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STANDARDS COMMITTEE ACTIVITIES OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY 1988 HIGHLIGHTS

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ABSTRACT

This report summarizes NIST standards committee activities and accomplishments during calendar year 1988. It profiles NIST staff participation on standards committees and highlights significant technical and individual contributions made by NIST staff. In 1988, 413 staff members (25% of NIST's professional, scientific, and technical staff) participated in 844 committees of 81 national and international standards organizations.

Key words: committee participation; SAMI annual report; standards committees; voluntary standards;

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INTRODUCTION

Many members of the NIST staff are active in various national and international standardization organizations in order to disseminate NIST research results; obtain vital information on the nation's measurement needs in the areas of public health and safety, economic development and environmental protection; and to interact professionally with their counterparts in industry and academia. During 1988, a total of 413 NIST staff members participated in these programs, which included contributing to the development and/or revision of standards; serving as technical advisors for international committees; and conducting round-robin testing. Many received awards for exceptional contributions or service and/or were elected as committee officers.

This report summarizes NIST staff contributions during calendar year 1988 in two sections 1) statistics; and 2) significant group and individual highlights. The report has been designed for use by NIST managers and outside standards bodies.

The statistics contained in this report were obtained through data collected by the staff of the Standards Assistance and Management Information (SAMI) program. Each NIST participant completed an NIST Form 83, Record of Committee Assignment, for each committee activity. The data are entered into a computer database which then becomes the official NIST record of standards committee activities. The highlights information was submitted by NIST major organizational units.

Comments or suggestions are welcome and should be sent to:

SAMI Office
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Administration Building, Room A629
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STATISTICS

Summary

In 1988, 413 NIST staff members participated in standards activities of 81 standards-developing organizations (57 national, 24 international). This participation encompassed 844 committees with 1251 memberships on these committees. Six organizations had 15 or more memberships. For their participation, NIST staff must often travel to committee meetings, conferences, etc. on committee business. In 1988, NIST staff took 521 domestic and 124 foreign trips related to standards committee work. The SAMI office collects and maintains travel cost information on standards committee participants and makes it available to NIST managers for budget and planning purposes.

Due to budget restraints and normal attrition, the number of staff members participating in standards activities had declined in recent years.

Detailed 1988 Statistics

Number of NIST professional staff participating in standards committees 413

Number of organizations

National	57
International	24
Total	81

Number of memberships 1,251

Number of participants in national and international activities

National	390
International	85

Number of committees on which memberships were held

National	734
International	110
Total	844

NIST Unit with the largest number of participants
Center for Electronics and Electrical Engineering 25

NIST Unit with the largest number of committee memberships
Center for Electronics and Electrical Engineering 113

Average number of memberships per NIST participant 3

55% (690) of all memberships were on ASTM committees

The following six standards organizations accounted for 81% (1010) of NIST committee memberships:

Organization	# of memberships
ASTM	690
American National Standards Institute	169
International Organization for Standardization	57
Institute of Electrical and Electronic Engineers	52
National Fire Protection Association	27
American Society of Mechanical Engineers	15

Number of memberships by position

Member	908
Chair	118
Secretary	33
Delegate	40
Tech Advisor	24
Alt Rep	61
Vice Chair	18
Other	50

Number of memberships by committee levels

Main Committee	469
Subcommittee	555
Working Groups	227

PARTICIPANTS AND MEMBERSHIPS BY NIST UNITS

Unit	Division	# of Participants	# of Memberships
IMSE	400	4	9
	401	1	13
	420	17	67
	430	8	11
	440	16	41
	450	25	98
	460	1	2
	Total	72	241
NML	500	7	21
	510	6	22
	520	19	52
	530	28	95
	540	14	36
	550	36	109
	Total	110	335
NCSL	600	3	13
	610	17	32
	620	10	35
	630	3	3
	660	8	16
	670	9	30
	Total	50	129
NEL	700	4	16
	710	6	10
	720	44	113
	730	35	83
	740	30	99
	750	19	94
	770	19	58
	Total	157	473
OD	100	5	18
	130	13	47
PBFP	110	1	2
ODA	349	3	3
	354	2	3
	Total	24	73

IMSE - Institute for Materials Science and Engineering
NML - National Measurement Laboratory
NCSL - National Computer Systems Laboratory
NEL - National Engineering Laboratory
OD - Office of the Director
PBFP - Office of the Assoc. Director for Programs/Budget/Finance
ODA - Office of the Director of Administration

HIGHLIGHTS

The following accomplishments were submitted by NIST Center/Division managers as representative of their various research areas. They are limited to standards committee participants, but include highlights of significant contributions made by NIST staff to standards development in general.

OFFICE OF THE DIRECTOR

Office of the Associate Director for International and Academic Affairs

Dr. Karl Kessler participated in a meeting of the Advisory Committee to ISO/TC 12, Quantities, Units, Symbols, Conversion Factors and Conversion Tables, held September 9-13 in Copenhagen, Denmark. The committee worked on a revision of ISO Standard 31, Units of Measurement - the English language version is nearly completed.

Office of the Associate Director for Industry and Standards

On January 11-14, Dr. Stanley Warshaw participated in a meeting of the Rapporteurs of the United Nations Economic Commission for Europe's (UNECE) Group of Experts on Standardization Policies in Berlin, Germany. Dr. Warshaw presented a new draft for a section of UNECE Recommendations on Standardization Policies that deals with certification and is aimed at gaining European recognition for the U.S. practice of self-certification. The proposal was accepted for presentation to the UNECE Government Officials Responsible for Standardization Policies.

Dr. Warshaw also served as United States representative at the following meetings: 1) 10th Meeting of Government Officials Responsible for Standardization Policies on May 30-June 3 in Geneva, Switzerland; 2) UNECE Rapporteurs and Coordinators in Varna, Bulgaria on September 28-30; and 3) a General Meeting of the International Electrotechnical Commission on October 4-14 in Istanbul, Turkey.

Samuel Chappell, Albert Tholen and Dr. Warshaw attended the 8th Quadrennial Meeting of the International Organization of Legal Metrology (OIML) in Sydney, Australia on October 23-31. The major objectives of the conference were to review and sanction international recommendations on legal measuring instruments and to adopt a budget. Of the twenty-six Recommendations adopted, the United States was responsible for developing five and had a significant effect on five others.

Otto Warnlof, Technical Advisor for OIML Secretariat PS7 on weighing instruments and PS5D/RS2 on meters and measuring systems

for cryogenic liquids, assisted in the development of the following two Recommendation adopted by the conference: 1) Electronic Weighing Instruments; and 2) Measuring Systems for Cryogenic Liquids.

Eric Vadelund, Technical Advisor for OIML Secretariat PS20/RS1 on general packaging problems worked with the Office of Weights and Measures, government agencies and U.S. industry in developing another adopted Recommendation on Information on Package Labels.

As Technical Advisor for the OIML Secretariats PS17/RS4 on measuring pesticides and other toxic substances and pollution and PS17/RS2 on measurement of water pollution, Samuel Chappell helped to prepare the Recommendation on Gas Chromatographs for Trace Analysis of Pesticides and other Toxic Pollutants and the Recommendation on Gas Chromatographs/Mass Spectomere/Data System for Analysis of Organic Pollutants in Water. Both were adopted at the 1988 conference.

George Uriano and John Donaldson were part of the U.S. delegation to the International Laboratory Accreditation Conference in Aukland, New Zealand on October 17-21 and to the Conference Task Force and Planning Committee Meetings, October 15-16. A video tape describing the National Voluntary Laboratory Accreditation Program was shown and well received by the other delegates. Of the 17 resolutions adopted by the conference, four were developed by the United States.

Donald Mackay served on the Executive Standards Council of the American National Standards Institute (ANSI), contributing to the review and approval of ANSI standards policies and the accreditation of standards development committees and organizations. He was also a member of a task group responsible for developing a program for a tracking system for standards activities within ANSI. In 1988, Mackay was elected President of the Standards Engineering Society, a professional organization engaged in standardization activities of the United States and Canada.

INSTITUTE FOR MATERIALS SCIENCE AND ENGINEERING

Office of Nondestructive Evaluation

The Nondestructive Evaluation Program initiated work, under the auspices of ASTM Subcommittee E07.02, Reference Radiographs, on the development of a new standard test method to assess the visual acuity of inspectors and others who read and interpret radiographs. The basis of the standard is a set of 72 reference radiographs of artifacts containing tight discontinuities (artificial cracks) in different locations, orientations, contrasts, etc. The development of the set was accomplished with partial support from the Army's Materials Technology Laboratory.

Although intended originally for radiographic applications, it is now anticipated that the new test method will also prove useful to practitioners of other nondestructive evaluation disciplines, such as visual inspection and liquid penetrant testing, where visual acuity is a critical factor.

Leonard Mordfin, along with Tom Siewart of the Fracture and Deformation Division, negotiated an agreement in July with representatives of the Army Materials Technology Laboratory (MTL) and the General Electric (GE) Aircraft Engineers Quality Technical Center for a joint effort to develop document standards (military and ASTM) on real-time x-ray radioscopy (RTR) for nondestructive evaluation. Under the agreement, GE developed drafts on the basis of their company standards and MTL provided funding to NIST to incorporate measurement considerations into standards. As a corollary benefit to NIST, Siewert was granted access to MTL's and GE' s RTR laboratory facilities for research purposes.

Ceramics Division

Division staff participated in a sub-task group of ASTM Committee C28, Advanced Ceramics, to evaluate test standards adopted by other ASTM committees to determine which ones might be applicable to advanced ceramics. The task group is concerned about the lack of standardized techniques for evaluating high strength ceramics and recommended several test procedures to the C28 committee for acceptance.

An ASTM draft standard test method for measuring wear of materials using a pin-on-disk test geometry was developed by Division staff members under ASTM Committee G02, Wear and Erosion. When final balloting is completed, this will be the first U.S. standard for this frequently used tribology test method which is applicable to both metals and ceramic.

A workshop on 'Computer Utilization in Tribology' was organized and held in conjunction with the December meeting of ASTM Committee G02, Wear and Erosion. Technical talks on such topics as computerized data acquisition, computer control of test systems, damage characterization by computer analysis, expert system for lubricant selection, and database format for tribology were presented.

Mario Cellarosi served as chair of ASTM Subcommittee C14.08, Flat Glass, which revised and approved for publication in November, ASTM Standards C1048, Heat Treated Flat Glass. The standard includes information for procurement and was approved for use by branches of the Department of Defense and General Services Administration. It is widely used by manufacturers, secondary fabricators, architects, and specifiers of glass in the building construction industry and in safety glazing applications.

Fracture and Deformation Division

In conjunction with ASTM, Division staff members are establishing standards for tensile and fracture toughness property measurements at liquid helium temperature - four degrees above absolute zero (4 K). The work is sponsored by the Department of Energy in support of the development of magnetic fusion energy devices which use large superconducting magnets operating under high stress at 4K. The 4K tensile standard is being voted on in ASTM Subcommittee E28.10, Temperature Effects. The fracture standard is being revised after presentation to the Task Group E24.08.04, Fracture Initiation Concepts, and will eventually appear as an annex to the present room temperature standard for J-integral testing.

NATIONAL MEASUREMENT LABORATORY

Standard Reference Data

Under the auspices of the Versailles Project on Advanced Materials and Standards, the Standard Reference Data staff served as co-organizer and chair of the International Workshop of Standards for Materials Databanks held at Petten, Netherlands in November. The purpose of the workshop was to define future steps to be taken by the international technical community to ensure that the materials databases and information networks currently being built will effectively serve the broad community of users. Specific recommendations to international and national standards bodies were made related to materials identification, terminology, data interchange, data reporting formats, and models for data evaluation and analysis. Thirteen countries participated in the workshop, which was co-chaired by Dr. John Rumble.

Center for Basic Standards

Dr. Barry Taylor, Electricity Division, represented NIST at the 18th meeting of the Consultative Committee on Electricity (CCE) of the International Committee of Weights and Measures (CIPM) held on September 27-28. In recommendations subsequently approved by CIPM, the CCE established new international, practical reference standards of voltage and resistance based on the Josephson effect and the quantum Hall effect, respectively. Starting on January 1, 1990, all national standards laboratories will use these values with the result that the previous significant differences which existed among national reference standards of voltage and resistance, and between such reference standards and the SI volt and ohm, will be eliminated. This will lead to significantly improved worldwide uniformity of electrical measurements and their agreement with the SI. The conventional values adopted by the CCE and CIPM were based on results from

several different laboratories including NIST.

Center for Radiation Research

ASTM Subcommittee E10.01, Dosimetry for Radiation Processing, developed a recently-approved standard - E1261, Guide for the Selection and Application of Dosimetry Systems for Radiation Processing of Food. This guide discusses the hierarchy of primary, reference, transfer, and routine dosimeters. It gives examples of a number of reference and routine dosimetry systems appropriate to the dose range of interest for food processing. It also discusses the various desirable characteristics that good dosimetry systems should have for these applications. Jimmy C. Humphreys of the Radiation Interactions and Dosimetry Group served as principal author of this guide and chaired the task group within Subcommittee E10.01 that developed the final draft. Humphreys received an Outstanding Service Award from ASTM for his contributions to this effort.

ANSI Subcommittee N42.2, Calibration Procedures for Radioactivity Sources, developed two draft standards entitled, Measurement Quality Assurance for Environmental Sample Radioassays and Traceability of Radioactivity Standards' Calibrations. NIST coordinated the development of both these standards.

Center for Analytical Chemistry

Jacquelyn Wise, Organic Analytical Research Division, was elected chair of ASTM Committee E20, Temperature Measurements, and also serves as chair of the Executive Subcommittee. She is recording secretary of Subcommittee E20.05, Liquid-in-Glass Thermometers and Hydrometers.

Dr. William Koch, Inorganic Analytical Research Division, is chair of a task group on pH in rainwater under ASTM Subcommittee D22.06, Acid Deposition. This committee is responsible for formulating standard methods for the accurate chemical analysis of atmospheric wet deposition - rainwater. One of the first methods drafted was for the measurement of pH, which was based on NIST research.

ASTM Subcommittee C26.07, Nuclear Waste, developed a method for testing water leaching of nuclear waste based on a high accuracy method published NIST in 1984. Dr. Howard Kingston, Inorganic Analytical Research Division, serves on Subcommittees C26.07, Waste Materials, and C26.05, Analytical Methods, under Committee C26, Nuclear Fuel Cycle. Two test methods - 'Static Leach Test Method for Nuclear Waste' and 'Analysis of Aqueous Leachates from Simulated Nuclear Waste Materials Using Plasma Atomic Emission Spectroscopy' - are in final review.

NATIONAL COMPUTER SYSTEMS LABORATORY

The Laboratory serves government and industry by providing standards, test methods and technical assistance to advance new uses of computer and related telecommunications technology and to spur productivity advancement. In 1988, NCSL completed the development of 27 Federal Information Processing Standards (FIPS) on such topics as software verification and validation, facsimile transmission, data communication systems, data encryption standard, and security requirements for equipment using the data encryption standard.

Information Systems Engineering Division

A suite of computer programs with approximately 200 tests to evaluate conformance of implementations of American National Standard X3.1986, Database Language SQL, was completed in August by Division staff, headed by Joan Sullivan. This SQL test suite was developed in cooperation with various members of the Accredited Standards Committee X3H2, Database, that developed the SQL standard.

Leonard Gallagher edited a forthcoming standard for embedding SQL database language statements into programming languages. American National Standard X3.168-1989, Database Language Embedded SQL, makes it possible to write portable database applications in any of six standard programming languages. Gallagher also served as Rapporteur for the International Organization for Standardization (ISO) Database Committee actively considering adoption of SQL database language specifications.

In October, the American National Standards Institute approved the Information Resource Dictionary System standard as developed under the auspices of Accredited Standards Committee X3H4. The standard was directly based on a document developed by NCSL and Alan Goldfine served as Technical Editor.

On October 31-November 2, NIST sponsored the fifth Information Management Directions Workshop in Fort Lauderdale, Florida. Division staff members supplied all administrative support for the conference and served as the selection board for the information to be presented during the workshop. The topics included intergrating knowledge and data management, intergrating systems planning, development, and maintenance tools for increased productivity, and architecture and standards for the 1990's.

The Federal Data Management Users Group, the eighth in a series of FIPS workshops on the Information Resource Dictionary System (IRDS) standard, was held at NIST on March 24-25. Division staff members served as workshop chair, and provided administrative

support and topic briefings. The purpose of the workshop was to bring together representatives of twenty Federal government agencies to discuss their current and planned applications of the IRDS.

Alan Goldfine received the 1988 award for Technical Excellence from the Interagency Committee on Information Resources Management. The award recognized Goldfine's efforts and achievements in the establishment of the standard for Information Resource Dictionary Systems. The standard provides the capability to document current information usage within an organization, gives organizations the capability to track information requirements for new system development applications, allows for an organization to uniformly track its current and future information resources from multiple organizational user views, and provides life-cycle tracking of all information resources in an organization.

In September, Mark Skall was appointed the chair of X3H3.7 within Accredited Standards Committee X3H3, Computer Graphics. X3H3.7 is responsible for validation and registration of computer graphics standards. Susan Quinn was appointed International Representative of X3H3.7.

Systems and Software Technology Division

On March 21-24, NCSL and the Institute of Electrical and Electronics Engineers (IEEE) Computer Society co-sponsored the Computer Standards Conference in Washington, DC. NCSL staff served as conference chair and program co-chair. The meeting dealt with computer standards and the standards process. On October 24-27, NCSL and the Society co-sponsored a Conference on Software Maintenance 1988 in Phoenix, Arizona. NCSL provided the program co-chair for the conference which focused on software maintenance issues.

Division staff played a significant role in the technical development of ISO Standard 8613, Office Document Architecture and Interchange Format (published in 1988) and the development of implementation agreements for the standard.

Fran Nielsen served as Vice-Chair of the Accredited Standard Committee X3V1.3, a task group of X3V1 - Text: Office and Publishing Systems. The task group is the national counterpart of ISO/International Electrotechnical Commission (IEC) Joint Technical Committee 1 on Information Technology, Subcommittee 18 working group 3 which developed the Office of Document Architecture and Interchange Format (ODA) standard. Ms. Nielsen played an active role in the development of the international standards for ODA and is the editor of the ANSI version of the standard.

Computer Security Division

NCSL established a working group on security of the IEEE P1003 Committee on Portable Operating System Environment (POSIX). The security group, chaired by Dennis Steinauser, addresses the critical issue of security within the POSIX standard.

The Key Management Validation System (KMVS) developed by NCSL was used to validate a device for conformance to an industry standard, ANSI X9.17, Financial Institution Key Management (Wholesale). This standard gives rules and protocols for manual and automatic key distribution used for encryption and message authentication in point-to-point and key center environments. Developed under Treasury Department sponsorship over a 2-year period, the KMVS tests the electronic distribution of keys in a point-to-point environment; the device was validated using a restricted set of options appropriate for Federal government use.

Systems and Network Architecture Division

The Government Open Systems Interconnection Profile (GOSIP) was approved as FIPS PUB 146 in 1988. The specification, which is based on national and international standards for Open Systems Interconnection (OSI) was developed by the Government Open Systems Interconnection Users Committees established by NCSL in cooperation with the Information Resource Managers of the Federal agencies. GOSIP is based on NIST Implementators Workshop Agreements and is compatible with industry profiles: the Manufacturing Automation Protocol (MAP) and the Technical and Office Protocol (TOP).

NATIONAL ENGINEERING LABORATORY

Center for Computing and Applied Mathematics

An international conference on Basic Questions in Fatigue, co-sponsored by NIST, ASTM Committees E9 on Fatigue and E24 on Fracture, was held to assess the state of fatigue research and to ascertain whether a sufficient body of knowledge existed to form a "scientific basis" of fatigue. The conference proceedings were published by ASTM in August and included contributions by Donald R. Johnson on "The International Role of ASTM," H.H. Ku on "Experimentation and Measurement", Dr. Jeffrey T. Fong, conference General Chairman and Proceedings Editor-in-Chief, and Dr. Richard J. Fields, Co-Editor of Volume 1.

Dr. Fong received the 1988-1989 Distinguished Lecturership Award from the American Society of Mechanical Engineers (ASME) in March. The award, established in 1987 by ASME through its Council on Engineering, is designed to provide its Regions and Sections with an opportunity to hear from outstanding speakers with exceptional credentials and a proven ability to communicate

with a diverse engineering audience.

ASTM Committee F1, Electronics, sponsored an interlaboratory test concerning a conversion factor for relating infrared (IR) spectrum of oxygen semiconductor silicon to total oxygen concentration. Statistical consulting for the study was provided by Carroll Croarkin. The conversion factor was adopted as ASTM Standards F121, Test Method for Interstitial Atomic Oxygen Content of Silicon by Infrared Absorption.

An accepted revision of American National Standard N15.18-1975, Mass Calibration Techniques for Nuclear Material Control, was prepared by a writing group composed of Carroll Croarkin, Dan McQuire of Rockwell International and Aaron Goldman of Los Alamos Scientific Laboratory. The standard contains detailed statistical methods for verifying the performance of mass measurement processes.

Stefan Leigh, Dr. Charles Hagwood, and Dr. James Filliben, assisted in the revision of an ASTM standard on response type road roughness systems. The standard describes the practice for calibrating road roughness measuring devices and is supported by a Federal Highway Administration study that evaluated the characteristics of the NIST profilometer and van under varying weather and road surface conditions.

Rosalie Ruegg, assisted by Steve Petersen and Dr. Harold Marshall, revised ASTM Standard E964-83, Standard Practice for Measuring Benefit-to-Cost and Savings-to-Investment Ratios for Buildings and Building Systems. ASTM Standard E917-83, Standard Practice for Measuring Life-Cycle Costs of Buildings and Building Systems, was revised by Petersen, with assistance from Ms. Ruegg and Dr. Marshall. The revisions were approved by ASTM Subcommittee E06.81, Building Economics, and were sent out for full committee balloting by ASTM Committee E6, Performance of Building Constructions.

Dr. Marshall received the Award of Merit from the ASTM Board of Directors and was named a Fellow of the Society at the March meeting of ASTM Committee E6, Performance of Building Constructions. The award was given "for outstanding technical contributions to the development of seven standard practices for the economic evaluation of buildings and for nine years of exceptional leadership as chairman of the Subcommittee on Building Economics in Committee E6, Building Performance and Constructions."

Center for Electronics and Electrical Engineering

Robert Scace was one of the principal architects of a new approach to produce a single international standard on a given topic with full world-wide consensus on the time scale needed by

the semiconductor industry. This scheme, which went into full operation during 1988, is coordinated under the auspices of Semiconductor Equipment and Materials International (SEMI). Three regions - Europe, Japan and North America - are managed by local management committees under the guidance of an International Standards Committee (ISC). The Committee reports to the SEMI Board of Directors. Scace prepared the regulations under which this work was done and heads a standards subcommittee of the ISC which deals with regulatory and communications issues.

IEEE Subcommittee P287, Precision Coaxial Connectors, held their first plenary meeting at NIST-Boulder on February 24 to begin work to review and update IEEE Standard 287-1968, Precision Coaxial Connectors, to include connectors to 65 GHz. With the extensive experience and background that has been exhibited in the past by NIST in the evaluation of coaxial connectors and standards, NIST is expected to play a major role in testing and evaluating the new connectors.

A round robin test of a draft military standard covering the performance characteristics of eddy current probes used for nondestructive evaluation of metal structures and parts was completed in 1988. The standard attempts to measure the characteristics of the probe independent of an actual eddy current instrument. The results of the test showed that impedance measuring equipment is not easily available to users of eddy current probes.

Ron Goldfarb and Fred Fickett, members of ASTM Committee A06, Magnetic Properties, contributed to the final revision of ASTM Standard F133, Specification for Distillation Equipment. Some of the revisions reflect improvements in vibrating-sampler magnetometry developed at NIST.

Dr. Loren L. Goodrich participated in the Versailles Agreement on Advanced Materials and Standards (VAMAS) Technical Working Party Meeting held on July 8-9 in Southampton, England. This was the first meeting where the collective results of the Nb_3Sn critical current round robin were presented. A collaborative paper on the overall results, with Dr. Goodrich as the lead NIST author, was presented at the Applied Superconductivity Conference on August 21-25 in San Francisco, California. Another paper covered an expanded study at NIST to address specific measurement variables that might have caused the discrepancies observed in the round robin.

An interlaboratory comparison to determine the geometrical parameters of a single-mode optical fiber was carried out by the Center in Collaboration with the Electronic Industries Association. NIST will coordinate U.S. measurements while British Telecom and the Nippon Telegraph and Telephone Co. of Japan will coordinate measurements for their respective

countries.

Dr. Alan F. Clark, chairman of ASTM Subcommittee B1.08 on Superconductors, presided over the subcommittee meeting held in conjunction with the Applied Superconductivity Conference on August 22 in San Francisco. Measurement concerns relating to both conventional and to high -T_c superconductors were discussed. There was a consensus among the group that the existing standards were completely relevant in regard to the new -T_c materials, but additional guidelines are needed.

Raymond S. Turgel, chairman of the U.S. National Committee on Electricity Metering, prepared a revision of Chapter 4 of the C12.1 standard which is the principal guideline for electricity metering used by U.S. utilities. Chapter 4 deals with recommended measurement standards and instrumentation for calibration of meters for power and energy measurements. NIST and IEEE cosponsor the C12 committee activities.

Results of numerous NIST laboratory studies on electric field and ion measurements were incorporated in the draft IEEE standard, Guide for the Measurement of DC Electric Field Strength and Ion related Quantities. Martin Misakian, in collaboration with members of the IEEE D.C. Fields and Working Group, Corona and Field Effects Subcommittee, IEEE Power Engineering Society, prepared the draft. The standard is intended to provide guidance during the characterization of the electrical parameters near high voltage dc transmission lines and in laboratory apparatus designed to simulate the transmission line environment.

NIST staff made significant contributions to an IEEE Standard, Trial Use Standard for Digitizing Waveform Recorders, which specifies and tests waveform recorders. Michael Souders and Donald Flach contributed a number of test methods for characterizing both the static and dynamic performance of waveform recorders. These recorders are relied on extensively in a broad spectrum of applications ranging from medical and chemical dynamics to fusion and pulse power research.

Center for Manufacturing Engineering

Myroslav R. Serbyn was appointed in July as Vice Chairman of ANSI Accredited Standards Committee S2 on Mechanical Shock and Vibration. The Committee, part of the standards program of the Acoustical Society of America, also serves as the U.S. Technical Advisory Group for ISO/Technical Committee (TC) 108 on Mechanical Vibration and Shock.

In November, the final results of the recent international intercomparison of sound pressure calibrations on "one-inch" laboratory standard microphones became available. Participants included the national standards laboratories of nearly all major

industrial nations. Dr. Victor Nedzelnitsky performed the NIST calibrations and serves as the Technical Advisor to the USNC/IEC for IEC Technical Committee 29, Electroacoustics. He is also the U.S. Expert Member on IEC TC29/Working Group 5, Calibration of Standard Condensor Microphones, through which this intercomparison was conducted. The current results are believed to represent the closet agreement ever attained in this type comparison between two laboratories using independent, significantly different procedures.

Donald G. Eitzen was appointed chairman of ISO Subcommittee 3 on Acoustics Methods, which is part of Technical Committee 135 on Non-Destructive Testing.

NIST, in cooperation with the Computer and Business Equipment Manufacturers Association, hosted a meeting of ANSI X3T2 Technical Committee on Data Interchange on April 27-29 in Washington, DC. A major activity of the meeting was the development of two new ANSI project proposals: 1) a "Language-Based Arithmetic" standard to insure some uniformity of results in mathematical computations expressed in different programming languages; and 2) a "conceptual schema interchange" to allow the interchange of information models, or "world models" between software applications operating in heterogeneous computing environments.

Ed Barkmeyer was appointed ANSI Editor for ANSI Project 593, "Common Language-Independent Datatypes," at the January meeting of ANSI X3T2, Technical Committee for Data Interchange Standards. Barkmeyer was also nominated and appointed to the ISO/IEC JTC1/SC22/WG11 working group on language support standards as Editor for the corresponding international standard project "Language-Independent Datatypes." The joint project deals with standardizing the nomenclature and representation structures for the purpose of determining compatible forms of interchange for information units among programming languages, database systems and communication systems.

In July, Version 4.0 of the Initial Graphics Exchange Specification was published. It was submitted to ANSI for approval in October. The technical work was accomplished by the NIST led Initial Graphics Exchange Specification (IGES)/Product Data Exchange Specification (PDES) Organization of 840 members. The IGES/PDES organization also completed work on a working draft of a new international standard for the digital representation of product data. Unofficially known as the standard for the Exchange of Product Model Data (STEP), the document is based upon the U.S. Product Data Exchange Specification and contains input from the ISO Committee TC184/SC4/WG1 on Industrial Automation Systems, External Representation of Product Definition Data, Technical Coordination and Support.

James G. Gross was elected chairman of the American Society of Civil Engineers Technical Council on Codes and Standards at the May Executive Committee meeting. The Technical Council coordinates all activities of the Society related to the establishment, use or discontinuance of national technical standards and building codes. It acts for the Society on the development and/or endorsement of standards and building codes and appointment of members of the Society as representatives to other standards boards or committees.

The American Society of Civil Engineers (ASCE) Standard Guideline for Structural Condition Assessment of Existing Buildings was approved by the ASCE Committee on Condition Assessment of Existing Buildings, chaired by James H. Pielert. The committee was established by ASCE in response to a request by NIST.

Based on a NIST recommendation, the International Union of Testing and Research Laboratories for Materials and Structures (RILEM) formed Technical Committee 91-CRL to prepare guidelines for evaluating the performance of cement and concrete laboratories. The committee, chaired by James H. Pielert, planned a RILEM workshop to review quality assurance procedures currently used in cement and concrete laboratories including the status and application of existing standards.

Accurate techniques for calibrating whole building pressurization devices, or blower doors, were developed by Dr. Andrew Persily and are now the basis for ASTM Standard E1258-1988, Standard Test Method for Airflow Calibration of Fan Pressurization Devices, published in September. These blower doors are used to quantify building air tightness and to determine compliance with air tightness standards. However, using the devices requires knowledge of the accuracy of the airflow measuring techniques, the correlation of air flow rate through the door to the fan speed and pressure difference across the door. Dr. Persily built a special calibration facility in the NIST laboratories and demonstrated proper calibration techniques that are now the basis of the standard.

The American Society of Heating, Refrigerating and Air-Conditioning Engineers revised Standard 103-1988, Method of Testing for Annual Fuel Utilization Efficiency of Residential Central Furnaces and Boilers, based substantially on the research done by Dr. George Kelly and the staff of the Mechanical Systems and Control Group. This work was performed for the Department of Energy program on minimum standards for residential equipment. For this version, NIST developed a computer program for performing the extensive calculations required to determine annual efficiency. A complete listing of the program is included in an Appendix to the standard along with example problems.

Floppy disks containing the source code and a compiled version of the program are currently being distributed to the industry by trade associations.

During 1988, Dr. Kent Reed took responsibility for preparation of "IGES Version 4.0", a report published in June, which extends and refines the technical content of the 1986 version and includes many changes to improve the syntax, clarity, and consistency of the document.

Mark Palmer chairs the Application Validation Methodology Committee of the IGES organization. This committee published a report concerning guidelines for the specification and validation of IGES application protocol. It specifies the technical content of a protocol, a validation methodology, and provides guidelines for implementation. It is expected that this document will ensure successful application of IGES for a wide variety of applications over the next several years.

Center for Fire Research

Dr. Jack E. Snell, chairman of the Toxicity Advisory Committee, National Fire Protection Association (NFPA), submitted to the NFPA Board of Directors, a report concerning the status of the toxicity issue and related guidelines and recommendations. The report cited a number of Center research efforts concerning the smoke toxicity issues including experiments with cone calorimeters modified to provide controlled combustion atmospheres; the significant progress made in the so-called n-gas method for measurement of toxic potency of smoke; a new approach to the calculation of smoke toxicity hazard; and the HAZARD I computer based system for predicting hazards resulting from a specified fire in a prescribed building.

The NFPA Fire Test Committee is currently balloting a new standard, NFPA 264A, Use of the Cone Calorimeter for Testing Upholstered Furniture, which was partly written by Sanford Davis. The standard is based on the cone calorimeter, a device developed in the Center by Dr. Vytenis Babrauskas. On behalf of ASTM E5.21 Subcommittee on Smoke and Combustion Products, Dr. Babrauskas organized and directed a round robin on the proposed ASTM Standard P190, Cone Calorimeter. Six laboratories were involved in the round robin.

The revised NFPA Standard 211, Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances, incorporates provisions for wall protection and chimney connector systems based on Center research on chimneys conducted by Richard Peacock. The standard, issued by the NFPA Technical Committee on Chimneys, Fireplaces and Venting Systems for Home Heating Appliances, addresses design and installation techniques for improved fire safety.

NFPA Standard 92A, Smoke Control Systems (recommended practice), was published in 1988 by the NFPA Smoke Management Systems Committee chaired by Harold Nelson. The Task Group that developed the standard was chaired by John Klote. This new document reflects NIST research in smoke control systems and references the American Society of Heating, Refrigerating and Air-Conditioning Engineers Smoke Control Manual authored by Klote.

Several Center staff members participated in NFPA committee activities during 1988. Daniel Gross made major contributions to a revision of NFPA 105, Recommended Practice for the Installation of Smoke Control Door Assemblies, which was approved in November. Gross demonstrated the practicality of the new method and wrote a portion of the document. James Winger worked on the Life Safety Task Group on Furnishings to make recommendations to the Safety to Life Committee on how to control the fire hazards of furnishings and contents. Douglas Walton has been using detector actuation models developed at NIST to examine the way NFPA Standard 13, Installation of Sprinkler Systems, really works and to see if the water requirements currently based on general occupancy classes can be based on potential fire hazard. Harold Nelson chaired a joint round table of the Smoke Control and Safety to Life Committee on fire safety in atriums. Kay Villa was appointed to the NFPA Technical Committee on Fire Service Protective Clothing and Equipment and is reviewing the reference tests cited in NFPA 1975 Standard on Work Station Uniforms.

Two draft standards on the IMO flame spread apparatus were approved by ASTM Subcommittee E5.22, Surface Burning. Margaret Harkleroad chairs the ASTM Task Group on the IMO apparatus. The new standards are based on test apparatus developed originally by Dr. Alex Robertson at NIST and more recently by Ms. Harkleroad. One standard defines the procedures for obtaining material ignition and flame spread properties used in predictive modeling of fires. The second defines the procedures for obtaining material flammability ratings from the apparatus.

Center staff resolved problems of repeatability with ASTM Standard E648, Critical Radiant Flux of Floor Covering Systems, that were revealed by the NIST National Voluntary Laboratory Accreditation Program. With support from the carpet industry, Dr. William Parker, Randall Lawson, and Sanford Davis investigated the variables that effect test results including ignition mode, preheat time, air flow through the test chamber, preconditioning of the sample and gas quality for the radiation panel.

Dr. Andrew Fowell chairs ASTM Subcommittee E5.39 on Fire Modeling which developed first drafts of guidance documents on the validation and documentation of fire models.

Dr. Vytenis Babrauskas was involved in drafting a new standard method for determining the corrosivity of fire gases and developed standard formats and a standard fire data handling program which may well be used for the National Material Fire Property Database.

Dr. William Parker helped to formulate plans for a new document on the use of room fire tests for ASTM E5.13 Subcommittee on Large Scale Fire Tests.

Various staff members were active in standards committee activities of the International Organization for Standardization (ISO). Daniel Gross attended the Working Group meetings of ISO TC92 Subcommittee on Fire Resistance in Paris, France, where revision of ISO 834, Fire Resistance of Structural Assemblies was being prepared for ballot and a final draft of a medium temperature test for smoke control doors was prepared. Margaret Harkleroad attended the meting of ISO TC92 SC1 WG3, Surface Spread of Flame and initiated consideration of the IMO flame spread apparatus as an ISO test. Dr. Barbara Levin, who chairs the U.S. Technical Advisory Group for ISO TC92 SC3, Toxic Hazards in Fire, was involved in writing two parts of a Technical Report on Toxicity Testing of Fire Effluents. The section on the State-of-the-Art in 1987 incorporates consideration of the NIST Toxicity Test. James Winger attended a meeting of ISO TC 136 SC1 WG4, Fire Test Methods for Furnishings in Ireland to discuss flammability of mattresses.

Center for Chemical Technology

Thomas J. Buckley and Dr. Eugene S. Domalski interpreted the data from previous ASTM round robins on the heating values of refuse derived fuels (RDF) and illustrated that the heating values of these fuels can be reliably estimated from their elemental compositions. The results of these studies were presented and published in the Proceedings of the 13th National Solid Waste Conference in May. The paper, "Evaluation of Data on the Higher Heating Values and Elemental Analysis of Refuse-Derived-Fuels," by Buckley and Dr. Domalski will be presented to the ASTM Committee D34 on Waste Disposal in the form of a draft standard on calculation of higher heating values of refuse-derived-fuels from elemental analysis. The higher heating values and the elemental analyses of RDF were determined during five rounds of ASTM testing of RDF with eight to twelve laboratories performing four tests each. It was found that established formulas can be used to calculate higher heating values on a moisture-free basis from elemental analyses. A comparison of the formulas provides a statistically meaningful measure of their accuracy. Buckley carried out the analysis and evaluation of the ASTM round robin data and Dr. Domalski was the project leader.

In April, Subhas K. Sikdar assumed chairmanship of ASTM

Subcommittee E48.03 on Unit Processes and Control in Biotechnology. In this capacity Sikdar coordinates writing draft standards on antiseptic samples, cell mass measurement, membrane characterization, microbial leaching and ore leaching. Two draft standards were prepared and submitted to committee ballots in 1988: 1) draft on molecular weight cutoff of ultrafiltration membranes and 2) a draft on pore size distribution measurement of membranes.

Chemical Engineering Science Division staff members provided technical assistance to task groups of ASTM Subcommittee C16.30 on Thermal Insulation. Staff members participated in interlaboratory comparisons by performing their own measurements and by analyzing the results from all the participants for inclusion in published reports of the results. Their work helped users to judge the precision and bias of an important standards apparatus for measuring thermal conductivity - the guarded hot plate. This apparatus is the basis for ASTM Standard C177, Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus, and plays an important role in developing efficient insulation materials for energy conservation. Dr. David R. Smith continued the work of developing test methods for the measurement of thermal conductivity of insulations and of developing thermal-insulation Standard Reference Materials in cooperation with ASTM and in response to the needs of industry.

Jane Callanan completed a report on the application of ASTM calibration procedures for differential thermal analyzers in October. This work serves as the basis for a projected round-robin for certification of reference materials for use with differential thermal analyzers. In her capacity as chair of ASTM Subcommittee E37.02, Standard Reference Materials, Ms. Callanan prepared a comprehensive bibliography of reference materials available worldwide for thermophysical properties measurements.

ASTM Standard D4784-88, Standard for LNG Density Calculation Models, was adapted from a Thermophysics Division publication and provides standard techniques for calculating the density (versus temperature, pressure and composition) of liquefied natural gas (LNG). The standard will be used to insure equity in trade of LNG, both in the United States and abroad. The NIST publication from which the standard was derived was the culmination of a seven year research effort on LNG properties, funded by a consortium of LNG producers and users.

ASME/ANSI Standard MFC-9M-1988, Measurement of Liquid Flow in Closed Conduits - Weighing Methods, was published by the American Society of Mechanical Engineers (ASME). This standard was produced within ASME Subcommittee 14, Flow Measurement by Weighing and Volumetric Techniques, which is chaired by Dr. George E. Mattingly. The standard incorporates a number of new

developments that were advanced at NIST and elsewhere in the United States and abroad.

ASME/ANSI Standard MFC-6M-1988, Measurement of Fluid Flow in Pipes Using Vortex Shedding Metering, was published by the ASME. The first of its kind, this standard was produced within ASME Subcommittee 16, Vortex Shedding Flow Meters. Dr. Mattingly chaired the subcommittee when the first drafts were written and initial approvals were made. The standard incorporates new developments that were advanced at NIST and elsewhere in the United States and abroad. The NIST contributions to vortex shedding flowmeter technology included: 1) laser Doppler velocimetry (LDV) investigations of the flow field in the basic flowmeter geometry conducted by Drs. T. T. Yeh and B. Robertson; and 2) examination, using LDV, of the jitter and fade characteristics of vortex shedding that can influence the performance of this type of flowmeter. Drs. Yeh, Robertson and Mattingly were involved in the second study. Because this was the first standard for vortex shedding flowmeters, the United States has petitioned the International Organization for Standardization (ISO) to become the secretariat for an ISO Committee to produce an international standard on these flowmeters.

AWARDS

The Rosa Award recognizes outstanding achievements in the development of meaningful and significant standards practice in the measurement field. In 1988, Samuel J. Schneider, Jr., of the Institute for Materials Science and Engineering, was cited for his major study on international cooperation and competition in materials science and engineering. He demonstrated technical competence and resourcefulness in his roles as chairman of ASTM Committees C28, Advanced Ceramics, and C8, Refractories, as he developed new and effective standards in the materials areas of advanced ceramics and steel research.

Dr. Howard P. Layer, National Measurement Laboratory, received the Department of Commerce Silver Medal for sustained excellence in the development of a new primary standard for the measurement unit of length. Based on this new reference standard, Dr. Layer provided scientific leadership for the redefinition of the International Unit of Length, and he carried out scientific research to improve the measured values of natural constants.

Commerce Department Bronze Medals were awarded to the following National Computer Systems Laboratory staff members.

Anthony V. Cincotta made a sustained outstanding contribution to the development of standards and conformance test suites to improve applications portability in the federal government. He served a crucial role in the development of voluntary standards for portable operating system interface (POSIX), designed and implemented the NIST POSIX Conformance Test Suite, and provided support in the development of the NIST Applications Portability Profile.

Frankie E. Spielman made outstanding contributions in the development of standards in the area of master graphics information exchange. He personally led the efforts in development of these standards and is directly responsible for the resolution of numerous technical and political problems that have arisen.

NIST-63
(REV. 12-88)

U.S. DEPARTMENT OF COMMERCE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

RECORD OF COMMITTEE ASSIGNMENT

PLEASE TYPE OR PRINT YOUR RESPONSES – SEE REVERSE FOR INSTRUCTIONS.

1. PURPOSE (CHECK (X) ONE)

☐ NEW MEMBERSHIP ☐ CHANGE INFORMATION PREVIOUSLY SUBMITTED

☐ TERMINATION OF MEMBERSHIP (COMPLETE BLOCKS 1 - 9 ONLY) ☐ OTHER (SPECIFY)

2. NAME (LAST, FIRST, INITIAL)	3. ORGANIZATION CODE	4. DATE

5. NIST MAILING ADDRESS (BUILDING AND ROOM)	6. NIST TELEPHONE NUMBER

7. NIST EMPLOYMENT STATUS

☐ FULL-TIME PERMANENT ☐ ANNUITANT ☐ OTHER (SPECIFY)

8A. THIS FORM COVERS THE FOLLOWING ASSIGNMENT

	LEVEL (CHECK (X) ONE)	NUMBER (IF APPLICABLE)	COMPLETE NAME OF ACTIVITY
☐	PARENT COMMITTEE		
☐	SUBCOMMITTEE		
☐	TASK OR WORK GROUP		
☐	OTHER (SPECIFY)		

8B. IF 8A IS A PARENT COMMITTEE, GO TO 9. IF 8A IS A SUBGROUP OF A COMMITTEE (e.g., a subcommittee or task group), LIST THE HIGHER LEVELS BELOW

LEVEL	NUMBER	COMPLETE NAME
PARENT COMMITTEE		
SUBCOMMITTEE		
OTHER (SPECIFY)		

9. PARENT ORGANIZATION	10. SECRETARIAT ORGANIZATION OR COUNTRY (IF DIFFERENT FROM PARENT ORGANIZATION)

11. DATE OF ASSIGNMENT (MONTH/YEAR)	12. EXPIRATION DATE OF ASSIGNMENT (IF ANY)

13A. TYPE OF COMMITTEE (BASE CLASSIFICATION ON TYPE OF COMMITTEE, NOT ORGANIZATION) (CHECK (X) ONE)

NATL	*NATL/INTL	INTL	
			STANDARDS
			PROFESSIONAL/SCIENTIFIC/TECHNICAL
			INTERAGENCY OR PUBLIC ADVISORY
			OTHER (SPECIFY)

13B. *NATIONAL COMMITTEE WITH MAJOR INTERNATIONAL RESPONSIBILITIES
IF YOU CHECKED NATL/INTL, PLEASE SPECIFY THE INTERNATIONAL COMMITTEE OR COMMITTEES WITH WHICH THE NATIONAL COMMITTEE IS CONCERNED.

14. POSITION ON COMMITTEE (CHECK (X) ONE)

☐ MEMBER ☐ TECHNICAL ADVISOR
☐ CHAIR ☐ ALTERNATE REPRESENTATIVE
☐ VICE-CHAIR ☐ DELEGATE
☐ SECRETARY ☐ OTHER (SPECIFY)

15. VOTING STATUS (CHECK (X) ONE)

☐ VOTING
☐ NONVOTING

16. TYPE OF FUNDING (CHECK (X) ONE)

☐ NIST
☐ OA (SPECIFY)
☐ NIST/OA (SPECIFY AGENCY)
☐ OTHER (SPECIFY)

17. KEY WORDS (FOR USE BY COMMITTEE MONITORING OFFICE)

18. APPROVAL DIVISION CHIEF (OR HIGHER) (SIGNATURE)	DATE	COMMITTEE MONITORING OFFICE (SIGNATURE)	DATE

ELECTRONIC FORM

INSTRUCTIONS

INTRODUCTION

THIS FORM SERVES AS A RECORD OF MANAGEMENT APPROVAL OF COMMITTEE ACTIVITIES AND PROVIDES BASIC INFORMATION WHICH IS USED TO COMPILE A DIRECTORY OF STANDARDS COMMITTEE PARTICIPANTS AND A SERIES OF SPECIAL REPORTS FOR NIST MANAGERS AND COMMITTEE PARTICIPANTS. FOR FURTHER INFORMATION, INCLUDING DEFINITIONS OF TERMS USED ON THIS FORM, REFERENCE ADMINISTRATIVE MANUAL SUBCHAPTER 3.02, STANDARDS AND PROFESSIONAL COMMITTEES. ANY QUESTIONS OR SUGGESTIONS FOR IMPROVING THIS FORM SHOULD BE DIRECTED TO THE OFFICE OF STANDARDS CODE AND INFORMATION (DIVISION 131), WHICH SERVES AS THE NIST COMMITTEE MONITORING OFFICE, ADMINISTRATION BUILDING, ROOM A629, TELEPHONE EXTENSION 4035.

GENERAL INFORMATION

1. A SEPARATE FORM SHOULD BE COMPLETED FOR EACH COMMITTEE. FOR EXAMPLE, IF YOU BELONG TO A COMMITTEE AND TWO OF ITS SUBCOMMITTEES, THREE FORMS SHOULD BE FILLED OUT.

2. A FORM SHOULD BE FILED AS SOON AS POSSIBLE AFTER JOINING OR APPLYING FOR MEMBERSHIP ON A COMMITTEE. EMPLOYEES ARE RESPONSIBLE FOR COMPLETING AND RETURNING TO THE COMMITTEE OR PARENT ORGANIZATION ANY FORMS THEY REQUIRE.

3. ADDITIONAL FORMS SHOULD BE FILED TO INDICATE CHANGES TO THE ORIGINAL FORM, TO RENEW EXPIRED MEMBERSHIPS, AND TO RECORD RESIGNATIONS. FORMS NEED NOT BE FILED FOR INTERNAL NIST COMMITTEES.

4. COPIES AND DISTRIBUTION -- THE ORIGINAL AND TWO COPIES OF FORM NIST-83 ARE TO BE SENT TO THE DESIGNATED INDIVIDUALS FOR APPROVAL (SEE APPROVALS).

SPECIFIC COMMENTS

BLOCKS 1 - 6 -- MINOR CHANGES SUCH AS TELEPHONE EXTENSION OR MAILING ADDRESS MAY BE MADE BY NOTIFYING THE COMMITTEE MONITORING OFFICE BY TELEPHONE (EXTENSION 4035) OR MEMO (ADMINISTRATION BUILDING, ROOM A629).
IF YOU ARE RESIGNING FROM A COMMITTEE, COMPLETE ONLY BLOCKS 1 - 9.

BLOCK 10 -- NAME OF AN ORGANIZATION OR COUNTRY ONLY, NOT AN INDIVIDUAL.

BLOCK 11 -- IF YOU HAVE BEEN ACCREDITED AS A DELEGATE TO A SPECIFIC MEETING, PUT THE STARTING DATE OF THE MEETING IN THIS BLOCK.
IF YOU HAVE BEEN ASKED TO SERVE AS A DELEGATE FOR AN INDEFINITE TIME, PUT THE DATE YOU ACCEPTED THE ASSIGNMENT IN THIS BLOCK.

BLOCK 13A -- INTERAGENCY COMMITTEE MEANS A COMMITTEE COMPOSED WHOLLY OF EMPLOYEES OF TWO OR MORE FEDERAL GOVERNMENT AGENCIES. PUBLIC ADVISORY COMMITTEE MEANS ANY COMMITTEE THAT IS (1) ESTABLISHED BY FEDERAL STATUTE OR REORGANIZATION PLAN; (2) ESTABLISHED OR UTILIZED BY THE PRESIDENT; OR (3) ESTABLISHED OR UTILIZED BY ONE OR MORE AGENCIES TO OBTAIN ADVICE OR RECOMMENDATIONS FOR THE PRESIDENT OR FOR ONE OR MORE FEDERAL GOVERNMENT AGENCIES. THE TERM DOES NOT INCLUDE ANY COMMITTEE WHICH IS COMPOSED WHOLLY OF EMPLOYEES OF THE FEDERAL GOVERNMENT.

BLOCK 14 -- INDICATE YOUR CURRENT POSITION ON THE ACTIVITY LISTED IN BLOCK 8A. IF YOU SERVE IN MORE THAN ONE CAPACITY, CHECK ONLY THE HIGHEST POSITION HELD.

BLOCK 16 -- INDICATE THE ORGANIZATION WHICH PAYS FOR YOUR TIME, TRAVEL, OR OTHER EXPENSES WHEN YOU ARE INVOLVED IN COMMITTEE WORK.

BLOCK 17 -- DO NOT FILL OUT. FOR COMMITTEE MONITORING OFFICE USE ONLY.

APPROVALS -- (FOR FURTHER EXPLANATION OF THE TYPES OF REPRESENTATION, REFERENCE ADMINISTRATIVE MANUAL SUBCHAPTER 3.02, STANDARDS AND PROFESSIONAL COMMITTEES.)

BLOCK 18 --

(1) IF AN NIST TECHNICAL REPRESENTATIVE -- SEND THE ORIGINAL AND TWO COPIES OF FORM NIST-83 TO THE DIVISION CHIEF (OR HIGHER) FOR APPROVAL. DIVISION CHIEFS AND HIGHER LEVEL MANAGERS SHOULD SIGN THEIR OWN FORMS. AFTER APPROVAL IS OBTAINED, SEND THE FORM TO THE OFFICE OF STANDARDS CODE AND INFORMATION, WHICH SERVES AS THE NIST COMMITTEE MONITORING OFFICE, FOR PROCESSING.

(2) IF AN OFFICIAL NIST SPOKESMAN -- SEND THE ORIGINAL AND TWO COPIES OF FORM NIST-83 WITH A COVER MEMO EXPLAINING THE ASSIGNMENT THROUGH THE DIVISION/CENTER OFFICE TO THE MOU DIRECTOR FOR APPROVAL. AFTER APPROVAL, THE MOU DIRECTOR FORWARDS THE MATERIAL TO THE OFFICE OF STANDARDS CODE AND INFORMATION, WHICH SERVES AS THE NIST COMMITTEE MONITORING OFFICE FOR REVIEW AND FORWARDING TO THE DIRECTOR.

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(1) THE ACTIVITY IS DIRECTLY RELATED TO THE AUTHORIZED FUNCTIONS OF NIST;

(2) THE APPOINTEE IS QUALIFIED AND CAN DEVOTE ENOUGH TIME AND EFFORT TO SERVE CREDITABLY; AND

(3) THERE ARE ADEQUATE RESOURCES AVAILABLE OR IN PROSPECT TO SUPPORT MEANINGFUL PARTICIPATION.

NBS-114A (REV. 2-8C)

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NATIONAL BUREAU OF STANDARDS
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GAITHERSBURG, MD 20899

7. Contract/Grant No.

8. Type of Report & Period Covered

Annual

9. SPONSORING ORGANIZATION NAME AND COMPLETE ADDRESS (Street, City, State, ZIP)

10. SUPPLEMENTARY NOTES

☐ Document describes a computer program; SF-185, FIPS Software Summary, is attached.

11. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here)

This report summarizes NIST standards committee activities and accomplishments during calendar year 1988. It profiles NIST staff participation on standards committees and highlights significant technical and individual contributions made by NIST staff. In 1988, 413 staff members (25% of NIST's professional, scientific and technical staff) participated in 844 committees of 81 national and international standards organizations.

12. KEY WORDS (Six to twelve entries; alphabetical order; capitalize only proper names; and separate key words by semicolons)

committee participation; SAMI annual report, standards committees, voluntary standards

13. AVAILABILITY

☐ Unlimited

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