

U.S. DEPARTMENT OF COMMERCE  
National Institute of Standards and Technology



**FIPS PUB 150**

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**FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION**  
**(Former Federal Standard 1065)**

**FACSIMILE CODING SCHEMES AND CODING  
CONTROL FUNCTIONS FOR GROUP 4  
FACSIMILE APPARATUS**

**CATEGORY: TELECOMMUNICATIONS STANDARD**

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## **FACSIMILE CODING SCHEMES AND CODING CONTROL FUNCTIONS FOR GROUP 4 FACSIMILE APPARATUS**

**CATEGORY: TELECOMMUNICATIONS STANDARD**

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National Computer Systems Laboratory  
National Institute of Standards and Technology  
(formerly National Bureau of Standards)  
Gaithersburg, MD 20899

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Issued November 4, 1988



**U.S. Department of Commerce**  
Robert A. Mosbacher, Secretary  
Ernest Ambler, Acting Under Secretary  
for Technology  
National Institute of Standards  
and Technology  
Raymond G. Kammer, Acting Director



This Standard was developed under a Memorandum of Understanding between NIST and NCS.

## Foreword

The Federal Information Processing Standards Publication Series of the National Institute of Standards and Technology (NIST) is the official publication relating to standards and guidelines adopted and promulgated under the provisions of Section 111(d) of the Federal Property and Administrative Services Act of 1949 as amended by the Computer Security Act of 1987, Public Law 100-235. These mandates have given the Secretary of Commerce and NIST important responsibilities for improving the utilization and management of computer and related telecommunications systems in the Federal Government. The NIST through its National Computer Systems Laboratory provides leadership, technical guidance, and coordination of Government efforts in the development of standards and guidelines in these areas.

Comments concerning Federal Information Processing Standards Publications are welcomed and should be addressed to the Director, National Computer Systems Laboratory, National Institute of Standards and Technology, Gaithersburg, MD 20899.

James H. Burrows, Director  
National Computer Systems  
Laboratory

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## Abstract

This standard adopts Electronic Industries Association (EIA) Standard EIA-538-1988, which defines the facsimile coding schemes and their control functions for Group 4 facsimile apparatus.

Key words: coding control functions; communications equipment; facsimile coding schemes; Federal Information Processing Standard; telecommunications.

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**Federal Information  
Processing Standards Publication 150**

**1988 November 4**

**Announcing the Standard for**

**FACSIMILE CODING SCHEMES AND CODING CONTROL  
FUNCTIONS FOR GROUP 4 FACSIMILE APPARATUS**

Federal Information Processing Standards Publications (FIPS PUBS) are issued by the National Institute of Standards and Technology after approval by the Secretary of Commerce pursuant to Section 111(d) of the Federal Property and Administrative Services Act of 1949 as amended by the Computer Security Act of 1987, Public Law 100-235.

- 1. Name of Standard.** Facsimile Coding Schemes and Coding Control Functions for Group 4 Facsimile Apparatus (FIPS PUB 150).
- 2. Category of Standard.** Telecommunications Standard.
- 3. Explanation.** This standard adopts Electronic Industries Association (EIA) Standard EIA-538-1988, which defines the facsimile coding schemes and their control functions for Group 4 facsimile apparatus.
- 4. Approving Authority.** Secretary of Commerce.
- 5. Maintenance Agency.** National Communications System, Office of Technology and Standards.
- 6. Cross Index.**
  - a. Former Federal Standard (FED-STD) 1065, Facsimile Coding Schemes and Coding Control Functions for Group 4 Facsimile Apparatus.
  - b. EIA-538-1988, Facsimile Coding Schemes and Coding Control Functions for Group 4 Facsimile Apparatus.
- 7. Related Documents.**
  - a. Federal Information Resources Management Regulation 201-8.1, Federal ADP and Telecommunications Standards.
  - b. CCITT Recommendation T.5, General Aspects of Group 4 Facsimile Apparatus, Malaga-Torremolinos, 1984.
  - c. CCITT Recommendation T.6, Facsimile Coding Schemes and Coding Control Functions for Group 4 Facsimile Apparatus, Malaga-Torremolinos, 1984.
  - d. Federal Standard 1037A, Glossary of Telecommunication Terms.
- 8. Objectives.** This standard is to facilitate interoperability between and among facsimile terminals within telecommunication facilities and systems of the Federal government.
- 9. Applicability.** This standard shall be used by all Federal departments and agencies in the design, development, and procurement of facsimile terminals/systems.
- 10. Specifications.** This standard adopts in whole the Electronics Industries Association (EIA) Standard EIA-538-1988, Facsimile Coding Schemes and Coding Control Functions for Group 4 Facsimile Apparatus.
- 11. Implementation.** The use of this standard by Federal departments and agencies is compulsory and binding, effective April 21, 1989.



**12. Waivers.** Under certain exceptional circumstances, the heads of Federal departments and agencies may approve waivers to Federal Information Processing Standards (FIPS). The head of such agency may redelegate such authority only to a senior official designated pursuant to section 3506(b) of Title 44, United States Code. Waivers shall be granted only when:

- a. Compliance with a standard would adversely affect the accomplishment of the mission of an operator of a Federal computer system, or
- b. Cause a major adverse financial impact on the operator which is not offset by Government-wide savings.

Agency heads may act upon a written waiver request containing the information detailed above. Agency heads may also act without a written waiver request when they determine that conditions for meeting the standard cannot be met. Agency heads may approve waivers only by a written decision which explains the basis on 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: National Institute of Standards and Technology, ATTN: FIPS Waiver Decisions, Technology Building, Room B-154, Gaithersburg, MD 20899.

In addition notice of each waiver granted and each delegation of authority to approve waivers shall be sent promptly to the Committee on Government Operations of the House of Representatives and the Committee on Governmental Affairs of the Senate and shall be published promptly in the *Federal Register*.

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

A copy of the waiver, any supporting documents, the document approving the waiver and any supporting and accompanying documents, 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.

**13. Conflict with Referenced Documents.** Where the requirements stated in this standard conflict with any requirements in a referenced document, the requirements of this standard shall apply. The nature of the conflict between this standard and a referenced document shall be submitted in duplicate to the Director, National Computer and Telecommunications Laboratory, Technology Building, Room B-154, National Institute of Standards and Technology, Gaithersburg, MD 20899.

**14. Special Information.** Group 4 facsimile equipments shall conform to the specifications set forth in EIA-538-1988.

Group 4 Facsimile—A mode of black/white facsimile operation as defined in CCITT Recommendations T.5 and T.6, which utilizes bandwidth compression techniques to transmit an essentially error-free 215 × 279 mm (8-1/2 × 11 inches) document at a nominal resolution of 8 lines/mm in less than one minute over a public data network voice-grade circuit.

**15. Where to Obtain Copies.** Copies of this publication are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. (Sale of the included specifications document is by arrangement with the American National Standards Institute.) When ordering, refer to Federal Information Processing Standards Publication 150 (FIPSPUB150), and title. Payment may be made by check, money order, purchase order, credit card, or deposit account.

Copies of the CCITT Recommendations T.5 and T.6 (PB85-192631) can be obtained from the National Technical Information Service.



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