BY ORDER OF THE
SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 33-110

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Communications and Information

DATA ADMINISTRATION PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air Force instruction (AFI) implements Air Force Policy Directive (AFPD) 33-1, *Command, Control, Communications, and Computer (C4) Systems*. It provides guidance and procedures to administer the Air Force (AF) Data Administration (DA) Program. It applies to all Air Force organizations that plan, design, model, synchronize, standardize, and control Air Force data at all echelons. It applies to all computer systems. To better understand the data standardization process, refer to Department of Defense (DoD) Directive (DoDD) 8320.1, *DoD Data Administration*, September 26, 1991; DoD Manual 8320.1-M, *Data Administration Procedures*, March 29, 1994; and DoD Manual 8320.1-M-1, *Data Element Standardization Procedures*, January 15, 1993. Refer technical questions to Headquarters, Air Force Communications Agency (HQ AFCA), Data Management Division (HQ AFCA/XPD), 203 W. Losey Street, Room 1005, Scott AFB IL 62225-5219. Use AF Form 847, **Recommendation for Change of Publication**, to refer recommended changes and conflicts between this and other publications to HQ AFCA, Policy Branch (HQ AFCA/XPPD), 203 W. Losey Street, Room 1065, Scott AFB IL 62225-5224. Major commands (MAJCOM), field operating agencies (FOA), and direct reporting units (DRU) send one copy of their supplement to HQ AFCA/XPPD. **Attachment 1** lists references, abbreviations, acronyms, and terms used in this instruction. **Attachment 2** provides guidance on completing AF Form 247, **Standard Data Element and Related Features Request**. Use the questions at **Attachment 3**, and AF Form 2519, **All Purpose Checklist** (available electronically) to develop a checklist on data administration tasks.

SUMMARY OF REVISIONS

This revision updates the entire document.

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Section A—Guidance

1. General. Within the Air Force Data Administration Program, the Air Force component data administrator (AFCDAd) is responsible for ensuring the identification, documentation, and support of mission-essential data requirements of commanders and decision makers. To aid the AFCDAd, data administrators (DAd) are appointed at all echelons to establish organizational goals, identify support requirements (including training and human resources), and implement stated DA policies. With the coordination and support of functional area experts (functional data coordinators[FDC]), DAds:

    1.1. Manage data as a shared corporate resource.

    1.2. Take appropriate measures to protect data.

    1.3. Use information engineering practices and methodologies as identified in DoDD 8320.1 to identify, document, and retain only mission-essential data requirements.

    1.4. When reviewing data elements, consider the Paperwork Reduction Act, the Privacy Act and associated publications, security classification, and operational security. Eliminate the possibility of redundancy or inconsistency by ensuring application of naming conventions prescribed in DoD Manual 8320.1-M-1.

2. Strategic Data Planning. Strategic data planning practices involve structuring data and applications independently to allow data sharing across functions and among organizations from the unit level up through the HQ Air Force and joint levels, while remaining consistent with national security and privacy requirements. This concept requires planning at the initial stages of system development to use or "share" standardized data that applies across all functional areas. Future data standards' efforts will comply with approved information modernization plans. In many cases, the Air Force can take advantage of data already standardized by DoD functional data administrators (FDAd). The FDAds' initiatives provide sharable data across their functional domain, but planning is still required to apply the highest level DoD structure to Air Force application development efforts. The DoD structure (framework) is further described below.

3. Data Architecture and Modeling. DoD Manual 8320.1-M defines data architectures as the framework for organizing and defining the interrelationships of data in support of an organization's missions, functions, goals, objectives, and strategies. Data architectures provide the basis for the incremental, ordered design and development of data bases based on successively more detailed levels of modeling. For the Air Force, the current strategy is to use the DoD Enterprise Data Model as the primary framework for defining interrelationships of data. The DoD framework began as a very high level entity relationship model, but the detailed modeling efforts of the FDAds have expanded it. A copy of the current DoD Enterprise Data Model is available through HQ AFCA/XPD. As the data administration program matures, the Air Force is building more detailed views based on the functional area and automated systems under consideration. This instruction establishes the requirement for all software development to include development of an associated data model that the Air Force can integrate with the DoD Enterprise Data Model and support proper use of existing standardized data elements.

4. Data Element Standardization. The physical implementation of sharable data bases relies on the creation of a robust, broadly accepted set of standard data elements that the Air Force can store, transmit, and manipulate without the overhead of sophisticated translators and interfaces along the way. Each data

element represents a single informational concept (for example, a representative code, a speed of a vehicle, or a title of a book). There are many instances and an extensive domain, but the data element can have only one definition. We must precisely define and agree on the number of characters, the precision, and the allowable values throughout the DoD before the DoD will approve the element as a standard. DoD Manual 8320.1-M-1 provides specific guidance on the DoD process for submitting data elements. Air Force field activities will submit standard data element proposal packages with the assistance provided by HQ AFCA/XPD. The DoD repository for standardized data is the Defense Data Dictionary System (DDDS). This AFI directs commands to discontinue maintenance, development, and implementation of local data repositories not approved by HQ United States Air Force/Communications and Information (HQ USAF/SC) or Defense Information Systems Agency (DISA), that duplicate the functionality of the DDDS, to support data administration and standardization. All Air Force development efforts must interrogate the DDDS and apply the approved standard data elements in their application development. As the DDDS evolves, the Air Force will issue incremental guidance through the AF DA Program Manager at HQ AFCA/XPD. The guidance will also provide guidelines to use in implementing the latest tools and procedures.

4.1. In operational systems, you must match or map existing data elements to DoD standard data elements in the DDDS, when economically feasible, to provide a data migration path for follow-on systems. The Air Force Data Dictionary (AFDD) will continue to support its current function as a data dictionary with codes and values until functionally supported by the DDDS. **Attachment 2** provides information for using AF Form 247 when updating the code values within AFDD for current system users.

4.2. All new systems and major redesigns (changes of 30 percent or more of existing code) must comply with data standardization rules and guidance prescribed by this instruction and DoD Manual 8320.1-M-1. System developers shall submit proposed data element candidates prior to development of the data model. It is not necessary to modify any existing system for the sole purpose of using standardized data elements.

4.3. Nonstandard systems sharing data with systems using standard data elements will bear the cost of translation.

4.4. Apply the following format standard: In instances where data elements are defined for date values, apply the DoD standard yyyymmdd (yyyy=year, mm=month, dd=day).

Section B—Functional Area Responsibilities

5. Headquarters, United States Air Force, DCS/Communications and Information. As the AFCDAd, HQ USAF/SC:

5.1. Appoints a primary point of contact (POC) to implement DA programs.

5.2. Plans for and provides resources for DA activities throughout the Air Force.

5.3. Fulfills requirements levied by the AF DA Program's Annual Planning Guidance by reviewing, choosing recommendations, approving, and forwarding requirements proposed by the AF DA POC.

5.4. Coordinates Data Administration Strategic Plan (DASP) information from the DoD DAd, approves adjustments to Air Force action plans, and prescribes, and approves DA implementation policies and procedures for publication.

6. Air Force Data Administration Point of Contact. As the AFDA POC, HQ USAF/SCTS, Chief Software Division:

6.1. Represents the Department of the Air Force to DoD on matters pertaining to DA.

6.2. Oversees Air Force matters pertaining to DA standards development and adoption.

6.3. Prepares the HQ USAF portion of the DASP for AFCDAd approval according to the DA Program Annual Planning Guidance.

6.4. Serves as focal point to ensure data systems are in compliance with data management policies, standards, and procedures.

6.5. Develops decision packages for AFCDAd approval to resolve disputes among submitters over standard element approval, installation, and archiving.

7. Headquarters Air Force Communications Agency, Data Management Division:

7.1. Acts as program manager for the DA program.

7.2. Supports the Air Staff in execution of the DA program.

7.3. Serves as focal point to make sure systems developers have the necessary tools and training for DA issues related to compliance with Air Force Technical Reference Code (TRC) S4, Computing Services.

7.4. Performs quality control, reviews, and coordinates on functional area data models developed by Central Design Activities (CDA)/Software Support Activity (SSA) and provides technical assessment of functional data requirements submitted by the FDCs.

7.5. Coordinates with the AFCDAd POC and FDAds on elements that fail technical review and makes recommendations to the FDAd to improve the technical quality of the proposed element.

7.6. Provides the means to house data models and data elements.

7.7. Consolidates and reviews AF DA funding requirements and recommends appropriate adjustments and allocations.

7.8. Assists the DoD DAd in integrating the Air Force inputs into the DoD data model.

7.9. Identifies and funds training requirements. Serves as the Air Force single POC for DISA-sponsored DA training.

7.10. Assists FDCs in evaluating functional publications for adequacy of DA policies and procedures.

7.11. Recommends archiving of standard elements when no longer needed or cost effective to maintain and manage.

8. Functional Data Coordinators. FDCs provide support to the AF DA Program by reviewing data modeling and data element standardization efforts for major systems developments in their functional area. Air Force FDCs work with DoD FDAds to see that DoD data standardization activities consider Air Force functional requirements. FDCs:

8.1. Reconcile and validate functional area activity and data models submitted by systems developers and database managers.

8.2. Assist the AF DA Program Office in integrating approved Air Force submissions into the DoD-approved data models.

8.3. Consult within the functional area and develop the functional input to the DASP (updated annually), based on functional area action plans.

8.4. Ensure the functional area staff supporting the AF DA Program is trained.

8.5. Maintain data element consistency among all development projects by using existing standard elements. This includes resolving differences in documentation for the same data element and staffing with interested users.

9. Major Commands and Field Operating Agencies. MAJCOMs and FOAs execute the AF DA Program within their areas of responsibility by using DoD and Air Force policies, standards, and procedures. MAJCOMs/FOAs designate a MAJCOM Data Administrator (MDAd) to provide MAJCOM-level technical expertise, enforce standards, identify requirements, and perform data management duties for the MAJCOM/FOA. MDAds:

9.1. Consult with functionals within the MAJCOM and develop the organizational DASP (updated annually), which identifies short- and long-range development plans and resource requirements needed to carry out the AF DA Program.

9.2. Ensure automated system designs, developments, modifications, modernizations, implementations, and life-cycle management efforts are accomplished in compliance with DoD and Air Force directives.

9.3. Arbitrate DA concerns which arise between the functional user and technical communities at the MAJCOM level.

9.4. Coordinate the review of other MAJCOM data submissions forwarded by the AFDA Program Office with the MAJCOM functional activity and/or software development activity.

9.5. Make sure you coordinate any computer systems requirements with the MDAd during the review process for new or modified systems (including contract proposal evaluations). Solicitations relating to data development must contain terms and conditions for enforcement of applicable Air Force data standardization publications.

9.6. Identify DA training and resource requirements to meet stated organization DASP goals.

9.7. Support ongoing efforts to measure and evaluate the use of standardized data. MDAds keep historical information to observe trends and avoid (or minimize) problems when possible.

10. Air Force Central Design Activity, Software Development Activity (SDA), and Software Support Activity Organizations:

10.1. Track the exchange of data across data bases, data systems, and functional lines.

10.2. Compare projected activities in data bases and systems to actual activities.

10.3. Document deviations from approved logical models when developing physical data bases.

10.4. Develop data model packages before new system development or reengineering efforts, and send models, data elements, and supporting metadata to the appropriate FDC for validation during the design phase.

10.5. Develop data models using the Integration DEFinition for Information Modeling (IDEF1X) methodology for modernization of selected migration systems and new software developments.

10.6. Reengineer legacy systems to extract application metadata and business rules for use in modernizing systems where feasible.

10.7. Provide MDAd with DA resource requirements and status of software development efforts requiring data element standardization.

10.8. Comply with DoD Manual 8320.1-M-1.

11. Air Education Training Command (AETC).   In response to identified requirements, AETC:

11.1. Develops training plans and material for a comprehensive training program that addresses all aspects of DA, and oversees the overall effectiveness of that training.

11.2. Establishes DA curricula and formal courses identified by the AFCDAd in coordination with HQ USAF/SCXB.

12. Form Prescribed: AF Form 247, **Standard Data Element and Related Features Request**.

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DCS/Communications and Information

Attachment 1

GLOSSARY OF REFERENCES, ABBREVIATIONS, ACRONYMS, AND TERMS

References

AFPD 33-1,. *Command, Control, Communications, and Computer (C4) Systems*.

DoDD 8320.1, *DoD Data Administration*, September 26, 1991.

DoD Manual 8320.1-M, *Data Administration Procedures*, March 29, 1994.

DoD Manual 8320.1-M-1, *Data Element Standardization Procedures*, January 15, 1993.

JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, March 23, 1994.

Abbreviations and Acronyms

AETC—Air Education Training Command

AF—Air Force

AFCDAd—Air Force Component Data Administrator

AFDD—Air Force Data Dictionary

AFI—Air Force Instruction

AFIRDS—Air Force Information Resources Dictionary System

AFPD—Air Force Policy Directive

AIS—Automated Information System

AN—Alphanumeric

CASE—Computer-Aided Software Engineering

CDA—Central Design Activity

CDAd—Component Data Administrator

CSAD—Computer Systems Authorization Directory

DA—Data Administration

DAd—Data Administrator

DASP—Data Administration Strategic Plan

DBMS—Data Base Management System

DDDS—Defense Data Dictionary System

DISA—Defense Information Systems Agency

DoD—Department of Defense

DoDD—Department of Defense Directive

DRU—Direct Reporting Unit

DSD—Data System Designator

DUI—Data Use Identifier

FDC—Functional Data Coordinator

FDAd—Functional Data Administrator

FOA—Field Operating Agency

IDEF1X—Integration DEFinition for Information Modeling

JP—Joint Publication

MAJCOM—Major Command

MDAd—MAJCOM Data Administrator

OPR—Office of Primary Responsibility

POC—Point of Contact

SDA—Software Design Activity

SSA—Software Support Activity

STID—Standard Identification

TRC—Technical Reference Code

Terms

Acronym—A name formed from the initial letters or groups of letters of words in a set phrase or series of words.

Air Force Corporate Data Dictionary—Composite program consisting of the Air Force Data Dictionary (AFDD), Computer Systems Authorization Directory (CSAD), Air Force Information Resources Dictionary System (AFIRDS) and Model Library.

Air Force Data Dictionary (AFDD)—Data element dictionary for those Department of Defense and Air Force data elements and related features authorized for use within the Air Force.

Air Force Information Resources Dictionary System (AFIRDS)—A software tool used as a data dictionary for management of metadata (data about data). It supports research and maintenance of existing data elements and is used to create new elements using the DoD standardization guidelines.

Alias—**1.** An alternate label (for example, a label and one or more aliases) used to refer to the same data element or point in a computer program. **2.** Synonym for alternate name.

Application (Program)—**1.** A computer program used for a particular kind of work, such as word processing or data base management. The term is commonly used interchangeably with "Program". **2.** The definition or procedure for solving a problem with a computer.

Command, Control, Communications, and Computer (C4) Systems—(DoD) Integrated systems of doctrine, procedures, organizational structures, personnel, equipment, facilities, and communications designed to support a commander's exercise of command and control across the range of military operations. Also called **C4 Systems**. (JMTGM # 081-95.)

C4 Systems—An integrated system of doctrine, procedures, organizational structures, personnel,

equipment, facilities, and communications designed to support a commander's exercise of command and control, through all phases of the operational continuum. It includes base visual information support systems.

Candidate Element—Generic elements and data elements that have been submitted by a functional data administrator (FDAd) or component data administrator (CDAd) for formal review.

Class Word—A word in the name of a data element describing the category to which the data element belongs. The word establishes the general structure and domain of a standard data element.

Computer Systems Authorization Directory (CSAD)—Catalog of all authorized computer systems within the Air Force inventory.

Data—(DoD) Representation of facts, concepts, or instructions formalized suitable for communication, interpretation, or processing by humans or by automatic means. Any representations such as characters or analog quantities to which meaning is or might be assigned. (JP 1-02)

Data Administrator (DAd)—A person or group that ensures the utility of data used within an organization by defining data policies and standards, planning for the efficient use of data, coordinating data structures among organizational components, performing logical data base designs, and defining data security procedures.

Data Architecture—A framework for organizing data into a manageable grouping to facilitate shared use and control throughout the Air Force.

Data Attribute—A characteristic of a unit of data such as length, value, or method of representation. Also, a property inherent in an entity or associated with that entity for data base purposes.

Data Base—(DoD) **1.** Information that is normally structured and indexed for user access and review. Data bases may exist as physical files (folders, documents, etc.) or formatted automated data processing system data files (JP 1-02). **2.** A structure or organized collection of information, which may be accessed by the computer. **3.** A set of data that is required for a specific purpose that is fundamental to a system, project, enterprise, or business. A data base may consist of one or more data banks and be geographically distributed among several repositories.

Data Administration (DA)—The analysis, classification, and maintenance of an organization's data and data relationships. It includes the development of data models and dictionaries, which combined with transaction processing, are the raw materials for data base design. The activity responsible for enforcing policies and standards set by the DAd, to include providing technical support for physical data base definition, design, implementation, maintenance, integrity, and security, and coordinating with computer operations technicians, system developers, vendors, and users. Orients administration toward technical support for data bases and the effective and efficient use of information technology resources.

Data Base Management System (DBMS)—The data processing system that provides the means to store, organize, and access the information in a data base.

Data Chain—A combination of logically related data elements. For example, the data chain "DATE" is comprised of the data elements "year," "month," and "day."

Data Code—(DoD) **1.** A number, letter, character, or any combination thereof used to represent a data element or data item. For example, the data codes "E8," "O3," and "O6" might be used to represent the data items of sergeant, captain, and colonel under the data element "military personnel grade." (JP 1-02) **2.** Numbers, letters, characters, blanks, or any combination thereof (maximum of 29-character positions)

used to represent a data element or data item within a standard data element or chain.

Data Code-for Domain Value—A number, letter, character, or any combination of these used to represent a data element. For example, the data codes "01," "02," and "03" might be used to represent the data items of blue, brown, and green in the data element "person eye color code."

Data Dictionary—A specialized type of data base containing metadata and managed by a data dictionary system; a repository of information describing the characteristics of data used to design, monitor, document, protect, and control data in information systems and data bases; an application of a data dictionary system.

Data Element—A basic unit of information built on standard structures having a unique meaning and distinct units or values. Examples of data elements are military personnel grade, sex, race, geographic location, and unit. In electronic recordkeeping, a combination of characters or bytes referring to one separate item of information, such as name, address, or age.

Data Element Alias—See **Alias**.

Data Element Standardization—The process of uniquely defining the characteristics of each shared data element to ensure acceptance by all data users across an organization. The process of documenting the uniform identification, definition and representation of data in accordance with established rules and installing the results in systems.

Data Entity—An object of interest to the enterprise, usually tracked by an automated system.

Data Integrity—**1.** The process of providing accidental erasure or adulteration of data in a data base. Data integrity includes data locking, consistency, transaction control, and synchronous writing of data. **2.** The assurance that the data received is the same data that was sent. **3.** The concept that the data base management system will perform its function consistently, preserve data without unintentional change, produce correct results to the defined degree of precision, and maintain data availability.

Data Management—The function of controlling the acquisition, analysis, storage, retrieval, and distribution of data.

Data Resource—Any data created manually or by automatic means, used by a system or enterprise to represent its information.

Data Source—A functional unit that originates data.

Data Steward—A person or group that manages the development, approval, and use of data within a specified functional area, ensuring that it can be used to satisfy data requirements throughout the organization.

Data Structure—The framework that defines the specifics about one or more types of data that support the user systems. The data structure includes the collection of record types, linkages, fields, entry points, and integrity rules.

Data Value—Qualitative and quantitative data expressions that represent the contents of a generic element or data element.

Domain—**1.** The independent variable used to express a function. Examples of domain are time, frequency, and space. **2.** In distributed networks, all the hardware and software under the control of a specified set of one or more host processors. **3.** A set of permissible data values from which actual values are taken for a particular attribute or specific data element. **4.** In a relational data base, all of the

permissible tuples for a given relation.

General Domain—The permissible data values allowed in representations of a data element, defined in terms of the character set that can be used (for example, A-Z, 0-9, etc.).

Generic Element—A structure used to specify a domain for data (either specific or generalized) which conveys meaning for many different data objects. The generic element, however, has no such organizational context other than to define a general class of data and see that consistency in structure and domain.

Information—(DoD) **1.** Facts, data, or instructions in any medium or form. (Approved by JMTGM# 034-96.) **2.** Any communication or reception of knowledge such as facts, data, or opinions, including numerical, graphic, or narrative forms, whether oral or maintained in any medium, including computerized data bases, paper, microfilm, or magnetic tape.

Information Engineering—A formal software engineering methodology that covers the complete information system life cycle from organization mission to application software and data base development and maintenance. This data-driven, top-down methodology is supported by computer-aided software engineering (CASE) tools that enforce the procedures, standards and rules of the information engineering methodology.

Information Model—A term used to describe the information resources of the organization and their interrelationships. It is used to support data modeling and resulting data and document storage design requirements. It provides the information resource managers' views of the architecture. A model that represents the processes, entities, information flows, and elements of an organization and all relationships between these factors.

Information System—(DoD) **1.** The organized collection, processing, transmission, and dissemination of information, in accordance with defined procedures, whether automated or manual. In information warfare, this includes the entire infrastructure, organization, and components that collect, process, store, transmit, display, disseminate, and act on information. See also information; information warfare. (Approved by JMTGM# 034-96). **2.** An automated or manual system comprised of people, machines, and, or methods organized to collect, process, transmit, and disseminate data that represents user information. The organized collection, processing, maintenance, transmission, and dissemination of information in accordance with defined procedures, whether automated or manual.

Legacy Systems—Systems that are candidates for phase-out, upgrade, or replacement. Generally, legacy systems are in this category because they do not meet current standards. Legacy system workloads must be converted, transitioned, or phased out (eliminated). An existing automated information system (AIS) that duplicates the support services provided by the migration system. Legacy systems will be terminated so that all future AIS development and modernization can be applied to the migration system.

Metadata—Information describing the characteristics of data; data or information about data; descriptive information about an organization's data, data activities, systems, and holdings.

Migration System—An existing automated information system (AIS), or a planned and approved AIS, that has been officially designated to support common processes for a functional activity applicable to use DoD-wide or DoD component-wide. Systems in this category, even though fully deployed and operational, have been determined for transitioning to a new environment or infrastructure. A migration system may need to undergo transition to the standard technical environment and standard definitions being established through the Defense Information Management (IM) program, and must "migrate"

toward that standard. In that process it must become compliant with the Reference Model and the Standards Profile. A system in this category may require detailed analysis that involve the total redesign, reprogramming, testing, and implementation because of a new environment and how the "users" have changed their work methods and processes. The detailed analysis may identify the difference between "as is" and the "to be" system.

Mission—(DoD) **1.** The task, together with the purpose, that clearly indicates the action to be taken and the reason therefore. **2.** In common usage, especially when applied to lower military units, a duty assigned to an individual or unit; a task. **3.** The dispatching of one or more aircraft to accomplish one particular task (JP 1-02). **4.** A general statement of the purpose and nature of the organization.

Model Library—Directory of Air Force data models.

Object—A passive receiver of information. Access to an object implies access to the information the object contains. Examples of objects are: records, blocks, pages, segments, files, directories, directory trees, and programs, as well as bits, bytes, words, fields, processors, video displays, keyboards, clocks, printers, and network nodes. A person, place, thing, concept, event, or activity about which an organization keeps information.

Organizational Data Administrator—An individual or organizational unit generally responsible for the data design, modeling, analysis, and management of data and systems development efforts.

Qualitative Data—A data value that is a non-numeric description of a person, place, thing, event, activity, or concept.

Quantitative Data—Numerical expressions that use Arabic numbers upon which mathematical operations can be performed.

Reference Model—A generic set of concepts, entities, interfaces, and diagrams that provides a basis for the specification of standards.

Specific Domain—The acceptable values allowed in a prescribed set of data representations.

Standards Profile—A detailed list of standards and methodology to achieve interoperability, interconnectivity, portability, and reduced life cycle costs across a broad spectrum of systems/subsystems.

System Developer—A central design activity (CDA), software development activity (SDA), or software support activity (SSA) which is responsible for the development and/or maintenance of automated information systems (AIS).

Technical Reference Code—Codes that identify the policy and standards considerations for the design of information systems and services.

User—**1.** A person or organizational unit responsible for applying an automated or manual procedure to support the execution of a process. **2.** Any person, organization, or functional unit that uses the services of an information processing system.

Attachment 2

AIR FORCE DATA DICTIONARY

A2.1. Air Force Data Dictionary (AFDD). This attachment explains how to prepare and submit AF Form 247, **Standard Data Element and Related Features Request**, to add, revise, or delete legacy data elements and to identify users of the data elements for inclusion in the AFDD only. Organizations needing to use an existing data element, data chain, or data use identifier, must register to use it by submitting a letter identifying the data element and the legacy system using the data element by the system's data system designator (DSD).

A2.2. Access to the Air Force Data Dictionary can be obtained as follows:

A2.2.1. Submit a letter to HQ AFCA/XPDP, 203 W. Losey Street, Room 1065, Scott AFB IL 62225-5224. Provide requested user's name, grade/rank, phone number (DSN and commercial), fax number, organization and office symbol, full mailing address, and e-mail address, if available. You may fax the letter to HQ AFCA/XPDP at DSN 576-8758 or commercial (618) 256-8758.

A2.2.2. Telephone the Program Support Branch at HQ AFCA, DSN 576-5700 or commercial (618) 256-5700.

A2.2.3. Complete the form contained under "AFCDD Account Requests" in the AFCA Data Management World Wide Web Home Page. The address is:

http://infosphere.safb.af.mil/users/xpd/public_www/

A2.3. Post changes made to the AFDD as necessary under the "AFDD Data Element Changes" in the AFCA Data Management Home Page under "AFDD Data Element Changes."

A2.4. Submit new data elements for new or migrated systems in compliance with DoD Manual 8320.1-M-1.

A2.4.1. Use plain bond paper if you need more space.

A2.4.2. Submit a separate form for each data element, data chain, or DUI.

A2.4.3. Initial pen and ink changes to verify approval by the office of primary responsibility (OPR).

Table A2.1. Completing AF Form 247.

BLOCK	ITEM	ACTION TO TAKE
	Date	Enter the date prepared.
	Through	Enter the MAJCOM POC full address.
	To	Send to HQ AFCA/XPDP.
	From	Enter the office symbol of the originator.

BLOCK	ITEM	ACTION TO TAKE
1	Action Requested	Check Add block if adding new information to an established data element or related feature. Check Revise block if revising portions of an established data element or related feature. Check Delete block if deleting information from an established data element or related feature.
2	Applies To	Check Data Element block if action applies to data element title, definition, size, class, or short title. Check "data code" block if the action applies to a data code, data code definition, or short title. Check Data Chain block if the action applies to a data chain title, definition, size, class, or short title. Check Data Use Identifier block if the action applies to a data use identifier (DUI) title, definition, size, class, or short title.
3	Standard Identification (STID) Number	Enter the STID number for established data elements.
4	Data Element/Data Use Identifier/ Data Chain Title	Enter the unique title. The title must not exceed 116 characters, and contain keywords to convey an accurate and concise description.
5	Size	When you do not change the size of an established data element chain or DUI, enter NC (No Change): (1) For a data element, enter the number of character positions that will accommodate all known data codes, yet allow for expansion. (2) For a data chain, enter the sum of the data element or DUI sizes from the data elements or DUIs that form the chain. (3) For a DUI, enter the number of character positions used (DUI size cannot exceed the data element or chain size). In any case, the maximum allowable size is 29 characters.

BLOCK	ITEM	ACTION TO TAKE
6	Class	When you do not change the class of an existing data element, chain, or DUI, enter NC: (1) Enter A if using only alpha characters. (2) Enter N if using only numeric characters. (3) Enter AN if using alphanumeric characters.
7	Short Title (Optional)	Enter the unique abbreviation (for example, COBOL data-name) for the data element, chain, or DUI. The short title cannot exceed 24 characters.
8	Definition	Enter the definition of the data element, chain, or DUI. The definition must have a meaning significantly different from any other definition. No definition will refer to other Air Force documents for sources of definition. A definition may refer to other than Air Force documents only if those documents are readily available. A data chain definition must not change the meaning of those data elements or DUIs that form the chain, and must contain the data element titles and STIDs; or when no STID exists, the DUI titles that form the STID.
9	Data Code	Enter the alphanumeric (AN) sequence the data codes use. For data codes you must use letters, numbers, or any combination of these, including a blank or space. Use only AN characters (A to Z, 0 to 9). When using a blank, enter the word Blank.
10	Short Title (Optional)	Same as block 7.
11	Data Code Definition	Enter the unique definition of each corresponding data code. The data code definition must begin with a reference consisting of at least one, but not more than three, keywords. In the case of long, text-like definitions, use keywords as an abstract of the definition, to ensure you convey the meaning of the code.

BLOCK	ITEM	ACTION TO TAKE
12	Typed, Name, Grade, etc.	Enter the typed name, grade, title, office symbol, and extension of originator.
13	Signature	Signature of originator.
14	Coordination and Concurrence	Obtain local coordination before sending the request through channels.
15	Send Copy of Approved/ Disapproved AF Form 247 to:	Enter the address of individuals requesting a copy of the AF Form 247 after HQ AFCA/XPDP action.
16	Originator Control Number For Point of Contact Use For HQ AFCA/XPD Use Only	If the originator chooses to use a control number, enter it here. Enter the date received from originator, name, grade, office symbol, and signature of the MAJCOM POC. If the POC chooses to use a control number, enter it here. Air Force Component Data Dictionary Repository Office (HQ AFCA/XPDP) reviews the request, obtains coordination, and enters the control numbers, dates, and so forth.

Attachment 3

QUESTIONS FOR DATA ADMINISTRATION CHECKLIST

A3.1. HQ AFCA/XPD:

A3.1.1. Does the program manager ensure compliance with data management policies, standards, and procedures?

A3.1.2. Are quality control and reviews performed on data models?

A3.1.3. Are means provided to house data models and data elements?

A3.1.4. Is assistance provided to integrate Air Force inputs into the DoD data model?

A3.1.5. Are training requirements identified and funded?

A3.2. Functional Data Coordinators (FDC).

A3.2.1. Do FDCs validate functional area activity and data models submitted by systems developers and database managers?

A3.2.2. Is assistance provided to integrate approved Air Force submissions into the DoD approved data models?

A3.2.3. Are functional area staff that support data administration properly trained?

A3.2.4. Do FDCs resolve differences in documentation with interested users?

A3.3. Major Commands and Field Operating Agencies.

A3.3.1. Is the Data Administration Strategic Plan updated annually to identify short and long-range plans and resource requirements?

A3.3.2. Are systems designs, developments, modifications, modernizations, implementations, and life-cycle management efforts accomplished in compliance with DoD and Air Force directives?

A3.3.3. Are data submissions coordinated with functional activity or software development activity?

A3.3.4. Do solicitations relating to software development contain terms and conditions for enforcement of applicable Air Force data standardization directives?

A3.3.5. Are data administration training and resource requirements identified?

A3.3.6. Are efforts to measure and evaluate the use of standard data supported and maintained?

A3.4. Air Force Central Design Activity (CDA), Software Development Activity (SDA), and Software Support Activity (SSA) Organizations.

A3.4.1. Is the exchange of data tracked between data bases, data systems, and functional lines?

A3.4.2. Are projected activities in data bases and systems compared to actual activities?

A3.4.3. Are deviations from approved logical models documented when developing physical data bases?

A3.4.4. Are data model packages developed new or re-engineered system development efforts?

A3.4.5. Are legacy systems re-engineered to extract application metadata and business rules for use in modernizing systems where feasible?

A3.4.6. Is the MDAd provided with data administration resource requirements and status of software development efforts requiring data element standardization?

A3.4.7. Is subject organization complying with DoD Manual 8320.1-M-1?

A3.5. Air Education and Training Command.

A3.5.1. Has training plans, materiel, and a training program to address data administration been developed?

A3.5.2. Have data administration curricula and formal courses identified by HQ USAF/SCTS been included in training plans?