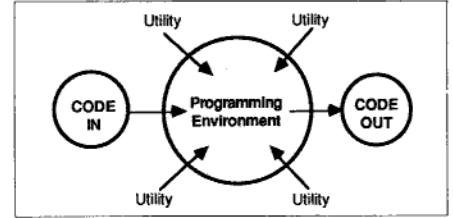
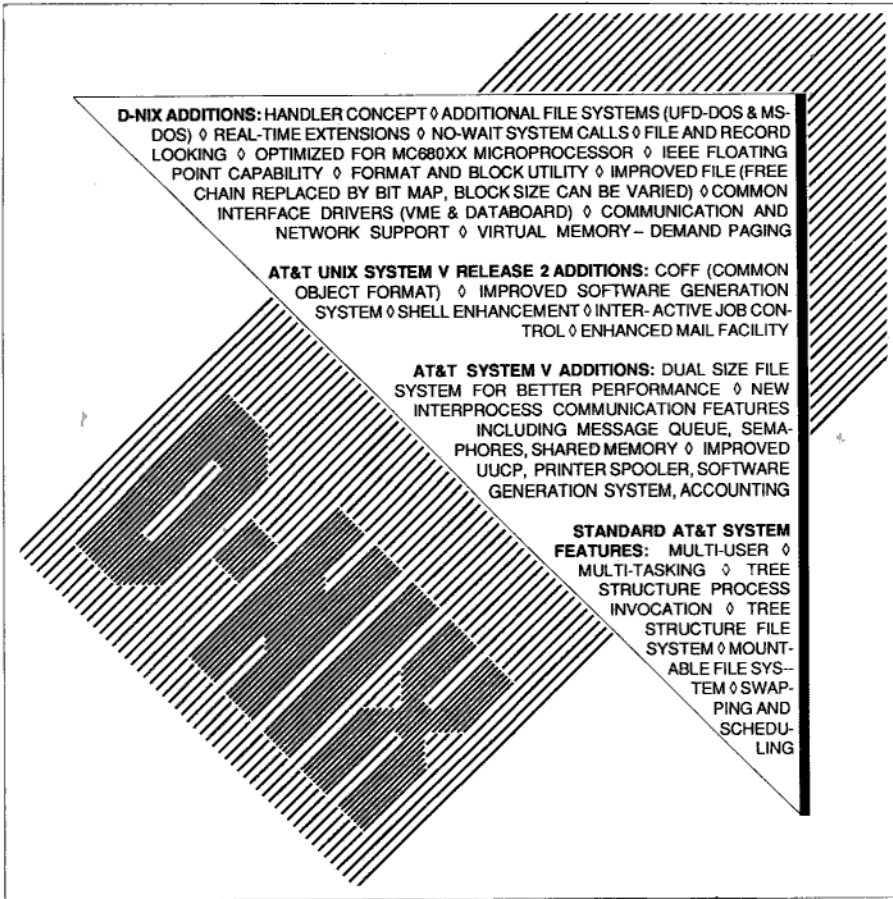
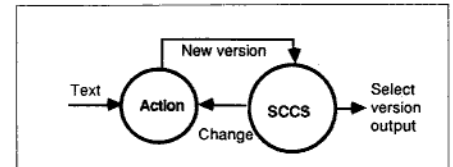


AT&T System V, Version 2 Development Package

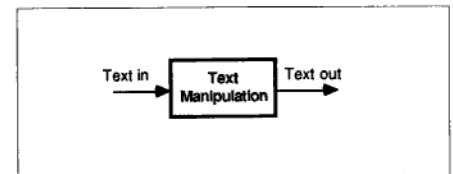


make, help reduce actual programming time. The *lint* utility identifies parts of a program that deviate from standard programming techniques. *prof* profiles an application to show where a program is least efficient, and *make* automates compilation when developing a modular software system. When modifying a program, *make* reduces both programmer's effort as well as the processing load on a system by examining the overall source and automatically rebuilding and relinking only those parts that are affected by the modification. The advantages of *make* are even greater in large-scale software projects where numerous programmers are involved in its development. The standard directories *libc* and *libm* are provided. The package also include over 100 useful utilities making software development much easier.



Source Code Control System

SCCS is an effective tool for managing the coding and maintenance of software development projects. It enforces revision check by archiving, version numbering and time stamping all software and documentation changes. Any version of the software or documentation can be automatically retrieved.



Editors

The software package includes both interactive screen (*vi*) and line-oriented (*ed, ex*) editors as well as a variety of batch-oriented tools (*grep, sed, sort...*) for sophisticated text manipulation.

The AT&T System V version 2 Development Package is running under the System V compatible D-NIX system on the complete range of DS90 computers from DataIndustrier DIAB AB. The package includes all basic and advanced utilities, communication and development programs as well as a documenter's workbench which is a set of utilities dedicated to sophisticated text processing.

Shell command interpreter

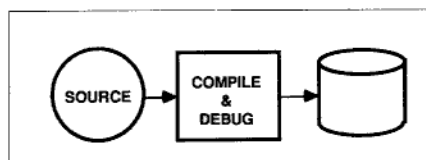
Two command language interpreters, the standard Bourne shell and the Berkeley C shell are provided in the system. The shell is an interactive command interpreter that processes commands typed in by the user. Commands are simply executable files that contains either compiled programs or shellscripts written in the native shell programming language. The user can add new commands simply by writing new programs or shell scripts.

Basic capabilities include:

- Executing a program as a command
- Passing the output of one program to another
- Flow control statement (if-then-else and do-while)

- Announce mail arrival
- Renaming of commands
- Set default parameters

User enter the shell commands to read files, redirect input and output and invoke processes that communicate through software channels or 'pipes'.

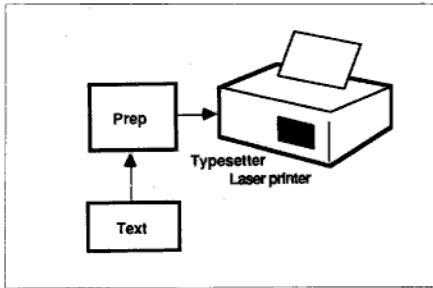


Compilers and debuggers

The software package provides C (*pcc*) language compiler, an assembler (*as*), and a powerful symbolic debugger (*adb*). The generated object code is in COFF format, which allows for object compatibility among families of microprocessors.

Program development facilities

Powerful utilities such as *lint*, *prof*, and



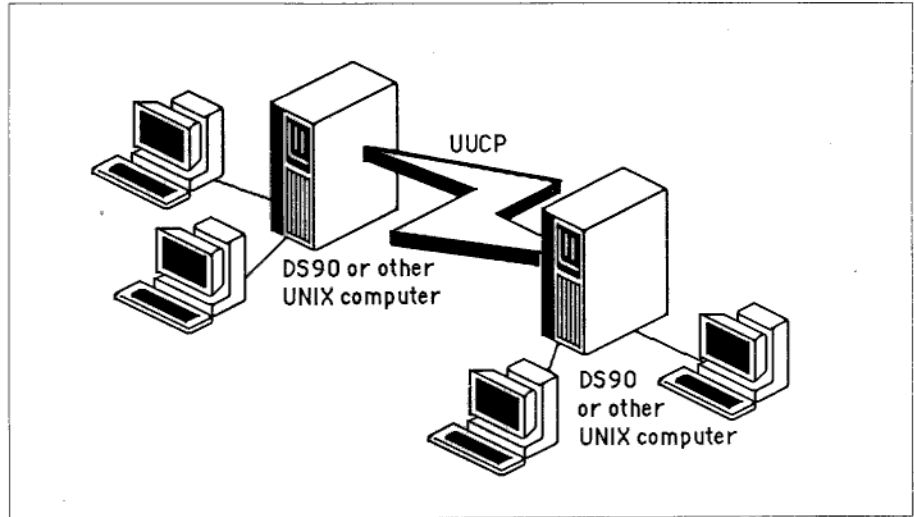
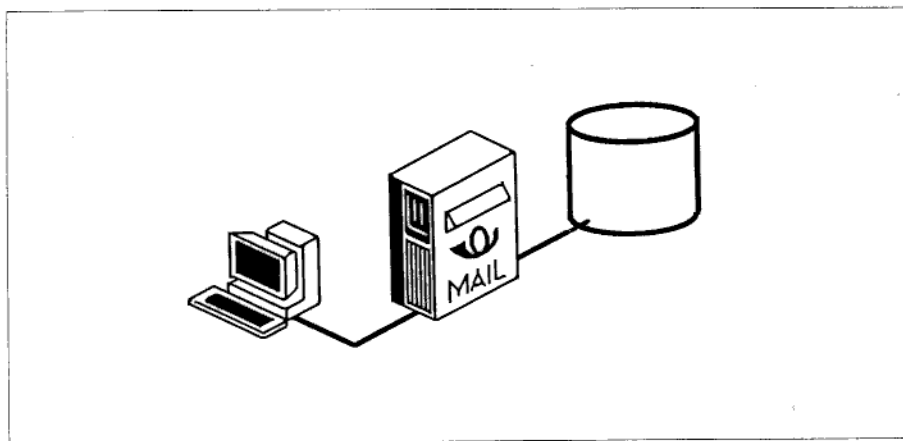
Documenter's workbench

Provides a variety of sophisticated text processing tools that transform text created by the editors into formatted output suitable for printing or photo typesetting. This sophisticated text processing package includes:

- Text processing programs *nroff* and *troff*
- Formatting macros that produce lists, headers, footers, automatic pagination, footnotes, level heading and table of contents.
- Line drawing macros for illustrations
- Mathematical typesetting macros

Mail

The software package includes electronic mail facilities for sending messages and documents to other local or networked users. On system running TCP/IP over the Ethernet extension, the mail function is extended over the network.

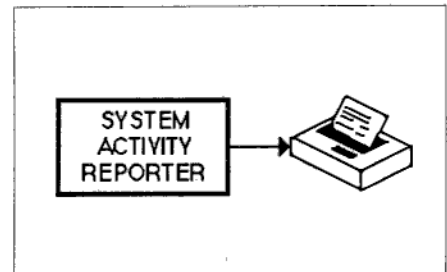


System activity reporter

This tool provides automatic measurement and reporting of system-wide activities to aid in fine-tuning the system

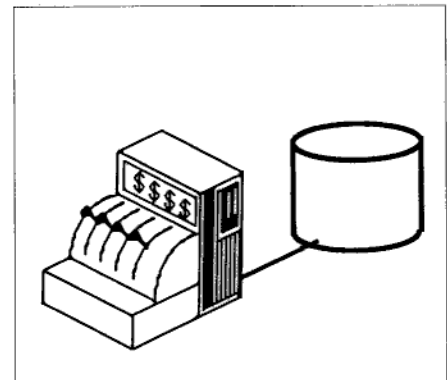
Accounting utilities

This set of tools optionally monitors, reports and allocates fees for prime and non-prime time system resource usage.



Remote UNIX communication

Commands such as *cu* and *uucp* allows D-NIX users to log onto or/and transfer files to other systems running UNIX software. Connection can be made either through RS-232C or over an Ethernet or D-NET network.



Commands

The following pages covers a list of the programs included in the software package. The package also includes different types of libraries containing all system call files, etc. The number of programs and files can vary between different releases of the software.

300, 300s handles special functions of Dasi 300/300s terminals
4014 paginator for Tektronix 4014 terminal
450 handles special functions of Dasi 450 terminal
accept rejects, allows/prevents LP request
acctcms provides a command summary from accounting records kept on process execution
acctcomm searches and prints process accounting

acctcon1 accounting for connect time
acctcon2 accounting for connect time
acctdisk reads and converts accounting records
acctdusg computes disk resource consumption
acctmerg merges and adds total accounting file
accton turns process accounting off
acctprc1 process accounting
acctprc2 process accounting

acctwtmp overview of accounting
adb general purpose debugger
admin creates and administrates SCCS files
ar archive and library maintainer
arcv converts archive files
arithmetic provides drills in number facts
as assembler
asa interprets ASA carriage control characters
at executes commands at a later time

awk	pattern scanning and processing language	date	*prints and sets date	graph	draws a graph from supplied pairs of numbers
back	a game	dc	desk calculator	greek	a filter that reinterprets the extended characters set for a terminal
banner	creates printer banner	dd	*converts and copies file	grep	searches a file for a regular expression
basename	*strips filename affixes	delta	makes a delta to an SCCS file	grpck	system maintenance command
dbasic	*#D-BASIC V interpreter	deroff	removes <i>nroff/troff, tbl</i> and <i>eqn</i> constructs	hangman	a game
batch	executes command at a later time	devnm	identifies the special file associated with the mounted file system	head	gives first few lines of a stream
bc	interactive processor providing arbitrary-precision arithmetic	df	*reports number of free disk block	help	finds information to explain the use of commands
bdblk	bad block utility	diff	differential file comparator	hp	handles special functions of HP 2640 and 2621
bdiff	big difference allows processing of files too large for <i>diff</i>	diff3	compares 3 versions of a file, noting differences	hpio	HP 2645A terminal archiver
bfs	big file scanner acts like <i>ed</i>	diffmk	compares two versions of a file and creates a third that includes commands for <i>nroff/troff</i>	hyphen	finds hyphenated words
bj	a game	dircmp	compares two directories	id	print user and group IDs and names
bootpar	*#sets boot parameters	dirname	*#print path name	init	processes control initialization
brc	system initialization shell script	disable	disables spool/printer	install	installs a file
bs	compiler/interpreter for modest size programs	disusg	generates disk accounting data by user ID	isamchk	*checks isam file
cal	prints a calendar	dodisk	invoked by <i>cron</i> to perform disk accounting	isamin	*init isam file
calendar	reminder service	du	*summarizes disk usage	ipcrm	*removes: message queue, semaphore set or shared memory id
cancel	sends/cancels request to an LP	dump	dumps selected parts of an object file	ipcs	*reports inter-process communication status
cat	*concatenates and prints files	echo	*echoes arguments	join	joins files according to a given relation
cb	c-program beautifier	ed	text editor	kermit	*file transfer protocol
cc	c compiler	edit	text editor	kill	*terminates a process
cd	changes working directory	egrep	searches files for full regular expressions as given	killall	kills all active processes
cdc	changes delta commentary of an SCCS file	enable	enables/disables LP printers	l	*content of a directory
chargefee	charges a fee for an account to its associated login name	env	modifies current environment according to arguments	labelit	*puts/displays volume label
checkall	faster file system checking procedure	eqn	formats mathematical text for <i>troff</i>	lastlogin	accounting utility
checkcw	verifies constant width text formatted by <i>cw</i> for <i>troff</i>	errdead	extracts error records from dump	ld	link editor
checkeq	verifies mathematical text formatted by <i>eqn</i> and <i>nqn</i> for <i>nroff</i> and <i>troff</i>	errdaemon	*error-logging daemon processes data collected by <i>errdaemon</i>	lex	generates programs to be used in lexical analysis
chess	a game	errprpt	terminates the error logging daemon	line	read one line
chroot	changes the root directory for a command	errstop	text editor	link	executes link system call
cflow	generates C flow graph	ex	text editor	lint	a C program checker for likely bugs
chmod	*changes mode	expr	*evaluates arguments as an expression	lin	*makes a link to a file
chgrp	*#changes group	factor	factored a number	login	*sign on to system
chown	*changes owner or group	false	*#provides truth values	logname	gets login name
ckpacct	periodically checks size of the accounting file	fgrep	searches a file for a fixed string	lorder	finds ordering relation for an object library
clear	clears terminal screen	file	determines file type	lp	sends&cancels request to an LP printer
clri	clears i-node	finc	fast incremental backup	lpadmin	configures the LP spooling system
cmp	*compares two files	find	*finds files	lpd	*printer spooler
col	filters reverse line-feeds	finger	user info lookup program	lpr	*line printer spooler
comb	combines SCCS deltas	fish	a game	lpsched	starts/stops LP request scheduler
comm	selects or rejects lines common to two sorted files	format	*formats disks and diskettes	lpstat	prints LP status
copy	*#groups of files copy	fortune	a game	ls	*lists contents of directory
cpio	*file archives in and out copy	frec	recovers files from a backup tape	m4	macro processor intended as a front-end for C
cp	*file copy, link or remove	fsck	*file check and repair	mail	sends or reads mail
cpp	UNIX c preprocessor	fscl	*extended file check	mailx	interactive message processing system
cpset	installs object files in binary directories	fsdb	file system debugger	make	maintains update and regenerates groups of programs
craps	a game	fsplit	splits <i>f77, ratfor</i> , or <i>eff</i> files	makekey	generates encryption key
cron	clock daemon	fuser	identifies processes using a file or file structure	man	prints user's manual
crontab	user <i>crontab</i> file	fwtmp	converts binary records of the type found in <i>wtmp</i>	maze	a game
crypt	encrypts/decrypts according to key	ged	interactive graphics editor	mdbasic	*D-BASIC V interpreter with MIMER statements
csch	the c-shell	get	gets a version of an SCCS file	memdiag	*memory diagnostics
csplit	splits the context of a file	getopt	breaks up a command line options for easy parsing by shell	memtest	*memory test
ctags	makes a tag file for <i>ex</i> and <i>vi</i>	getty	sets terminal parameters	mesg	permits or denies message via write
ctrace	C program debugger			mkcfig	*configurates a system
cu	*calls another system			mkdir	*makes a directory
cut	cuts out selected fields of each line of a file			mkfs	*constructs a file system
cxref	generates C program cross reference				

mknod	*builds special file	regcmp	compiles a regular expression and saves it in a file	test	*tests a file
mkuser	*makes a user			tic	terminfo compiler
mm	types out document using <i>nroff</i> and <i>mm</i> text formatting macro package	reject	allows/prevents LP requests	time	*times the execution of a command
		reversi	a game	timex	same as <i>time</i>
mmt	typesets documents via <i>troff</i>	rjestat	RJE status report	toc	graphical table of contents routines
mmlint	document capability checker	rm	*removes files or directories	touch	*updates the modifications of a file
mntchk	*extended mount	rmail	restricted mail	tplot	translates plotting instructions
moo	a game	rmdel	removes a delta from an SCCS file	tput	query terminfo database
monacct	invoked once each month or each accounting period	rmdir	*removes directory	tr	*translates characters
mount	*mounts and dismounts file system	rmuser	*removes user	trenter	enters a trouble report
mv	*moves or changes file name	rsh	standard/restricted shell	troff	formats text for photo typesetter
mvdir	moves a directory	runacct	mainshell procedure to run daily accounting	true	*provides truth values
ncheck	generates names from i-numbers	sa1	system activity report	tsort	topological sort
neqn	formats mathematical text for <i>nroff</i>	sa2	system activity report package	ttt	a game
newform	changes the format of a text file	sact	prints current SCCS file editing activity	tty	*gets the name of the terminal
newgrp	log in to a new group	sadc	system activity report package	turnacct	turns accounting on
news	prints news items	sadp	disk access profiler	umask	sets the file-creation mask
nice	*runs a command with low scheduling priority	sar	system activity reporter	umount	*unmounts a file system
nl	a filter numbering lines of a file on left side	SCCS	Source Code Control System	uname	*prints name of current system
nm	prints the name list of each object	scsdiff	compares two versions of an SCCS file	unget	undo a previous <i>get</i> of SCCS file
nohup	runs a command immune to hang-ups	sdb	symbolic debugger	uniq	*reports repeated lines in a file
nroff	formats text for printing on typewriter like devices and printers	sdiff	uses output of <i>diff</i> to produce a side-by-side listing of two files indicating lines that are different	units	conversion program
ocw	prepares constant width text for <i>troff</i>	sed	stream editor	unlink	links and unlinks system files
od	*octal dump	send	sends mail	unpack	compresses and expands files
pack	stores specified files in a compressed form	setbclock	*sets battery clock	uuclean	<i>uucp</i> spool directory clean-up
paste	merges some lines of several files or subsequent lines of one file	setmnt	*establishes mount table	uucp	communication between UNIX systems
passwd	*changes login password	setspeed	*sets speed of printer port	uulog	<i>uucp</i> log
pcat	expands packed files and writes to standard output	sh	*the shell	uname	<i>uucp</i> name
pg	files perusal filter for soft-copy terminals	shl	shell layer manager	uupick	<i>uucp</i> public monitor
pr	*prints files	shutacct	turns process accounting off	uusub	<i>uucp</i> network status of <i>uucp</i> communication
prctmp	prints the session record file created by <i>accton</i>	shutdown	*terminates all processing	uustat	public system-to-system file copy
prdaily	accounting utility	siv	#*full screen editor	uuto	uucp system command execution
prfdc	operating system profiler	size	prints decimal number of bytes in object form	uux	uucp system command execution
prfld	operating system profiler	sky	a game	val	validates SCCS file
prfpr	operating system profiler	sleep	*suspend execution for an interval	vc	version control
prfsnap	operating system profiler	sno	SNOBOL interpreter	vi	screen text editor
prfstat	operating system profiler	soelim	eliminates source directives from <i>nroff/troff</i>	volcopy	copies file systems with label checking
powerfall	system initialization shell	sort	*sort program	wait	*awaits completion of process
print	*prints files with formatting	spell	checks words in a file adds new words to spelling dictionary	wall	*writes to all users
printenv	prints out the environment	spellin	adds new words to spelling dictionary	wc	word count
prof	displays profile data	spline	accepts number pairs to interpolate a smooth curve	what	locates file of any type
profiler	operating system profiler	split	splits a file	who	*who is on the system
prs	prints an SCCS file	scroff	text formatter	whodo	who is doing what
prtacct	used to format and prints any accounting file	startup	shell procedure for <i>acctsh</i>	write	*writes to another user
ps	*reports process status	strip	removes symbols table	wtmpfix	manipulates connect accounting
psych	a game	stty	*sets the option for a terminal	wump	a game
ptx	generates a permuted index	su	*become super-user or another user	xargs	constructs argument list
pwck	scans password file and checks for inconsistencies	sum	calculates and prints a 16 bit checksum	yacc	yet another compiler-compiler
pwd	*prints working directory name	sync	*updates the super block system definition		
quiz	a game	sysdef	sets tabs on terminal		
ratfor	rational Fortran dialect	tabs	prints the tail end of a file		
rc	system initialization	tail	*tape file achiever		
red	text editor	tar	a preprocessor formatting tables for <i>nroff</i> or <i>troff</i>		
		tbl	passes output of one program to input of another		
		tee	processes control		
		telinit	initialization		

* included in the D-NIX Base Package (may vary)
Commands/programs added by DIAB (may vary)

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The information contained herein is intended to be a general description and is subject to change with product enhancement without notice.