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FIPS PUB 146-2

Federal Information  
Processing Standards Publication 146-2

1995 May 15

**Announcing the Standard for**

# **PROFILES FOR OPEN SYSTEMS INTERNETWORKING TECHNOLOGIES (POSIT)**

[See Important Change Notice](#) at the end of this document.

**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. Profiles for Open Systems Internetworking Technologies (POSIT) (FIPS PUB 146-2).
2. **Category of Standard.** Hardware and Software Standards, Computer Network Protocols.
3. **Explanation.** FIPS 146-1 adopted the Government Open Systems Interconnection Profile (GOSIP) which defines a common set of Open Systems Interconnection (OSI) protocols that enable systems developed by different vendors to interoperate and the users of different applications on those systems to exchange information. This change modifies FIPS 146-1 by removing the requirement that Federal agencies specify GOSIP protocols when they acquire networking products and services and communications systems and services. This change references additional specifications that Federal agencies may use in acquiring data communications protocols.
4. **Approving Authority.** Secretary of Commerce.
5. **Maintenance Agency.** U. S. Department of Commerce, National Institute of Standards and Technology (NIST), Computer Systems Laboratory (CSL).
6. **Related Documents.**
  - a. NIST Special Publication 500-217, Industry Government Open Systems Specification (IGOSS), or subsequent versions, May 1994.
  - b. Internet Official Protocol Standards, Internet RFC 1610, or subsequent versions.

c. NIST Special Publication 500-224, Stable Implementation Agreements for Open Systems Interconnection Protocols, or subsequent versions. (NOTE: This reference is the most recent version of the Stable Implementation Agreements. The Stable Implementation Agreements are updated at regular intervals, but no more than once a year. Interested parties should contact NIST for information about the latest available version).

d. NISTIR 5438, Industry/Government Open Systems Specification Testing Framework, or subsequent versions, June 1994.

**7. Objectives.** The primary objectives of this standard are:

- to promote interconnection and interoperability of computers and systems that are acquired from different manufacturers in an open systems environment;
- to reduce the costs of computer network systems by increasing alternative sources of supply;
- to facilitate the use of advanced technology by the Federal Government;
- to provide guidance for the acquisition and use of networking products implementing open, voluntary standards such as those developed by the Internet Engineering Task Force (IETF), the International Telecommunication Union, Telecommunication Standardization Sector (ITU-T; formerly the Consultative Committee on International Telegraph and Telephone [CCITT]), and the International Organization for Standardization (ISO).

**8. Specifications.** See documents in Section 6.

**9. Applicability.** Open, voluntary standards should be used by Federal Government agencies when acquiring computer networking products and services and communications systems or services.

**10. Implementation.** The Industry Government Open Systems Specification (IGOSS) issued as NIST Special Publication 500-217 updates the OSI protocols in FIPS 146-1 and may be used immediately by Federal Government agencies when they wish to acquire computer networking products and services and communications systems or services that are based on OSI standards.

In addition, other specifications based on open, voluntary standards such as those cited in paragraph 7 may be used.

The National Institute of Standards and Technology has described a testing program in ***IGOSS Industry/Government Open Systems Specification Testing Framework***, (NISTIR 5438). This testing is voluntary and limited to the protocols that conform to the standards included in the IG OSS. However, this and other test methodologies may be adapted for use in testing compliance to other profiles whenever government agencies have demonstrable need for more stringent testing.

**11. Special Information.** The National Institute of Standards and Technology plans to work with other government agencies and with industry to develop additional profiles based on open, voluntary standards and to publish these profiles in separate documents.

Interoperability is a key requirement for the effective usage of information technology. Consequently, Federal

agencies are strongly encouraged to acquire components that have either been tested for interoperability or otherwise demonstrably meet the agencies' interoperability requirements. The appropriate extent of such testing will be determined by the affinity groups developing the profiles and by the acquiring agencies.

**12. Where to Obtain Copies.** Copies of this publication are for sale by the National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. When ordering, refer to Federal Information Processing Standards Publication 146-2 (FIPSPUB146-2), and title. Specify microfiche if desired. Payment may be made by check, money order, or NTIS deposit account.

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## Important FIPS 146-2 Change Notice

U.S. DEPARTMENT OF COMMERCE  
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY  
Gaithersburg, MD 20899

**DATE OF CHANGE: 1995 September 12**

FIPS PUBLICATION CHANGE NOTICE

TITLE OF PUBLICATION

# PROFILES FOR OPEN SYSTEMS INTERNETWORKING TECHNOLOGIES (POSIT)

This change notice incorporates information in Change Notice No. 1 and supersedes Change Notice No. 1.

Attached is a reprint from the May 15, 1995, FEDERAL REGISTER (60 FR 25888) which announces that the Secretary of Commerce *approved FIPS PUB 146-2*. This revision supersedes FIPS PUB 146-1. This revision includes references to specifications that Federal agencies may use in acquiring data communications protocols based on open, voluntary standards.

Agencies wishing to use Open Systems Interconnection (OSI) protocols should cite NIST Special Publication 500-217, IGOSS-Industry/Government Open Systems Specification, May 1994, as the reference specification. Copies of NIST Special Publication 500-217 (**Order No. SN-003-003-03269-7**) are available from:

*Superintendent of Documents  
Government Printing Office (GPO)  
Washington, DC 20402  
Telephone Number - (202) 512-1800  
FAX Number - (202) 512-2250*

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**The following document is the Federal Register:**

Federal Register  
May 15, 1995  
Vol. 60 No. 93  
Page 25888-25890

**DEPARTMENT OF COMMERCE  
National Institute of Standards and Technology**

**[Docket No. 950215052-5052-01]  
RIN 0693-AB24/POSIT and 0693-AB35/GNMP**

**APPROVAL OF  
FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATIONS (FIPS)  
146-2, PROFILES FOR OPEN SYSTEMS INTERNETWORKING TECHNOLOGIES,  
AND  
179-1, GOVERNMENT NETWORK MANAGEMENT PROFILE**

**AGENCY:** National Institute of Standards and Technology (NIST), Commerce.

**ACTION:** The purpose of this notice is to announce that the Secretary of Commerce has approved two revised standards, which will be published as FIPS Publication 146-2, Profiles for Open Systems Internetworking Technologies (POSIT), and FIPS 179-1, Government Network Management Profile (GNMP).

**SUMMARY:** On September 14, 1994 (59 FR 47119-47121), notice was published in the **Federal Register** that revisions to Federal Information Processing Standard 146-1, Version 2 of the Government Open Systems Interconnection Profile (GOSIP), and FIPS 179, Government Network Management Profile, (GNMP) were being proposed for Federal use.

The written comments submitted by interested parties and other material available to the Department relevant to the revised standards were reviewed by NIST. On the basis of this review, NIST recommended that the Secretary approve the revised Federal Information Processing Standards Publications, and prepared a detailed justification document for the Secretary's review in support of that recommendation.

The detailed justification document which was presented to the Secretary is part of the public record and is available for inspection and copying in the Department's Central Reference and Records Inspection Facility, Room 6020, Herbert C. Hoover Building, 14th Street between Pennsylvania and Constitution Avenues, NW, Washington, DC 20230.

These FIPS contain two sections: (1) An announcement section, which provides information concerning the applicability, implementation, and maintenance of the standards; and (2) a specifications section which deals

with the technical requirements of the standards. Only the announcement sections of both standards is provided in this notice.

**EFFECTIVE DATE:** These revised standards may be used immediately by Federal Government agencies.

**ADDRESSES:** Interested parties may purchase copies of these revised standards, including the technical specifications sections, from the National Technical Information Service (NTIS). Specific ordering information from NTIS for these standards is set out in the Where to Obtain Copies Section of the announcement section of each standard.

**FOR FURTHER INFORMATION CONTACT:**

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telephone (301) 975-3631,  
National Institute of Standards and Technology,  
Gaithersburg, MD 20899.

Dated: May 9, 1995  
Samuel Kramer, Associate Director

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