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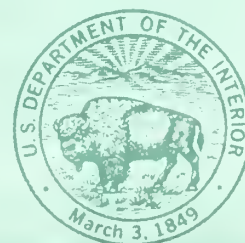
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U.S. DEPARTMENT OF COMMERCE/National Bureau of Standards



REPRESENTATION OF GEOGRAPHIC POINT LOCATIONS FOR INFORMATION INTERCHANGE

CATEGORY: DATA STANDARDS AND GUIDELINES
SUBCATEGORY: REPRESENTATIONS AND CODES;
EARTH SCIENCE SERIES.



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No. 70-1

1986

A MEMORANDUM OF UNDERSTANDING
SURVEY, U.S. DEPARTMENT OF THE INTERIOR.

FIPS PUB 70-1

Foreword

The Federal Information Processing Standards Publication Series of the National Bureau of Standards is an official subsidiary activity of the primary activity of the Bureau, which is to develop and maintain a national system of standards and to disseminate information on such standards. The Chief of Federal Standards, David C. Williams, is the principal officer in the Bureau responsible for the development, promulgation, and maintenance of the Federal Information Processing Standards. The Bureau is also responsible for the NBS through its function as Departmental Technical Agency. Areas of activity include technical guidance and information on Government activities, technical cooperation with other agencies and the private industry.

Comments, criticisms, special inquiries, and suggestions are welcomed and should be addressed to the Chief, Office of Liaison and Special Services, Technology Division, Bureau of Standards, Gaithersburg, MD 20899.

James H. Stewart, Associate
Director for Chemical Sciences and Technology

1. Introduction

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**Federal Information
Processing Standards Publication 70-1**

1986 November 14

Announcing the Standard for

**REPRESENTATION OF GEOGRAPHIC POINT LOCATIONS
FOR INFORMATION INTERCHANGE**



Federal Information Processing Standards Publications (FIPS PUBS) are issued by the National Bureau of Standards in accordance with section 111(f) (2) of the Federal Property and Administrative Services Act of 1949, as amended, Public Law 89-306 (79 Stat 1127), Executive Order 11717 (38 FR 12315, dated May 11, 1973), and Part 6 of Title 15 Code of Federal Regulations.

1. **Name of Standard.** Representation of Geographic Point Locations for Information Interchange.
2. **Category of Standard.** Data Standards and Guidelines; Representations and Codes: Earth Science Series.
3. **Explanation.** This standard establishes uniform formats for geographic point location data through the adoption of ANSI X3.61-1986, a standard approved by the American National Standards Institute. Geographic point location refers to the use of a coordinate system to define the position of a point that may be on, above, or below the Earth's surface. It provides a means for representing these data in digital form for the purpose of interchanging information among data systems and for improving clarity and accuracy of interpersonal, technical communications.
4. **Approving Authority.** Secretary of Commerce.
5. **Maintenance Agency.** U.S. Department of the Interior, Geological Survey (National Mapping Division).

Inquiries concerning the technical content of this standard should be addressed to: U.S. Geological Survey, National Mapping Division, National Center 516, Reston, VA 22092. The Geological Survey has assumed the leadership in developing and maintaining earth-science data element and representation standards under the terms of a Memorandum of Understanding signed in February 1980 by the National Bureau of Standards of the Department of Commerce and the Geological Survey, a bureau of the Department of the Interior.

The Maintenance Agency is responsible for the content of the standard and will provide the National Bureau of Standards with information on adopted changes. Change notices to this FIPS PUB will be issued by the National Bureau of Standards. Users who wish to receive such notices should complete the Change Request Form included in this FIPS PUB and return it to the address indicated.

6. **Cross Index.**
 - a. ANSI X3.61-1986, Representation of Geographic Point Locations for Information Interchange (revision of ANSI X3.61-1978).
 - b. FIPS PUB 70, Representation of Geographic Point Locations for Information Interchange, October 24, 1980 (the previous edition of this standard).
7. **Objectives.** The objectives of this standard are to improve the utilization of data resources of the Federal Government and avoid unnecessary duplications and incompatibilities in the collection, processing and dissemination of data.
8. **Applicability.** This Federal general data element and representation standard is made available for data interchange among executive departments and independent agencies, and for Federal data interchange with the non-Federal sector including industry, State, local, and other governments, and the public at large.

This standard applies only to uniquely identified locations, and not to a series of coordinates, at small intervals, such as linear map features, terrain profiles, or elevation models.

This standard does not apply to the inclusion, in text, of single values of latitude or longitude, or to applications covered by non-conforming international agreements established under the aegis of the World Meteorological Organization or the North Atlantic Treaty Organization. This standard excludes geographic coordinate systems and vertical control datums utilized by the U.S. Department of Defense in military applications.

9. Implementation Schedule. This standard becomes effective April 15, 1987. Use by Federal agencies is encouraged when such use contributes to operational benefits, efficiency, or economy.

10. Specifications. This standard adopts ANSI X3.61-1986, Representation of Geographic Point Locations for Information Interchange (revision of ANSI X3.61-1978), approved by the American National Standards Institute, Inc.

11. Where to Obtain Copies. Copies of this publication are available for sale by the National Technical Information Service (NTIS), 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, please refer to Federal Information Processing Standards Publication 70-1 (FIPSPUB70-1), and title. Copies of other FIPS PUBS are also available from NTIS. Payment may be made by check, money order, or deposit account.

CHANGE NOTICE REQUEST FORM
TO
FIPS PUB 70-1

REPRESENTATION OF GEOGRAPHIC POINT LOCATIONS
FOR INFORMATION INTERCHANGE

Institute for Computer Sciences and Technology
Technology Building, Room B-64
National Bureau of Standards
Gaithersburg, MD 20899

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NBS Interagency Reports (NBSIR)—A special series of interim or final reports on work performed by NBS for outside sponsors (both government and non-government). In general, initial distribution is handled by the sponsor; public distribution is by the National Technical Information Service, Springfield, VA 22161, in paper copy or microfiche form.

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