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PRESS RELEASE

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## AUTOMATIC CONTROL TERMINOLOGY

IFAC's Terminology Committee  
tackles a universal problem

Terminology and the precise definition of the terms used in automatic control systems is of vital importance especially when the subject of control embraces so many different disciplines such as hydraulics, pneumatics and electronics. Added to this is the fact that control systems cover so many application fields, ranging from aerospace to the automation of water and irrigation systems. Finally, with the increasing international aspect of control it is essential that precise definitions and authoritative dictionaries of terms are available.

The International Federation of Automatic Control (IFAC) has been working through its Terminology Committee on both these aspects and the first fruits of this work are now being published in the Multilingual Dictionary of Automatic Control Terminology on which a report is given in IFAC Information Bulletin No.39.

On the subject of terminology, an international summary of the various standards related to the control field has been prepared by two members of the Terminology Committee under the direction of its Chairman, Dr. H.L. Mason (USA).

One member, Jaroslav K r i z e k , of the Institute for Information Theory and Automation of the Czechoslovak Academy of Sciences, has drawn together details of relevant control standards issued by bodies outside the United States. Standards issued within the United States by various bodies there that affect control engineers have been collated by R.H. K o h r , member of the American Automatic Control Council as part of the work of the AACC Terminology Committee. These two sections of IFAC's work on Terminology are given in the following report.

REPORT ON  
AUTOMATIK CONTROL TERMINOLOGY AROUND THE WORLD  
issued by the Terminology Committee of IFAC

Section A: Outside the United States

Compiled by J. K r i z e k , Czechoslovakia, May 1967.

I S O , I n t e r n a t i o n a l O r g a n i z a t i o n  
f o r S t a n d a r d i z a t i o n

Draft Recommendation No. 996, Alphanumeric Character Sets for Optical Recognition, as proposed by TC97, Computers and Information Processing, was submitted to all ISO Member Bodies for comment. Part I gives standard sizes and repertoire of character sets OCR-A and OCR-B, with illustrations; Parts II & III specify the nominal printed image of each character in these sets.

Draft Recommendation No. 1052, covering 6 & 7 Bit Coded Character Sets for Information Processing Interchange was submitted to ISO Member Bodies for comment. It is a revised text resulting from observations received from the International Telegraph and Telephone Consultative Committee and modifications by TC97, Computers and Information Processing.

C z e c h o s l o v a k i a :

Standard (CSN 01 3720) Symbols for measuring and control loop diagrams and Terminology of logical circuits have been prepared; both standards will be ready in 1967. A preliminary proposition of terms and symbols for a system of logical functions and blocks has been published in the Czechoslovak journal Automatizace, No. 3/1966.

D e n m a r k :

A terminology proposal has been worked out for IEC (International Electrotechnical Commission) by a Terminology Working Group within the Danish Automation Society. The Group is now working on a Danish vocabulary on automatic controlling and regulating systems, based on IEV 50(31). SAMS (Scandinavian Analog Computer Society) has worked out an English edition of an Analog Programming Handbook, the copies of which can be requested from FOA, Div.290, Stockholm 80, Sweden. A standing standardisation working group is active on terminology and symbols for analog and hybrid computation.

F i n l a n d :

The Finnish National Committee on Applications has considerably contributed to the Dictionary of automatic control, published by the firm Valmet Oy.

G r e e c e :

The National Committee on Terminology is still in the first stages of organization; its first report can be expected by the end of 1967.

H u n g a r y :

Since 1964 the Hungarian Office of Standards has been preparing a new frame of standards, consisting of four parts: 1 - Basic terms; 2- Control loop components; 3- Telemechanics; 4 - Terms of control theory.

Parts 1, 2 and 4 are expected to become valid in 1968. These standards will replace the tentative standard (1952) and the Multilingual Vocabulary of Automatic Control (published 1962 by Terra).

J a p a n :

A new committee has selected and is discussing terms which are to be the Japan Industrial Standard for computers. The Japan Society of Mechanical Engineers (JSME) has now no Terminology Committee.

U n i t e d K i n g d o m :

B.S. 1523, Glossary of Terms used in Automatic Controlling and Regulating Systems is being revised; it will cover all types of automatic control and will be published during 1967.

B.S. 3527, Glossary of Terms relating to Automatic Data Processing, though current, is being revised on the basis of the Vocabulary of Information Processing published by IFIP and ICC.

B.S. 1646, Graphical Symbols for Process Measurement and Control Functions has been used as the basis for a proposal of I.S.O. for the preparation of an international Recommendation. The second part of this Standard will be extended from basic to detailed symbols.

P.D. 5686, the Use of SI Units, a popular publication on the metric system, expresses the support of U.K. Government on adoption of this system by British industry.

U n i o n o f S o c i a l i s t S o v i e t  
R e p u b l i c s :

A final wording of a terminology containing basic conceptions of automatics has been published as: General Conception of Automatics - General Notions. Actions and Signals. Kinds of Automatic Systems. Kinds of Function Blocs - Terminology. Volume 71. Publisher "Nauka" Moscow 1966.

A final wording of terminology on computing techniques has been published as: Computing Technique - General Conception. Digital Computers - Terminology. Volume 72. Publisher "Nauka", Moscow, 1966

Section B: United States Automatic Control Terminology

Prepared by R.H. Kohr, member of American Automatic Control Council Terminology Committee, April 1967.

This 1966 report covers publications and plans of professional societies and technical associations writing standards of interest to the control systems engineer. Thanks for help in the preparation of this report are due to other members of the AACC Terminology Committee W.I. Caldwell, E.J. Mastascusa and F.M. Sullivan.

ASME American Society of Mechanical Engineers,  
345 East 47th Street, New York, N.Y. 10017

The Automatic Control Division of ASME has formed a Technical Panel, chaired by R.H. Kohr, to study control terminology and propose revisions in USASI C85.1 - Terminology for Automatic Control.

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

The following EIA standards were issued in 1966:

RS-245-A Letter Symbols and Abbreviations for Semiconductor Devices.

RS-326 Interchangeable Perforated Tape Fixed Block Format for Positioning and Straight Cut Numerically Controlled Machines

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

The EJC is in the final stage of a co-operative project with the Department of Defense (ONR), Project Lex to produce a thesaurus of scientific and engineering terms intended to serve the needs of both the DOD and the Engineering community in general. June publication is expected. In addition EJC is updating and augmenting its Thesaurus of Engineering Terms originally published in 1964.

FCI Fluid Controls Institute, Inc.,  
P.O. Box 1485, Pompano Beach, Florida 33061.

Voluntary Standards for Determining Industrial Steam Trap Capacity Rating, FCI standard 65-3, includes a brief description of the operating principles of various types of traps and the

temperature depression below saturation upon which the capacities of each are based.

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

In 1966 the IEEE G-AC standards liaison committee, chaired by G.S. Axelby, continued to define and revise A Glossary of Terms Used for Modern Control Technology. It is planned to incorporate these terms, along with others from the ASA Standard Terminology for Automatic Control, ASA C85.1 in a forthcoming IEEE Technical Dictionary.

N A R M National Association of Relay Manufacturers,  
P.O. Box 7765, Phoenix, Arizona, 85011.

The Engineer's Relay Handbook, sponsored by NARM, has been published. It contains a comprehensive list of definitions of relay terms, symbols, and contact diagrams. The chairman of the board of Editors was H.D. Steinback.

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

Several Technical Committees of the Systems Group of NEMA, under C.W. Ludvigsen, are developing standards of digital position transducers, steadystate performance of feedback control systems, SCR adjustable speed drives, and printed circuit assemblies.

N F P A National Fluid Power Association,  
P.O. Box 49, Thiensville, Wisconsin, 53092.

The following NFPA standards have been published in recent months or will be published soon:

T3.17.1 Glossary of Terms for Electrohydraulic Servo-Valves, Chairman D.R. Sweeney, contains basic definitions of electrohydraulic servovalves, their parts, functions, electrical characteristics, and performance characteristics.

T3.10.3 Terminology for Hydraulic Filtration for Fluid Power Systems, Chairman J.A. Farris, contains definitions of hydraulic filters, parts, and functions.

T3.10.4 Graphic Symbols for Hydraulic Fluid Power Filters, Chairman J.A. Farris, presents new graphic symbols for filters and filter elements used in hydraulic fluid power systems.

SAE Society of Automotive Engineers, Inc.,  
485 Lexington Avenue, New York, N.Y. 10017.

The SAE Construction and Industrial Machinery Technical Committee's sub-committee XIX, Remote and Automatic Control, chaired by W.R. Master, has published Remote and Automatic Control Systems for Construction and Industrial Machinery, SAE J956. This recommended practice gives a list of common terms relating to industrial control systems, including newer areas such as ultrasonic techniques and laser beams.

SAMA Scientific Apparatus Makers' Association,  
Recorder-Controller Section, 370 Lexington Avenue,  
New York, N.Y. 10017.

Supplement I to SAMA standard RC20-11-64 Measurement and Control Terminology, prepared by a committee, chaired by F.H. Cary, has been issued. This standard with its supplement applies to industrial process control and related fields.

SCI Simulation Councils, Inc.,  
P.O. Box 2228 LaJolla, California, 92037.

The SCI Standards Committee, headed by F.C. Rieman, is at work revising definitions of terms and methods of measurement, issued in 1963. Under consideration are A/D and D/A converters, as well as the linkage systems used with hybrid computers.

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

USA Standard C85.1a-1966 Supplement to Terminology for Automatic Control has been approved. It contains new definitions and an index of symbolic notation used in the parent document C85.1. This supplement was prepared by Sectional Committee C85, D.H. Smith, Chairman.