Introduction to UNIX

"...the number of UNIX installations has grown to 10, with more expected..."
- Dennis Ritchie and Ken Thompson, June 1972 (Bell Lab.)

Universities, research institutes, government bodies and computer companies all began using the powerful UNIX system to develop many of the technologies which are now part of today's Linux system.

Guide to UNIX on the beginners level:

http://www.ee.surrey.ac.uk/Teaching/Unix/

Summary of some useful commands:

Some basic UNIX commands

cd directory_name	change to the directory directory_name
cd ..	change to the directory above the current directory
cd ~	change to the home directory
cp file_1 file_2	copy the file file_1 to the file file_2
ln –s source linkname	link the file with the name source to the file linkname
ls directory_name	show the content of the directory directory_name
ls –l directory_name	show in detail the content of the directory directory_name
ls –a directory_name	show all files including hidden files of the directory directory_name
mkdir directory_name	create the new directory directory_name
less file_name	show the content of the file file_name
tail file_name	show the last part of a file file_name
head file_name	show the top part of a file file_name

(x)emacs file_name	edit the file file_name using the editor xemacs
mv file_1 to file_2	change the filename file_1 to file_2
rm –i file_name	remove the file file_name (the system asks for confirmation)
rm –ri directory_name	remove all files recursive in the directory directory_name
rmdir directory_name	remove the directory directory_name
find . –name file_name	find a file with the name file_name in all directories starting in the current directory
grep string file_name	find in the file file_name the string pattern string
command > file	redirect standard output to a file
command >> file	append standard output to a file
command1 | command2	pipe the output of command1 to the input of command2
cat *file1 file2 > file0*	concatenate file1 and file2 to file0
sort	sort data
chmod a+rw file_name	give read and write permissions on the file file_name
history	show command history list
!!	recall last command
!-3	recall third most recent command
!grep	recall last command starting with grep
tar -cvf file.tar directory_name	create an archive of a set of files located in the directory directory_name
tar -xvf file.tar	unpack the archive file.tar

Commands concerning the system

df	show information about local and nfs mounted partitions of the hard disks
w	show information about all user and their usage of the system
ps	show all processes belonging to the login process
ps aux | *grep string*	show all processes and select the one which contains string
pstree	show the full process tree
top	show a list of the current processes
du –sk directory_name	show disk usage of the directory directory_name as summary information
kill processid	kill process with process identifier processid

Common tools on UNIX systems

g++	C++ compiler
f2c	Fortran compiler
make	manage large programs or groups of programs
gimp	Manipulate graphics
xfig	Create and edit graphics
gv	View ps and eps files
xv	View gif or pdf files
latex	Type setting system for large documents
firefox	Web browser

Printing

Postscript and text can be printed by the following command

lpr –Pprinter_name file_name

The location of the printers is in the CIP pools, either P.I. or KIP.

Getting help

On Unix operating systems the command

man 'your command'

provides syntax and available optional parameters of the commands.