Reference

FIPS PUB 16-1
Supersedes FIPS PUB 16
1971 October 1

FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION

1977 SEPTEMBER 1

U.S. DEPARTMENT OF COMMERCE / National Bureau of Standards

BIT SEQUENCING OF THE CODE FOR INFORMATION INTERCHANGE IN SERIAL-BY-BIT DATA TRANSMISSION

CATEGORY: HARDWARE STANDARD
SUBCATEGORY: TRANSMISSION
Foreword

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Comments covering Federal Information Processing Standards and Publications are welcomed, and should be addressed to the Associate Director for ADP Standards, Institute for Computer Sciences and Technology, National Bureau of Standards, Washington, D.C. 20234. Such comments will be either considered by NBS or forwarded to the responsible activity as appropriate.

Ernest Ambler, Acting Director

Abstract

This standard specifies the method of transmitting the Standard Code for Information Interchange (FIPS 1) in the serial-by-bit, serial-by-character data transmission. This revision supersedes FIPS PUB 16 and reflects changes necessary to accommodate FIPS 1 when operating in either 7 or 8 bit coded environments. This standard is identified also as Federal Standard Number 1010.

Key words: American Standard Code for Information Interchange; ASCII; communications; data communications equipment; data processing terminal equipment; data transmission; Federal Information Processing Standards; serial-by-bit; serial-by-character; telecommunications; teleprocessing.

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For sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161
Federal Information Processing Standards Publication 16-1

1977 September 1

ANNOUNCING THE STANDARD FOR

BIT SEQUENCING OF THE CODE FOR INFORMATION INTERCHANGE IN SERIAL-BY-BIT DATA TRANSMISSION


Name of Standard. Bit Sequencing of the Code for Information Interchange in Serial-By-Bit Data Transmission.


Explanation. This standard specifies the method of transmitting the Standard Code for Information Interchange (FIPS 1) in the serial-by-bit, serial-by-character data transmission. This revision supersedes FIPS PUB 16 and reflects changes necessary to accommodate FIPS 1 when operating in either 7 or 8 bit coded environments.

Approving Authority. Secretary of Commerce.


Cross Index.


b. FIPS PUB 1, Code for Information-Interchange.

c. FIPS PUB 17-1, Character Structure and Character Parity Sense for Serial-By-Bit Data Communication in the Code for Information Interchange.

d. FIPS PUB 18-1, Character Structure and Character Parity Sense for Parallel-By-Bit Data Communication in the Code for Information Interchange.

Applicability. Applicable to the transmission of the Standard Code in a serial bit stream form at the interface between data terminal equipment and data communications equipment. Data terminal equipments transmitting an approved Federal subset of FIPS 1 are not precluded.

Implementation Schedule. All applicable equipment ordered on or after the date of this FIPS PUB must be in conformance with this standard unless a waiver has been obtained in accordance with the procedure described below. Exceptions to this standard are made in the following cases:

a. For equipment installed or on order prior to the date of this FIPS PUB.

b. Where procurement actions are into the solicitation phase (i.e., Request for Proposals or Invitation for Bids have been issued) on the date of this FIPS PUB.

Waiver Procedure. Proposed waivers relating to the procurement of equipment using non-standard data rates will be coordinated in advance with the General Services Administration according to the procedures described in paragraph 3, CHANGES, of the Federal Standard affixed to this FIPS PUB. It is suggested that a request for waiver include the following information:

a. A brief, narrative description of the existing or planned teleprocessing or data communication system to which the waiver applies, including:

   (1) Statement of purpose and principal function of the system.

   (2) Potential or planned use of the facilities employed with this system to interchange information with similar systems operated within the agency or by other agencies.

b. A brief description of the system configuration, including a listing of accountable features, such as numbers and costs of data processors, terminals, modems, and communication lines, identifying those items to which the waiver applies.

Special Information. Federal Information Processing Standards are reviewed and revised periodically based upon changing requirements and the need to clarify or correct problems identified in their use. When a specific FIPS is cited or cross referenced in this publication, it should be noted that the most current version of it will be used. A list of current FIPS may be obtained from the NBS Office of ADP Standards Management, Washington, D.C. 20234.

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FEDERAL STANDARD

TELECOMMUNICATIONS: BIT SEQUENCING OF THE AMERICAN NATIONAL STANDARD CODE FOR INFORMATION INTERCHANGE IN SERIAL-BY-BIT DATA TRANSMISSION

This standard is issued by the General Services Administration pursuant to the Federal Property and Administrative Services Act of 1949, as amended, and Public Law 89-306. This standard has also been published as an integral part of Federal Information Processing Standards (FIPS) Publication 16-1. The application of this standard to data processing systems and telecommunication systems is mandatory on all Federal agencies.


1.1 Purpose. Federal telecommunication standards are to facilitate interoperability between telecommunication facilities and systems and compatibility of these systems at the computer-communications interface with data processing equipment.

1.2 Application. This standard is to be used by Federal agencies with other Federal Standards or design specifications describing functional, mechanical and procedural characteristics as necessary to achieve interoperability.

2. Reference Document. This standard adopts the following American National Standards Institute (ANSI) document:


Copies may be obtained from ANSI, Inc., 1430 Broadway, New York, New York 10018. Federal agencies may obtain copies with FIPS Publication 16-1 from the National Technical Information Service, Document Processing Branch, 5285 Port Royal Road, Springfield, VA 22161.

3. Changes. When a Federal agency considers that this standard does not provide for its essential needs, a statement citing inadequacies shall be sent in duplicate to the General Services Administration, Federal Supply Service, FMH, Washington, DC 20406, in accordance with provisions of Federal Property Management Regulations 41 CFR 101-29.3. The General Services Administration will determine the appropriate action to be taken and will notify the agency.

PREPARING ACTIVITY:

National Communications System
Office of Technology and Standards
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