

Berkeley Pascal User's Manual

Version 3.0 – July 1983

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ABSTRACT

Berkeley Pascal is designed for interactive instructional use and runs on the PDP/11 and VAX/11 computers. Interpretive code is produced, providing fast translation at the expense of slower execution speed. There is also a fully compatible compiler for the VAX/11. An execution profiler and Wirth's cross reference program are also available with the system.

The system supports full Pascal. The language accepted is 'standard' Pascal, and a small number of extensions. There is an option to suppress the extensions. The extensions include a separate compilation facility and the ability to link to object modules produced from other source languages.

The *User's Manual* gives a list of sources relating to the UNIX® system, the Pascal language, and the Berkeley Pascal system. Basic usage examples are provided for the Pascal components *pi*, *px*, *pix*, *pc*, and

Errors commonly encountered in these programs are discussed. Details are given of special considerations due to the interactive implementation. A number of examples are provided including many dealing with input/output. An appendix supplements Wirth's *Pascal Report* to form the full definition of the Berkeley implementation of the language.

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Introduction

The Berkeley Pascal *User's Manual* consists of five major sections and an appendix. In section 1 we give sources of information about UNIX, about the programming language Pascal, and about the Berkeley implementation of the language. Section 2 introduces the Berkeley implementation and provides a number of tutorial examples. Section 3 discusses the error diagnostics produced by the translators *pc* and *pi*, and the runtime interpreter *px*. Section 4 describes input/output with special attention given to features of the interactive implementation and to features unique to UNIX. Section 5 gives details on the components of the system and explanation of all relevant options. The *User's Manual* concludes with an appendix to Wirth's *Pascal Report* with which it forms a precise definition of the implementation.

History of the implementation

The first Berkeley system was written by Ken Thompson in early 1976. The main features of the present system were implemented by Charles Haley and William Joy during the latter half of 1976. Earlier versions of this system have been in use since January, 1977.

The system was moved to the VAX-11 by Peter Kessler and Kirk McKusick with the porting of the interpreter in the spring of 1979, and the implementation of the compiler in the summer of 1980.

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