UVAPC/386 Fact Sheet

WHAT

uvapc/386 is an ISO standard Pascal compiler developed by the University of Virginia's Academic Computing Center and the Department of Computer Science. *uvapc/386* passes the ISO standard Pascal validation suite. The compiler is written in C and has been ported to several other Unix platforms. *uvapc/386* can generate the necessary information so that the System V Unix debugger, *sdb*, can be used.

SYSTEM REQUIREMENTS

Processor

Intel 80386 and 80387 or compatible.

Operating System

System V/386 Release 3.2 Version 2.1. We believe it should run under SCO Unix and Interactive Unix, but it has not been tested under these operating systems.

Software

Requires or uses the following components:

- /bin/ld — the loader.
- /bin/as — the assembler.
- LIBDIR/crt1.o — the C startup routine
- LIBDIR/crtn.o—the C endup routine
- LIBDIR/mcrt1.o — the profiled C startup routine.
- LIBDIR/libc.a — the standard C library.
- LIBDIR/libm.a — the math library.

DOCUMENTATION

A man page as well as a 50 page document describing the internals of *uvapc* are included in the distribution.

DISTRIBUTION MEDIA

One 5-1/4 inch 1.2 MB floppy or one 3-1/2 inch 1.4 MB floppy, *cpio* format.

PURCHASE AND LICENSING INFORMATION

A source site license agreement must be signed. To obtain the license form, please contact Professor Jack Davidson at the address below. For educational institutions, a source site license costs $100.00. Commercial source site licenses are $1000.00. Payment must accompany the executed site license, and it must be in the form of a check made payable to the University of Virginia. Purchase orders and other forms of payment are *not* acceptable.

BENCHMARK INFORMATION

The following benchmark information was gathered on an SYP301, which is a 16MHz 80386 with an 80387 floating-point coprocessor. The machine has 4 megabytes of memory. The C programs were compiled with the command ‘‘cc -o program program.c’’, while the Pascal programs were compiled with the command ‘‘uvapc -t -o program program.p’’. The -t option turns off the Pascal run-time checking. All times are reported in seconds and are the average of three compiles or runs.

Benchmark Information

	cc		uvapc	
Program	compile	run	compile	run
ackerman	2.6	1.6	3.2	2.3
arraymerge	3.1	25.3	4.1	25.7
bubblesort	3.0	17.7	3.7	20.4
puzzle	6.3	5.3	6.4	6.4
quicksort	4.8	1.0	4.9	1.3
shellsort	3.0	1.5	3.8	2.1
sieve	2.3	1.6	3.1	1.7
matmult	3.1	6.6	3.8	8.1

LANGUAGE CONFORMANCE

The following table shows the behavior of the compiler with respect to the British Standards Institute Pascal Validation Suite. Failure of the two tests in the conformance sub-suite is normal behavior.

Statistical Summary of the Validation

Class	Results(Pass/Fail)	Total
Conformance†	226/2	228
Deviance	283/0	283
Pretests	87/0	87
Error Handling	54/33	87
Implementation Defined	14/0	14
Implementation Dependent	0/14	14
Implementation Defined Behavior	53/0	14
Extension	4/0	4

†Failure of two tests is normal.

CONTACT INFORMATION

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