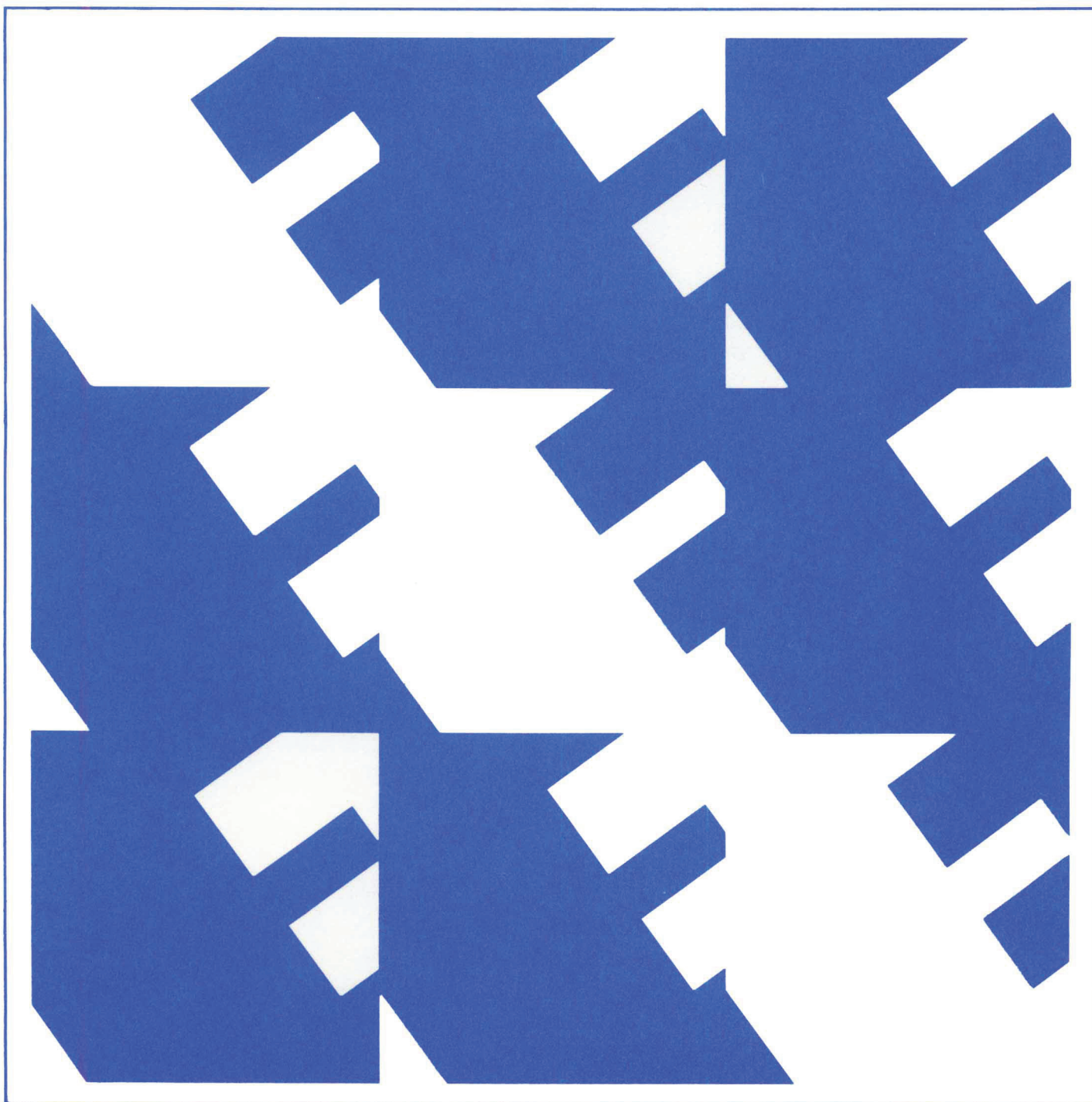


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IEEE Standard Real-Time BASIC for CAMAC

IEEE Std 726-1979



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IEEE Standard Real-Time BASIC for CAMAC*

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Instruments and Detectors Committee of the
IEEE Nuclear and Plasma Sciences Society

*Computer Automated Measurement and Control

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Foreword

(This Foreword is not a part of IEEE Std 726-1979, Standard Real-Time Basic for CAMAC.)

This standard deals with software for the CAMAC modular instrumentation and interface system of ANSI/IEEE Std 583-1975, Modular Instrumentation and Digital Interface System (CAMAC) (also Report EUR 4100e of the Commission of the European Communities). The report on which this document is based, ERDA Report TID-26619, was prepared by the NIM Committee* of the United States Energy Research and Development Administration (now the Department of Energy) and the ESONE Committee** of European Laboratories. The corresponding ESONE document is ESONE/RTB/02.

IEEE Std 726-1979 differs from the corresponding ESONE document ESONE/RTB/02 and US Energy Research and Development Administration document TID-26619 in the following respects:

- (1) The keyword **RECEIVE** is used in place of the keyword **READ** for process input.
- (2) The section on interrupt handling is not included. In particular, reference to the **WHEN** statement to link an event-name to an interrupt service routine has been deleted.
- (3) The capability of handling errors at run-time has been deleted.

There has been substantial input to this document from members of TC2 of the Purdue-Europe Workshop¹ and the standard is complementary to American National Standards Institute (ANSI) and Purdue-Europe¹ work on BASIC. ANSI and Purdue-Europe developments will be followed closely to assure continued compatibility.

This document recommends an extension to BASIC in which CAMAC is introduced as part of a general real-time scheme. The language has been extended by the introduction of real-time operations and CAMAC entities in the form of process variables. The only major change to the syntax is the introduction of declaration statements to assign attributes to process variables.

The extension is in keeping with the general philosophy of BASIC and reflects current trends in real-time language and operating system design.

This standard was reviewed and balloted by the Nuclear Instruments and Detectors Committee of the IEEE Nuclear and Plasma Sciences Society. Because of the broad applicability of the CAMAC system, this document was submitted for review to liaison representatives of numerous societies and committees including the Communications Society, Computer Society, Industry Applications Society, Industrial Electronics and Control Instrumentation Group, Instrumentation and Measurement Group, and the Power Generation and Nuclear Power Engineering Committees of the Power Engineering Society.

At the time of approval of this standard, the membership of the Nuclear Instruments and Detectors Committee of the IEEE Nuclear and Plasma Sciences Society was as follows:

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¹The Purdue-Europe Workshop is the European branch of the International Purdue Workshop.

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³European Standards on Nuclear Electronics Committee.

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CAMAC Specifications and Reports

Title	IEEE, ANSI Std No	IEC No	DOE No	EURATOM (EUR) or ESONE No
Modular Instrumentation and Digital Interface System (CAMAC)	ANSI/IEEE Std 583-1975*	516	†	EUR 4100e
Serial Highway Interface System (CAMAC)	ANSI/IEEE Std 595-1976*	640	†	EUR 6100e
Parallel Highway Interface System (CAMAC)	ANSI/IEEE Std 596-1976*	552	†	EUR 4600e
Block Transfers in CAMAC Systems	ANSI/IEEE Std 683-1976	§	†	EUR 4100 suppl
CAMAC Instrumentation and Interface Standards‡	SH06437‡ (Library of Congress No 76-39660)	—	—	—
Amplitude Analogue Signals within a 50Ω System	—	—	TID-26614	EUR 5100e
The Definition of IML A Language for use in CAMAC Systems	—	—	TID-26615	ESONE/IML/01
Multiple Controllers in a CAMAC Crate	ANSI/IEEE Std 675-1979	—	DOE/EV-0007	EUR 6500e
CAMAC Tutorial Articles	—	—	TID-26618	—
Real-Time BASIC for CAMAC	IEEE Std 726-1979**	—	TID-26619	ESONE/RTB/02
Recommendations for CAMAC Serial Highway Drivers and LAM Graders for the SCC-L2	—	—	DOE/EV-0006	ESONE/SD/02
Supplement to CAMAC Standards and Reports	IEEE Std 583A-1979	—	DOE/EV-0009	—

*Includes supplementary information.

†Superseded by corresponding IEEE Standard listed.

‡This is a hard cover book that contains IEEE Stds 583-1975, 595-1976, 596-1976, and 683-1976, plus introductory material.

§ In preparation.

**Contains some differences with respect to the two identical documents TID-26619 and ESONE/RTB/02.

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IEEE	IEEE Service Center, 445 Hoes Lane, Piscataway, New Jersey 08854, U.S.A.
IEC	International Electrotechnical Commission, 1, rue de Varembe, CH-1211 Geneva 20, Switzerland.
DOE and TID Reports	National Bureau of Standards, Washington, D.C. 20234, U.S.A., Attn: L. Costrell.
EURATOM	Office of Official Publications of the European Communities, P.O. Box 1003, Luxembourg.
ESONE	Commission of the European Communities, CGR-BCM, B-2440 GEEL, Belgium, Attn: ESONE Secretariat, H. Meyer.