their time searching for, using and completing maintenance documentation.

Our companies, EduSelf, Inc. and TechPubs, LLC have performed for you various projects of technical documentation, translations and preparation of training programs, where the final product was a standard manual in WORD, PDF, or a hard copy of printed material.

We would like to take this opportunity to let you know that we have upgraded our technological capacity and we are now capable of providing Interactive Electronic Technical Manuals (**IETM**).

IETM enables the user, and especially technicians that handle any equipment, faster access to the various information of the equipment, without having to waste time on searching tens, hundreds, or even thousands of pages. This includes the various procedures and troubleshooting, performing quick diagnosis of the defaults, spotting faulty components, access to the catalog and wiring-drawings, and performing systematic repairing with the assistance of the software which is based on your existing manuals.

Using our IETM, a search of any volume of data that includes information in tenth of thousands of pages (like of aircraft, large vehicles, naval vessels & commercial equipment) takes about only 40-50 seconds!

The material/procedures that are searched, will appear in the system in modules of **edited** data base form in a 1-3 pages that will include all relevant information e.g. description, the theory of operation, maintenance, assembly and disassembly, troubleshooting, tuning and spare-parts catalog that may be needed for the repair.

The followings are the Mil-standards:

- MIL-M-87268 Manuals, Interactive Electronic Technical: General Content, Style, Format, and User-Interaction Requirements For.
- MIL-D-87269 Data Base, Revisable: Interactive Electronic Manuals, For the Support Of.
- MIL-Q-87270 Quality Assurance (QA) Program: Electronic Technical Manuals (IETMs).

The IETM Advantages:

- Shortening maintenance time invested for routine maintenance , troubleshooting and training to 25%.
- Maintenance management.
- Validation, when we do the authoring we may find missing information e.g. in wiring drawing that the wires are dangling or not connected in the other side.
- Online updating of the manuals.
- Maintenance manager gets automatic results of troubleshooting and can follow up in real time.

About us: TechPubs, LLC was founded in 1973. Since then, we have produced about one million pages for our customers (technical writing, rewriting, editing, training and translation – not including duplicating). We are a U.S. company located in Englewood, NJ. Our companies have also been granted the ISO-9001-2008 mark and are a certified vendor of the D.O.D. with CAGE number. For more information, please contact me directly.

We appreciate forwarding this letter to any of your colleagues who may need our services.

Best Regards,

Mario Hallphone, President

Enclosure

IETM Technology



Ms. Ifat is saying; TO 1F-4E, Super Phantom A/C, 80,000 pages, 120 volumes, weight 1,000lb, Reading? Even paginating is hard labor.

An **IETM**, or **Interactive Electronic Technical Manual**, is a portal to manage technical documentation. IETMs compress volumes of text into just CD-ROMs or online pages which may include sound and video, and allow readers to locate needed information far more rapidly than in paper manuals. IETMs came into widespread use in the 1990s as huge technical documentation projects for the aircraft and defense industries.

Classes of Functionality

The functionality of IETMs systems is broken down into five classes. However, these classes are more like points in a spectrum of features with most real-world IETM products falling somewhere in between two classes.

- **Type I**

- Class 1 - This IETM class follows the structure and format of a printed book, with indexes and table of contents that are hyperlinked into the content of the document. This might be a scanned book with some links added.
- Class 2 - This format includes more hyperlinks than Class 1, such as figures, tables and section references. A hyperlinked PDF document is the typical example. The document would be authored in XML/SGML.
- Class 3 - The difference between Class 2 and Class 3 is analogous to the difference between PDF book and a web site. The book structure is discarded; instead the document is structured more freely following the logic of the content. The document can still be printed but it won't necessarily match the presentation on the screen. Hyper-linking throughout the document is expected. The document would be authored in a markup language, typically SGML.

- **Type II**

- Class 4 - This class now expects the data to be stored in a relational database, obtaining benefits of data integrity and removal of data redundancy. Relationships in the content that are presented as hyperlinks that are mapped directly to relations in the database schema. Redundancy in the data that exists in earlier classes should be removed. The sequence of presentation is also different than earlier classes. There is no longer the concept of a static page. Content can change dynamically based on users' navigation and input through the content; the content may now be user specific.
- Class 5 - In this class the documentation is now integrated with expert systems that may influence the display of content. For example, the IETM system may aggregate data from a large number of users input, feed that to the expert system that analyzes it, and then the result gets fed back to the user through the IETM system. An analogy might be Google search, where

search results are improved based on analysis of large data sets of previous queries entered by users.

References

1. [^ "IETM: From Research to Reality"](http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/CALS94F.pdf). US Navy. <http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/CALS94F.pdf>. Retrieved 2010-12-16.
2. [^ "IETM: From Research to Reality"](http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/CALS94F.pdf). US Navy. <http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/CALS94F.pdf>. Retrieved 2010-12-16.
3. [^ "The Interactive Electronic Technical Manual"](http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/sole.pdf). US Navy. <http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/sole.pdf>. Retrieved 2010-12-16.
4. [^ "The Interactive Electronic Technical Manual"](http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/sole.pdf). US Navy. <http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/sole.pdf>. Retrieved 2010-12-16.
5. [^ "The Interactive Electronic Technical Manual"](http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/sole.pdf). US Navy. <http://www.dt.navy.mil/tot-shi-sys/des-int-pro/tec-inf-sys/etm/rep-pap-pre/pdf/sole.pdf>. Retrieved 2010-12-16.

The Tri-Service group came up with three standards:

- MIL-M-87268. Manuals, Interactive Electronic Technical: General Content, Style, Format, and User-Interaction Requirements For.
- MIL-D-87269. Data Base, Revisable: Interactive Electronic Technical Manuals, For The Support Of.
- MIL-Q-87270. Quality Assurance (QA) Program: Interactive Electronic Technical Manuals (IETMs) and Associated Technical Information, Requirements For.

S 1000D

S1000D is an international specification for the procurement and production of technical publications. It is an XML specification for preparing, managing, and using equipment maintenance and operations information. It was initially developed by the AeroSpace and Defense Industries Association of Europe (ASD) for use with [military aircraft](#). The specification has since been modified for use with land, sea, and commercial equipment.

S1000D is maintained by the S1000D Steering Committee, which includes board members from ASD, the United States' Aerospace Industries Association (AIA), and the Air Transport Association (ATA), along with national industry and defense representatives from most of the countries currently using the specification.

The specification is free to download and use, although it is recommended that advice be sought on the best methods for implementing an S1000D repository.