DEFENSE INFORMATION SYSTEMS AGENCY
CENTER FOR INFORMATION MANAGEMENT
701 SOUTH COURT HOUSE ROAD
ARLINGTON, VIRGINIA 22204-2199

IN REPLY REFER TO: XD

27 OCT 1992

MEMORANDUM FOR FUNCTIONAL AND COMPONENT DATA ADMINISTRATORS

SUBJECT: FY93 Data Administration Strategic Plan (DASP)

1. The requirement for annual plans from the DoD functional and component data administration community is outlined in DoDD 8320.1, DoD Data Administration. Planning from all areas within the Department helps guide the implementation of the data administration program to ensure that DoD data is treated as a corporate asset.

2. Enclosed is the planning guidance for the FY93 DASP. Your plan should be submitted to my office no later than 31 December 1992. If you have any questions, please contact Ms. Dawn M. Hughes at (703) 285-5381.

Denis M. Brown

1 Enclosure a/s

DENIS M. BROWN
Chairman
Data Administration Council

Copy to:
CFIB members
ODDI/IT (Bozek and Molter)

FY93 DATA ADMINISTRATION STRATEGIC PLAN GUIDANCE

References:

(a) DoDD 8320.1, 26 September 1991, DoD Data Administration

(b) DoD 4120.3-M, August 1978, Defense Standardization and Specification Program Policies, Procedures and Instructions

(c) DoD 8020.1-M (draft), Functional Process Improvement

(d) DoD 8320.1-M (draft), Data Administration Procedures

(e) DoD 8320.1-M-1 (draft), Standard Data Element Development, Approval, and Maintenance Procedures

Enclosures:

(1) Functional Information Manager and Functional Data Administrator List

(2) Data Administration Planning Process Chart

(3) DoD Data Administration Strategic Plan Fiscal Year 1992, 14 July 1992

BACKGROUND

Reference (a) established policy and outlined roles and responsibilities for Department-wide implementation of the DoD Data Administration program. The Directive specifically outlined requirements for an annual Data Administration (DA) plan. The DoD Data Administration Strategic Plan (DASP) was developed as the primary annual planning document that addresses and guides the development, implementation and management of the entire DoD Data Administration Program.

DATA ADMINISTRATION ANNUAL PLANNING CYCLE

To meet the requirements of reference (a) and promote Functional Data Administrator (FDAd) and Component Data Administrator (CDAd) active participation and involvement in the Data Administration strategic planning process, a coordinated Data Administration planning cycle is required. Major phases of this cycle are aligned with the Program Objective Memorandum (POM) and budget cycle of DoD to assist FDAd/CDAd plan and prepare budget submissions to resource data administration in their respective areas. Reporting elements such as action plan requirements conform to guidelines of reference (b).

For Fiscal Year 1993, each FDAd and CDAd will prepare and coordinate a DASP through their senior official for submission to the DoD Data Administrator (DoD DA) by 31 December 1992. Functional areas should coordinate the DASP with the Functional Area Program Manager (FAPM) within their area and the Office of the DDI Functional Information Manager (FIM) prior to submission to the DoD DA. A list of the FAPMs, FIMs and related FDAds will be provided under separate cover to the functional DA community to assist in coordination efforts.

The DoD DA will consolidate and evaluate the submissions and forward a coordinated FY93 DoD Data Administration Strategic Plan to the Corporate Functional Integration Board (CFIB) for cross-functional planning by 1 March 1993. Following CFIB review, the DASP is forwarded to the DDI for approval. A chart of the overall planning process is provided as enclosure (2).

RELATIONSHIP OF DATA ADMINISTRATION IMPLEMENTATION PLANS TO THE DASP

At the request of the DDI, Data Administration Implementation Plans (DAIPs) were required by each FDAd/CDAd. The intent of this one-time, planning document was to expedite the planning process in each DoD functional and component area in advance of the annual planning cycle. The date for submission of DAIPs to the DoD DA was 31 August 1992.

To promote consistency and continuity of the DA planning process, guidance and suggested formats for the DAIPs were similar to that of the FY92 DASP. The FY92 DASP was conditionally approved 29 April 1992 by the DDI. One of the approval provisions was that the DASP be updated to include an additional objective for developing FDAd/CDAd Implementation Plans. The objective was added, and the final FY92 DASP was distributed on 14 July 1992. A copy of the FY92 DASP is provided for reference as enclosure (3).

Because the DAIPs were based on the format and direction established in the FY92 DASP, the majority of the effort expended to develop DAIPs can be used as a baseline for functional and component FY93 DASPs. Although there may be some updating to reflect milestone updates, a minimum of revision is anticipated for most of the DoD DA community that submitted comprehensive DAIPs in the suggested format.

RELATIONSHIP OF DATA MANAGEMENT PLANS TO THE DASP

Reference (c) outlines functional process improvement roles and responsibilities for Functional and Component Data Administrators. Data administration activities in the Manual involve tasks such as data modeling and data element standardization. Another significant activity for FDAds is preparation of Data Management Plans (DMP) for migration systems and Business Process Improvement projects. A description of DMP content and usage is provided in Chapter 12 of reference (c).

When preparing a DASP each data administrator, particulary FDAds, should be aware of migration system or process improvement initiatives in their respective functional areas. Each initiative that requires a DMP should be documented as a separate Action Plan with a description, milestones for DMP tasks, etc. This will provide visibility and tie all DMPs into the DASP so that the DASP serves as an integrated document for the functional area.

FY93 DASP CONTENT

General Information:

Functional and Component DASPs should be developed according to the vision and goals of the FY92 DASP, 14 July 1992. This document establishes the direction for the Department to evolve to standard data that is shared by many users. The FY92 DASP should be used as the framework for each functional and component area to address current and future data administration activities in their DASP.

Presentation requirements for the FY93 DASP are similar to that of the FY92 DASP and DAIPs. One exception that should be noted is that enhancements have been made to the resource section of the Action Plan(s). For resource requirements, the source of staffing and funding must be identified. In addition, a table for unresourced requirements has been included. It should be noted that identifying FY94 and future requirements is needed to plan and resource the staffing and funds for the budget cycle. Current year resources serve as a documentation baseline.

Although the FY92 DASP goals and objectives reflect basic data administration concepts and tasks that are relatively stable, new program influences should be considered when preparing Functional and Component DASPs. The most significant that should be addressed are as follows:

- data administration tasks (e.g., data modeling and DMP preparation) identified in reference (c) should be planned and resourced in DASP Action Plans under the appropriate goal and objective.

- population of the Defense Data Repository System (DDRS) with migration system data.

DA Program Assessment Criteria:

To evaluate program effectiveness, each Functional and Component DASP will be measured by the DoD DA against established criteria for each DASP goal. The results will then be consolidated to assess overall DoD DA program performance. Weights for each measurement criteria have been assigned by the DoD DA and will be used when evaluating the DASP submissions.

The following metrics have been identified and are provided for reference during DASP development:

Goal #1 - Operational Central Repository

- Milestones established to populate the Defense Data Repository System (DDRS) with:

    a. model-based data.

    b. migration system data, if applicable.

- Action taken to obtain User ID and DDRS password and use of it.

Goal #2 - Standard Data

- Efforts documented in Action Plans to:

    a. develop data model(s) for area of responsibility.

    b. participate in development of DoD Data Model.

    c. integrate data model(s) with the DoD Data Model.

    d. conduct data analysis of existing legacy data.

    e. set milestones for transitioning from migration system data to standard data, if applicable.

    f. inventory data dictionary(s) for area of responsibility.

    g. participate and meet timeframes of reference (e) for data standardization approval process.

Goal #3 - Use of Common Procedures and Tools

- Milestones established to use data standardization practices established in references (d) and (e).

- Functional process improvement data administration support initiated IAW reference (c).

Goal #4 - Quality Data

- Plans to establish quality assurance controls that conform to reference (d) documented.

- Plans in place to document data "sources" to support single-point-of entry objectives for area of responsibility.

Goal #5 - Education, Training and Consultation

- Promote and attend DA education and training opportunities at all staff levels from:

    a. DoD Data Administration.

    b. professional organizations.

    c. conferences/symposiums.

    d. other.

Goal #6 - Effective Infrastucture

- Personnel assigned to support data administration at all organizational levels.

- Submit a complete DASP to DoD Data Administrator by 31 December 1992.

- Attend or designate a representative to attend all Data Administration meetings.

- Action taken to establish a DA work group within the Functional or Component area.

FY93 DASP FORMAT

PART I - PROFILE Part I is an overview that provides introductory context and a summary of the functional or component plan. This part of the DASP has three sections described as follows:

A. Data Administrator

1. name

2. organization

3. phone

B. Data Administration Overview: A general description of the Functional or Component area's primary activities and supporting organizations related to data administration services.

C. Action Plan Summary:

1. A narrative of the overall approach to implementing data administration that summarizes the tasks within the individual action plans.

2. A cummulative table of the resources (staff and funds) identified in each of the action plans. The format is the same as that for the action plans.

PART II - ACTION PLANS

A. Goal # (Link to the respective FY92 DASP Goal.)

B. Objective(s) # (List each objective under the goal by near-term, mid and long-term according to DASP fiscal year timeframes.)

C. Description (Narrative of the tasks to be executed for each objective; include products that will be developed and customers, if applicable.)

D. Major Milestones (Start and finish dates for each task. Intermediate events should be included.)

E. Resource Requirements (Identify total staff, contractor and/or procurement requirements for current and outyears. Funds should be shown in the thousands. The source for staffing and funds must also be identified. For example, the source for funds may be from CIM Central Funds, from your internal budget or from other sources.. Format for this information is shown in TABLE 1.)

TABLE 1

RESOURCE REQUIREMENTS	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	TOTAL
Staffing (FTE):									
In-House									
Contractor									
FFRDC									
Other									
Funding ($K):									
O&M									
FFRDC									
Other									
Procurement									
Staffing Source:									
In-House									
CIM Central									
Other									
Funding Source:									
In-House									
CIM Central									
Other									

RESOURCE REQUIREMENTS

F. Unresourced Requirements (Identify staff and funds for the current and outyears that are unresourced. This is the balance of staffing and/or funds required from TABLE 1 not resourced for the task. Describe the impact of the unresourced requirement(s) on your Action Plan. Format for this information is shown in TABLE 2.)

TABLE 2

UNRESOURCED REQUIREMENTS	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	TOTAL
Staffing (FTE): In-House Contractor FFRDC Other									
Funding ($K): O&M FFRDC Other Procurement									

UNRESOURCED REQUIREMENTS

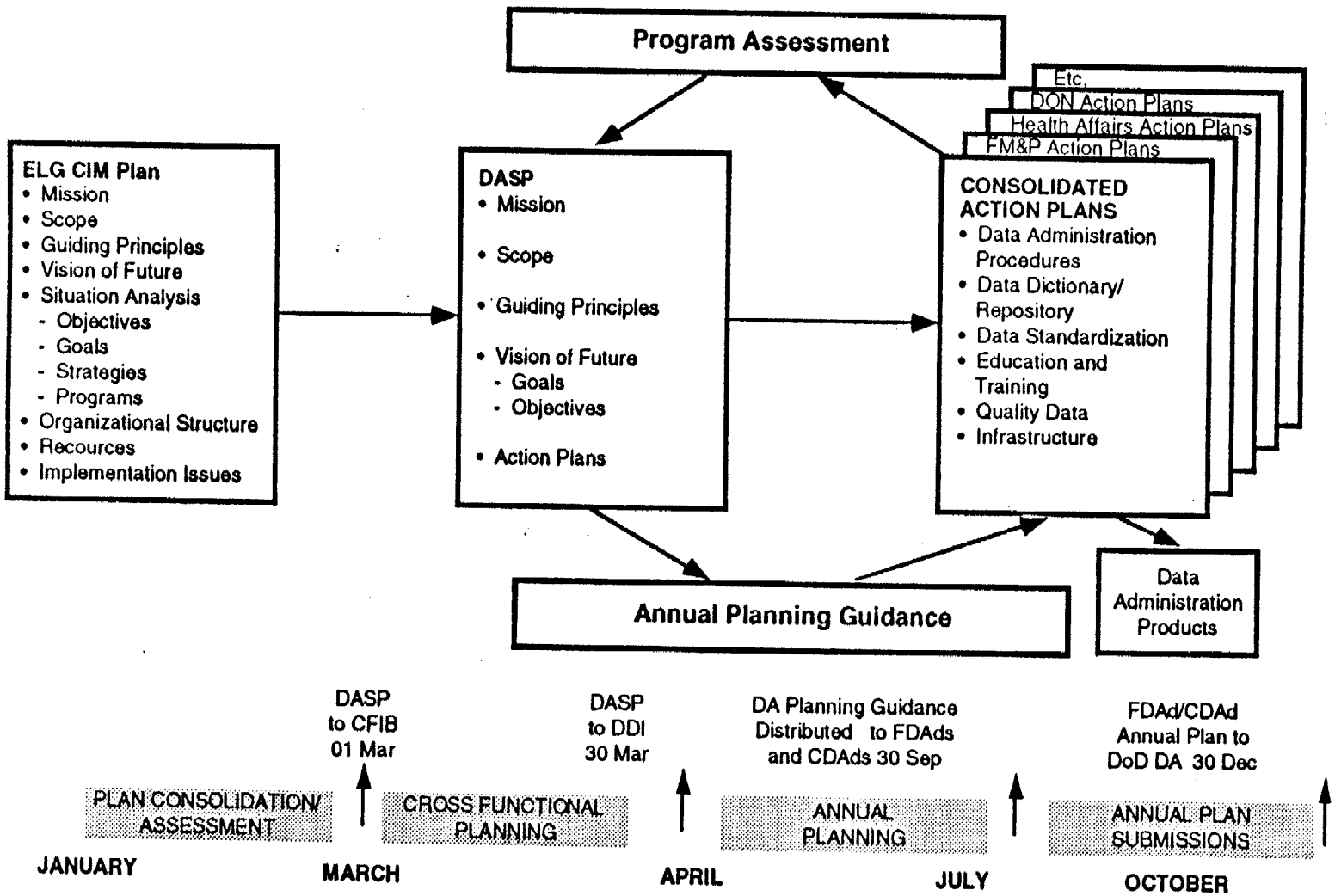

Figure 1. Data Administration Planning Cycle

DEPARTMENT OF DEFENSE

DATA ADMINISTRATION STRATEGIC PLAN

FISCAL YEAR 1992

DEFENSE INFORMATION SYSTEMS AGENCY
CENTER FOR INFORMATION MANAGEMENT

July 14,1992

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SECTION 1

INTRODUCTION

1.1 PURPOSE AND SCOPE

The Data Administration Strategic Plan (DASP) provides comprehensive and long-term direction necessary to improve the planning and management of Department of Defense (DoD) data resources. Information contained in this plan is to be used to define, plan, implement, and operate the DoD Data Administration Program. The DASP will be updated annually as required by DoD Directive 8320.1 for submission to the Assistant Secretary of Defense Command, Control, Communications, and Intelligence (ASD C^3I). The Fiscal Year 1992 (FY92) DASP includes a description of DoD Data Administration's mission, scope, guiding principles, vision of the future, goals, objectives, and action plans. The DoD Data Administration Framework, which describes key functions, roles, and responsibilities, is contained in Appendix A to the DASP. The FY92 DASP covers the eight year period from FY92 through FY99.

1.2 BACKGROUND

In April 1991, Policy Proposal 91-11 (Executive Agent for Data Management) was submitted to the Information Technology Policy Board (ITPB). This policy proposal recommended appointment of the Army as Executive Agent for DoD data management and data modeling. The ITPB directed the Army to lead a 30-day Joint Task Force to develop an action plan for Data Administration. The Army-led task force, with representation from the military services and defense agencies, developed the Data Administration Implementation Plan (DAIP). The DAIP identified nine action areas with products and subordinate tasks required to establish and maintain a DoD-wide Data Administration Program. For each action area, three types of products were specified: near-term (within 6 months), mid-term (7 to 18 months), and long-term (over 18 months). One of the products specified in the DAIP is the Data Administration Strategic Plan.

In June 1991, the ITPB approved the DAIP and authorized the Army to act as interim Executive Agent for DoD Data Administration. As interim Executive Agent, the Army was responsible for and subsequently implemented specific DAIP near-term actions.

On 26 September 1991, DoDD 8320.1, *DoD Data Administration*, was issued. This directive established policies for Data Administration and authorized establishment of and assigned responsibilities for planning, managing, and regulating data within the DoD. Newly established roles and responsibilities include the DoD Data Administrator (DoD DA), Functional Data Administrators (FDAds), and Component Data Administrators (CDAds).

The final step in preparing the DASP was to map near-term objectives to action plans, reconcile actions and objectives, and prepare the final set of action plans for FY92. The resultant action plans are included in Section 3 of DASP.

The DASP will be provided to FDAds and CDAds for review. FDAds and CDAds are requested and strongly encouraged to actively participate in the Data Administration strategic planning process. Subsequent revisions of the DASP will reflect the involvement of and comments from FDAds and CDAds. Future versions of the DASP will also include FDAd and CDAd annual plans required by DoDD 8320.1.

1.4 DATA ADMINISTRATION PLANNING CYCLE

To meet the requirements of DoDD 8320.1 and promote FDAd and CDAd active participation and involvement in the Data Administration strategic planning process, a coordinated Data Administration planning cycle is required. Figure 1 depicts graphically the key phases and products of the planning cycle. Major phases of this cycle are aligned with the Program Objective Memorandum (POM) and budget cycle of DoD. Annual planning guidance will be developed by the DoD Data Administrator and issued to FDAds and CDAds by 30 September of each year to assist in the preparation of their annual plans. FDAds and CDAds will have the opportunity to participate in development of the planning guidance. FDAd and CDAd annual plans will be forwarded to the DoD DA by 30 December each year. After review and consolidation, annual plans will be incorporated into the DASP for submission to the Assistant Secretary of Defense (C^3I). Final DASP and respective planning guidance will serve as a baseline for performing Data Administration assessments. The FY92 DASP initiates the Data Administration planning cycle.

SECTION 2

DATA ADMINISTRATION STRATEGIC PLAN

2.1 DATA ADMINISTRATION MISSION

The mission of DoD Data Administration (DA) is to provide for effective, economic acquisition and use of accurate, timely, and shareable data to enhance mission performance and system interoperability.

2.2 DATA ADMINISTRATION SCOPE

DoD Data Administration involves both data requirements and data resources at all levels of authority and responsibility, whether used to conduct transactions or support decisions. It includes installation/base, strategic, tactical, theater, research and development, and administrative support programs. It supports principles for data standardization considered to be consistent with the Cataloging and Standardization Act described in DODD 4120.3-M.

DoD Data Administration functions include procedures, guidelines and methods for effective data planning, analysis, standards, modeling, configuration management, storage, retrieval, protection, validation and documentation.

DoD Data Administration applies to data elements, data values and data managed by all information systems whether the information systems are administrative, command and control, or embedded in deployable weapon systems or test equipment. It does not apply to data elements, data values, and data required to be unique for use in cryptologic activities.

2.3 DATA ADMINISTRATION GUIDING PRINCIPLES

DoD Data Administration will support the guiding principles and doctrine developed for Corporate Information Management (CIM) and will adhere to the specific Data Administration guiding principles identified below. The guiding principles are fundamental precepts for DoD Data Administration. The guiding principles include direct restatements of CIM guiding principles and Information Management doctrine for data, modified CIM principles, and new guiding principles appropriate to the scope of Data Administration.

The following guiding principles are consistent with the scope of the DoD Data Administration functions and CIM strategic guidance. They include responsibilities, standards, data standardization and modeling, business method improvement, strategic planning, data collection and validation, shared databases, and backup and archiving. Specifically:

- Responsibilities and accountabilities for data must be clearly defined

- Standard data elements will be derived from approved data models

2.4 VISION OF THE FUTURE: DOD DATA ADMINISTRATION IN YEAR 2000

Collectively the vision statements discussed in this section represent change which should occur for DoD to realize the potential benefits of improved management of data resources. The vision statements form the basis for the goals and objectives outlined in the following sections of the plan and are intended to produce a shared view of a new, service oriented, working environment for Data Administration. This shared view is essential for realization of the benefits of this new environment by all participants. The vision of the future describes the contribution of DoD Data Administration to improvements in business methods and the development, operation and maintenance of information systems. The following paragraphs describe the future vision of Data Administration.

2.4.1 Data Management Roles and Responsibilities

Data management is established throughout the DoD and recognized as a cornerstone of Corporate Information Management. Functional managers, data administrators, the technical support community, and system end users have accepted specific responsibilities for managing data throughout the data life cycle. Authoritative sources for data requirements, data descriptions, data element values, data validation, and data reporting have been clearly identified and documented.

2.4.2 Data Standards

Data standards have been set and implemented across the Department's major business, support, and mission areas. Modeling initiatives have resulted in standardized data descriptions and attributes for data. Because data definitions are common, data reuse is widespread and a standard practice in all systems development and maintenance.

2.4.3 Data Models

Data models of all business areas are complete and under configuration control. The contributions of data modeling in simplifying business methods and constructing and maintaining information systems is well recognized. As new programs are created and legislation enacted, data models are used to gauge first order impacts and communicate data requirements. Data modeling tools and methodologies have matured to permit rapid generation and manipulation of databases.

2.4.4 Centralized Repository

The centralized DoD repository maintains the data models, standard data element definitions and core attributes. It documents management roles and responsibilities (Data Stewards) for

support. They are essential in reducing overhead and maintaining effective operations in a down-sized DoD.

2.4.9 Decision Support

Coordinated portfolios of decision support systems that draw upon standard operating data are used as tools of planning and analysis. Because of this, there has been a reduction in middle management responsible for decision support. Decision making is accelerated. Information systems are easier to use than in the past.

2.4.10 Education and Training

Functional managers have assumed direct responsibility for funding, costs, and achievement of benefits for the information systems upon which they depend. Data Administrators throughout DoD have accelerated this transition by providing a much needed communications bridge between functional managers and the technical support community. Data Administration education and training programs have greatly improved understanding, communication, and acceptance of new roles and responsibilities of functional managers, Data Administrators, and the technical support community. Information management is no longer delegated to the technical support community. Both the functional and the technical support communities recognize and appreciate the contribution of Data Administration.

2.4.11 Data Products and Standards

A new concept in system life cycle management methodology is applied across the DoD which permits rapid, evolutionary, prototype-driven implementation within a generally defined strategy. The methodology describes management policies, decision points, responsibilities, metrics, and activities to be followed. Data modeling is accomplished early in the life cycle. Architectural standards for data guide the design process and automated tools support reuse of data and software components. Data Administration products and services exist and are used extensively to meet requirements of the new methodology. Database management software facilitates assembly of data both for transactional processing and decision support. The guiding principles for information management and Data Administration are included as exit criteria of the milestone process. Development costs and times are reduced by following this methodology.

2.5 DATA ADMINISTRATION GOALS

As the vision of the future describes the future environment and expectations of Data Administration, the following six goals focus DoD-wide efforts on targets necessary to realize that vision. The goals represent **what** needs to be achieved by Data Administration to reach the future described in the vision statements. Each goal is a broad statement of long-term priorities for DoD Data Administration. Objectives, developed for each goal, are

with the scope of the plan. Both the DAIP actions and products were used in formulating these objectives.

The objectives, which are presented for each goal, are shown as near-term (FY92/93), mid-term (FY94/95), and long-term (FY96-99). Although the tabular format for displaying the objectives is not meant to portray specific dependencies, there is a logical ordering of columns and rows for the majority of the goals. Tables 1 through 6 display the objectives for each respective goal. For each near-term objective, Action Plans are referenced.

Table 1. Goal 1 Objectives, **Operational Central Repository**

Goal 1: A centrally controlled, DoD-wide data repository is in place to manage and store standard data element definitions, data descriptions, data format, data usage, subject area data models, and the data architecture.

FY 92/93	FY 94/95	FY 96/99
Defense Data Repository System (DDRS) operating capability established Operate and maintain DDRS Evolve DDRS to add functionality and standards compliance	DDRS database evolved to DoD repository DoD repository has initial operating capability DoD repository interfaces established DoD repository fully operational	DoD repository Maintained Centrally controlled repository used to achieve CIM goals

Action Plans
1-1, 2, 3

Table 3. Goal 3 Objectives, **Use of Common Procedures and Tools**

Goal 3: Common processes, procedures, and tools are in use and continually improved to support functional managers, data administrators, and the technical support community in providing standard data products.

FY 92/93	FY 94/95	FY 96/99
DA procedures developed and published	DA procedures updated and published	DA procedures updated and published
Functional and technical requirements for DA tools identified	Technology assessment and insertion plan defined and maintained	Technology assessment and insertion plan maintained
Guidance for tool acquisition published	Guidance for tool acquisition updated and published	Guidance for tool acquisition updated and published
Specific tools evaluated	Specific tools evaluated	Specific tools evaluated
I-CASE source selection participation	Follow-on acquisition study accomplished	I-CASE 2 requirements specified
Proof-of-concepts demonstrated	Proof-of-concepts demonstrated	Proof-of-concepts demonstrated
Required DA products defined for information management methodology	DA products refined and updated	DA products refined and updated

Action Plans
- 3-1
- 3-2
- 3-3, 4, 5
- 3-6
- 3-7

Table 5. Goal 5 Objectives, **Education, Training, and Consultation Services**

Goal 5: Data Administration training, education, consultation services and materials designed to support data management goals are available to and used by a broad spectrum of practitioners within DoD and support industries.

FY 92/93	FY 94/95	FY 96/99
Data consultation services established	Data consultation services provided	DA consultation services provided
DA training and education requirements defined and training plan completed	DA training and education requirements refined and training plan updated and maintained	DA training and education requirements refined and training plan updated and maintained
DA training provided	DA training provided	DA training provided

Action Plans
5-1
5-2, 3

SECTION 3

ACTION PLANS

This section of the DASP provides the action plans to implement the necessary first steps to improve the centrally coordinated planning and management of DoD data resources. The action plans that follow were prepared by DISA/CIM staff. These action plans resulted from the review and update of the DAIP actions and products, the development of Data Administration vision, goals, and objectives and the reconciliation of action plans and DASP near-term objectives. The results of the review and update of the DAIP are summarized in Appendix B. Each action plan in this section references the specific goal and near-term objective supported, and describes the planned activities, and major milestones. In the future, FDAd and CDAd annual plans required by DoDD 8320.1will also be included. The action plans which follow are ordered in the same sequence as the goals and near-term objectives presented in the previous section.

MAJOR MILESTONES:

Initial Development/Testing
Start : October 1991
Finish: April 1992

Maintenance/Evolutionary Updates
Continuous through FY 1999

RESOURCE REQUIREMENTS:

	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	Total
Manpower (FTE)									
In-house:	2	2	1	5	5	5	5	5	30
Contractor:									
FFRDC									
Other	7.5	6	4	4	4	4	4	4	37.5
Funding ($K)									
O&M:									
FFRDC									
Other	883	780	520	520	520	520	520	520	4783
Procurement:	1260	1000	75	350	100	100	1000	100	3885

CALS/EDI - CIM Implementation
Continuous after June 1992

Standards-Based Products Report
TBD Based on Funding

Other Milestones TBD based on funding

RESOURCE REQUIREMENTS:

	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	Total
Manpower (FTE)									
In-house:	.5	.5	1	1	1	1	1	1	7
Contractor:									
FFRDC									
Other	1	1	1	1	1	1	1	1	8
Funding ($K)									
O&M:									
FFRDC									
Other	165.0	171.7	177.6	183.6	189.8	196.3	203	109.9	1496.9
Procurement:									

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN # 2-3,4,5

GOAL #2: Standard data elements, data models and data architecture exist that facilitate data sharing, reuse, single point entry and integration of DoD databases.

OBJECTIVE #3: DoD top level data model defined.

OBJECTIVE #4: Functional area models integrated.

OBJECTIVE #5: DoD Data architecture defined.

DESCRIPTION: This action will develop a management-driven, top-level DoD data model in three phases. From existing DoD documents (missions and functions, goals and objectives, policies, visions, and plans), the first two phases identify documented data requirements and develop a "Base" data model, and the third phase refines and validates the Base data model into a final top-level DoD data model. Phase III will include individual, small group, and/or large group review and validation sessions to refine and finalize the base model into a final DoD data model.

Objective #3: To support managing data as resources (maximizing its use and minimizing its cost), this action develops a top-level data model from DoD current management documents and then refines the model with the personal involvement of DoD management. The top- level DoD data model will provide a common DoD data structure framework to analyze and establish responsibilities for shared databases; to design new data structures; to control duplicate data; to support cross-functional integration; to guide migration of data into new, shared data structures; and to support DoD data standardization (e.g., identifying prime object names to provide for better data classification). This model will serve as the data component of the DoD Enterprise Model, and it will also serve as the basis for a DoD data architecture to guide the data components of all data integration projects and for all future information systems.

Objective #4: This produces a cross-functional data model of the 15 functional USDs and ASDs identified in enclosure 4 of the DoD Directive 8320.1 (DoD Data Administration). The purpose of this model is to identify the common data components which could be shared by the 15 organizations. Its purpose is also to establish the first stage of a broader model, initially called a "Base Data Model," developed in Phase II. This cross-functional model will provide early opportunities to design new data structures that identify candidates for data sharing, control duplicate data, support cross-functional integration, and guide migration of existing instances of data from old data structures to newly engineered data structures. At the same time, the cross-functional data model will identify any data structures which are fairly unique with minimal opportunities for data sharing at the functional process or systems application level. The model will assist the

RESOURCE REQUIREMENTS:

	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	Total
Manpower (FTE)									
In-house:	4	4	6	6	6	6	6	6	44
Contractor:									
FFRDC									
Other	6.7	2.9	2.8	2.7	2.6	2.5	2.4	2.3	24.9
Funding ($K)									
O&M:									
FFRDC									
Other	1138	500	500	500	500	500	500	500	4638
Procurement:									

MAJOR MILESTONES:

Start:	Shared DB Plans	2/92
	Shared DB Designs	3/92
	Customer Requests	3/92
Finish:	Shared DB Plans	9/92 and intermittently based on needs
	Shared DB Designs	9/92 and intermittently based on needs
	Customer Requests	based on demands

RESOURCE REQUIREMENTS:

	FY92	FY93*	FY94*	FY95*	FY96*	FY97*	FY98*	FY99*	Total
Manpower (FTE)									
In-house:	1	1	1.5	1.5	1.5	1.5	1.5	1.5	11
Contractor:									
FFRDC									
Other	2.1	2.9	5.6	5.5	5.4	5.3	5.2	5.1	37.2
Funding ($K)									
O&M:									
FFRDC									
Other	351	500	1000	1000	1000	1000	1000	1000	6581
Procurement:									

* FY93 and on, most activities projected to be fee-for-service

Assess Automated Tools. This activity will identify the functions that must be performed to migrate data from an old data structure to a new one. It will also define the requirements for automated tools that will be essential to perform those functions; thus, making the process less labor intensive. At a minimum, automated tools will be needed for data structure design, data conversion, and data loading from old to new structures.

Prototype a Data Reengineering Process. Automated tools will be selected to prototype the data reengineering process for representative legacy/migration systems. The prototyping effort will determine the effectiveness of reengineering tools on data structures in legacy or selected migration systems. Based on the results of the prototype, the Government will make recommendations on data reengineering tools. This prototype effort will be coordinated with other reengineering prototyping efforts.

Develop Data Migration/Integration Guidance. The results of this action will be guidance including strategies and procedures for data migration/integration that are applicable to different migration scenarios.

MAJOR MILESTONES:

Start:	Data Migration Issues	01 Jan 92
	Technical Assessment of Automated Tools	01 Nov 91
	Prototyping Approaches and Database	01 Mar 92
	Data Reengineering Prototype	01 Mar 92
	Data Migration/Integration Guidance	01 Mar 92
Finish:	Data Migration Issues	15 Feb 92
	Technical Assessment of Automated Tools	01 Mar 92
	Prototyping Approaches and Database	30 Apr 92
	Data Reengineering Prototype	30 Sep 92
	Data Migration/Integration Guidance	30 Sep 92

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN # 2-8

GOAL #2: Standard data elements, data models and data architecture exist that facilitate data sharing, reuse, single point entry and integration of DoD databases.

OBJECTIVE #8: Data standardization procedures implemented.

DESCRIPTION: This objective is related to the following:

- Completion of DoD 8320.1-M procedures on data standardization
- Implementation of DoD 8320.1-M procedures for data standardization
- Review/approval of data elements for storage in the DoD Data Dictionary
- Arbitration of data issues that arise during the approval process
- Assessment measurements for inclusion in the Data Administration Strategic Plan

The DoD 8320.1-M will provide the design rules, naming conventions and conflict resolution channels necessary for standard data elements to be developed by the DoD community. The procedures manual will also provide users with instructions on how to submit candidate data elements for approval and how to access the DoD Data Dictionary. These procedures must be published and disseminated to start the chain of data element standardization. Support must also be provided in the technical review of data element attributes that are proposed and entered in the DoD Data Dictionary with recommended approval/disapproval IAW DoD 8320.1-M guidance.

In order to gauge progress of data standardization procedures implementation, criteria for assessment will be developed and included in program guidance of the Data Administration Strategic Plan. Annual plans forwarded by the Functional and Component Data Administrators will be evaluated against pre- determined assessment criteria. Results will be consolidated and incorporated into a comprehensive document for the DDI.

MAJOR MILESTONES:

DoD 8320.1-M procedures
See Action Plan # 3-1

Data Element Review/Approval
Start: May 1992
Finish: Ongoing

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN # 3-1

GOAL #3: Common processes, procedures and tools are in use and continually improved that support functional managers, data administrators and the technical support community in providing standard data products.

OBJECTIVE #1: DA procedures developed and published.

DESCRIPTION: Policy, procedures, and standards actions result in the formulation and publication of Data Administration Program directives, instructions, rules, and principles. The products developed through policy, procedures and standards actions are documents containing program direction and operation guidelines needed by organizational elements to accomplish the DoD Data Administration mission. As the DoD Data Administration Program matures, actions to modify or develop additional policies, procedures, and standards will continue.

A working draft of DoD 8320.1-M, Data Administration Procedures is under development. Data Element Standardization Procedures have been extracted from DoD 8320.1-M and have been distributed for comment.

Data Administration policy, procedures, and standards describe the Data Administration Program direction and operational requirements and provide the guidelines, instructions, rules, and principles necessary to fulfill the operational requirements. The procedures and standards under development will address:

- Quality assurance metrics;
- Data Administration vocabulary;
- Legacy data transition strategy;
- Data Administration security requirements;
- Data Administration security concept of operations;
- Data reuse concept of operations;
- Data and database integrity ;
- Data Administration products;
- Data modeling guidance;
- Data standardization procedures;
- Data conflict resolution channels;
- Data Administration concept of operations;
- Data Administration infrastructure;
- Business systems data exchange standards; and
- Data management measurement methods.

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN # 3-2

GOAL #3: Common processes, procedures and tools are in use and continually improved that support functional managers, data administrators and the technical support community in providing standard data products.

OBJECTIVE #2: Functional and technical requirements for DA tools identified.

DESCRIPTION: Requirements analysis to establish and maintain effective, streamlined, DoD-wide techniques and tools to guide creation and maintenance of common DA products that can be shared among a community of users, using a standards based architecture. Methodologies must be supported by automated tools to ensure consistency, integrity, extensibility, semantic and syntactic integration, interoperability, reuse and portability. Description of Objective DA Methodologies and Tools (M&T) Requirements. Assessment of M&T scalability, evolvability, and integratability.

Customer is DDI and Services/Agencies.

MAJOR MILESTONES:

DA tool requirements incorporated into I-CASE procurement
- Start: December 1991
- Finish: March 1992

Tool assessment and requirement specification
- Continuous

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN # 3-3,4,5

GOAL #3: Common processes, procedures and tools are in use and continually improved that support functional managers, data administrators and the technical support community in providing standard data products.

OBJECTIVE #3: Guidance for tool acquisition developed.

OBJECTIVE #4: Specific tools evaluated.

OBJECTIVE #5: I-CASE source selection participation.

DESCRIPTION: Establish and maintain effective, streamlined, DoD-wide techniques, methods, tools to guide creation and maintenance of common DA products that can be shared among a community of users, using a standards based architecture. Methodologies must be supported by automated tools to ensure consistency, integrity, extensibility, semantic and syntactic integration, interoperability, reuse and portability.

The products include an operative set of Methodologies, Tools and Training that can be acquired from the I-CASE contract. Participation in the I-CASE source selection will occur. Evaluation of other Data Administration tools as the marketplace matures and evolves will be a continual process. For those tools that cannot be placed on the I-CASE contract or its evolving environment, guidance for tool acquisition will be developed. The products include:

- Tools to support data management and Data Administration function
- Schedule of controlled evolution of Data Administration tools based on the I-CASE acquisition
- Guidance for tool acquisitions not satisfied through I-CASE
- Functional requirements documents and associated acquisition documents that may be needed for DoD-unique DA tools
- Reports of activity of participation in the I-CASE acquisition
- Evaluation reports of specific tools

Customer is DDI and Services/Agencies.

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN # 3-6

GOAL #3: Common processes, procedures and tools are in use and continually improved that support functional managers, data administrators and the technical support community in providing standard data products.

OBJECTIVE #6: Proof-of-Concepts demonstrated.

DESCRIPTION: Establish proof-of-concept capabilities to demonstrate Data Administration (DA) functions, various and multiple methodologies, tools, and data products including, but not limited to:

- Evolvability and scalability of various existing and emerging methodologies
- Evolvability and scalability of various existing and emerging tools
- Data product creation, refinement, iteration, integration
- Tool integration, interface
- Methodology and tool testing
- Data product reuse
- Data integrity and security establishment, enforcement, and maintenance
- DA support activities (e.g., quality assurance, configuration management)
- DA training
- Metrics

Customer is DDI and Services/Agencies.

MAJOR MILESTONES:

Start: October 1993
Finish: September 1999

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN #3-7

GOAL #3: Common processes, procedures and tools are in use and continually improved that support functional managers, data administrators and the technical support community in providing standard data products.

OBJECTIVE #7: Required data products defined for Information Management Methodology.

DESCRIPTION: Supports the objective to define Data Administration Services and Products and to ensure that these are integrated into the overall IM methodology being developed in ITPB proposal 91-21 (Information System Architecture Methodology). The products include planning for use of data models, data standards, data architectural products and dictionary/repository capabilities to be integrated and controlled by an overall IM methodology. Products include:

- List of products and services to support data management and Data Administration functions
- Guidance on use of products for data management in the IM Methodology
- The CIM Policy and Procedures Instruction
- The Strategic Model for Technical Integration
- The DOD DMR, Inc Handbook on Open Systems Implementation
- Use of I-CASE and Reuse
- Software Development Framework (SDF) documents

Customer is DDI and Services/Agencies.

MAJOR MILESTONES:

Services and Products defined:
Start: 1 Nov 91
Finish: 1 August 93

Other milestones TBD

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN #4-1,2,3

GOAL #4: A data quality assurance program is integral to Data Administration and ensures DoD operations and decision-making are supported with data that meets needs in terms of availability, accuracy, timeliness and integrity.

OBJECTIVE #1: Data quality program defined.

OBJECTIVE #2: Data quality program implemented.

OBJECTIVE #3: Data quality assessments performed.

DESCRIPTION: Quality assurance assessment will be conducted on the effectiveness and efficiency of DoD Data Administration (DA). The assessment will be conducted by the DoD Data Administrator to reflect functional and component Data Administration progress measured against the published objectives of the annual plan.

Metrics will be established to measure the progress of the program's major functions such as data standardization and data integration. The foundation of the actual assessment will be quality control checkpoints established early in the life cycle to ensure adherence to standards and guidance provided in DOD 8320.1-M, DoD Data Administration Procedures.

Customers for this product are the DDI and the DoD Data Administrator as well as the Component and Functional Data Administrators who can initiate corrective action or reinforce accomplishments based on the assessment results.

MAJOR MILESTONES:

Start:	March 1992 (develop criteria with DA Strategic Plan guidance and DOD 8320.1-M)
Finish:	March 1993 (first annual submission to DDI); quality control ongoing with annual results each March thereafter

RESOURCE REQUIREMENTS:

Resourcing is part of Action Plan #3-1 and Action Plan #6-1,2,3,4,5

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN #5-2,3

GOAL #5: Data Administration training, education, consultation services and materials designed to support data management goals are available to and utilized by a broad spectrum of practitioners within DoD and support industries.

OBJECTIVE #2: DA training and education requirements defined and training plan completed.

OBJECTIVE #3: DA training provided.

DESCRIPTION: Define requirements for multi-level training/education tailored to meet the needs of executives, managers and data administrators with the DoD who are responsible for implementing and maintaining the DoD Data Administration Program.

Develop a Data Administration Training Program Plan that includes, at a minimum:

- Description of the DoD DA education and training activities requirements (including all supporting functions).
- Selection set of training programs, including format subject areas, and mechanisms (e.g., formal curricula, workshops, conferences, computer-aided instruction, video tape).
- Identification of internal and external forums to institutionalize DoD Data Administration concepts.

Based on the Quick-Start Project initial training program efforts, survey results, the DoD DA Training Program Plan, and annual assessment, training must be developed and provided to all Functional Data Administrators and Component Data Administrators. Requirements identified to date are as follows:

- DoD DA Roles and Responsibilities
- Strategic Data Planning
- Data Modeling Theory and Techniques
- How DA Intersects in the Information Systems Life Cycle
- How to Design/Reengineer Shareable Data
- Transition from Legacy Systems to a Shared Data Environment

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN #6-1, 2, 3, 4, 5

GOAL #6: Data Administration organizations are in place throughout the DoD, supported by senior management, established to serve functional managers, staffed to assist the technical support community, with the essential leadership to effect improved data management.

OBJECTIVE #1: DA concept of operations defined.

OBJECTIVE #2: DA planning guidance published.

OBJECTIVE #3: Annual plans published.

OBJECTIVE #4: Annual Data Administration planning conferences held.

OBJECTIVE #5: DA program reviews conducted.

DESCRIPTION: Data Administration planning actions result in the identification, definition and scheduling of activities to implement, operate and manage the DoD Data Administration Program. The products developed through planning actions are documents containing the information needed by organizational elements to accomplish the DoD Data Administration mission. It also entails coordination of the Data Administration Council (DAC). As the DoD Data Administration Program matures, additional planning actions will be required to modify or develop planning documents.

The U.S. Army, as Interim Executive Agent for Data Administration, originally identified the following planning products for development:

- Strategic Plan for Data Administration;
- Updated Strategic Plan for Data Administration;
- Updated Data Administration Implementation Plan;
- Data Administration Transition Plan; and
- Data Administration Concept of Operations.

This submission constitutes the first updated Data Administration Implementation Plan. The Implementation Plan will be incorporated in the Strategic Plan for Data Administration. The Strategic Plan will define Data Administration program actions for an eight-year period and will be updated annually.

A Data Administration Transition Plan was drafted for use in transitioning the Executive Agent role from the U.S. Army to DISA over a twelve month period beginning in July 1991.

MAJOR MILESTONES:

Develop DA Strategic Plan (Draft delivery to DDI)
Start: January 1992
Finish: February 1992

Refine DA Strategic Plan with FDA/CDA Participation
Start: March 1992
Finish: August 1992

Develop and Issue Planning Guidance
Start: March 1992
Finish: September 1992

Program Review/Assessment
Start: October 1992
Finish: February 1993

DA Strategic Plan Update
Start: March 1993
Finish: Ongoing

RESOURCE REQUIREMENTS:

	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	Total
Manpower (FTE)									
In-house:	1	1	1	1	1	1	1	1	8
Contractor:									
FFRDC									
Other	.8	.3	.3	.3	.3	.3	.2	.2	2.9
Funding ($K)									
O&M:									
FFRDC	127	50	50	50	50	50	50	50	477
Other									
Procurement:									

DATA ADMINISTRATION STRATEGIC PLAN
ACTION PLAN #6-7

GOAL #6: Data Administration organizations are in place throughout the DoD, supported by senior management, established to serve functional managers, staffed to assist the technical support community, with the essential leadership to effect improved data management.

OBJECTIVE #7: Migration Systems Data Management Plans (DMPs) Published

DESCRIPTION: Migration System Data Management Plans (DMPs) will be prepared and published for all designated migration systems in accordance with DoD 8020.1-M to guide the planning and control of data administration activities within a functional activity. The DMP is a system specific integration document that is updated as required by business process improvements and/or the Data Administration Strategic Plan. The DMP is maintained for the life of the system it supports. The DMPs support the realization of DoD-wide data standardization and integration that will yield improved data quality, timeliness and accuracy. Customers are the DDI and Functional Activity Program Managers.

MAJOR MILESTONES:

Functional Area: **Human Resources**
DMP Completion Date: **60 days after issuance of DoD 8020.1-M**
Designated Migration Systems

- o Defense Civilian Personnel Data System (DCPDS)
- o MEPCOM Integrated Resource System (MIRS)

Functional Area: **Health**
DMP Completion Date: **60 days after issuance of DoD 8020.1-M**
Designated Migration Systems

- o Composite Health Care System (CHCS)
- o Automated Quality of Care Evaluation System (AQCESS)
- o Medical Expense and Performance Reporting System, Expense Assignment System, Version 3 (MEPRS/EAS III)
- o Tri-Service Food Service System (TRIFOOD)
- o Tri-Service Micro Pharmacy System (TMPS)
- o Computer Assisted Processing of Cardiograms (CAPOC)
- o Shipboard Nontactical ADP Program (SNAP) Automated Medical System (SAMS)
- o Defense Blood Standard System (DBSS)
- o Defense Medical Regulating Information System (DMRIS)
- o Automated Patient Evacuation System (APES)
- o Theater Army Medical Management Information System (TAMMIS)
- o Veterinary Services Automated Data management System (VSADMS)

- o Program Depot Maintenance Scheduling (PDMSS) - USAF
- o Repair & Remanufacturing Resource Planning (R&RMP - II) - USAF

Functional Area: **C3I**
DMP Completion Date: **TBD**
Designated Migration System(s) TBD

14. Strassman, Paul, "Strategic Framework for C^4I in DoD Corporate Information Management (CIM)," Briefing, Director Defense Information, 26 November 1991.

15. Strassman, Paul, "The Role of Open Systems in DoD Corporate Information Management (CIM)," Briefing, Director Defense Information, 10 December 1991.

16. Strassman, Paul, "Integration Framework and Doctrine for Corporate Information Management," Briefing, Director Defense Information, 15 December 1991.

17. National Institute of Standards and Technology, *NIST Special Publication 500-167, Information Management Directions: the Integration Challenges*, September 1989.

18. Rosen, Bruce K. and Margaret H. Law, *NIST Special Publication 500-173 Guide to Data Administration*, National Institute of Standards and Technology, October 1989.

19. Defense Information Systems Agency, *FY92-FY98 Program and Resource Plan: Center for Information Management and Related DISA Corporate Information Management Activities*, 4 September 1991.

20. Information Engineering Directorate, Center for Information Management, Defense Information Systems Agency Information *Engineering Directorate Strategic Plan for FY91*, 30 September 1991.

21. Director of Information Systems for Command, Control, Communications and Computers (DISC4), U.S. Army, *Data Administration Implementation Plan* , June 1991.

APPENDIX A

DOD DATA ADMINISTRATION FRAMEWORK

The overall framework for DoD Data Administration, summarized in Figure A-1 of this appendix, represents two levels of management responsibilities. The first level provides overall program planning and management, sets policy, and provides resources. The second level executes those plans and implements those policies by managing and administering DoD data.

The first level is composed of the Assistant Secretary of Defense (C^3I) (ASD (C^3I)), other Assistant Secretaries and Undersecretaries of Defense (USD/ASD), and DoD Component Heads. These organizations are responsible for DoD, Functional, and Component Data Administration respectively. Together they will establish and manage programs that will promote integration and standardization of data across all functional and component areas in the DoD. The ASD (C^3I) sets DoD-wide policy. All organizations will annually review the DA Strategic Plan for their particular functional or component perspective prepared by the data administrators designated to implement their particular programs.

The second level is composed of Data Administrators and their staffs. The DoD Data Administrator (DoD DA), Functional Data Administrators (FDAds), and the Component Data Administrators (CDAds) represent the DoD, functional area, and component view of data resources. Together they manage, coordinate, and execute necessary operations to define and standardize information about data resources to ensure a more integrated data environment to support both DoD decision-making and operations.

The execution of coordinated Data Administration operations is guided by three predefined but constantly evolving elements: standards, architecture, and functional data models. The first two are developed by the DoD DA and the third by the FDAds. Standards and procedures for data and Data Administration, published by the DoD DA, provide operating guidelines for all Data Administrators. The DoD Data Architecture, also developed by the DoD DA, is the foundation for organizing data and the information derived from data into manageable groupings. This architecture facilitates shared use and control of that information by all users, including the FDAds and CDAds. Designated functional data models, developed by the FDAds with Functional Information Manager (FIM) and Technical Integration Manager (TIM) support, provide an integrated view of each functional area's data. These models will be used by FIMs and TIMs to ensure cross-functional integration.

Guided by these elements, the CDAds are responsible for coordinating the execution of Data Administration operations within their respective Component. User data requirements are captured by the CDAds as standard data elements, data models, or other forms of information about data. These products are reviewed for technical adherence to standards. Standard data products (e.g. standard data elements and data models) are forwarded for

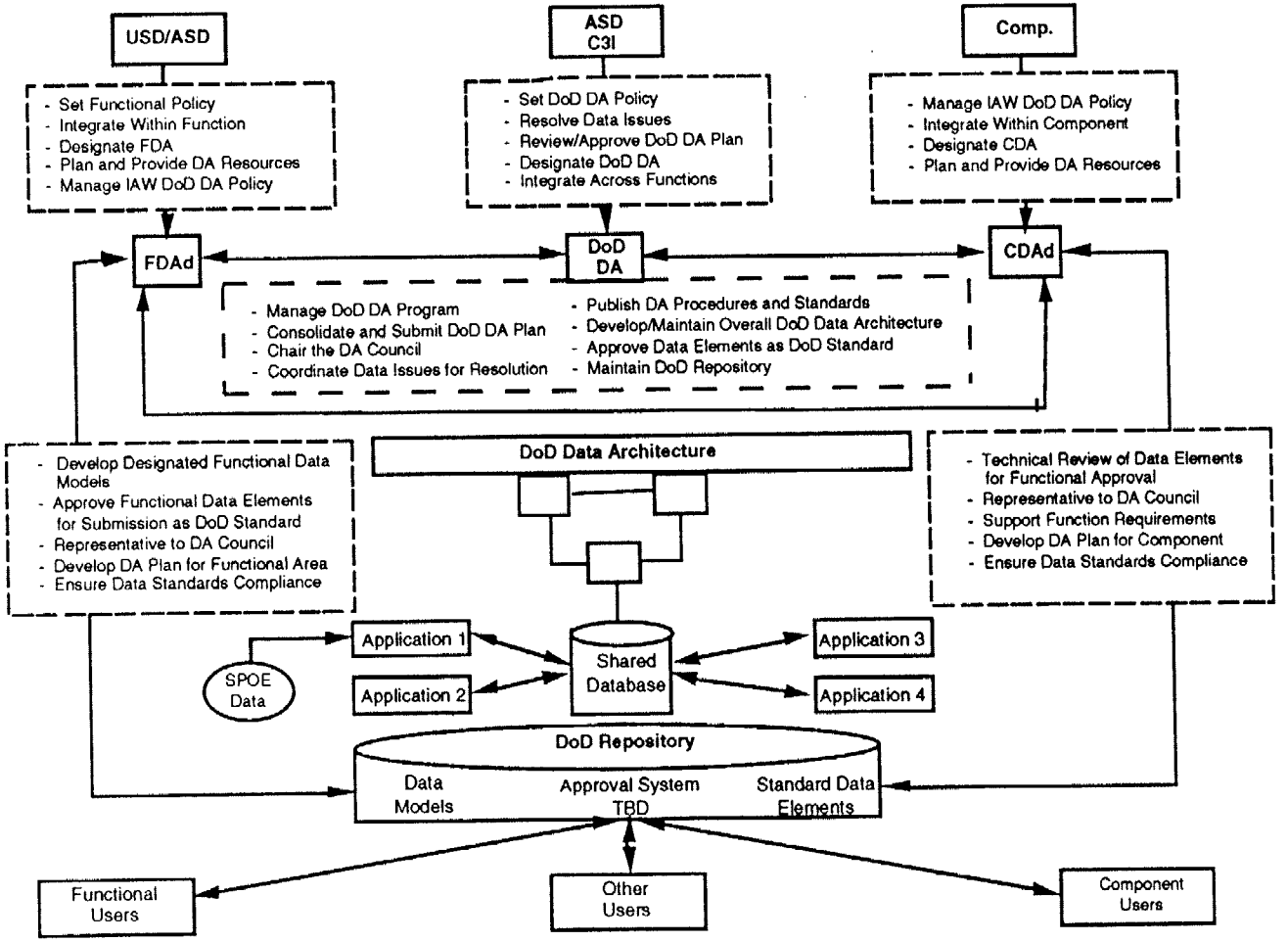

Figure A-1. DoD Data Administration Framework

APPENDIX B

DATA ADMINISTRATION IMPLEMENTATION PLAN STATUS

This appendix describes the results of the Center for Information Management review of the near-term, mid-term and long-term products specified for the nine action areas contained in the DAIP. The actions and products from the DAIP are specified in Attachment B1, DA Implementation Plan Action/Product Schedule.

Attachment B2, DAIP Status, shows the status of actions and products from Attachment B1 as of 1 March 1992. The final column reflects the impact of consolidation and reorganization of the original 9 actions and 66 products. Final action plans now directly support the near-term objectives of the DASP. Once the DASP is approved, it will serve as the master plan for DoD Data Administration and as such subsume all remaining actions from the DAIP.