

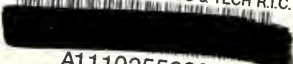
REFERENCE

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FIPS PUB 121



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# FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION

1986 MAY 6

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



## VIDEOTEX/TELETEXT PRESENTATION LEVEL PROTOCOL SYNTAX (NORTH AMERICAN PLPS)

CATEGORY: HARDWARE AND SOFTWARE STANDARD  
SUBCATEGORY: INTERCHANGE CODES

FIPS PUB 121

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## Foreword

The Federal Information Processing Standards Publication Series of the National Bureau of Standards is the official publication relating to standards, guidelines, and documents adopted and promulgated under the provisions of Public Law 89-306 (Brooks Act) and under Part 6 of Title 15, Code of Federal Regulations. These legislative and executive mandates have given the Secretary of Commerce important responsibilities for improving the utilization and management of computers and automatic data processing in the Federal Government. To carry out the Secretary's responsibilities, the NBS, through its Institute for Computer Sciences and Technology, provides leadership, technical guidance, and coordination of Government efforts in the development of standards, guidelines and documents in these areas.

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James H. Burrows, *Director*  
Institute for Computer Sciences and Technology

## Abstract

This standard describes the formats, rules, and procedures for the encoding of alphanumeric text and pictorial information for videotex and teletext applications. This standard is based upon the architecture defined in the multi-layered reference model of open systems interconnection (OSI), under development by the ISO, and defines a specific data syntax for use by OSI presentation layer protocols and some specific semantics for use at the application layer. This standard is based upon ASCII and its extensions (as specified in FIPS 1-2), and adopts in whole American National Standard X3.110-1983/Canadian Standard T500-1983, Videotex/Teletext Presentation Level Protocol Syntax (North American PLPS). It is intended to be used in Federal information processing systems, communications systems, and associated videotex/teletext equipment.

Key words: character coded information; communication; computer; data syntax; Federal Information Processing Standard; NAPLPS; North American PLPS; open systems interconnection; pictorial; presentation layer; teletext; videotex.



**Federal Information  
Processing Standards Publication 121**

1986 May 6

**Announcing the Standard for**

**VIDEOTEX/TELETEXT PRESENTATION LEVEL PROTOCOL SYNTAX  
(NORTH AMERICAN PLPS)**



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**Name of Standard.** Videotex/Teletext Presentation Level Protocol Syntax (North American PLPS) (FIPS 121).

**Category of Standard.** Hardware and Software Standard, Interchange Codes.

**Explanation.** This standard describes the formats, rules, and procedures for the encoding of alphanumeric text and pictorial information for videotex and teletext applications. This standard is based upon the architecture defined in the multi-layered reference model of open systems interconnection (OSI), under development by the International Organization for Standardization (ISO), but this standard does not define the OSI Standard presentation layer protocol itself. This standard defines a specific data syntax for use by OSI presentation layer protocols and some specific semantics for use at the application layer in videotex and teletext applications. This standard is based upon the American National Standard Code for Information Interchange (ASCII) and its extensions (as specified in FIPS 1-2). It is intended to be used in Federal information processing systems, communications systems, and associated videotex and teletext equipment.

**Approving Authority.** Secretary of Commerce.

**Maintenance Agency.** Department of Commerce, National Bureau of Standards (Institute for Computer Sciences and Technology).

**Cross Index.** American National Standard X3.110-1983/Canadian Standard T500-1983, *Videotex/Teletext Presentation Level Protocol Syntax (North American PLPS)*.

**Related Documents.**

- a. FIPS PUB 1-2, *Code for Information Interchange, Its Representations, Subsets and Extensions* (adopts three ANSI standards: X3.4-1977, X3.32-1973, X3.41-1974 and also has further specifications).
- b. FIPS PUB 16-1, *Bit Sequencing of the Code for Information Interchange in Serial-by-Bit Data Transmission* (adopts ANSI X3.15-1976).
- c. FIPS PUB 17-1, *Character Structure and Character Parity Sense for Serial-by-Bit Data Communication in the Code for Information Interchange* (adopts ANSI X3.16-1976).
- d. FIPS PUB 18-1, *Character Structure and Character Parity Sense for Parallel-by-Bit Data Communication in the Code for Information Interchange* (adopts ANSI X3.25-1976).
- e. FIPS PUB 86, *Additional Controls for Use with American National Standard Code for Information Interchange* (adopts ANSI X3.64-1979).
- f. American National Standard X3.4-1977, *Code for Information Interchange (ASCII)*.
- g. American National Standard X3.41-1974, *Code Extension Techniques for Use with the 7-Bit Coded Character Set of American National Standard Code for Information Interchange*.
- h. American National Standard X3.64-1979, *Additional Controls for Use with American National Standard Code for Information Interchange*.
- i. International Standard ISO 646-1983, *Information Processing—ISO 7-Bit Coded Character Set for Information Interchange*.

- j. International Standard ISO 2022-1982, *Information Processing—ISO 7-Bit and 8-Bit Coded Character Sets—Code Extension Techniques*.
- k. International Standard ISO 2375-1974, *Data Processing—Procedure for Registration of Escape Sequences*.
- l. International Standard ISO 4873-1979, *Information Processing—8-Bit Coded Character Set for Information Interchange*.
- m. International Standard ISO 6429-1983, *Information Processing—ISO 7-Bit and 8-Bit Coded Character Sets—Additional Control Functions for Character Imaging Devices*.
- n. International Standard ISO 6937/1-1982, *Information Processing—Coded Character Sets for Text Communication, Part 1. General Introduction*.
- o. International Standard ISO 6937/2-1982, *Information Processing—Coded Character Sets for Text Communication, Part 2: Latin Alphabetic and Non-Alphabetic Graphic Characters*.
- p. International Standard ISO 7498-1983, *Data Processing—Open Systems Interconnection Basic Reference Model*.
- q. CCITT Recommendation V.3, 1972, *International Alphabet No. 5*.
- r. CCITT Recommendation F.300-1980, *Videotex Service*.
- s. CCITT Recommendation S.100-1980, *International Information Exchange for Interactive Videotex*.

**Objective.** The objective of this standard is to facilitate the interchange of videotex and teletext information between different transaction services and between equipment developed by different manufacturers of videotex and teletext devices.

**Applicability.** This standard is applicable to Federal acquisition and use of data processing and communication systems, data systems, system components, and related equipment that may be required to accept, process, store, transmit or interchange character coded information representing alphanumeric text or pictorial information to be displayed or printed on videotex or teletext terminals. This standard is applicable to the representation of alphanumeric text and pictorial information at the interface between host computers and videotex terminals or between teletext data and teletext decoders.

**Implementation.** This standard becomes effective November 3, 1986. All equipment and data systems to which this standard is applicable that are brought into the Federal Government inventory on or after the effective date of this FIPS PUB must be in conformance with this standard unless a waiver has been obtained in accordance with the waiver provisions given below.

**Specifications.** This standard adopts in whole American National Standard X3.110-1983/Canadian Standard T500-1983, Videotex/Teletext Presentation Level Protocol Syntax (North American PLPS).

**Waivers.** Under certain exceptional circumstances, the head of the agency is authorized to waive the application of the provisions of this FIPS PUB. Exceptional circumstances which would warrant a waiver are:

- a. Significant, continuing cost or efficiency disadvantages will be encountered by the use of this standard and,
- b. The interchange of information between the system for which the waiver is sought and other systems is not anticipated.

Agency heads may act only upon written waiver requests containing the information detailed above. Agency heads may approve requests for waivers only by a written decision which explains the basis upon which the agency head made the required finding(s). A copy of each such decision, with procurement sensitive or classified portions clearly identified, shall be sent to the Director, Institute for Computer Sciences and Technology, National Bureau of Standards, Gaithersburg, MD 20899.

When the determination on a waiver request applies to the procurement of equipment and/or services, a notice of the waiver determination must be published in the *Commerce Business Daily* as part of the notice of solicitation for offers on an acquisition or, if the waiver determination is made after that notice is published, by amendment to such notice.

A copy of the waiver request, any supporting documents, the document approving the waiver request and any supporting and accompanying document(s), with such deletions as the agency is authorized and decides

to make under 5 U.S.C. Sec. 552(b), shall be part of the procurement documentation and retained by the agency.

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