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Contents

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liason with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 15145 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 22, *Programming languages, their environments and system software interfaces*.

Annexes A to F of this International Standard are for information only.

Introduction

The purpose of this International Standard is to promote the portability of Forth programs for use on a wide variety of computing systems, to facilitate the communication of programs, programming techniques, and ideas among Forth programmers, and to serve as a basis for the future evolution of the Forth language.

Forth is a language for direct communication between human beings and machines. Using natural-language diction and machine-oriented syntax, Forth provides an economical, productive environment for interactive compilation and execution of programs. Forth also provides low-level access to computer-controlled hardware, and the ability to extend the language itself. This extensibility allows the language to be quickly expanded and adapted to special needs and different hardware systems.

Forth was invented by Mr. Charles Moore to increase programmer productivity without sacrificing machine efficiency. Forth is a layered environment containing the elements of a computer language as well as those of an operating system and a machine monitor. This extensible, layered environment provides for highly interactive program development and testing.

In the interests of transportability of application software written in Forth, standardization efforts began in the mid-1970s by an international group of users and implementors who adopted the name "Forth Standards Team". This effort resulted in the Forth-77 Standard. As the language continued to evolve, an interim Forth-78 Standard was published by the Forth Standards Team. Following Forth Standards Team meetings in 1979, the Forth-79 Standard was published in 1980. Major changes were made by the Forth Standards Team in the Forth-83 Standard, which was published in 1983.

The first meeting of the Technical Committee on Forth Programming Systems was convened by the Organizing Committee of the X3J14 Forth Technical Committee on August 3, 1987, and has met subsequently on November 11-12, 1987, February 10-12, 1988, May 25-28, 1988, August 10-13, 1988, October 26-29, 1988, January 25-28, 1989, May 3-6, 1989, July 26-29, 1989, October 25-28, 1989, January 24-27, 1990, May 22-26, 1990, August 21-25, 1990, November 6-10,1990, January 29-February 2, 1991, May 3-4, 1991, June 16-19, 1991, July 30-August 3, 1991, March 17-21, 1992, October 13-17, 1992, January 26-30, 1993, June 28-30, 1993, and June 21, 1994.

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Requests for interpretation, suggestions for improvement or addenda, or defect reports are welcome. They should be sent to the X3 Secretariat, Computer and Business Equipment Manufacturers Association, 1250 Eye Street, NW, Suite 200, Washington, DC 20005.