IFAC INFORMATION BULLETIN

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International Federation of Automatic Control

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IFIP/IFAC Prolamat Conference

The First International Conference on Programming Languages for Numerically Controlled Machine Tools to be held in Rome, Italy, September 15 to 17, 1969 is planned as a scientific intercharge among active participants in the field. It covers primarily the important aspects of numerical control languages, their implementation on various computers, the treatments of cutting technology, and the theory and basic principles involved. In addition, sessions are devoted to discussions of the principal group developments in the field, to standards activities, and to surveys and trends of development.

Sign-up Sessions are planned for those desiring to discuss related topics, namely: graphic programming, on-line and conversational systems, grated manufacturing systems using N/C, post processors, testing, and related computer-aided design.

Discussions being a significant feature of the Conference, preprints of the papers will be mailed to those who register by July 1st, 1969. Those who register after that date will receive the preprints at the conference.

Registration fees are as follows:

50 US $ for fees received by July 1st, 1969
70 US $ for fees received after July 1st, 1969.

Post Conference Proceedings with discussions are included in fee.

Space in the conference hall necessitates limiting the attendance. For information apply to:

PROLAMAT Secretariat -
Dr. A. RESTA
S · p · A · Olivetti
Piazza di Spagna 15
00187 Roma, Italy.

IFAC/IFIP Symposium on Digital Computers for Traffic Control

A first announcement of the Symposium to be held in Versailles, France, in June 1970, appeared in No. 51 of the IFAC Information Bulletin. Since then an invitation extended to IFIP to jointly sponsor the Symposium has been accepted.

Enquiries should be addressed to:

AFCET, Section AP
Centre Dauphine,
Place du Maréchal de Lattre de Tassigny,
Paris 16e, France.

IMEKO V

The Fifth Congress of the International Measurement Confederation IMEKO organized by the Association Française pour la Cybernétique Economique et Technique AFCET will take place at Versailles, France, from May 25 to 30, 1970 in conjunction with the MESUCORA exhibition. Topics to be treated include:

Industrial measurement techniques for on-line computation;

On-Stream composition analysis;

New solid state devices in instrument design;

Design, manufacture and production-control of instruments;

New sensors, transducers and transmitters for in-vivo biological measurements;

Advances in flow measurement for optimisation of material balances;

Environmental problems of sensors and instruments;

Automatic inspection and testing.

Enquiries: IMEKO Secretariat, P.O.B. 457, Budapest 5/Hungary.

Automation in the Iron and Steel Industry

Luxembourg (April 13 to 15, 1970) and Düsseldorf (April 16 to 18, 1970) are the places chosen for this International Meeting organized jointly by the Centre National de Recherches Métallurgiques (CNRM) and the Verein Deutscher Eisenhüttenleute (VDEh). The first part (Luxembourg) will deal with automation in sintering, in blast-furnace practice, and in steel plants, and the second part (Düsseldorf) will be devoted to automation of rolling mills and their auxiliary plants. Conference languages are: English, French and German. Simultaneous translation will be provided.

Enquiries: Centre National de Recherches
Metallurgiques CNRM,
Abbaye du Val-Benoît,
Liège, Belgium

or

Verein Deutscher Eisenhüttenleute VDEh
Postfach 8209
4 Düsseldorf 1/Germany.

Information Processing in Measurement Systems

An IMEKO Symposium will be held in Pezinok near Bratislava, Czechoslovakia, from October 7 to 10, 1969. Main topics of the subject area deal with recent theoretical approaches to the planning of measuring methods and systems, with the application of statistical methods and stochastic signals and with accuracy, speed, sensitivity and reliability in analog, digital or hybrid measuring systems. Summaries of Papers in English or Russian should reach the IMEKO Secretariat, P.O.B. 457, Budapest 5/Hungary, by May 31, 1969. The full papers will be due before July 31, 1969.

Design and Application of Logical Systems

An International Symposium organized by the Royal Belgian Society of Electrical Engineers in conjunction with the Industrial Electronics and Automatic Control Laboratories of the Brussels University will be held in Brussels from September 15 to 20, 1969. The object is to animate activities in the related field of the design of logical systems by systematic methods and their applications in research and industry by emphasizing the systematic methods used in the design of the particular logical systems.

Enquiries: Laboratoire d'Electronique Industrielle,
Université Libre de Bruxelles,
50 avenue F.D. Roosevelt,
Bruxelles 5/Belgium

ISO Technical Committee on Industrial Process Control Instruments

Forty delegates from ten countries attended the first plenary meeting of a new ISO Technical Comittee (ISO/TC 124) on industrial process control instruments, from 6th to 8th November, 1968 in London. IFAC was represented by an observer.

Pending steps towards unification, ISO/TC 124 defined its scope of work as covering performance, accuracy, dimensions and interface characteristics of electrical, electrically operated, electronic, pneumatic, hydraulic, mechanical or other equipment for measurement, control and safeguarding of operations, as used in industrial process control; the term „equipment" is covering individual elements in a system or individual instruments used for industrial process control.

To carry out its programme, the Committee decided to appoint a number of Working Groups. We mention:

WG 1 - Terminology, will be concerned primarily with the co-ordination of terms and definitions established by the other Working Groups.

WG 3 - will deal with methods of testing and evaluating performance of controllers, positioners and transmitters.

WG 6 - Control Valves, will give particular consideration to fac-to-face dimensions and methods for determinig the capacity of control valves.

The Committee has also expressed the view that work on graphical symbols for instrumentation being carried out in anther ISO Committee should be transferred to ISO/TC 124.

New Symposium Publications

2nd IFAC/IFIP Symposium on Digital Computer Applications to Process Control
Menton, France, June 1967

The English version of the Proceedings are now available from ISA, Instrument Society of America, 530 William Penn Place, Pittsburgh, Pa. 15219, USA, at US $ 19.50.

IFAC Symposium on Technical and Biological Problems of Control
Yerevan, USSR, September 1968

The Russian version of the Proceedings of the Symposium may be obtained from "Mezdunarodnaja Kniga", Smolenskaja-Sennaja Square 32/34, Moscow G-200, USSR. The English version will be published by the Instrument Society of America (ISA) and will be available in fall 1969.

REPORT ON AUTOMATIC CONTROL TERMINOLOGY
for the year 1967

issued by the IFAC Committee on Terminology
compiled by H.L. Mason, USA, and G. Vafiadis, Germany (FRG)

The IFAC Technical Committee on Terminology prepares and issues annual reports dealing with the most important and fundamental work done in the area of standardization relevant to concepts, terms and symbols for control engineering and related fields on a national as well as on an international level.

Following the reports 1966 by J. Kříž and by R.H. Kohr respectively (see IFAC Bulletin No. 40, Sept.1967) and the subsequent report for 1967 by E.J. Mastascusa dealing with standards etc. issued in the United States only, the present supplementary report for 1967 covers the international level and countries other than the United States as far as the relevant bodies in these countries have been active in the field and made it known to the rapporteurs. Unforeseen circumstances have unfortunately delayed the report, but it is hoped that it may still be of value for making the picture of the 1967 activities complete. The compilation of the 1968 reports is in the hands of P. Anttila and, for the USA, of W.J. Kudlaty (see page 8 of this Bulletin)

International Organizations:

(Reporter: Dr. H.L. Mason, Chairman IFAC TC on Terminology, 7008 Meadow Lane, Chevy Chase, Maryland 20015,USA)

ISO International Organization for Standardization
1, rue de Varembé, 1211 Genève 20, Suisse/Switzerland

ISO/TC 37 Terminology (Principles and Coordination) Secretariat: Austria, Österreichischer Normenausschuß (ÖNA)

ISO/R 639-1967 "Symbols for Languages, Countries, and Authorities" was completed, but an addendum is proposed.
ISO/DR 676 "Naming Principles" and ISO/DR 1189 "International Unification of Concepts and Terms" were submitted to Council.

ISO/TC 97 "Computers and Information Processing", Secretariat: USA Standards Institute.

ISO/DR 1299 "Flowchart Symbols for Information Processing",

ISO/DR 1320 "Implementation of the 6 and 7-Bit Coded Character Sets on 7-Track 1/2 inch (12.7 mm) Magnetic Tape",
ISO/DR 1322 "Guide for the Definition of 4-Bit Character Sets Derived from the ISO 7-Bit Coded Character Set for Information Processing Interchange", and ISO/DR 1323 "Magnetic Tape Labeling and File Structure for Information Interchange"
have all been submitted to member bodies for approval.

IEC International Electrical Commission
1, rue de Varembé, 1211 Genève 20, Suisse/Switzerland

IEC/TC 25 "Letter Symbols for Electrical Engineering" has set up Preparatory Working Group 4 "Signals and Variables for Automatic Control", with the following membership:

Mr. H. Bühler-Canepa (Switzerland)
Mr. Adam G. Kegel (USA)
Dr. H.L. Mason (USA) Secretary
Monsieur Gilbert Nasse (France)
Dr.-Ing. Rudolf Oetker (Germany (FRG))
Mr. M. Pleeging (Netherlands)
Mr. V.V. Sidelnikov (USSR)
Prof. Sakae Yamamura (Japan)
D.T. Broadbent (England)
Prof. Gabriel A. Ferrate (Spain)

IFIP International Federation for Information Processing
Secretariat: British Computer Society, 23 Dorset Square, London N.W.1, England

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The Technical Committee on Terminology of the International Federation for Information Processing is planning a multilingual dictionary. IFAC has supplied complimentary copies of its recently published dictionary to Chairman Ivan H. Gould of St. Albans, Herts, U.K., and his committee.

National Organizations:

Austria:

(Reporter: Dipl.-Ing. Kopacek, Österreichisches Produktivitäts-Zentrum, Arbeitsgemeinschaft f. Automatisierung, 1014 Wien 1, Renngasse 5, Austria)

ÖPZ Österreichisches Produktivitäts-Zentrum
1014 Wien 1, Renngasse 5

Arbeitsgemeinschaft für Automatisierung
(Committee for Automatization):

The Arbeitskreis "Rechenmaschinentechnik und Informationsverarbeitung" (Working Group "Computer Technique and Information Processing") under the chairmanship of Professor Dr. H. Zemanek especially works on questions resulting from membership of IFIP. The Working Group has issued a Brochure "Klassifikation der Tätigkeiten in der Datenverarbeitung" ("Classification of the Activities in Data Processing"); it deals with the following matters: Perforate and punch, check, reproduce, sort, interpret, collate, tabulate, operate data processing systems, code, program, analyse.

ÖVE Österreichischer Verband für Elektrotechnik,
1010 Wien, Eschenbachgasse 9

The ÖVE has a Working Group, headed by Dr. Milan and Dipl.-Ing. Eigl, dealing with terminology problems in the field of automatic control.

Belgium:

(Reporter: Prof. J. Hoffmann, Member IFAC TC on Terminology, Association Internationale pour le Calcul analogique, 50, Avenue Franklin D. Roosevelt, Bruxelles)

Institut Belge de Régulation et d'Automatisme,
3, rue Ravenstein, Bruxelles

The Belgian Committee on Terminology engaged with the preparations for the third edition of chapter 37 of the International Electrotechnical Vocabulary for the I Committee (37) "Automatic Control and Regulating Equipment", is writing of the last part of chapter F: "Constituent components".It is composed of some University professors and specialists of Belgian industry working under the presidency of Professor Marcel Dery of the Royal Military School. This committee met as a whole on 17th January 1967; since then, activities are carried on in this uncommonly difficult field by partial groups.

Denmark:

(Reporter: P. Martin Larsen, Assoc.Professor, Member of IFAC TC on Terminology, Electric Power Engineering Department, Technical University of Denmark, Lyngby, Denmark)

Danish Electrotechnical Committee
(Danish National Committee of IEC),
Sølvgade 23. 4.sal,
Copenhagen K, Denmark

A Danish vocabulary on Automatic Controlling and Regulating Systems based on the IEC publication 50 (37) has been prepared in 1967 and is going to be a National Standard in 1968.
Chairman of the working group: Assoc.Prof. P. Martin Larsen, Electric Power Engineering Department, Technical University, Lyngby, Denmark,

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Danish Standards Association,
Aurehøjvej 12, Hellerup, Denmark.

A Danish vocabulary including 600 terms within information processing and digital computation based on the IFIP/ICC publication has been edited as a Danish Standard Recommendation. The vocabulary will be followed by a Danish Standard Recommendation including definitions of the terms.

Chairman of the working group: Director H.J.A. Helms, Northern European University Computing Center, Technical University, Lyngby, Denmark.

Finland:

(Reporter: Dipl.ins. Paavo Anttila, member of IFAC TC on Terminology, c/o Oy Honeywell Ab, Hitsaajankatu 5, Helsinki 81, Finland)

Finnish Society of Automatic Control

The Terminology Committee of the Finnish Society of Automatic Control concluded the task of preparing a Finnish translation of the International Electrotechnical Vocabulary, second edition, Group 37, Automatic controlling and regulating systems, published by IEC. This translation was prepared at the request of and in cooperation with the Finnish Electrotechnical Standards Association (SESKO) to whom it was submitted for possible publication. It was suggested that this Vocabulary should not be published as a Finnish Standard as its contents and structure are not ideal for that purpose.

The Symbols Committee of the Finnish Society of Automatic Control drew up and published a Recommended Practice on letter and drawing symbols for instrumentation drawings. An English translation of this Finnish Recommended Practice was also produced and submitted to the ISO/TC10/SC3 Subcommittee on Graphical Symbols for Instrumentation.

Finnish Data Processing Association

The Finnish Data Processing Association published a Finnish Data Processing Vocabulary.

Germany (FRG):

(Reporters: Dr.-Ing. R. Oetker, member IFAC TC on Terminology, 7501 Berghausen/Karlsruhe 1, Veilchenstraße 19.
and Dr.-Ing. G. Vafiadis, member IFAC TC on Terminology, c/o VDI/VDE-Fachgruppe Regelungstechnik, 4000 Düsseldorf 1, Postfach 1139, Germany)

DNA Deutscher Normenausschuß
1000 Berlin 30 (West-Berlin)
Burggrafenstraße 4-7, Germany

Fachnormenausschuß Messen, Steuern, Regeln (FMSR) im DNA
(Technical Committee for Measuring and Control):

Out of the former Arbeitsausschuß Steuerungs- und Regelungstechnik (Committee for Control Engineering) of the DNA who used to deal with standardization problems of terminology and signal flow diagrams of control engineering July 1967 emerged FMSR (Chairman Dr. W. Peinke, Vice-Chairman Professor W. Oppelt). Its task is to treat the standardization in that field as a whole. The decision had been taken as a result of the close connection of measuring and control in the area of automatic control engineering. The FMSR has formed also subcommittees for definitions and graphic symbols.

The activities of the FMSR, as far as they are relevant, are closely coordinated with those of the Fachnormenausschuß Informationsverarbeitung (FNI) of the DNA (Technical Committee for Information Processing) and of the Fachnormenausschuß Elektrotechnik (FNE) of the DNA (Technical Committee for Electrical Engineering).

DIN 19226 Regelungstechnik und Steuerungstechnik; Begriffe und Benennungen (Terminology for control systems):

After having dealt with the voluminous alleged anticipating matter that had arrived in respect of the new draft from May 1962, a definitive version was passed in July 1967 which will replace the old standard DIN 19226 from January 1954. Attention is specially drawn to the newly included definitions of "system", "variable" and "signal". They are fundamental to the whole standardization work.

Other new standards etc.:

DIN 44301	Vornorm (Preliminary Standard) June 1967 Informationstheorie; Begriffe (Information Theory, vocabulary), (FNI and FNE).
FNI	ALGOL Dictionary, English and German, (Edition 1967).
FNI	FORTRAN Dictionary, English-German, German - English, (Edition 1967)

VDI	Verein Deutscher Ingenieure 4000 Düsseldorf 1, Graf-Recke-Straße 84, Germany,
VDE	Verband Deutscher Elektrotechniker 6000 Frankfurt/Main 70, Stresemannallee 21, Germany.

New directives (Richtlinien)

from VDI/VDE-Fachgruppe Regelungstechnik (VDI/VDE Technical Group for Control Engineering):

VDI/VDE 2180 Blatt(sheet) 1 December 1966
Sicherung von Anlagen der Verfahrenstechnik; Einführung, Begriffe, Erklärungen
(Safeguarding of process plants; introduction, concepts, explanations),

VDI/VDE 3527 May 1967
Kernreaktor-Regelung; Sinnbilder
(Nuclear reactor control, graphic symbols)

from VDE/VDI-Fachgruppe Meßtechnik (VDE/VDI Technical Group for Metrology):

VDE/VDI 3515 Entwurf(Draft) October 1967
Einheitliches Gleichstromsignal für elektrische Meß- und Regelanlagen
(Standardized D.C.signal used in electrical measuring and control systems).

In the VDE/VDI-Fachgruppe Meßtechnik a working group (chairman Dr.-Ing.E.Samal) for definitions and terms was formed in April 1967 and its work is based on the ZVEI-draft "Measuring devices; Concepts and terms" (Elektronorm 20(1966) No.11, pp.512-533).

Hungary:

(Reporter: Dr.-Ing. J. Szalay, member IFAC TC on Terminology, Research Institute for Electric Power, Budapest, V.Zrinyi u.l.,Hungary)

All four sheets of the Hungarian Standard MSZ 18450 "Terminology of Control Engineering" are available as a printed draft and have been sent to the competent authorities and organizations for comments.

The opposition period for Sheet 1 - Fundamental Concepts, and for Sheet 2 - Control Circuit, expired on July 1, 1967. The deadline for Sheet 3 - Open-loop Control, and for Sheet 4 - Concepts of the Theory of Closed - loop Control, had been fixed for July 1, 1968. The deliberations on the objections received so far have not yet taken place.

In January 1968, Sheet 5 - Concepts of the Theory of Open-loop Control - was prepared as a proposal for the standard mentioned above and distributed among the members of the Commission. Preliminary and preparatory discussions were held, in the first place, by a small Committee of the Commission.

Standard MSZ 18450 is taken care of by the Hungarian Standards Association. Furthermore, the Ministry of the Iron and Steel and of the Machine Industry issues Technical Standards which explain also some concepts but which may rather be considered as directives.

Japan:

(Reporter: Dr. M. Masubuchi, member IFAC TC on Terminology, Yokohama National University, Ooka-Machi, Minami-Ku, Yokohama, Japan)

JSME The Japan Society of Mechanical Engineers
1-24, Akasaka 4-chome
Minato-ku, Tokyo

A Committee for the Investigation of the Standardization of Terms for Numerically Controlled Machines for the Japan Industrial Standard, chaired by K. Togino, is making inquiries about classification, terms, expression, programming, tape, component, numerical control equipment and numerically controlled machine tools and the results will be completed soon. Next year's plan will be an investigation on the standard specification of numerically controlled machines.

IEE of Japan The Institute of Electrical Engineers of Japan,
1-3 Yuraku-cho,
Chiyoda-ku, Tokyo

A Glossary of Terms on Electrical Engineering which contains many automatic control terms is now being revised and supplemented by a Committee chaired by H. Yanagii.
A Sub-committee on Electronic Computer chaired by Y. Komamiya is now discussing and evaluating the terminologies on digital computer based on the Digital Computer Terminology JIS Z-8111 and JIS Z-8112.
A Committee for the Standardization on Sequential Control Symbols and Sequential Diagrams chaired by Yamamura is now selecting and discussing letter symbols for sequential control instruments and control performance including contactless relays. These symbols are proposed as the Japan Industrial Standard. Graphic symbols are excluded.

SICE The Society of Instrumentation and Control Engineers
c/o Keisokukaikan, 20 Kotohira-cho,
Minato-ku, Tokyo

The second revision of the Symbols for Instrumentation JIS Z-8204 (first revised 1963) was discussed by a committee under T. Isobe and modified symbols were proposed last September.
A Committee under chairman A. Nomoto for the International Standardization of Industrial Instruments has been set up for collaborating with ISO/TC 124 Industrial Process Control Instruments.
A Sub-committee under chairman A. Nomoto, which is to standardize the terms and symbols on fluidics, has started discussion with the cooperation of related societies and institutes.

Switzerland:

(Reporter: H. Marti, Secretary of the Schweizerischer Elektrotechnischer Verein (SEV)/Association Suisse des Electriciens (ASE), 8008 Zürich, Seefeldstraße 301, Switzerland)

SEV/ASE Schweizerischer Elektrotechnischer Verein (SEV)/Association Suisse des Electriciens (ASE),
8008 Zürich, Seefeldstraße 301

There used to be a "Studienkommission für die Regelung großer Netzverbände"(Study Commission for the Control of big Electrical Power Networks) which belonged to the SEV/ASE. This Study Commission had charged its "Unterkommission für die Ausarbeitung einer Nomenklatur für die Regelungstechnik" (Subcommission for the Establishment of a Terminology for Automatic Control) to elaborate a document

SEV/ASE 0208.1956:
Leitsätze "Nomenklatur der Regelungstechnik"/
Recommendations pour une Terminologie en matière de réglage.

In 1956 this bi-lingual document was published. Afterwards, an English translation was made which appeared in 1957 under the title:

SEV/ASE 0208.1956:
Recommended Terminology for Automatic Control.

A second revised edition of the bi-lingual Leitsätze "Nomenklatur der Regelungstechnik" was completed in 1960.
The SEV/ASE also issues recommendations for letter symbols. A fifth edition appeared in 1967 under the title

SEV/ASE 8001.1967:
Regeln und Leitsätze für Buchstabensymbole und Zeichen (mit Einschluß der Empfehlungen der 4. Auflage der Publikation 27 der CEI) / Règles et recommendations pour les symboles littéraux et les signes (y compris les recommendations de la 4e édition de la publication 27 de la CEI).
(Rules and Recommendations for Letter Symbols and Signs (including the recommendations of the 4th edition of Publication 27 of IEC).)

This document contains on pp. 80-85 a special list of letter symbols for automatic control.

United Kingdom:

(Reporter: B.V. Atkinson,
Assistant Honorary Secretary,
United Kingdom Automation Council,
Savoy Place,
London WC 2, U.K.)

BSI British Standards Institution
British Standards House,
2 Park St., London W.1

British Standard 1523: Part 1: 1967
UDC 001.4:621-52
Glossary of Terms used in Automatic Controlling and Regulating Systems
Part 1. Process and Kinetic Control.

Union of Socialist Soviet Republics:

(Reporter: Professor M.A. Gavrilov, member IFAC TC on Terminology, Chairman of the Terminology Committee of the USSR National Committee of Automatic Control, Profsojuznaja 81, Moscow V-485)

There were fulfiled the following works in the field of automatic control terminology and some other relative fields in the USSR.

1. State standard: "The main concepts of automatics. Terminology." (Recommendation of SEV).
2. Computing devices: "Programming for digital computers. Terminology." (Draft).
3. State standard: "State system of industrial instruments and automatic devices." a) Common technical requirements. b) Reliability. Common technical requirements and methods of tests.
4. State standard: "Pneumatic instruments and devices."
5. N.V. Yushmanov. "Elements of international terminology", Publishing House of "Nauka". Works to be published: a) Terminology on the theory of relays. b) Terminology on the basis of cybernetics.

United States of America:

Report for 1967 by
E.J. Mastascusa
see IFAC Information Bulletin
No. 47, July 30, 1968.

AUTOMATIC CONTROL TERMINOLOGY

1968 Annual Survey of U.S. Standards Activity

In persuance of the aims of the IFAC Terminology Committee under its Chairman Dr. H.L. Mason and in continuation of the previous year's report which appeared in IFAC Information Bulletin No. 47, control standards issued in the United States in 1968 have been compiled by W.J. Kudlaty of Marvel Engineering Company on behalf of the American Automatic Control Council, assisted by R.H. Kohr, E.J. Mastascusa, R.J. Woodcock, and the Chairman, H.L. Mason. Terms, definitions, symbols, abbreviations, and stylized codes for a variety of products such as: relays, semiconductor devices, varistors, transistors, potentiometers, transformers, encoders, servo-valves and fluidics are included.

EIA Electronic Industries Association
2001 Eye Street, N.W.
Washington, D.C. 20006

EIA published an Index of EIA and JEDEC Standards and Engineering Publications in September 1968. The listing includes EIA Recommended Standard RS-349 (1968), Varistor Definitions and Test Methods as well as JEDEC (Joint Electron Device Engineering Councils of EIA and NEMA) Suggested Standard 8 (1968), Recommendations for Symbols, Terms and Definitions for Bipolar Transistors for Chopper Applications.

An Ad Hoc Engineering Committee has been formed to investigate the preparation of standards for interfaces between signal converters and communication facilities.

EJC Engineers Joint Council
345 East 47th Street
New York, N.Y. 10017

Engineers Joint Council cooperated with the Office of Naval Research in Project LEX, Thesaurus of Engineering and Scientific Terms. This is a new comprehensive reference for engineers, scientists and technical information specialists, and is designed to lay the ground work for compatible information systems in all technical disciplines. The Thesaurus provides the necessary bridge between the technical language used in published technical documents and the language of the searcher of information. The book contains over 18,000 separate descriptors for use in indexing and retrieval and in addition some 5,000 entries referring to one or more descriptors as preferred indexing terms.

The book was developed over a period of 2 1/2 years as a joint project of Engineers Joint Council and the U.S. Department of Defense. Some 300 engineers and scientists from government, industry and education took part in the project. Robert Dodds of Gibbs and Hill, New York, Chaired EJC's participation.

FPS Fluid Power Society
P.O. Box 43
Thiensville, Wisconsin 53092

The Fluid Power Society is preparing a multilingual dictionary of Fluid Power Terms and Definitions. USASI STANDARD B.93.2-1965, Glossary of Terms for Fluid Power, prepared by the National Fluid Power Association (see also under NFPA), will be translated into Italian, Spanish, French, German, Swedish, Japanese, and Russian equivalents. The work was initiated by Italian FPS Chapters under the Chairmanship of Aldo G. Rimassa. Copies of this text are scheduled for distribution through FPS Headquarters by mid-1969.

IEC International Electrotechnical Commission
1, rue de Varembé
Geneva, Switzerland

IEC/TC 1, Terminology, met December 1968 in the Netherlands. The Belgian secretariat for Group 37, Automatic Controlling and Regulating Systems, is updating the 1966 edition of 127 definitions.

IEC/TC 3, Graphical Symbols, met October 1968 in London. The United States was represented by George Platt, Bechtel Corp., and IFAC was represented by David Broadbent of the United Kingdom. The German delegation suggested that work on graphical symbols for automatic control be initiated.

IEC/TC 25/WG 4, Letter Symbols for Automatic Control, reported progress to the WG 1 meeting in Stockholm in November 1968.

IEC/TC 41, Electrical Relays, met in Rome during November 1968. Further details are not available.

IEC/TC 50, Environment Test Methods, revised its scope of activity recently in Stockholm. International Chairman Ellsworth Seaman reports the previous scope of electronic components and electronic equipment has been changed to delete particular reference to any engineering discipline.

IEC/TC 65, Process Control Systems, will deal with mechanical and fluidic as well as electrical systems by agreement with ISO. It is establishing four subcommittees: 1) Terms and Definitions, 2) Service Conditions, 3) Safeguarding of Operation and Reliability, 4) Interface Characteristi. , A fifth committee, Analog Computing Equipment, is under consideration. The parent committee met in London in September 1968. IFAC will seek representation on the Terminology Committee. USASI C85 Chairman Donald H. Smith, Bell Telephone Laboratories, and G.S. Axelby, Westinghouse Aerospace have offered to participate in terminology work. Both IEC/TC 65 and ISO/TC 124 are supported in the USA by an Advisory Committee sponsored by ISA and SAMA. This committee is chaired by W.E. Howe of Foxboro and R.K. Mandell of SAMA is the secretary.

IEC/SC 17a, High-Voltage Switchgear and Controlgear, met in Arnhem, Netherlands, in October 1968. A progress report is not available.

IEC/SC 17B, Low-Voltage Switchgear and Controlgear, met in October 1968 in Brussels. Further details are not available.

IEEE Institute of Electrical and Electronics Engineers
345 East 47th Street
New York, N.Y. 10017

A "Glossary of Terms Used in Modern Control Technology" is being prepared by the Standards Liaison Committee. Meanwhile, the activities of the G - AC, Standards Liaison Committee are expected to be discontinued, and a new committee "Computation Standards on Optimization" will be created.

Consideration is being given to revising IEEE 177, Standard Definitions and Methods of Measurement for Piezoelectric Vibrations, at the request of the National Conference of Standards Laboratories. A.R. Chi is Chairman of the IEEE Technical Committee on Frequency and Time.

The Technical Subcommittee on Pulse Techniques, appointed by the IE E Group Instrumentation and Measurements (F.L. Hermach, Chmn.), under the chairmanship of John C.Hubbs has produced a second draft of a Glossary of Pulse Terms and Definitions to be considered for inclusion in the revision of IEEE Standard 194.

IFAC International Federation of Automatic Control
Postfach 1139
Duesseldorf 1, Germany

A Round-Table on Terminology and Standards will be held at the Warsaw Congress June 23 27, 1969. It will be moderated by David Broadbent of the United Kingdom. Various subgroups from ISO, IEC, IFIP, and IMEKO will be represented. The Polish Committee has received permission to publish a Polish/English version of the IFAC Multilingual Dictionary. Lea Mason, National Bureau of Standards, Chairman of the Terminology Committee of the American Automatic Control Council, is arranging the session in his capacity as the IFAC Terminology Chairman.

IFAC is preparing a tabulation of the basic parameters and characteristics of automation elements. Herman R. Weed, Ohio State University, Chairman of the Components Committee of AACC, is developing this project.

IPC The Institute of Printed Circuits,Inc.
3525 Peterson Road
Chicago, Illinois 60645

The Institute of Printed Circuits is preparing Standard IPC-T-50, Terms and Definitions. A September 1968 publication lists Officers, Directors and Technical Committees of IPC.

ISA Instrument Society of America
530 William Penn Place
Pittsburgh, Pa. 15219

ISA has organized Committee SP 51 on Measurement and Control Terminology at the request of the Process Measurement and Control Section of SAMA. The scope of the new committee includes both comparative and analytical aspects of terminology for measurement and control in all industrial applications. The Committee will integrate and update two parts of SAMA's Standard RC 20, Measurement and Control Terminology. SP 51 also will consider other suggested terminologies prepared by instrument manufacturers, committees of the USA Standard Institute (USASI), and selected foreign guides which list English equivalents, Chairman of SP 51 is T.S. Imsland of Fisher Governor Company and past Chairman of SAMA RC 20. Work has initiated at a June 26, 1968 meeting in Pittsburgh and was continued at the annual ISA Conference and Exhibit in New York.

A new Control Centers Committee (CCC) has been established by the Process Measurement and Control Division of ISA. Chairman of the new organization is Dick Borut of M.W. Kellogg Company. CCC will direct its attention to the following areas of control panel activities: control panel design, graphic symbolization, typical specifications, human factors, terminology, fabrication standards, initiation of recommended practices, functional and operational testing, and symposia development.

ISO International Organization for Standardization
1, rue de Varembé
Geneva, Switzerland

ISO/TC 39/SC 1, Classification of Fluid Power Systems, Components, and Related Terms, met in December 1968 in Paris. The National Fluid Power Association has urged USA Standards Institution to become the Secretariat for this group. A related standard is R 541, Measurement of Fluid Flow by Means of Orifice Plates and Nozzles.

ISO/TC 85/SC 1, Nuclear Energy, met in October 1968 to edit an International Nuclear Glossary. It is hoped the Glossary will be ready for letter ballot by TC 85 in early 1969.

ISO/TC 97/SC 8/WG 1, Numerical Control Systems, is currently working on Terms and Definitions. Documents offered for consideration of the Committee are as follows: BS 1523, Glossary of terms used in automatic controlling and regulating systems; BS 2643: 1955, Glossary of terms relating to the performance of measuring instruments; BS 3527: 1962, Glossary of terms relating to automatic data processing; IFIP, the first English language edition of the vocabulary of information processing prepared by the International Federation for Information Processing and the International Computation Centre; and USASI C 85, Terminology for Automatic Controls. Darren B. Schneider, General Electric Company, is Chairman of the U.S. Advisory Committee on Numerical Control. He is also Chairman of EIA TR-31 Committee.

ISO/TC 108, Mechanical Shock and Vibration, met in Tel Aviv in 1968.

ISO/TC 124, Industrial Process Control Instruments, is in the process of organization. It met in London in November 1968 to consider organizational and procedural matters. The United States was represented by G.F. Hohn, Richard Yahrmarkt, and J.W. Murdock. IFAC was represented by Akira Nomoto, Tokyo. The tentative Scope covers Graphical Symbols, Terminology, Dimensions, Scale Markings, Performance of Instruments and Methods of Test, and Interface Characteristics. USASI C 85 Chairman Donald H. Smith, Bell Telephone Laboratories and G.S. Axelby of Westinghouse Aerospace have offered to participate in terminology work.

NBS U.S. Department of Commerce,
National Bureau of Standards
Washington D.C. 20234

The present and anticipated rapid growth in the number of persons having access to computers from remote terminals has led the National Bureau of Standards Center for Computer Sciences and Technology to appraise the need for standardizing user procedures and data formats. John L. Little of the Computer Center has directed this work which includes a study by Rockford Research Institute Inc. Mr. Little and Calvin N. Mooers of Rockford conclude that the users dialogue with the computer system can take place with the use of a small number of stylized terms, facilitating standardization. User signals to gain access to the system, to delete, and stop operation, for example, should be universally recognized. The codes suggested by any standardizing committee will no doubt be unfamiliar to most users but standards should be selected and advanced now to avoid greater costs if this action is postponed.

NEMA National Electrical Manufacturers
Association
155 East 44th Street
New York, N.Y. 10017

The Components Committee of the Systems Group, Industrial Control and Systems Section, with the assistance of several representatives of leading encoder manufacturers, has developed more than 40 definitions of terms pertaining to shaft position encoders and the various types of codes used. With the exception of a half dozen definitions, which are being held for further consideration, these definitions have been approved as NEMA Standards, and will be published in the near future in a supplement to NEMA Standards Publication AS 1-1962: Industrial Automatic Systems. The Chairman of the Components Committee is Joseph R. Moser, Allen-Bradley Company; the Chairman of the Systems Group is A.P. DiVincenzo, Reliance Electric Company.

The first standard for Line-Voltage Electric Heat Room Thermostats has been developed by the Automatic Temperature Controls Section of NEMA. The new standard includes definitions, test procedures, electrical ratings, and construction details necessary to describe operations and performance of thermostats, as well as details for construction of a test box. Copies of the Standard, DC 15-1968 may be obtained from NEMA for $ 1.25 each.

NFPA National Fluid Power Association
POB 49
Thiensville, Wisconsin 53092

Recently published recommended standards are: Symbols for Marking Electrical Leads and Parts on Fluid Power Valves, T 3.5.68.2, Glossary of Terms for Fluidic Devices and Circuits,- T3.7.68.1, and Graphic Symbols for Fluidic Devices and Circuits, T3.7.68.2. Others in preparation cover methods of rating performance on such items as fluidic devices, hydraulic or pneumatic directional control valves, and electrohydraulic servovalves.

SAE Society of Automotive Engineers, Inc.
Two Pennsylvania Plaza
New York, N.Y. 10001

SAE Subcommittee A-2R, Relays, has accepted an assignment in the 1969 Military Relay Program to standardize test procedures for relays. E.U. Thomas, Grumman Aircraft Engineering Corporation, is Chairman of this project. Other SAE Committees with control activities are:

A - 4	Aircraft Instruments
S - 7	Flight Deck & Handling Qualities Standards
S - 7B	Airplane Control
S - 7M	Aircraft Handling Qualities & Control Characteristics
A - 2A	Protective and Control Devices
A - 2G	Generators and Voltage Regulators
A - 2P	Precision Control Motors
A - 2S	Electrical Synchros & Computing Resolvers
A - 6	Aerospace Fluid Power & Control
A - 6D	Servovalves
SC - 22	Guidance and Stabilization Components
AE - 2	Engine Temperature Sensing

SAMA Scientific Apparatus Makers Ass.
20 North Wacker Drive
Chicago, Illinois 60606

SAMA has established a Standardization Committee for Analytical Instruments. The work is being Chaired by William E. Vannah, Director of Research for the Foxboro Company. The scope of activity includes: 1) Atomic Absorption, 2) Ion-Selective Electrodes, 3) Gas Chromatography, 4) Gathering and collating of analytical instrument standards and recommended pratices published by professional societies and trade associations around the world. Initial activities are directed primarily at ion-selective electrode terminology.

SAMA Standard, RC 22-11-1966, Functional Diagramming of Instrument and Control Systems, Part 1, covers Analog Symbology. The Systems Engineering Committee is now working on Digital Symbology. The Committee Chairman is J.M. Kovacic of the Bailey Meter Company.

SCI Simulation Councils, Inc.
POB 2228
La Jolla, California 92037

The hybrid computer linkage systems draft referred to in the May 1968 Control Standards Report should be completed shortly. Work has begun on defining terms and methods of measurement for the patchable logic and mode control portions of analog computers. Work is also being done on definitions of typical benchmark problems for acceptance testing of analog computers. The new Chairman of these projects is A.J. Muceri of North American/Rockwell.

USASI United States of America Standards Institute
10 East 40th Street
New York, N.Y. 10016

C 33.41-1968, Electrically Actuated Transmitters (UL 632-1968) ... $ 1.00
Covers electrically actuated transmitters to be employed in ordinary indoor locations.

C 57.13-1968, Instrument Transformers, Requirements for ... $ 4.00
Applies to current and potential instrument transformers of types generally used in the measurement of electricity and the control of equipment associated with the generation, transmission, and distribution of alternating current.

Y 10.5-1968, Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering ... $ 3.00
Provides letter symbols in two categories: Symbols for physical quantities (quantity symbols) and symbols for the units in which these quantities are measured (unit symbols) Revision and redesignation of Z 10.5-1949 and Y 10.9-1953

B 88, Calibration of Instruments, requests that organizations that have developed standards in this area submit them for review and consideration for approval as USA Standards. The Committee is concerned with the calibration of measuring devices for flow, pressure, liquid level, temperature, mass, force, and density. James W. Murdock, Naval Ship Engineering Center, Philadelphia Division, Chairs this activity.

B 89, Dimensional Metrology, is preparing standards on the calibration and inspection methods for measuring geometric attributes. The subcommittees are currently working on standards in the areas of : length; angle; geometry; screw thread metrology; definitions and principles; and environment. Don MacFudgen is Chairman of B 89's subcommittee 5, definitions.

B 93, Fluid Power Systems and Components, under the joint sponsorship of NFPA and SAE, considered additional standards at the March, 1969 meeting in Akron, Ohio. John J. Pippenger is Chairman of B 93. A related standard is Y 32.10-1967, Graphic Symbols for Fluid Power Diagrams.

C 85, Terminology for Automatic Controls, has offered to cooperate with IEC/TC 65 and ISO/TC 124 in the development of Process Control Systems and Industrial Process Control Instruments respectively. Cooperation has also been extended to ISO/TC 97/SC 8 on Numerical Control Systems. C 85, under the sponsorship of the American Society of Mechanical Engineers, is Chaired by Donald H. Smith of the Bell Telephone Laboratories.

C 100, Ratio and Transfer Devices, under the chairmanship of J.C. Riley is preparing a list of terms and definitions which will be submitted for inclusion in the IEEE Dictionary. A working meeting was held during the Instrument Society of America Show in October 1968 at New York.

X 3.2, Code for Information Interchange, is seriously considering whether the 7-bit ISO information interchange code should be revised to an 8-bit system. This is based on the fact that "Today's computers are, for the most part, organized to handle 8 bits or multiples thereof".

VRCI Variable Resistive Components Institute
3525 Peterson Road
Chicago, Illinois 60645

VRCI has issued the following documents: 1) VRCI-P-100 Terms and Definitions for Wirewound and Non-wirewound Precision Potentiometers, 2) VRCI-P-200 Inspection and Test Procedures for Wirewound Precision Potentiometers.

VRCI has circulated a new proposal (VRCI-T-110) for an Industry Standard for Terms and Definitions for Trimming Potentiometers. In addition the VRCI Standards and Nomenclature Committee is working on a new standard (VRCI-T-210) for Incoming Test Procedures for Trimming Potentiometers.

The General Chairman of the Standards and Nomenclature Committee is William Thoele, Helipot Division, Deckman Instrument Company. The Co-Chairmen of the Trimmer Standards and Nomenclature Subcommittee are James Cunningham, Weston Instruments, Inc. and Ed. Tumbusch, Techno Components Corp.