Whitesmiths, Ltd.

C INTERFACE MANUAL FOR 8086

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The C language was developed at Bell Laboratories by Dennis Ritchie; Whitesmiths, Ltd. has endeavored to remain as faithful as possible to his language specification. The external specifications of the Idris operating system, and of most of its utilities, are based heavily on those of UNIX, which was also developed at Bell Laboratories by Dennis Ritchie and Ken Thompson. Whitesmiths, Ltd. gratefully acknowledges the parentage of many of the concepts we have commercialized, and we thank Western Electric Co. for waiving patent licensing fees for use of the UNIX protection mechanism.

The successful implementation of Whitesmiths' compilers, operating systems, and utilities, however, is entirely the work of our programming staff and allied consultants.

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C INTERFACE MANUAL FOR 8086

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SCOPE

This manual describes the 8086 dependent aspects of the C programming environment provided by Whitesmiths, Ltd. In addition, it documents all of the utilities necessary for building new programs. Section I introduces the conventions and describes the format used by the Idris assembler. Section II succinctly describes the programming utilities of Idris, which also serve as cross support utilities for other host machines. Each subsection of Section III describes the library functions that interface the portable C library to Idris, to CP/M-86 or PCDOS/MSDOS, or to the Intel UDI; and Section IV describes the runtime routines called upon by code produced by the 8086 C compiler.

Information on the C language and the portable library may be found in the C Programmers' Manual, while information peculiar to other machines supported by Whitesmiths, Ltd. is given in other C Interface Manuals.

THIS MANUAL IS PROVIDED WITH SEVERAL SOFTWARE PACKAGES, SOME OF WHICH USE ONLY A SUBSET OF THE FACILITIES DOCUMENTED. THE PRESENCE OF A MANUAL PAGE HERE DOES NOT IMPLY THAT THE CORRESPONDING SOFTWARE IS ALSO SUPPLIED.

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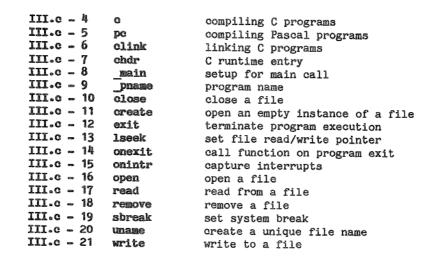
III.a - 16	onintr	capture interrupts
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III.c - 1	Interface	to UDI systems
TTT.0 - 3	Conventions	UDT system subroutine



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	cs	jump far or read code segment register
IA - 3	ds	load or read data segment register
IV - 4	es	load or read extra segment register
IV ~ 5	in	input byte from port
IV - 6	inw	input word from port
IV - 7	movs	move memory to memory
IV - 8	out	output byte to port
IV - 9	outw	output word to port
IV - 10	88	load or read stack segment register
IV - 11	c_cfcc	copy 8087 condition code
IV - 12	e_count	counter for profiler
IV - 13	c_dadd	add double into double
IV - 14	c demp	compare two doubles
IV - 15	c ddiv	divide double into double
IV - 16	c dmul	multiply double into double
IV - 17	c daub	subtract double from double
IV - 18	c_dtf	convert double to float
IV - 19	c dtl	convert double to long
IV - 20	c_fac	the floating accumulators
IV - 21	c_fret	return from a far C function
IV - 22	c ftd	convert float to double
IV - 23	c_iax	jump indirect on ax
IV - 24	c lemp	compare two signed longs
IV - 25	c ldiv	divide signed long by long
IV - 26	c_llsh	shift long left by count
IV - 27	c lmod	remainder signed long by long
IV - 28	c laul	multiply long by long
IV - 29	c_lrsh	shift signed long right by count

IA - 30 IV - 30 IV - 31 IV - 32 IV - 33 IV - 34 IV - 35 IV - 37 IV - 38 IV - 39 IV - 40 IV - 41 IV - 42 c_ltd convert signed long to double c_repk repack a double number c_ret return from a C function c rets return from a C function, restoring no registers c_sav save register on entering a C function c_savs save register on entering a C function c_switch perform C switch statement c_uldiv divide unsigned long by long c_ulmod remainder unsigned long by long c_ulrsh shift unsigned long right by count convert unsigned long to double c_ultd c_unpk unpack a double number