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STANDARDIZATION OF DATA ELEMENTS AND REPRESENTATIONS

U.S.
DEPARTMENT
OF
COMMERCE

National
Bureau
of
Standards

Abstract

Pursuant to the authority delegated to the Secretary of Commerce by Executive Order 11717 (38 FR 12315, dated May 11, 1973), Subtitle A of Title 15 of the Code of Federal Regulations has been amended to add a new Part 6 which implements the provisions of Section III (f) (2) of the Federal Property and Administrative Services Act of 1949, as amended (79 Stat. 1127). This new Part 6 supersedes and replaces in its entirety the provision of Office of Management and Budget Circular A-86 entitled, "Standardization of data elements and codes in data systems", dated September 30, 1967 which was rescinded by the Director of the Office of Management and Budget on August 29, 1973. Part 6 provides policy and identifies responsibilities of executive branch departments and independent agencies for a government-wide program for the standardization of data elements and representations used in Federal automated data systems. This publication provides a copy of Part 6 and other documents relating to this amendment.

Key words: Computers; Data elements and representations; Data processing systems; Federal Information Processing Standards; Management information systems; Standards; U.S. Government.

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STANDARDIZATION OF DATA ELEMENTS AND REPRESENTATIONS

Federal Information Processing Standards Publications are issued by the National Bureau of Standards pursuant to the Federal Property and Administrative Services Act of 1949 as amended, Public Law 89-306 (79 Stat. 1127), and as implemented by Executive Order 11717 (38 FR 12315, dated May 11, 1973).

Purpose. This Federal Information Processing Standards Publication embodies Title 15, Subtitle A, Part 6 of the Code of Federal Regulations which identifies responsibilities and provides policies and guidelines for the management of activities in the Executive Branch relating to the development, implementation and maintenance of standards for data elements and representations used in automated Federal data systems. Also contained in this FIPS PUB is the notice and explanatory statement that accompanied the regulation when it was published in the Federal Register on December 5, 1973 (38 FR 33482). A memorandum to the heads of departments and agencies, dated November 28, 1973, from the Secretary of Commerce that forwarded an advanced copy of the regulation is also provided.

Questions concerning the program should be addressed to the Associate Director for ADP Standards, Institute for Computer Sciences and Technology, National Bureau of Standards, Washington, D.C. 20234.

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Title 15 - Commerce and Foreign Trade

Subtitle A - Office of the Secretary of Commerce

PART 6 - STANDARDIZATION OF DATA ELEMENTS AND REPRESENTATIONS

Pursuant to the authority delegated to the Secretary of Commerce by Executive Order 11717 (38 FR 12315, dated May 11, 1973), Subtitle A of Title 15 of the Code of Federal Regulations is hereby amended to add a new Part 6 which implements the provisions of Section 111 (f) (2) of the Federal Property and Administrative Services Act of 1949, as amended (79 Stat. 1127). This new Part 6 supersedes and replaces in its entirety the provisions of Office of Management and Budget Circular A-86 entitled, "Standardization of data elements and codes in data systems", dated September 30, 1967 which was rescinded by the Director of the Office of Management and Budget on August 29, 1973 through a letter to the Heads of Executive Departments and Establishments, same subject.

Part 6 provides policy and identifies responsibilities of executive branch departments and independent agencies for a government-wide program for the standardization of data elements and representations used in Federal automated data systems. The principal features of Part 6 are described in the attached explanatory statement.

Part 6 shall become effective upon publication in the Federal Register.

Issued: November 28, 1973

A handwritten signature in dark ink, appearing to read "Robert S. Bell", is written over the printed name of the Secretary of Commerce.

Secretary of Commerce

Subtitle A of Title 15 of the Code of Federal Regulations is amended by adding a new Part 6, reading as follows:

PART 6.

STANDARDIZATION OF DATA ELEMENTS AND REPRESENTATIONS

Sec.

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- 6.2 Background
- 6.3 Objectives
- 6.4 Glossary
- 6.5 Types of Standards
- 6.6 Policies
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- 6.9 Effect On Previously Issued Standards
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AUTHORITY: The provisions of this Part 6 issued under 79 Stat. 1127; Executive Order 11717, dated May 9, 1973 (38 FR 12315, dated May 11, 1973).

6.1. Purpose

The purpose of this Part is to implement the provisions of Section 111 (f) (2) of the Federal Property and Administrative Services Act of 1949, as amended (79 Stat. 1127) and Executive Order 11717 of May 9, 1973 (38 FR 12315, dated May 11, 1973). It supersedes and replaces in its entirety Office of Management and Budget Circular A-86 entitled, "Standardization of data elements and codes in data systems", dated September 30, 1967. Office of Management and Budget Circular No. A-86 was rescinded by the Director of Office of Management and Budget on August 29, 1973.

This Part identifies responsibilities and provides policies and guidelines for the management of activities in the Executive Branch relating to the development, implementation and maintenance of standards for data elements and representations used in automated Federal data systems. Its provisions complement the standards and recommendations that have been or may be issued under the statistical procedures prescribed by Office of Management and Budget Circular A-46.

6.2. Background

Recent advances in computer and communications technologies have made possible the wider use of data and programs that are developed or generated to meet mission requirements of Federal departments, agencies, and activities. While the extended use of these data and programs can contribute to reduced costs in Government operations and improved services, the full advantages of these new technical capabilities cannot be realized until standards are developed and implemented which will provide for the uniform identification, definition and representation of data. These standards for data must also be accompanied by supporting standards for representing graphic characters (alphabets, numbers, and other symbols), communications and device controls. In addition, it is essential to have standards that provide for interchangeable media (e.g., tapes, cassettes and disks) covering both physical and logical specifications.

There is an ever increasing need to interchange data and programs with state, local and other governments, and with industry and the public. This adds further emphasis and dimension to the need for responsive standards that will facilitate interchange.

This Part defines a Federal-wide program for standardizing data elements and representations which are used and interchanged in Government data systems. Other approved standards and guidelines issued by the National Bureau of Standards in the Federal Information Processing Standards series of publications address related ADP subjects and areas.

6.3. Objectives

The principal goal in standardizing data elements and representations is to make maximum utilization of the data resources of the Federal Government and to avoid unnecessary

duplications and incompatibilities in the collection, processing, and dissemination of data.

6.4. Glossary

Appendix A of this Part provides a glossary of terms as used in this Part and in descriptions of data.

6.5. Types of Standards

For the purposes of this Part, the following types of practices and standards are identified for data elements and representations:

(a) **De facto Practices.** Those data elements and representations in current use that have not been subjected to official or formal standardization.

(b) **Unit Standards.** Those data elements and representations that have been approved by an authorized official for use within that unit. (A unit for purposes of this Part is any Federal organization within the executive branch of the Government, which is at a lower organizational level than an executive department or independent agency).

(c) **Agency Standards.** Those data elements and representations that have been approved by an authorized official for use within an executive department or independent agency.

(d) **Federal Program Standards.** Those data elements and representations that have been approved by the Secretary of Commerce for use in a particular program or mission where more than one executive branch department or independent agency is involved with their use. For example, those standards that could be approved and prescribed for use are those which include, but are not limited to, Federal-wide personnel, communications and transportation data systems.

(e) **Federal General Standards.** Those representations that have been approved by the Secretary of Commerce for Federal-wide use by executive departments and independent agencies in all Federal-wide programs and for use in all Federal data systems. For example, this includes such representations as calendar dates, state abbreviations and codes, and codes for standard metropolitan statistical areas.

(f) **American National Standards.** Those data elements and representations that have been approved for voluntary national use by the American National Standards Institute.

(g) **International Standards.** Those data elements and representations that have been approved by the International Organization for Standardization (ISO), for voluntary use by member nations and international organizations.

6.6. Policies

The following policies apply to the development, implementation, and maintenance of data element and representation standards:

(a) Data Elements and representations that are prescribed for interchange among more than one executive department or agency or with the private sector including industry, state, local, or other Governments, or with the public at large will be considered for standardization as either Federal general or Federal program standards.

(b) Federal general standards are the highest level standards followed by Federal program standards, agency standards and unit standards in that order. This order establishes a precedence for standards use. For example, a Federal general standard will be used and will supplant a Federal program, agency or unit standard. Likewise a Federal program standard takes precedence over an agency or unit standard.

(c) Approved standards will be implemented by all Federal agencies in all circumstances where technical, operating and economic benefits can be expected to result. These standards will be considered on the basis of their long-term benefits and advantages to the Government at large. Local inconveniences or short-term conversion costs need to be recognized, but such factors will not be considered overriding deterrents to the development, implementation, and maintenance of standards that are capable of reducing overall government operating costs or providing improved Government services.

(d) Existing standards will be considered for adoption as Federal general or program standards when these are determined to meet Federal requirements or can readily be adapted to do so.

(e) Approved standards and revisions thereto will be implemented on a time phased basis in order to minimize disruption and conversion costs. Conversion costs will be identified and considered in the submissions of annual budget estimates.

(f) Although data element and representation standards are developed and implemented to provide for the effective interchange and processing of data, Federal departments and agencies must comply with applicable statutes, regulations and executive orders to assure that sensitive or classified data are adequately protected and that only authorized disclosure or release of such data is allowed.

(g) In the formulation of standards for data elements and representations which will have implementation impact on state and local governments, industry or other segments of the private sector, arrangements will be made to establish necessary liaisons and coordinations with these interests to consider their needs and potential problems in responding to Federally imposed reporting requirements.

6.7. Responsibilities

Responsibilities for the standardization of data elements and representations are outlined below:

(a) **Department of Commerce.** The Department of Commerce will provide leadership of an executive branch program for standardizing data elements and representations. Within the Department the following specific responsibilities are assigned:

(1) **Secretary of Commerce.** The Secretary of Commerce, on behalf of the President, approves all Federal Information Processing Standards. For data elements and representations, this approval will include both Federal general and Federal program standards.

(2) **National Bureau of Standards.** The National Bureau of Standards will:

(i) Arrange with appropriate executive branch departments and independent agencies to assume leadership and undertake responsibilities for the development and maintenance of specific Federal program and Federal general standards.

(ii) Arrange for the publication and promulgation of approved Federal general and

Federal program standards. These will be promulgated by the National Bureau of Standards as Federal Information Processing Standards. The responsibility under this subparagraph includes the authority to modify or supersede these standards whether issued under this regulation or prior to the effective date of this regulation.

(iii) Maintain and promulgate selected registers of data element and representation standards and practices that are under development or are in current use.

(iv) Provide procedures, guidelines and criteria to assist Federal departments and agencies in the development, implementation, and maintenance of standards.

(v) Provide technical assistance, as requested and within the limits of available resources to Federal departments and agencies on matters concerning the utilization of automatic data processing and standardization.

(vi) Arrange for the assessment of the need, impact, benefits and problems related to the implementation of proposed and approved standards.

(vii) Coordinate requests for exceptions to and deferments on the implementation of approved Federal standards.

(viii) Arrange for and coordinate appropriate Federal representation and participation on voluntary industry committees.

(ix) Arrange for appropriate liaison with state, local and other governments on matters of mutual interest or concern relating to Federal development, implementation, and maintenance of standards.

(b) **Departments and Independent Agencies.** Each of these organizations will:

(1) Implement approved Federal standards that are announced under the provisions of this Part and assist the National Bureau of Standards in the assessment of the need, impact, benefits and problems related to the implementation of approved standards.

(2) Assume leadership and support of responsibilities for the development of Federal general and Federal program standards as may be mutually arranged by the National Bureau of Standards.

(3) Establish within their organizations, mechanisms for the development, implementa-

tion and maintenance of agency and unit standards where such efforts will contribute to reduced costs or improved services.

(4) Establish appropriate procedures and mechanisms within their organizations for the dissemination and implementation of approved Federal standards.

(5) Review and provide information and comments on proposed standards that are being considered for Federal adoption. This includes the analyses necessary to assess implementation impact and potential savings or improved services.

(6) Prepare and submit selected registers of data elements and representations within the data systems of the department or agency as may be arranged by the National Bureau of Standards. These registers will be used as a source reference to avoid duplication in the design of new data elements and representations and to assist in determining possible subjects for future standardization.

(7) Provide participation on committees and task groups that may be formed to develop and maintain Federal general or Federal program standards.

(8) Provide participation, as requested by the National Bureau of Standards, on committees and task groups that may be formed

to develop and maintain voluntary industry standards for use nationally and internationally.

(9) Designate an office or official to act as a single point of contact on matters related to this Part.

6.8. Exceptions, Deferments, and Revisions of Federal Standards

Requests for exceptions, deferments and revisions of standards will be forwarded to the National Bureau of Standards for consideration and/coordination. These requests will provide detailed justification for the exception, deferment or revision deemed necessary. These should be submitted at least forty-five days in advance of any exception or deferral action.

6.9. Effect On Previously Issued Standards

All standards that were issued under the provisions of Office of Management and Budget Circular No. A-86 prior to the effective date of this regulation remain in effect unless modified or superseded pursuant to the provisions of this regulation.

Glossary of Terms

This Glossary includes definitions of terms used in this Part. Additional terms applicable to data standardization are provided for purposes of clarification. The terms and definitions are either from established vocabularies or have been defined for purposes of this Part.

Attribute Data Element—A data element that is used to qualify or quantify another data element (e.g., "Date of Birth" and "Mailing Address" would be attribute data elements in a personnel file where the primary element(s) is/are used to identify the person).

Character Type—An indication of the type of characters or bytes to represent a value (i.e., alphabetic, numeric, pure alphabetic, pure numeric, binary, packed numeric, etc.).

Alphabetic—A representation which is expressed using only letters and punctuation symbols.

Alphanumeric—A representation which is expressed using letters, numbers, and punctuation symbols.

Binary—A representation of numbers which is expressed using only the numbers 0 and 1; e.g., 5 is expressed as 101.

Numeric—A representation which is expressed using only numbers and selected mathematical punctuation symbols.

Packed Numeric—A representation of numeric values that compresses each character representation in such a way that the original value can be recovered; e.g., in an eight bit byte, two numeric characters can be represented by two four bit units.

Pure Alphabetic—A representation which is expressed using only letters.

Pure Alphanumeric—A representation which is expressed using only letters and numbers.

Pure Numeric—A representation which is expressed using only numbers.

Composite Data Element (Data Chain)—A data element that has an ordered string of related data items that can be treated as a group or singly; e.g., a data element named "Date of Birth" could have the data items, "Year", "Month", and "Day of Month".

Context Dependent Definition—A statement of meaning that relies upon a situation, background, or environment for proper interpretation.

Date Code—A coded representation used to identify a data item. Usually codes are designed according to established rules and criteria, and only by chance form a phonetic word or phrase.

Data Element—A basic unit of identifiable and definable information. A data element occupies the space provided by fields in a record or blocks on a form. It has an identifying name and value or values for expressing a specific fact. For example, a data element named "Color of Eyes" could have recorded values of "Blue (a name)", "BL (an abbreviation)" or "06 (a code)." Similarly, a data element named "Age of Employee" could have a recorded value of "28 (a numeric value)."

Data Element Abbreviation—An abbreviated form of the data element name.

Data Element Definition—A statement of the meaning of a data element.

Data Element Name—A name used to identify a data element.

Data Element Source—An identification of the source or provider of the particular data element; i.e., individual, organization, sensor, computation, etc.

Data Element Tag (Data Element Code)—A symbolic tag used to identify a data element.

Data Item—The expression of a particular fact of a data element e.g., “Blue” may be a data item of the data element named “Color of eyes”.

Data Item Abbreviation—An abbreviated form of the data item name.

Data Item Definition—A statement of the meaning of a data item.

Data Item Name—A name used to identify a data item.

Dependent Code—A code that has segments which are dependent upon other segments in order to provide unique identification of the coded item. Usually, codes having classification significance are dependent codes.

Field—In a record, a specific area used for representing a particular category of data; e.g., a group of card columns used to express a wage rate.

Field Length—A measure of the length (size) of a field, usually expressed in units of characters, words, or bytes.

Field Length Type—An indication of whether the field of a record is fixed or variable in length.

Fixed Length Field—A field whose length does not vary.

Variable Length Field—A field whose length varies. Usually, the boundaries of this type of field are identified by field separators.

Field Separator—A character or byte used to identify the boundary between fields.

Filler Character—A specific character or bit combination used to fill the remainder of a field after justification.

Formatted Information—An arrangement of information into discrete units and structures in a manner to facilitate its access and processing. Contrasted with narrative information that is arranged according to rules of grammar.

General Definition—A statement of meaning that can be interpreted without regard to a specific situation, background, or environment.

Information Interchange—The transfer of data representing information between or among two or more points (devices, locations, organizations, or persons) of the same or different (dissimilar) information system or systems.

Justification—To adjust the value representation in a field to either the right or left boundary (margin).

Left Justify—Adjustment of a value representation to the left boundary (high order) of a field.

Right Justify—Adjustment of a value representation to the right boundary (low order) of a field.

Non-Significant Code—A code that provides for the identification of a particular fact but does not yield any further information; e.g. random numbers used as codes. Contrasted with significant code.

Numeric Value—The expression of a data item which denotes a measurement, count, or mathematical concept, usually represented by numerals and a limited number of special characters (i.e., plus (+), minus (-), decimal point (.), comma (,), asterisk (*), and slant (/)).

Padding—A technique used to fill a field, record, or block with dummy data (usually zeros or spaces).

Primary Data Element—A data element or elements that is/are the subject of a record. Usually the other elements, called attribute data elements, qualify or quantify the primary data element (e.g., in a personnel field, the element(s) that is/are used to identify the individual are primary; other elements such as “Date of Birth” and “Mailing Address” are attribute data elements).

Radix Point—A character, usually a period, that separates the integer part of a number from the fractional part. In decimal (base 10) notation the radix point is called the decimal point.

Record—A collection of related elements of data treated as a unit.

Record Index—An ordered reference list of the contents of a record together with keys or reference notations for identifying and locating the contents.

Record Layout—A description of the arrangement and structure of information in a record, including the sequence and size of each identified component.

Record Length—A measure of the length (size) of a record, usually expressed in units of characters, words, or bytes.

Record Length Type—An indication of whether the records of a file are fixed or variable in length.

Fixed Length Record—Pertaining to a file in which the records are uniform in length.

Variable Length Record—Pertaining to a file in which the records are not uniform in length.

Representation—A number, letter or symbol used to express a particular concept or meaning. It may be in the form of a name, abbreviation, code, or numeric value.

Rounding (Roundoff)—To delete the least significant digit or digits of a numeral, and to adjust the part retained in accordance with some rule.

Self-Checking Code—A code that is appended to another code to provide for validity check-

ing. A self-checking code is derived mathematically from the characteristics of the base code.

Significant Code—A code which in addition to identifying a particular fact also yields further information; e.g., catalog numbers in addition to identifying a particular item also often indicate the classification of the item. Contrasted with non-significant code.

Truncate—To delete characters from a character string, usually from either end of the string.

Type of Code Significance—An indication of the type of significance that a particular code yields.

Collating Significance—A code designed in such a way that it facilitates ordering of the coded item.

Mnemonic Significance—A code designed in such a way as to facilitate the human recall of the name of the coded items.

Classification Significance—A code designed in such a way as to facilitate the classifying of the coded items into classes and subclasses.

Variable Name Data Element—A data element that identifies a set (array) of similar values (data items) By varying certain identifiers in the name the entire set (array) of values can be identified. For example, a set of values that give population by State and Year could be identified by the data element "Population of (State) in (Year)" where State and Year are variable names. The variable names are used to identify particular values in an array (e.g., "Population of (New Jersey) in 1970" was 7,168,164.) In this example "New Jersey" and "1970" are variable names used to identify a specific value "7,168,164" in an array.

Explanatory Statement

Public Law 89-306 (79 Stat. 1127) of October 30, 1965, amended Title I of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377) and made provision for the economic and efficient purchase, lease, maintenance, operation and utilization of automatic data processing equipment by Federal departments and agencies.

Pursuant to this statute, the Secretary of Commerce is authorized (1) to provide agencies and the Administrator of General Services with scientific and technological advisory services relating to automatic data processing and related systems, and (2) to make appropriate recommendations to the President relating to the establishment of uniform Federal automatic data processing standards. The Secretary of Commerce is also authorized to undertake necessary research in the sciences and technologies of automatic data processing computer and related systems. The authority conferred upon the Secretary of Commerce is exercised subject to the direction of the President and to fiscal and policy control exercised by the Office of Management and Budget.

By letter to the Secretary of Commerce from the Acting Director of the Office of Management and Budget, dated December 15, 1966, policy guidance was provided concerning the implementation of Public Law 89-306 (79 Stat. 1127). This policy guidance provided guidelines on the development of voluntary commercial standards and recommendations for uniform Federal standards. The standardization of data elements and codes was excluded in this policy guidance letter.

The Office of Management and Budget on September 30, 1967, issued Circular A-86 entitled "Standardization of data elements and codes in data systems." This Circular (A-86) identified responsibilities and provided policies and guidelines for the management of activities in the executive branch regarding the development and application of standard data elements and their related codes in data systems. The Office of Management and Budget retained the function of providing leadership of the standards program within the executive branch on this subject.

On April 30, 1971, in a memorandum to the Director, Office of Management and Budget, the President authorized and empowered the Director to act finally on behalf of the President, upon recommendations concerning the establishment of automatic data processing standards for use by Federal agencies. Executive Order 11717 of May 9, 1973, transferred to the Secretary of Commerce all functions being performed on that date by the Office of Management and Budget relating to the establishment of government-wide automatic data processing standards, including the function of approving standards on behalf of the President. In this Executive Order (11717) the Director of the Office of Management and Budget retained oversight responsibilities for the transferred functions.

On August 29, 1973, in a letter to the Heads of Executive Departments and Agencies, the Director of the Office of Management and Budget rescinded OMB Circular No. A-86 and stated that revised policies and procedures in regard to the standardization of data elements and codes would be issued by the Department of Commerce. This amendment to Title 15 of the Code of Federal Regulations to add Part 6 is the embodiment of this direction provided by the Director of the Office of Management and Budget.

The new Part 6, in addition to incorporating the general provisions of the rescinded Office of Management and Budget Circular No. A-86, provides clarifications and other changes deemed essential and appropriate for the effective management and operation of a standards program for data elements and codes. The principal changes and additions to Office of Management and Budget Circular No. A-86 provided in the new Part 6 are identified and described below:

Title—Standardization of Data Elements and Representations

The designation of the Part "Standardization of Data Elements and Representations" is a change to the title of Office of Management and Budget Circular No. A-86. The use of the term

"representations" is a broader term than "codes" in that it includes codes, abbreviations, names and numeric values. It also avoids confusion with other uses of the term "codes" as in character codes, self-checking codes, redundancy codes and programming codes.

6.1 Purpose

This section indicates the transfer of functions prescribed in Executive Order 11717 and defines the relationship of the provisions of the Part to Office of Management and Budget Circular No. A-46.

6.4 Glossary

This section provides clarification of terms and adds new terms needed to describe data standards. The terms used are those defined in Federal Information Processing Standard 20, "Guidelines for Describing Information Interchange Formats" which has been additionally approved by the American National Standards Institute as a voluntary national standard (X10.1-1973). These terms are provided in an appendix as noted in § 6.4.

6.5 Types of Standards

This section provides for two additional types of standards (i.e., De facto practices and Unit standards).

6.6 Policies

This section provides for a relative ranking of the types of standards; the need to assure that applicable statutes, regulations and Executive Orders are complied with to protect sensitive and classified data files; and the requirement to cooperate with affected activities

outside the Federal Government in the development and implementation of data standards.

6.7 Responsibilities

This section lists the responsibilities of the Department of Commerce and Executive Branch departments and agencies. In addition to the responsibilities for maintaining registers and providing advisory services as in Office of Management and Budget Circular No. A-86, the National Bureau of Standards is assigned the major operational functions for the standardization of data elements and representations. The Secretary of Commerce approves Federal general and Federal program standards.

The responsibilities of Federal departments and independent agencies are for the most part a continuation of responsibilities reflected in the rescinded Office of Management and Budget Circular No. A-86. The need to assess the impact, benefits and problems related to the implementation of approved standards is a new responsibility.

6.8 Exceptions, Deferments and Revisions of Federal Standards

This section is a change from Office of Management and Budget Circular No. A-86 in that all such requests are coordinated in advance with the National Bureau of Standards rather than with various Government agencies.

6.9 Effect On Previously Issued Standards

This section continues the standards previously approved under the provisions of Office of Management and Budget Circular No. A-86.



THE SECRETARY OF COMMERCE
Washington, D.C. 20230

November 28, 1973

MEMORANDUM FOR Heads of Departments and Agencies

SUBJECT: Standardization of Data Elements and Representations

I am forwarding to you the text of a new regulation being issued by the Department of Commerce which will appear in the Federal Register. This regulation provides policy and identifies executive branch responsibilities for a government-wide program for the standardization of data elements and representations used in Federal automated data systems. This regulation supersedes and replaces Office of Management and Budget Circular No. A-86 which was rescinded on August 29, 1973, following the transfer of OMB functions for ADP standards to the Department of Commerce under the provisions of Executive Order 11717 of May 9, 1973.

The principal objective of standardizing data elements and representations is to make maximum utilization of the data resources of the Federal Government and to avoid unnecessary duplications and incompatibilities in the collection, processing and dissemination of data. The program is intended to benefit each department and independent agency through improved utilization of its automatic data processing systems and to benefit the Federal Government and public at large through the effective interchange and sharing of data by government activities and by state and local governments, industry and the public.

In carrying out the objectives of this program, it is necessary that appropriate implementing directives be issued by each department and agency. Accordingly, it is requested that you submit to the Director of the Institute for Computer Sciences and Technology, National Bureau of Standards within 120 days two copies of the internal directives or issuances that will implement this new regulation within your department or agency.

In providing the leadership for this standardization program, I must rely upon the strength, cooperation and support of each department and independent agency. Any suggestions you may have for improving the attached regulation or the standardization program including proposed subjects for future standardization will be welcome.

A handwritten signature in dark ink, appearing to read "Robert S. McNamara", is written over the typed name.

Secretary of Commerce

Enclosure

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