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A specification for a set of Ada® packages which together form a set of common interfaces for Ada Programming Support Environments. Designed to promote the source-level portability of Ada programs, particularly Ada software development tools. Presented at PCTE International Review Workshop on the EURAC, 17-18 Sep 1987, The Hague, Netherlands.			
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COMMON APSE INTERFACE SET (CAIS)

U.S. DOD-STD-1838
and
DOD-STD-1838A

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DOD-STD-1838 ("CAIS 1")

- **OBJECTIVE:**

A specification for a set of Ada[®] packages which together form a set of common interfaces for Ada Programming Support Environments. Designed to promote the source-level portability of Ada programs, particularly Ada software development tools.

- **SCOPE:** Those services, traditionally provided by an operating system, that affect tool transportability.

- **STATUS:** Approved as a U.S. military standard on 9 October 1986

- **For copies, contact:**

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5801 Tabor Ave.
Philadelphia, Pennsylvania 19120 U.S.A.
(215)697-3321

- **"Fast reaction team" in place; send comments and questions to**
calscom@ajpo.sei.cmu.edu



Ada is a registered trademark of the U.S. Government, Ada Joint Program Office.

DOD-STD-1838 (cont.)

● GUIDES:

- Wide acceptance in the Ada community**
- Transportability**
- Support for APSE tool writers**
- Uniformity/cohesiveness of design**
- Flexibility**
- Database management**
- Implementability**
- Compiler independence**
- Evolution from AIE and ALS**
- Base for interoperability**

DOD-STD-1838 (cont.)

- Ada orientation
- Performance
- Distribution and security
- Standards utilization

DOD-STD-1838 (cont.)

- **OUTLINE (610 pp.)**

- **1. Scope**
- **2. Referenced Documents**
- **3. Definitions**
- **4. General Requirements**
- **5. Detailed Requirements**
 - 5.1 General Node Management (Includes Access Control)**
 - 5.2 CAIS Process Nodes**
 - 5.3 CAIS Input and Output**
 - 5.4 CAIS List Management**
 - 5.5 Package CAIS_STANDAR**
 - 5.6 Package CAIS_CALENDAR**
 - 5.7 CAIS Pragmatics**
- **6. Notes**
- **Appendices:**
 - A. Predefined Relations, Attributes and Attribute Values**
 - B. CAIS Specification**
 - C. Cross Reference of CAIS Procedures and Functions**
 - D. Syntax Summary**
 - E. CAIS Access Control Management**
 - F. Implementation Dependencies**
- **Index**

DOD-STD-1838A ("CAIS 2" or "CAIS-A")

● OBJECTIVE:

- Fulfill the Requirements and Design Criteria (RAC) in a manner that is upwardly compatible with DOD-STD-1838**
- Conflicts between these are expected; these are resolved with the help of the KAPSE Interface Team (KIT)**

● SCOPE:

- 1838 + typing in the node model
I/O extension
explicit distribution
Interoperability
transactions
triggering**
- including status return information
predefined types for operation of 1838 tools**

DOD-STD-1838A (cont.)

- STATUS: Under contract with SofTech/Compusec (12/85 - 12/88)
- SCHEDULE:
 - Review meeting (by Invitation) 21 - 23 October 1987
 - Public review (by mail; no meeting) in February 1988
 - Submission of Proposed DOD-STD-1838A for formal review by 30 April 1988
 - Final DOD-STD-1838A approved 31 December 1988
 - Prototype underway, to be delivered approx. 30 June 1988 and updated to meet the final standard

DOD-STD-1838A (cont.)

- Will cover most of RAC:
 - simplistically for identification methods
 - no paper tape
 - probably no I/O-handler-to-device-driver
 - protocols
 - KIT recommendation to defer window management and graphics

KIT RESOLUTION ON WINDOW MANAGEMENT AND GRAPHICS:

- **WHEREAS:**

- These areas are immature and changing rapidly
- Neither area has a clear "winner" (either vendor or public)
- The Ada bindings are weak or non-existent
- To devise our own is time-consuming and not effective

- **WE RECOMMEND THAT THE AJPO:**

- Defer window & graphics interfaces for CAIS-A
- Assure robustness of CAIS-A primitive I/O extensibility
- Track current efforts in these areas
- Get Involved & even provide leadership in these areas
- Budget for development & eventual insertion in CAIS

RAC

- **OBJECTIVE:** Express requirements and design criteria for CAIS-A

- **STATUS:**

- Completed 4 October 1985
- Submitted to Defense Technical Information Center (DTIC) and National Technical Information Service (NTIS) as NQSC Technical Document (TD) 1121
- For copies: DTIC (must be registered with them)
(703)274-7633

NTIS (703)487-4650
Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
U.S.A.

- Ask for #ADA 184 488

- Rationale to be released at SWG on APSEs meeting in November