Common APSE Interface Set

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:**
  Naval Publications and Forms Center
  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.
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
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_STANDARD
  - 5.6 Package CAISCALENDAR
  - 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
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 1986

  – Submitted to Defense Technical Information Center (DTIC) and National Technical Information Service (NTIS) as NOSC 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