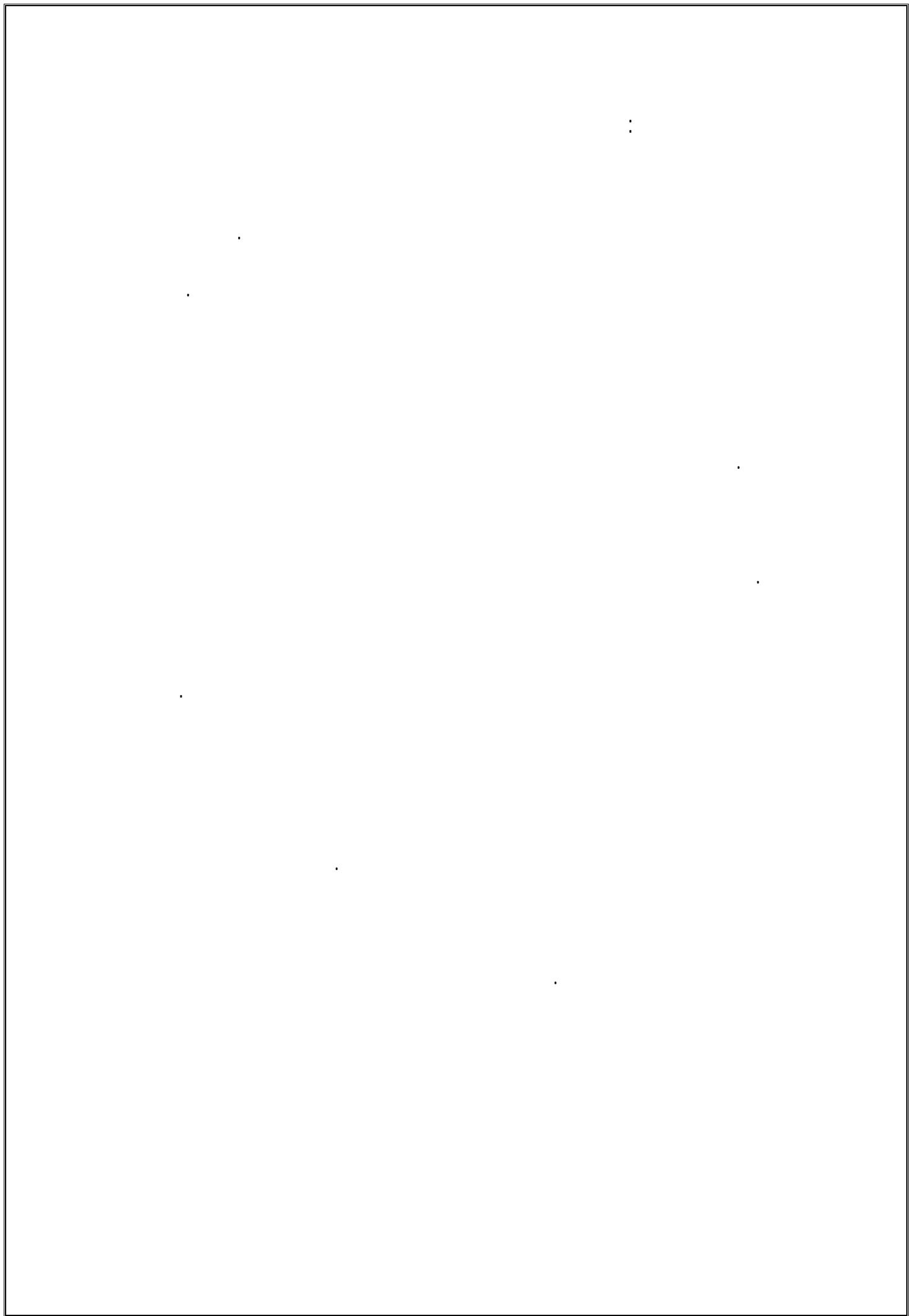


:

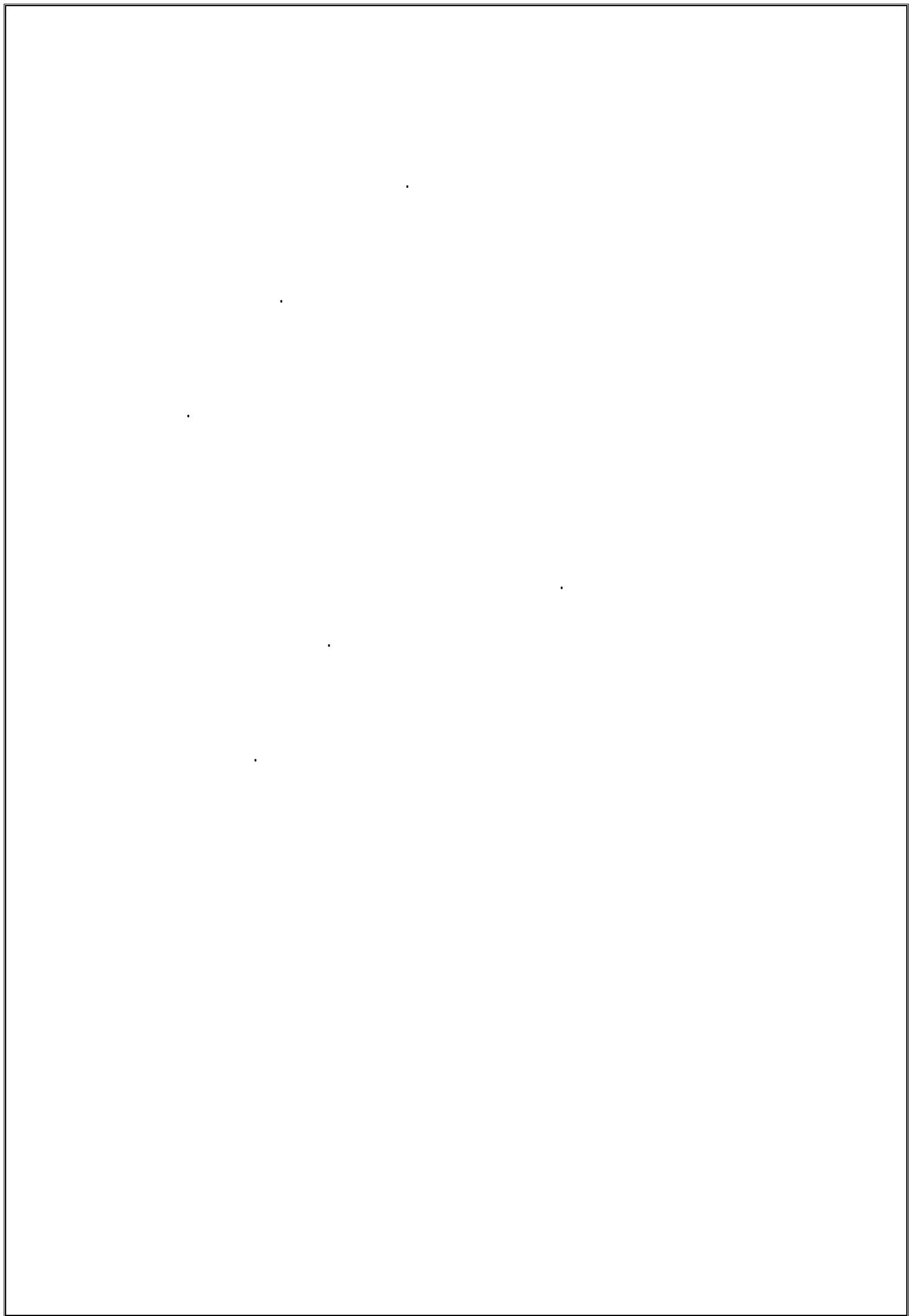


linux windows

!!!

linux

Microsoft



**:( Operating System ( OS ) )**

**:(user layer)**

**:(hardware layer)**

**... CDROM**

**...**

**:(software layer)**

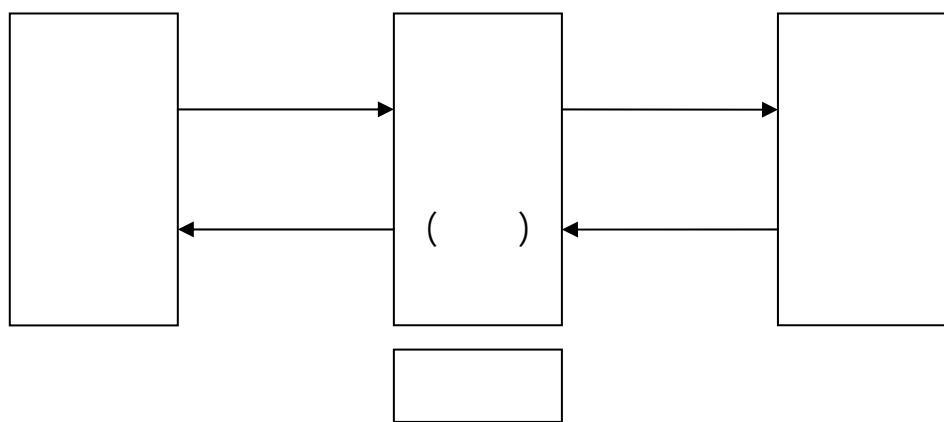
**CD**

**CD**

**CDROM**

**CDROM**

**floppy**



- Input ( )
- Output ( )
- I/O ( )

Input

...

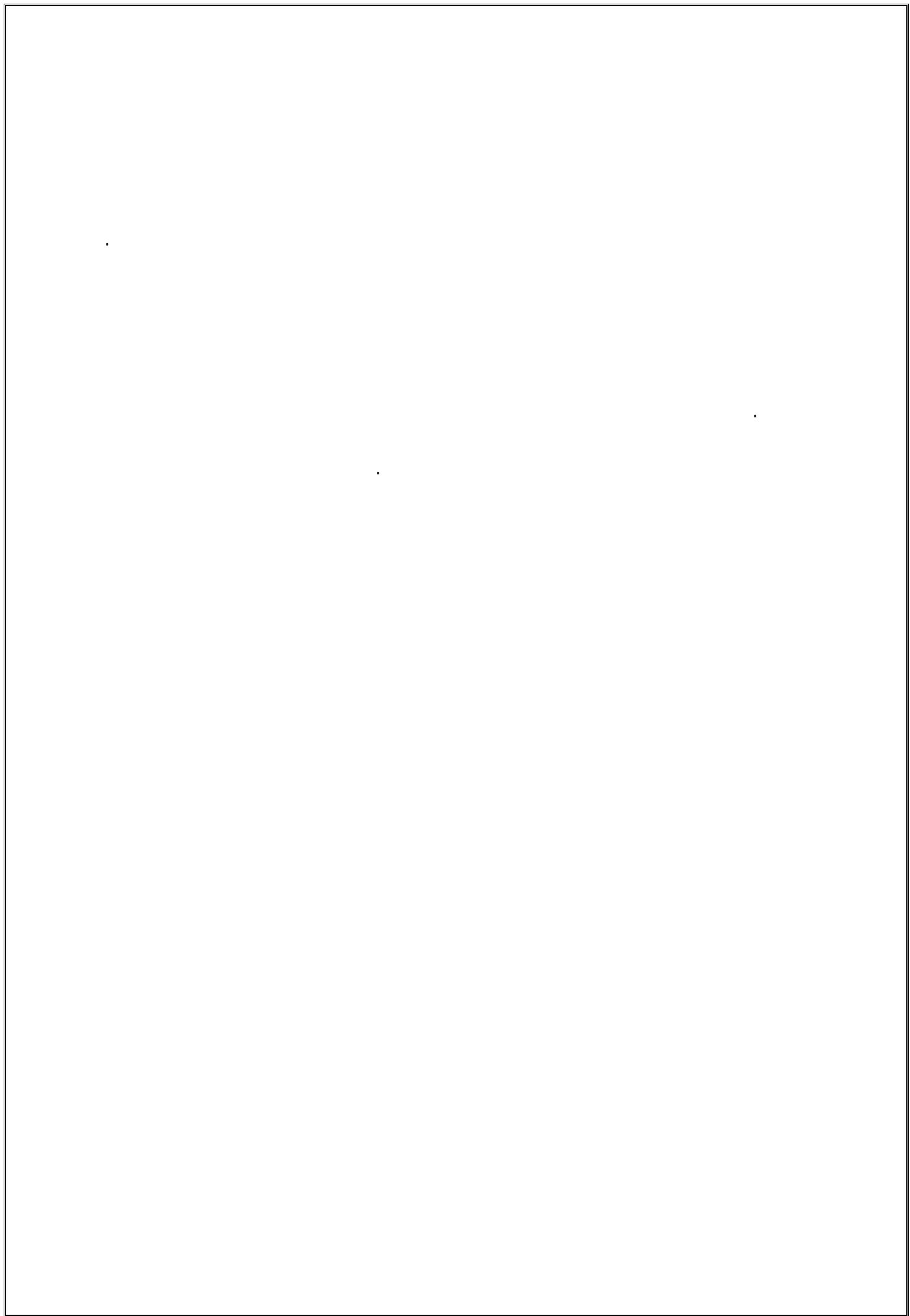
output

(

(Operating System)

(

(multi user)



**:Interface (**

Interface

Interface

Interface

Interface

Interface

Interface

Interface

Interface

Interface

User friendly

User friendly

...

Interface

User friendly

!!!

Interface

Interface

Interface

Microsoft

: (

( )

Interface

ATI

OS

MB

OS.

ATI

MB

OS

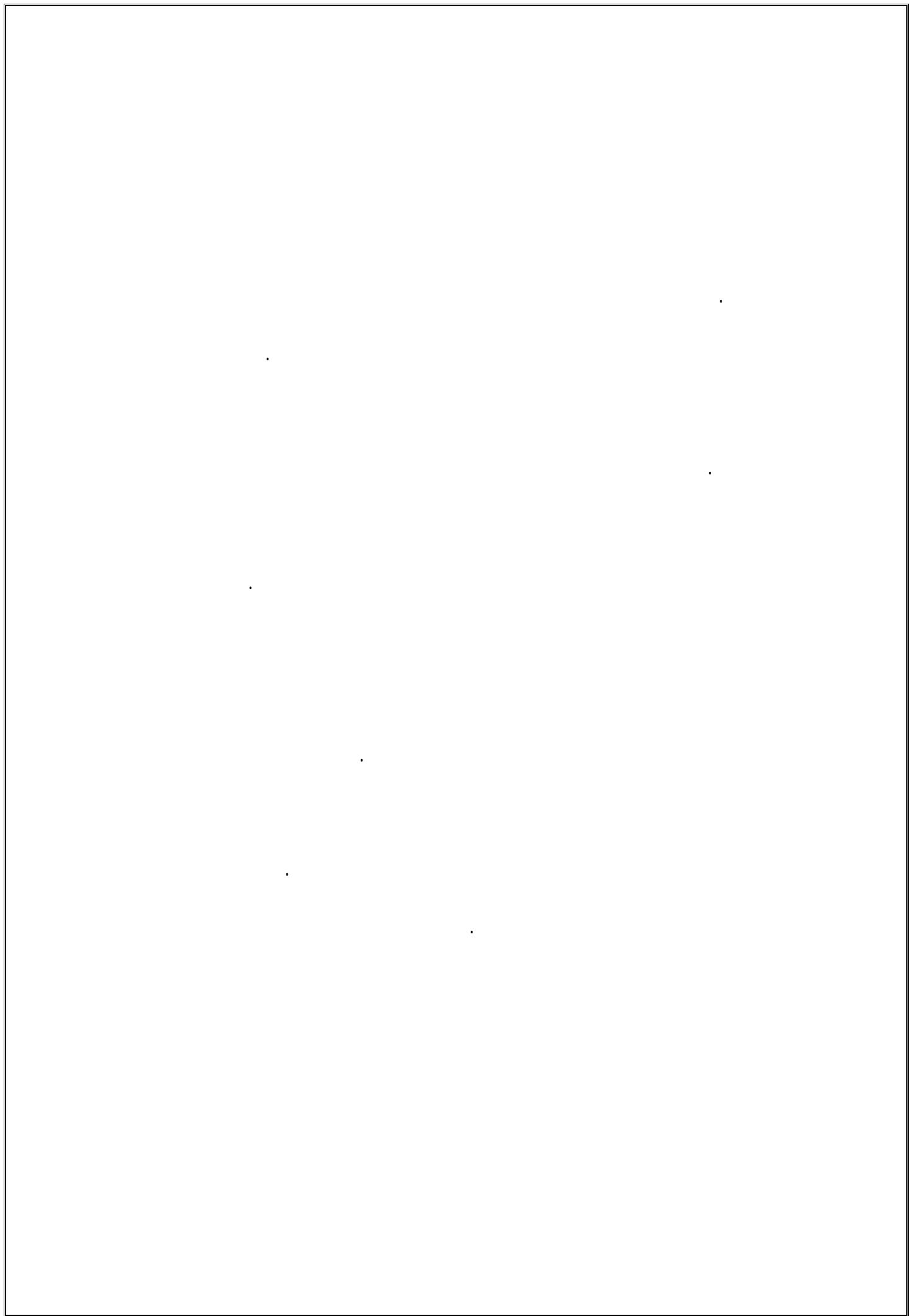
OS

OS

!...

Microsoft

XP



:**(File System)** (

Memory

RAM

RAM

Disk

(

(

Blue Ray

DVD      CD

Flash Disk

Flash

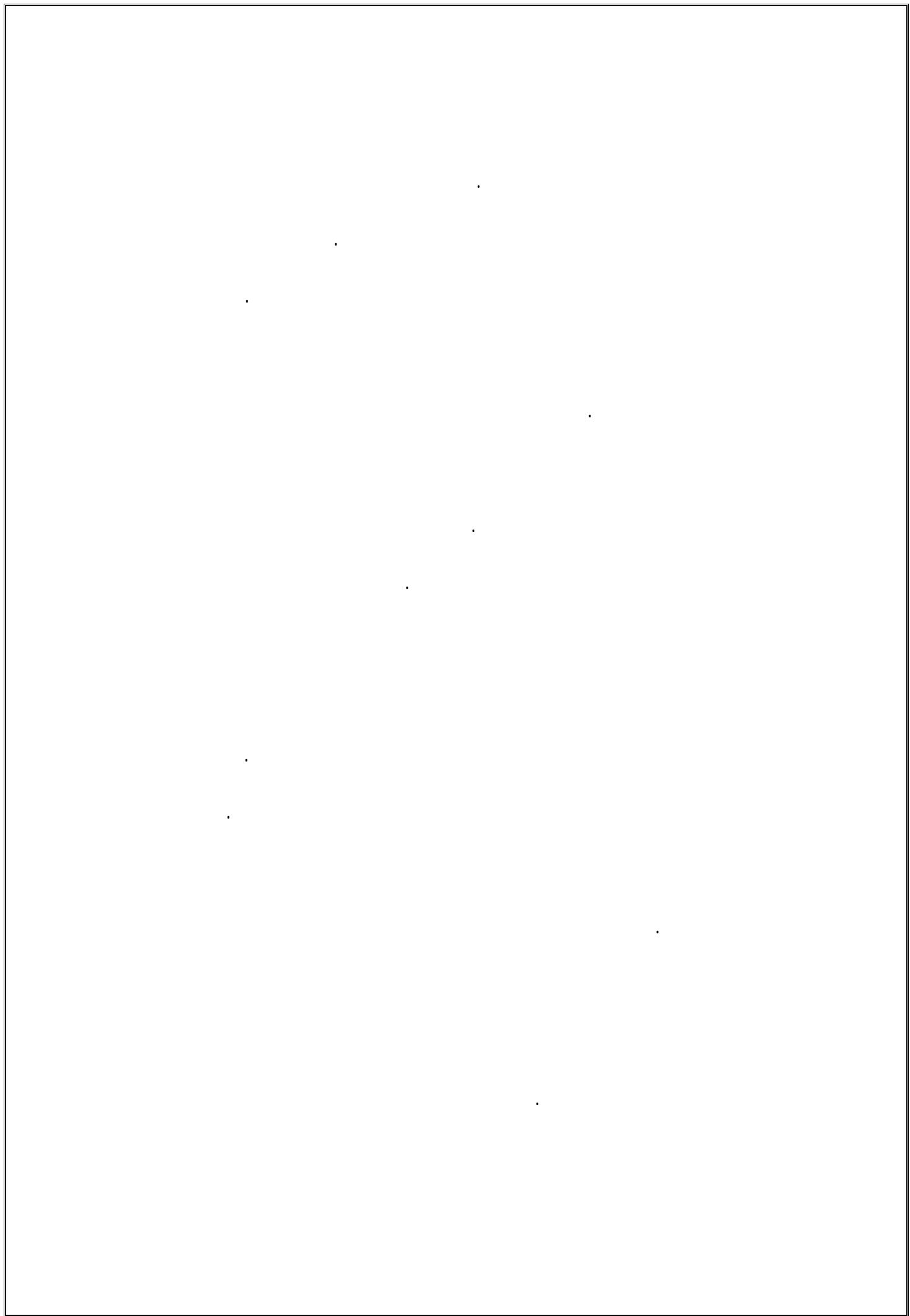
FAT

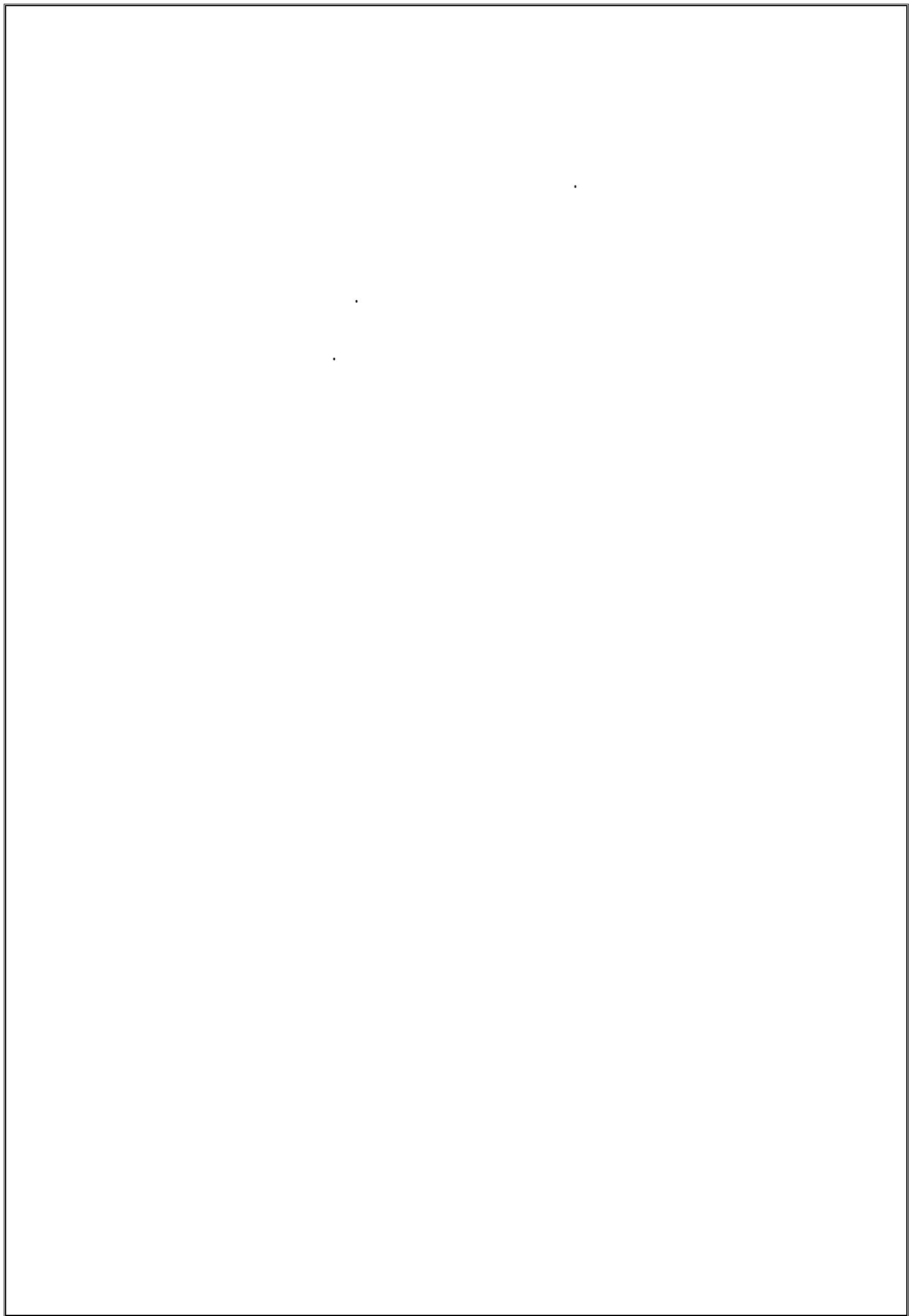
NTFS

XP

NT

FAT





(

Application

App.

App.

App. ACDSee

App.

App.

App.

App.

platform

App.

App.

App.

App.

App.

App.

App.

setup

exe

App.

App.

dsmax

Mac

Jet Audio

App.

App.

App.

(

Microsoft

CD

**Microsoft**

App.

App.

free

: (

liscense

App.

App.

CD

!

App.

App.

Microsoft

:

(

RAM

MB

RAM

...

RAM

(

(

RAM

RAM

RAM(

CPU

RAM

RAM

CPU

RAM

load

RAM

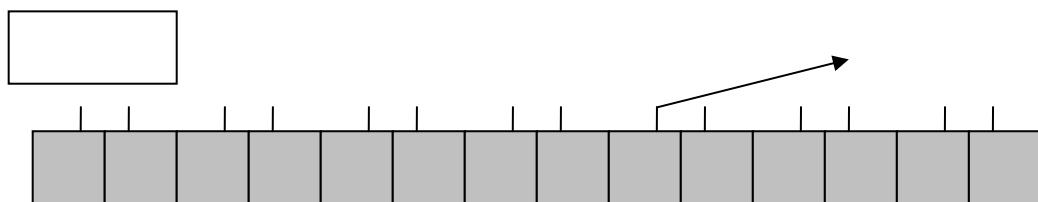
RAM (

RAM

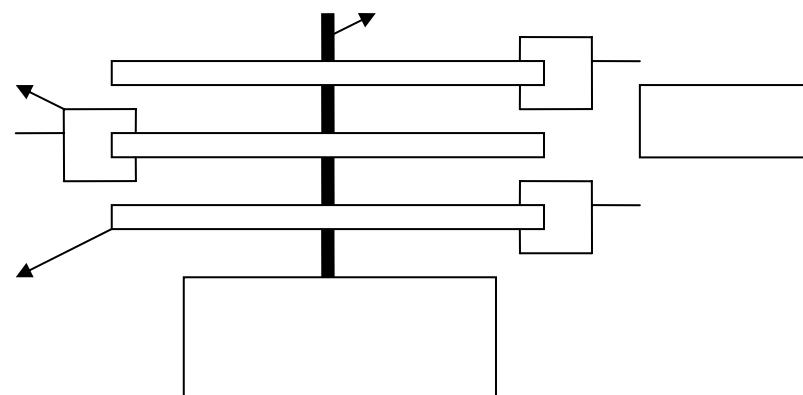
RAM

RAM

RAM



*RAM*



RAM

RAM

secret

RAM

RAM

CPU

(

RAM

bus

Sata

Data

RAM

CPU

RAM

RAM

GB

GB

RAM

RAM

RAM

RAM

RAM

GB

RAM

RAM

GB MB

RAM

RAM

RAM

RAM

RAM

RAM

OS

MMS

:

(

OS

MMS

MHZ    GHZ

FSB

RAM CPU

RAM

FSB

RAM

RAM

CPU RAM

MMS

MMS

MMS

Interface

## **Multi Tasking (**

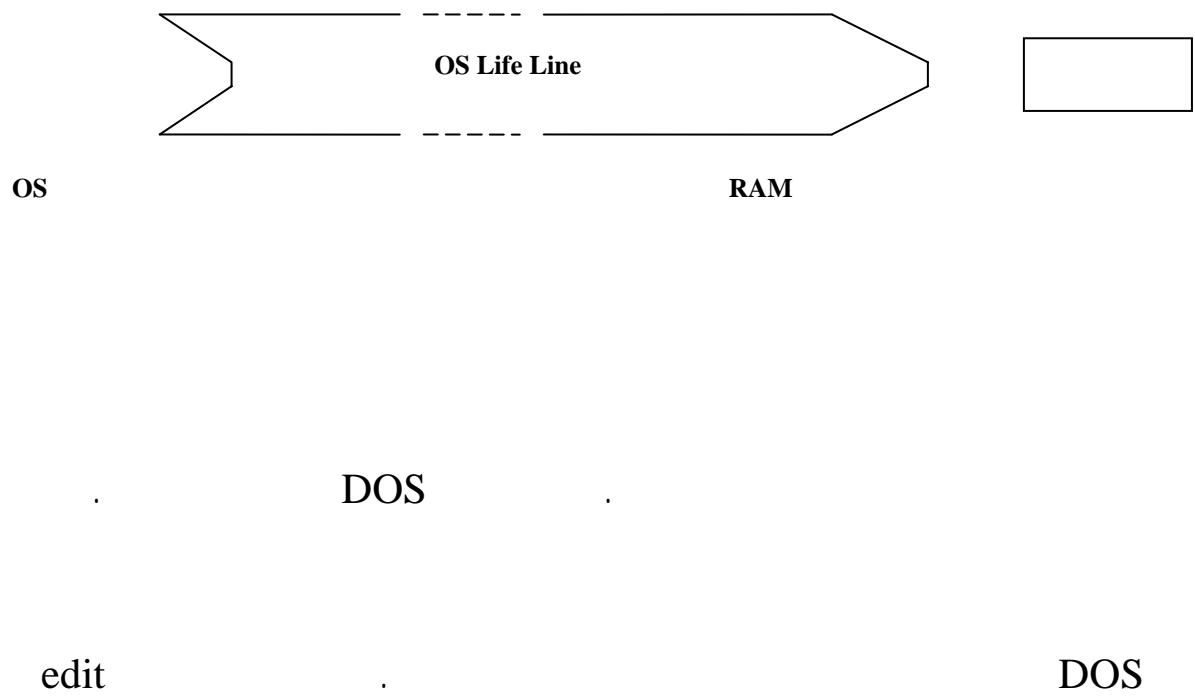
Multi tasking

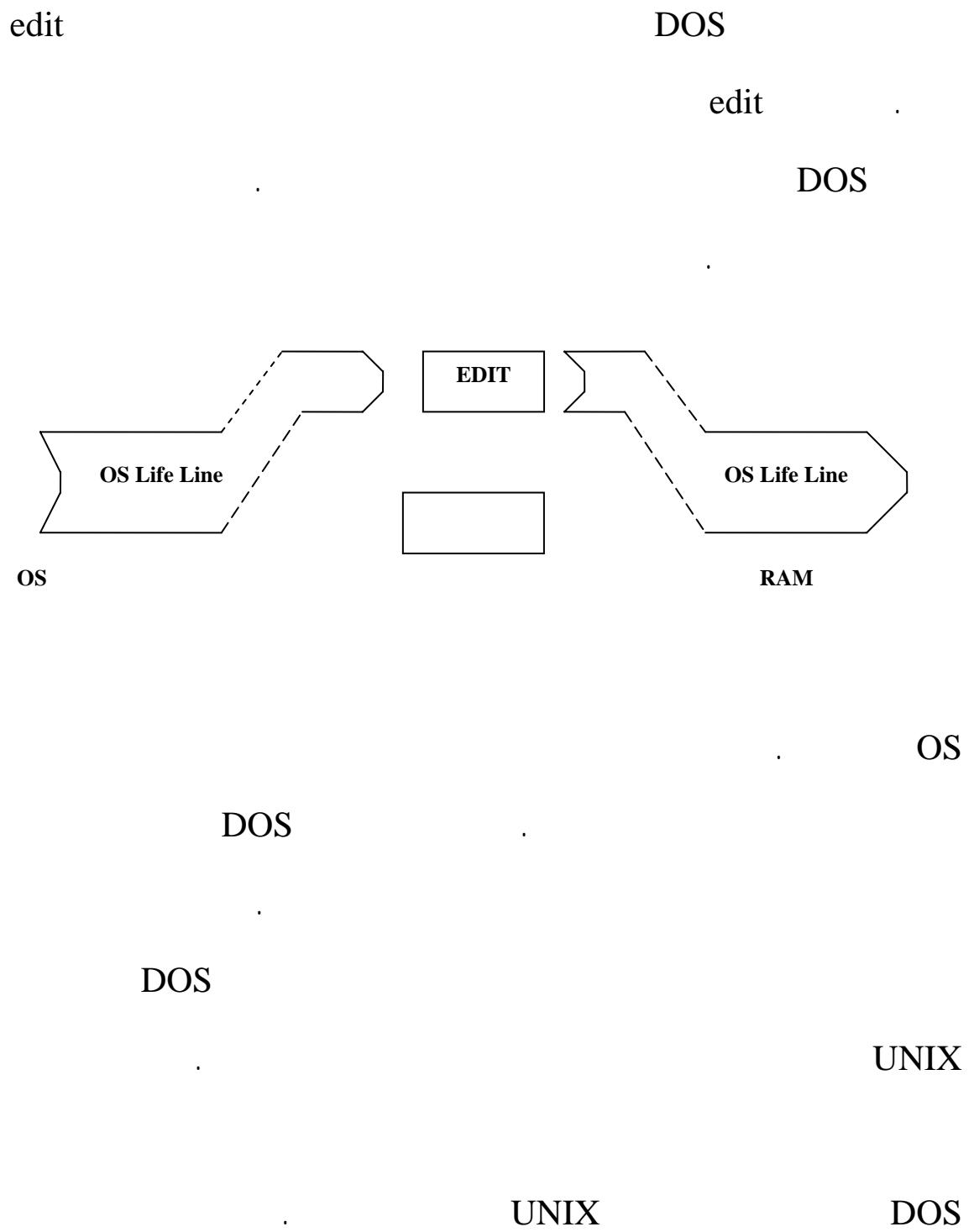
Dos

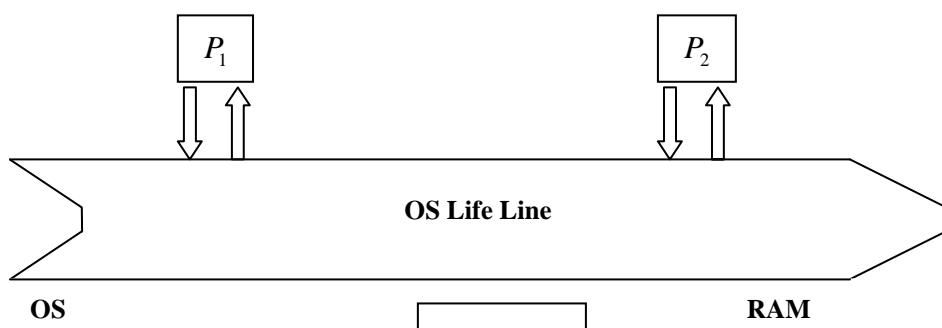
Dos

Dos

boot







OS

P P

P

P

OS

OS

P

terminate

instruction

CPU

CPU

CPU

CPU

CPU

CPU

CPU

CPU

MMS

OS

:Networking (

Network

OS

)

CD

!!

(... Flash DVD

:

EMS

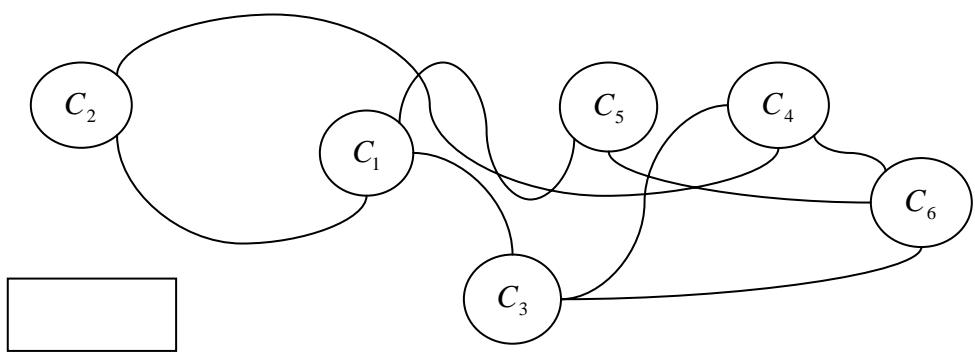
!

!!

Network

Network  
(Information Sharing)

Toppology



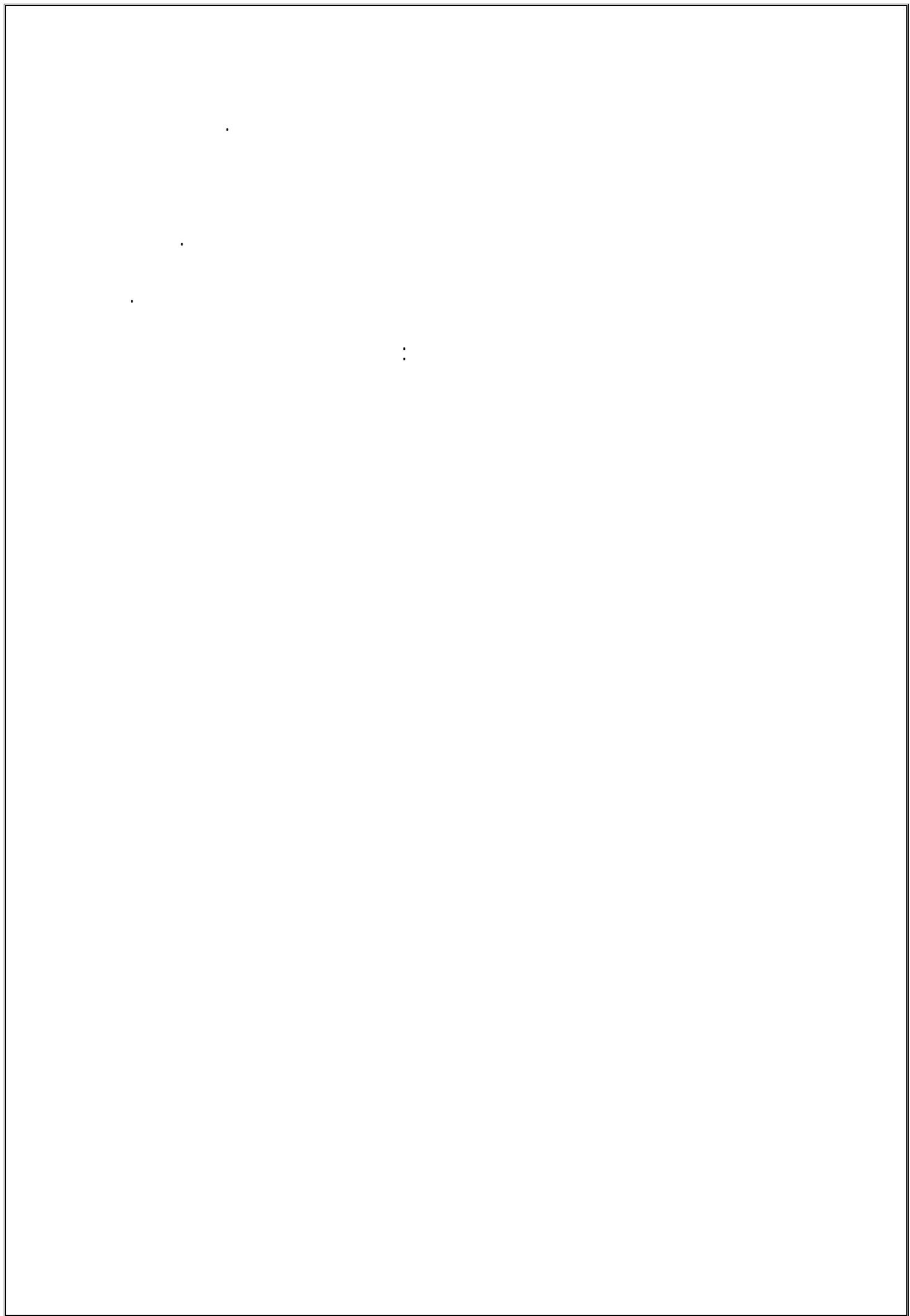
C C

C

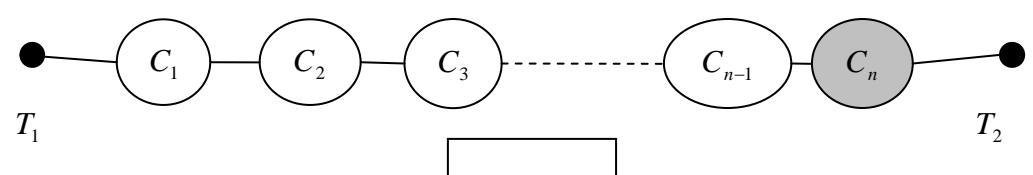
C -C

C

C -C



(

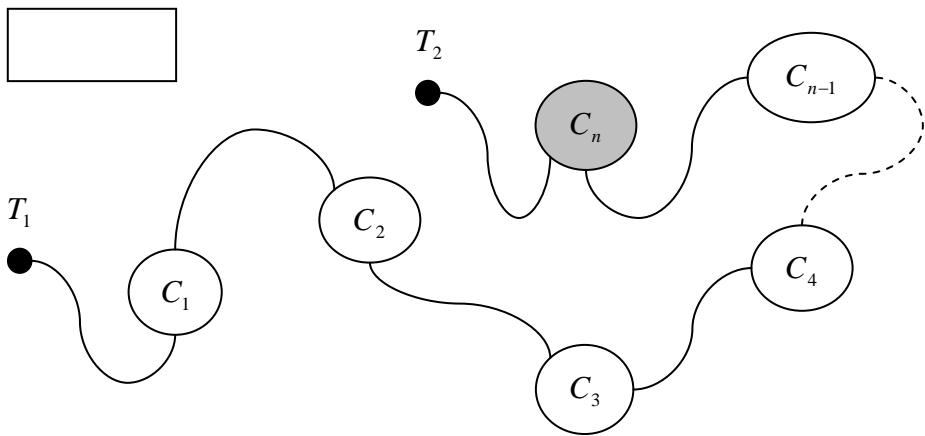


n



) .

(



T      T

Terminator

(

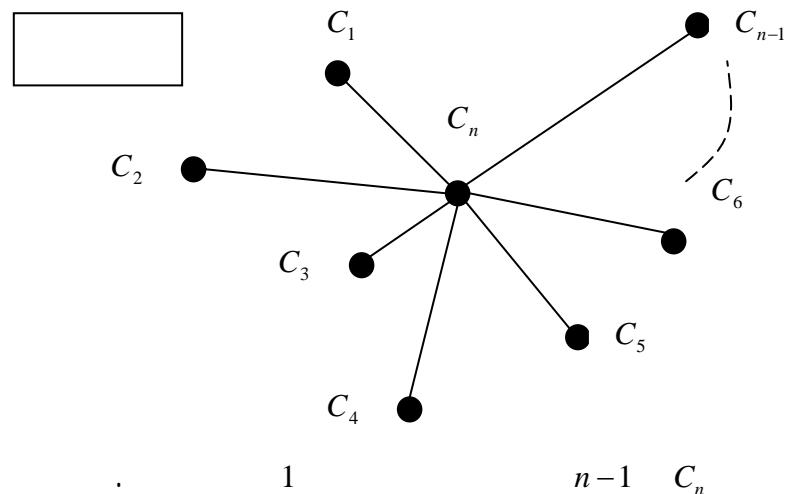
Star

n

n

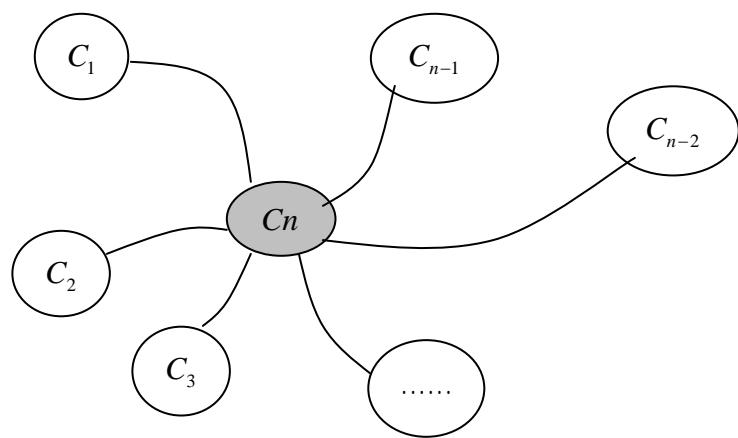
n

n



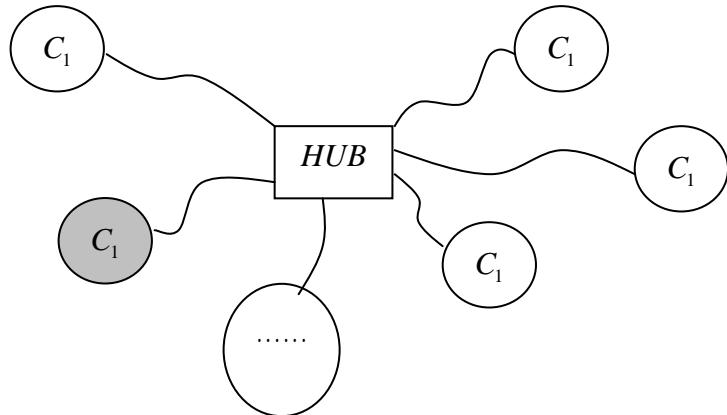
) Client - Server

(



*HUB*

*Switch*



*Switch      HUB*

*Switch      HUB*

$C_1$

**HUB**

$C_3$

$$\dots "C_3 "$$

*Switch HUB*

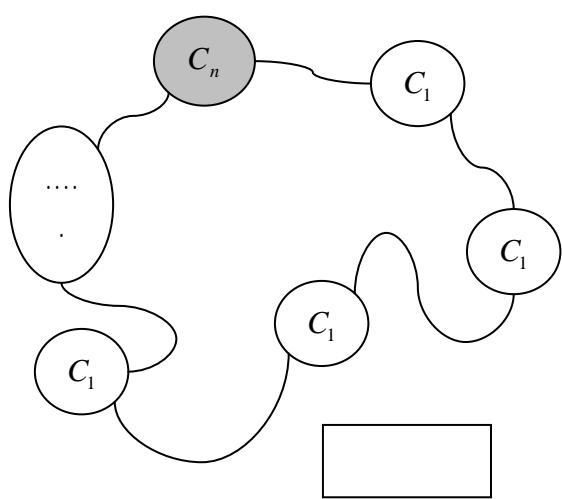
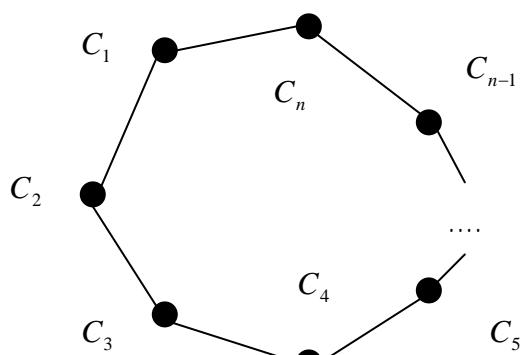
## *Switch*

C<sub>3</sub>

Server

Server

: ( Token Ring )

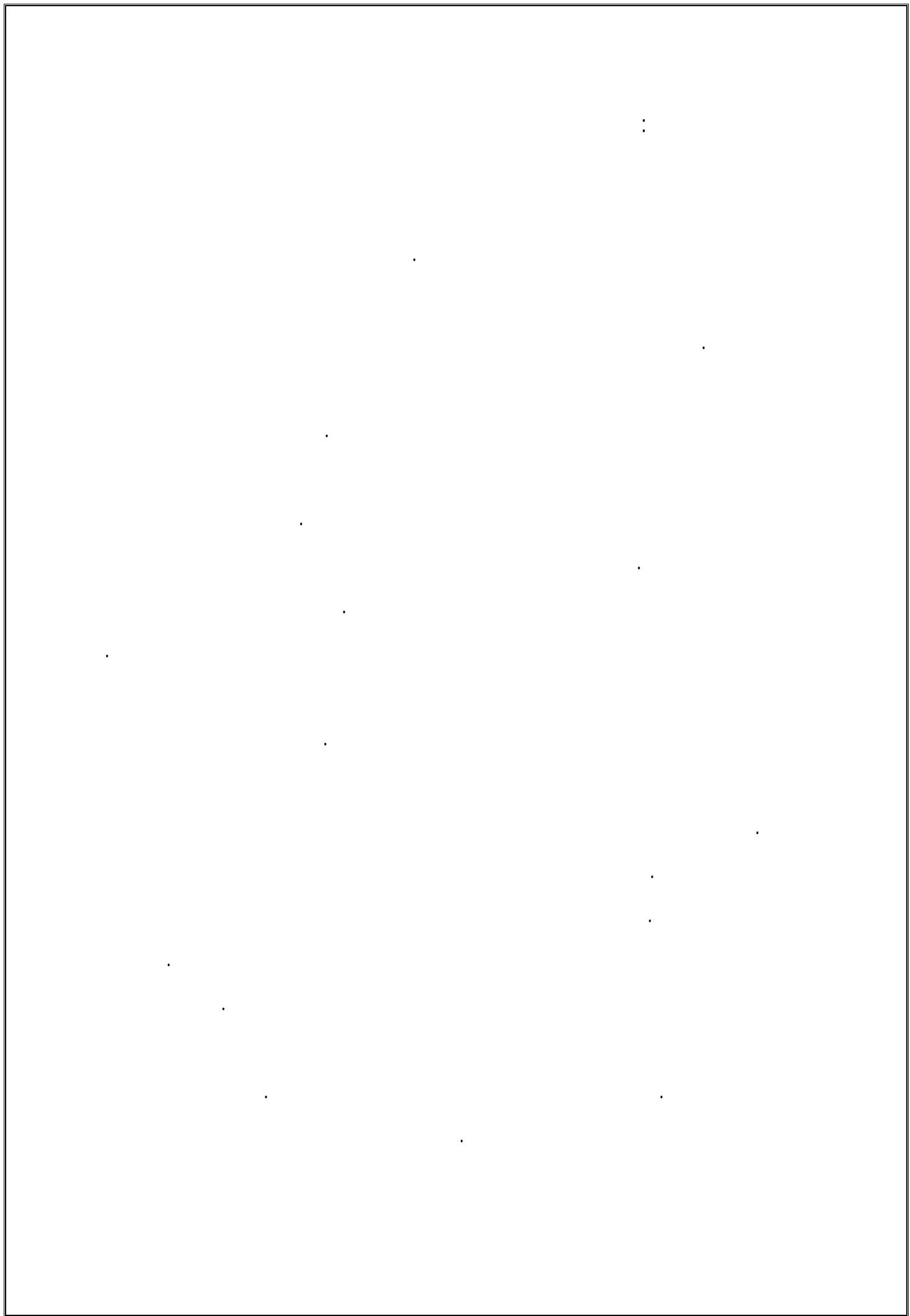


$C_2$

$C_4$

$C_3$

*Server*



*Network Card*

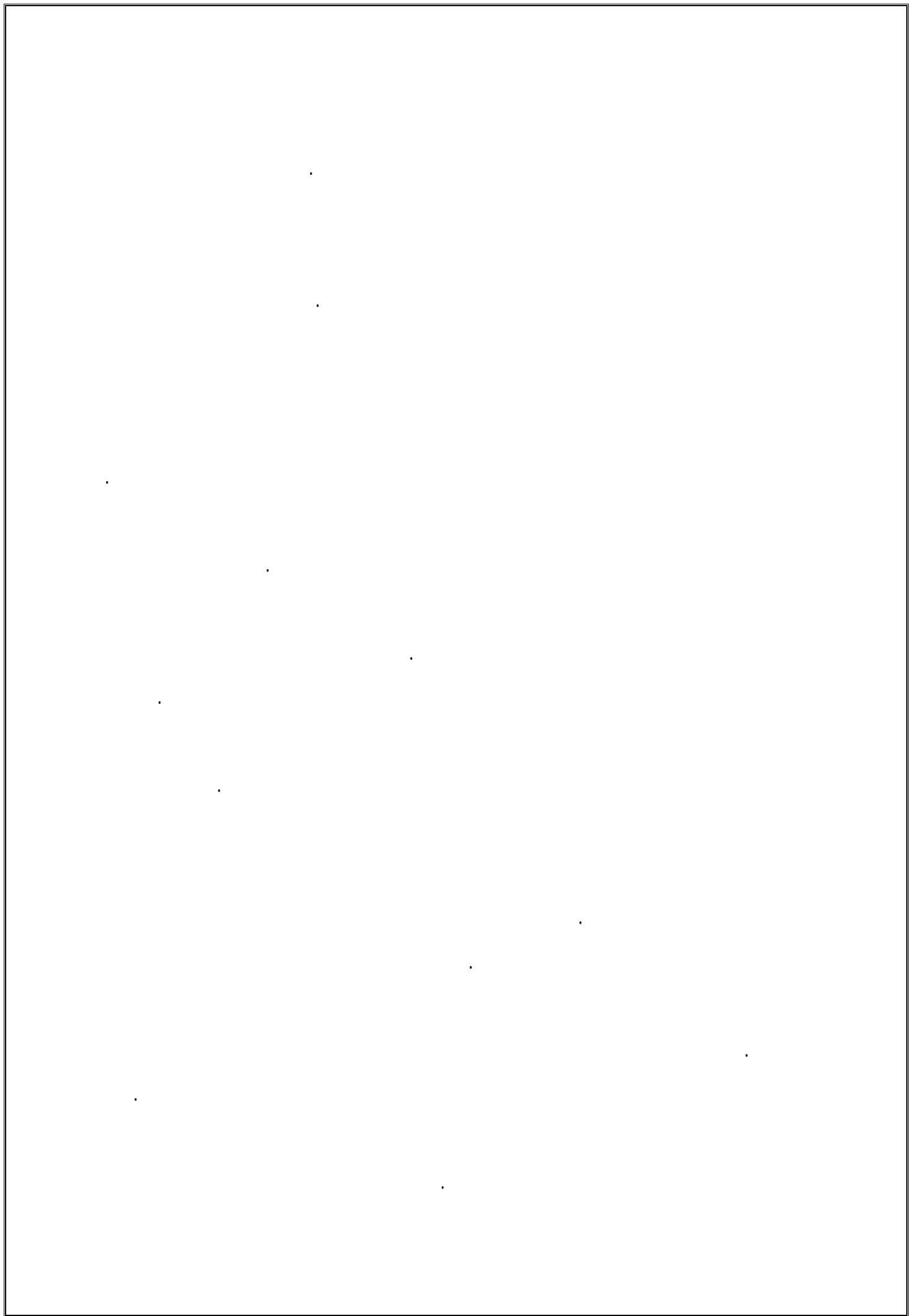
[

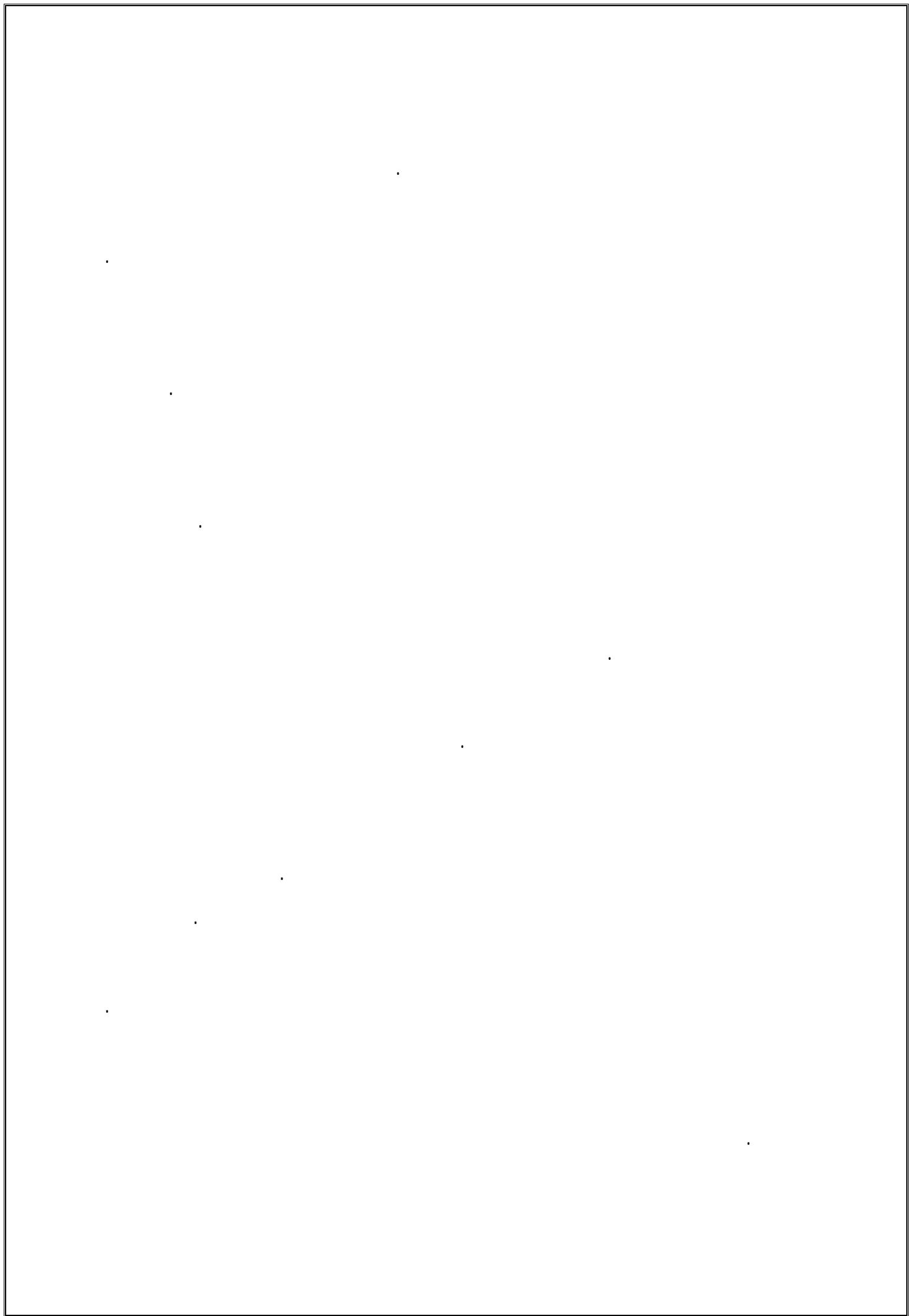
).

(.

...

...





*TCP / IP*

*UDP*

## **TCP/IP**

*Control Protocol*

*TCP*

*IP*

*Transimtion*

*Internet Protocol*

*IP*

*IP*

*IP*

*IP*

*IP*

*IP*

192.168.100.25

*IP*

*TCP*

*IP Addressing IP*

*IP*

192.168.100.12

192.168.100.23

192.168.100

192.168.100.12

192.168.101.12

*IP*

*TCP*

*Ping*

*Ping*

*Ping*

*Ping*

*Ping*

*Ping*

*IP*

*Ping* 192.168.100.1

>> *Ping* 192.168.100.1

*Ping* .

*TCP*

*TCP*

*TCP*

*Packet*

*TCP*

*IP*

*IP*

*TCP*

*TCP*

).

(.

) .

( .

*SMS*

*Delivery*

*TCP*

*TCP*

*UDP*

*UDP*

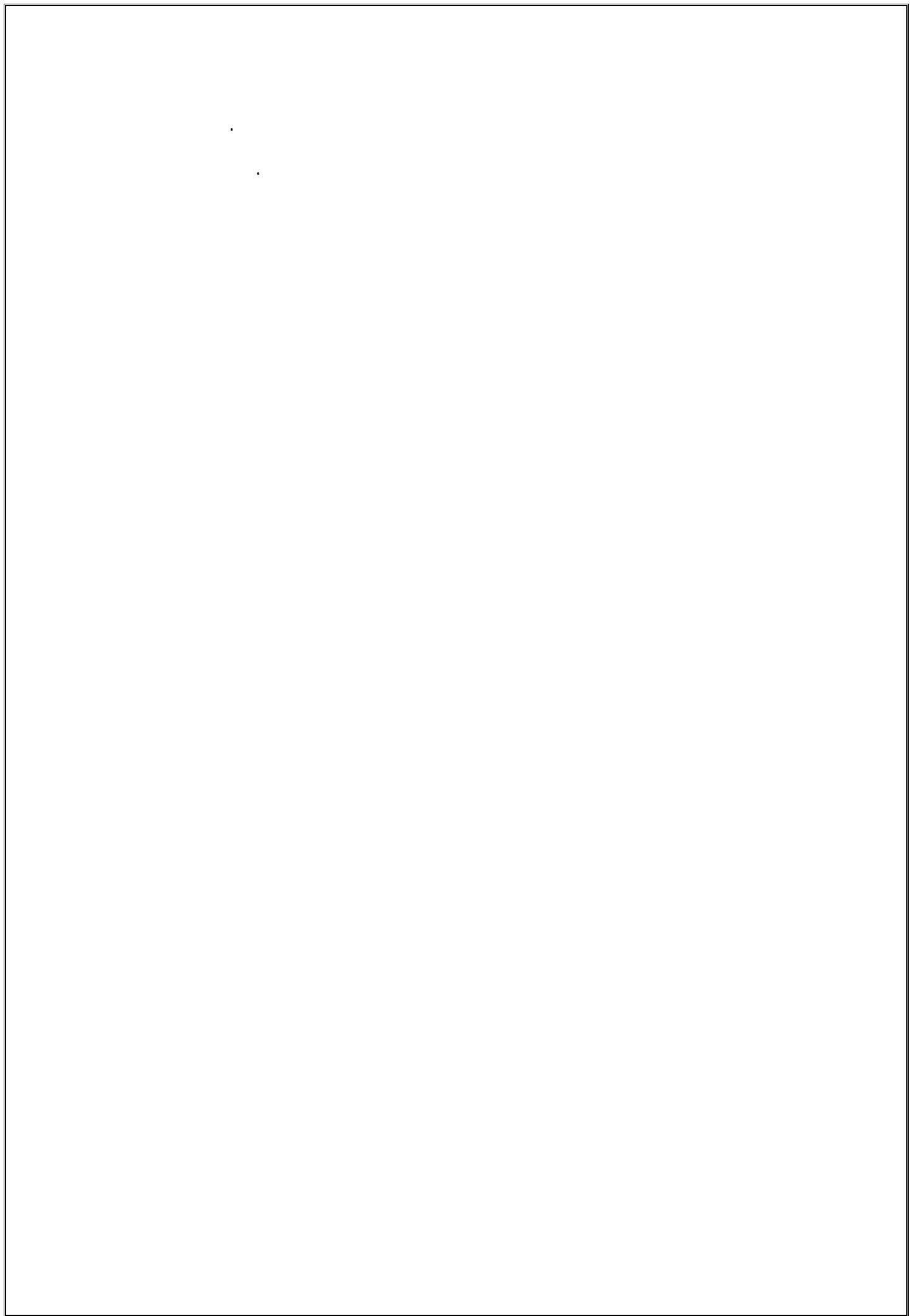
*User Datagram Protocol*

*UDP*

*TCP*

*TCP*

*Server*



: ( *Servers* )

*TCP*

*TCP*

*IP*

192.168.10

*x*

192.168.10.*x*

*IP*

*x*

*IP*

*Done*

*Done*

*Switch*

*HUB*

*Switch*

*Switch*

192.168.10.5

*Switch*

*IP*

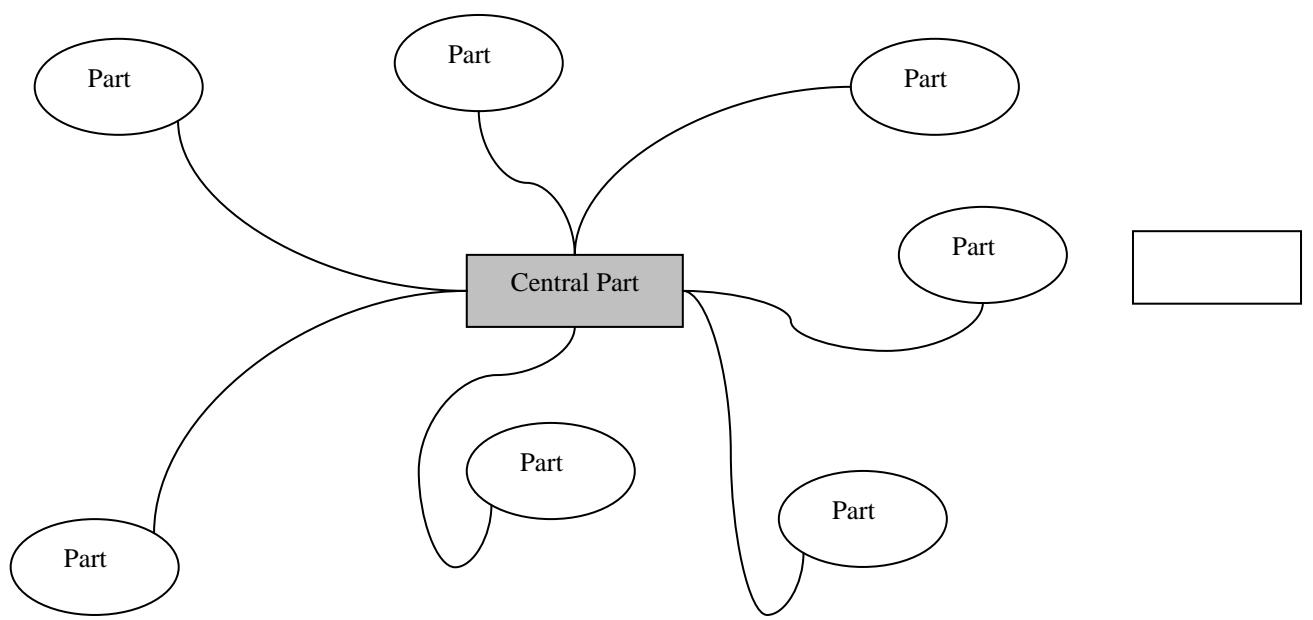
*TCP*

*Switch*

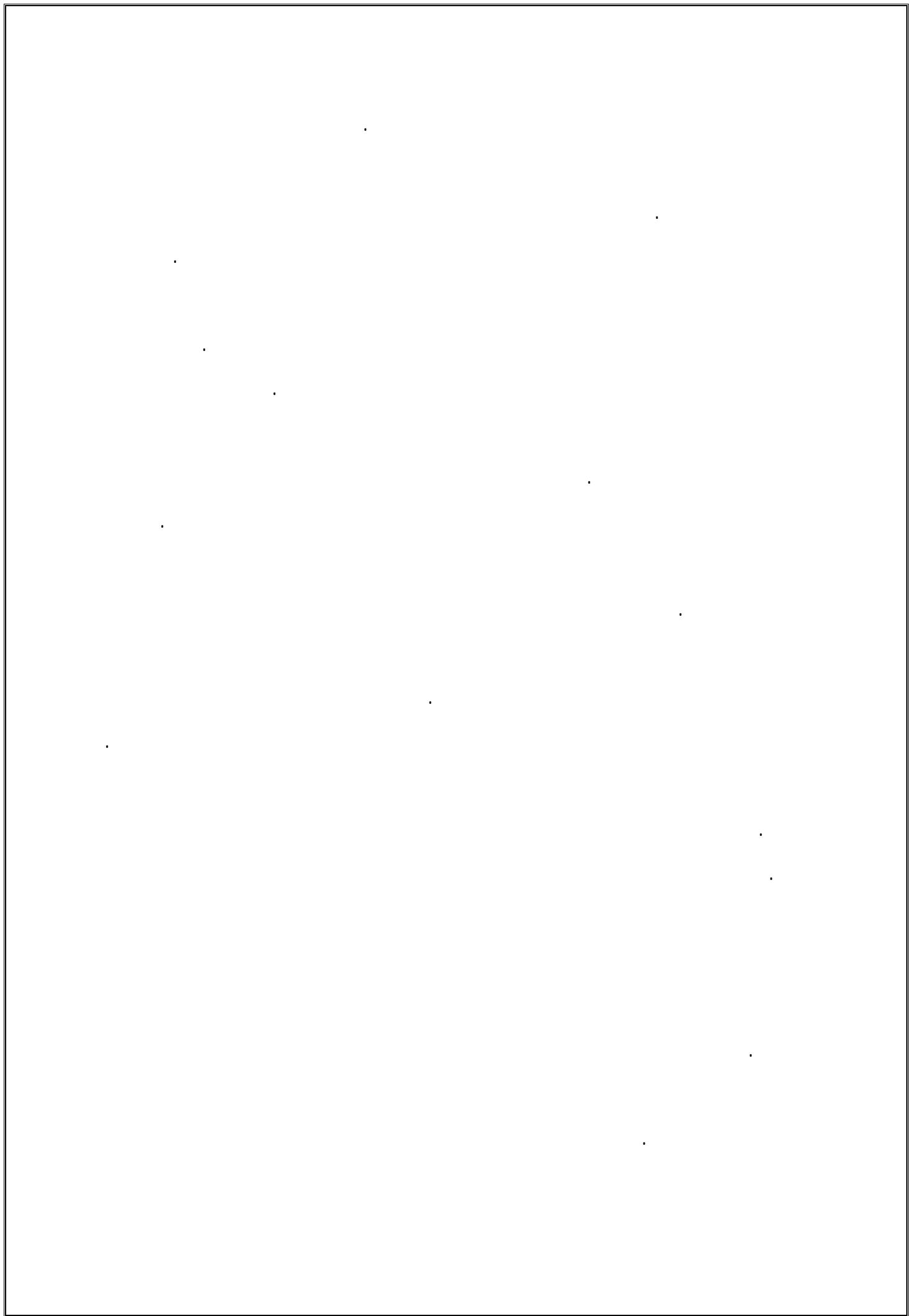
192.168.10.5

192.168.10.1

*TCP*



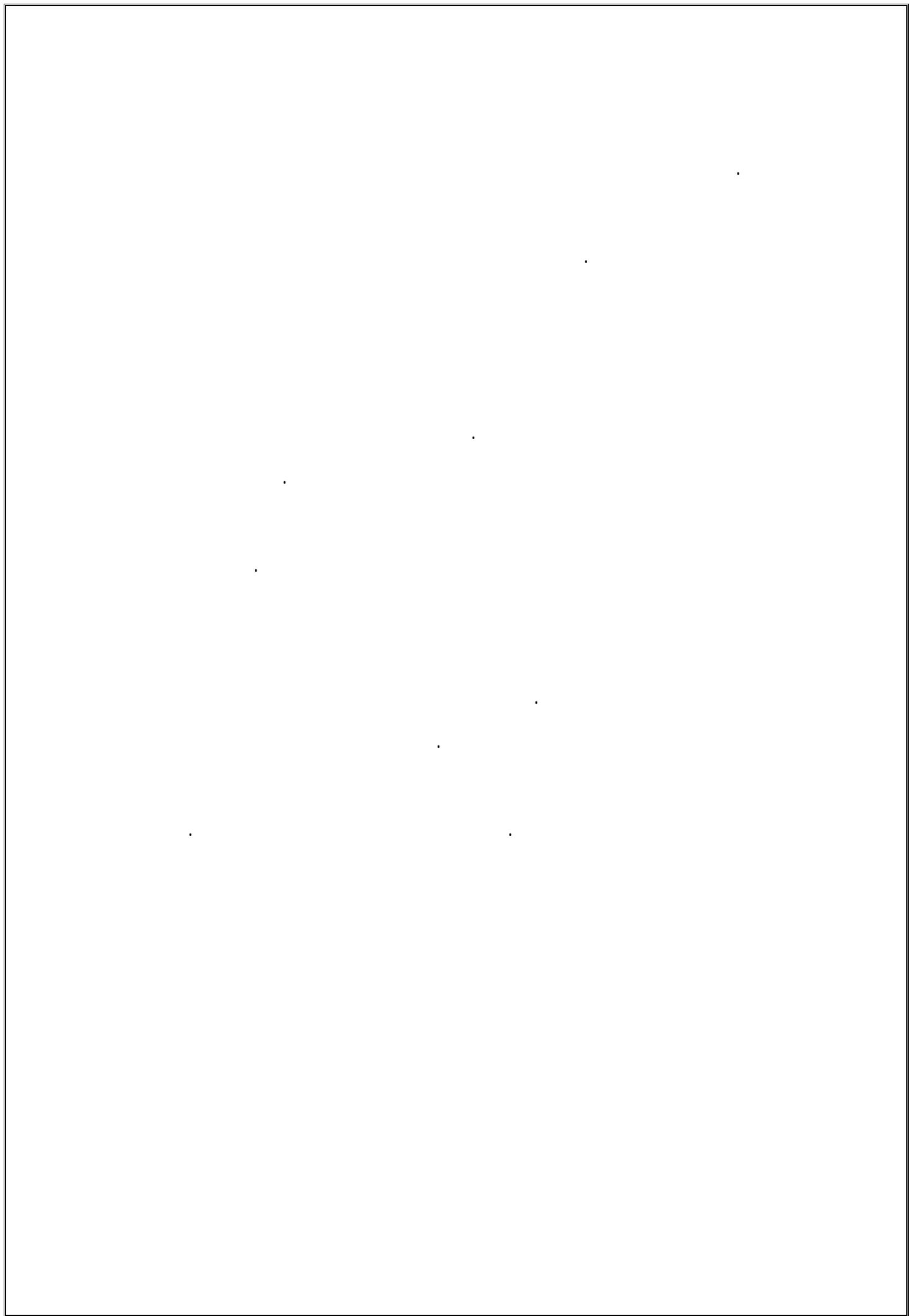
*TCP*



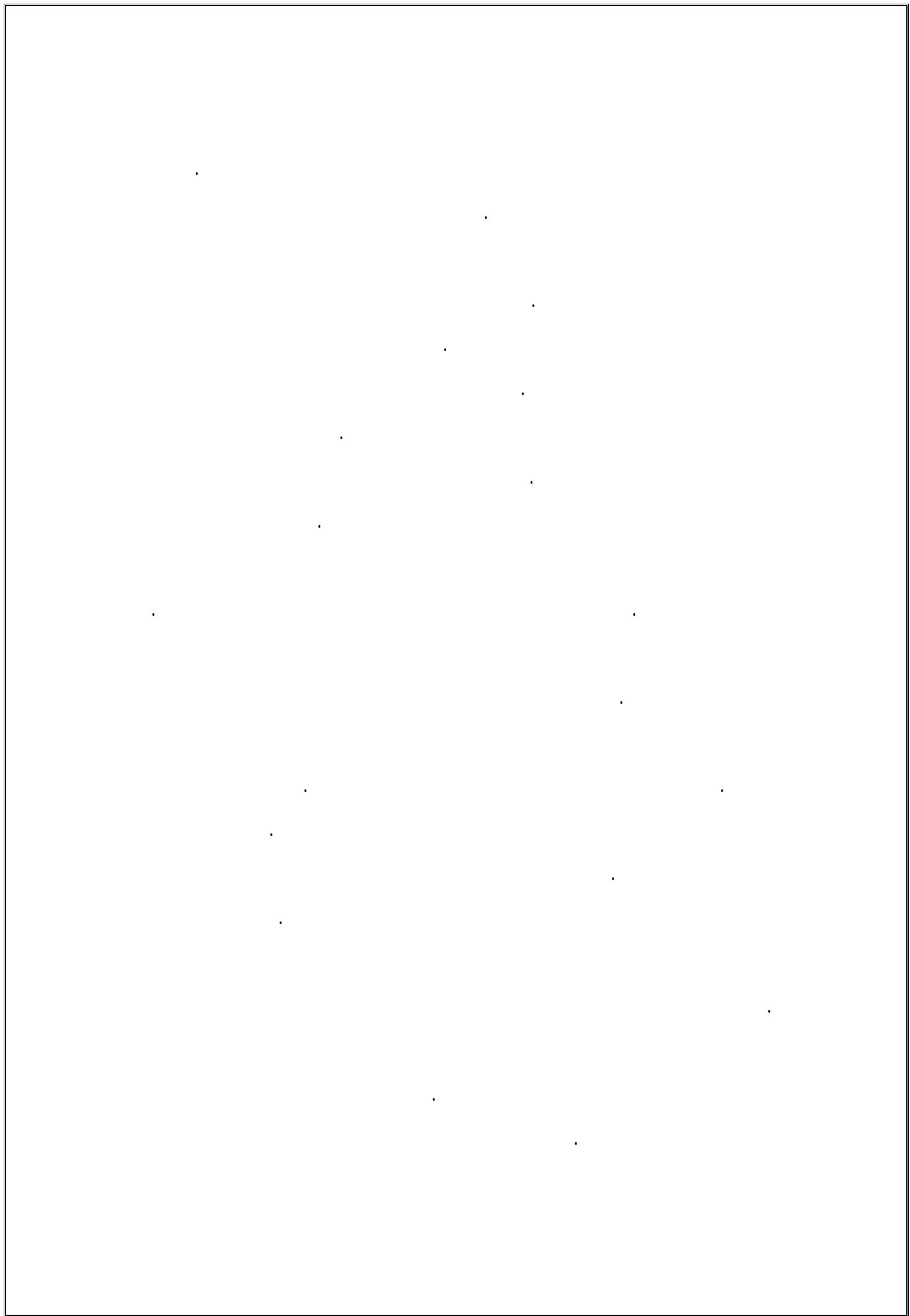
*Server*

*Switch      HUB*

*Microsoft*



(



*RAM*

*RAM*

*RAM*

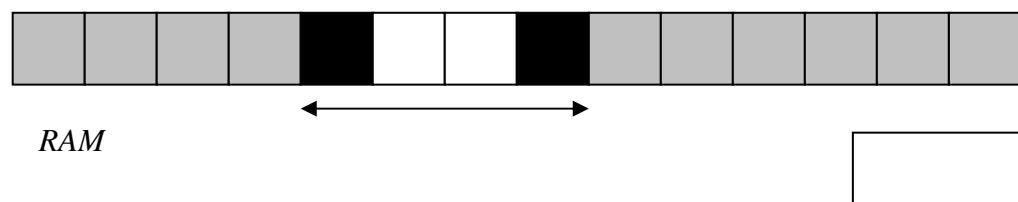
*RAM*

*RAM*

*RAM*

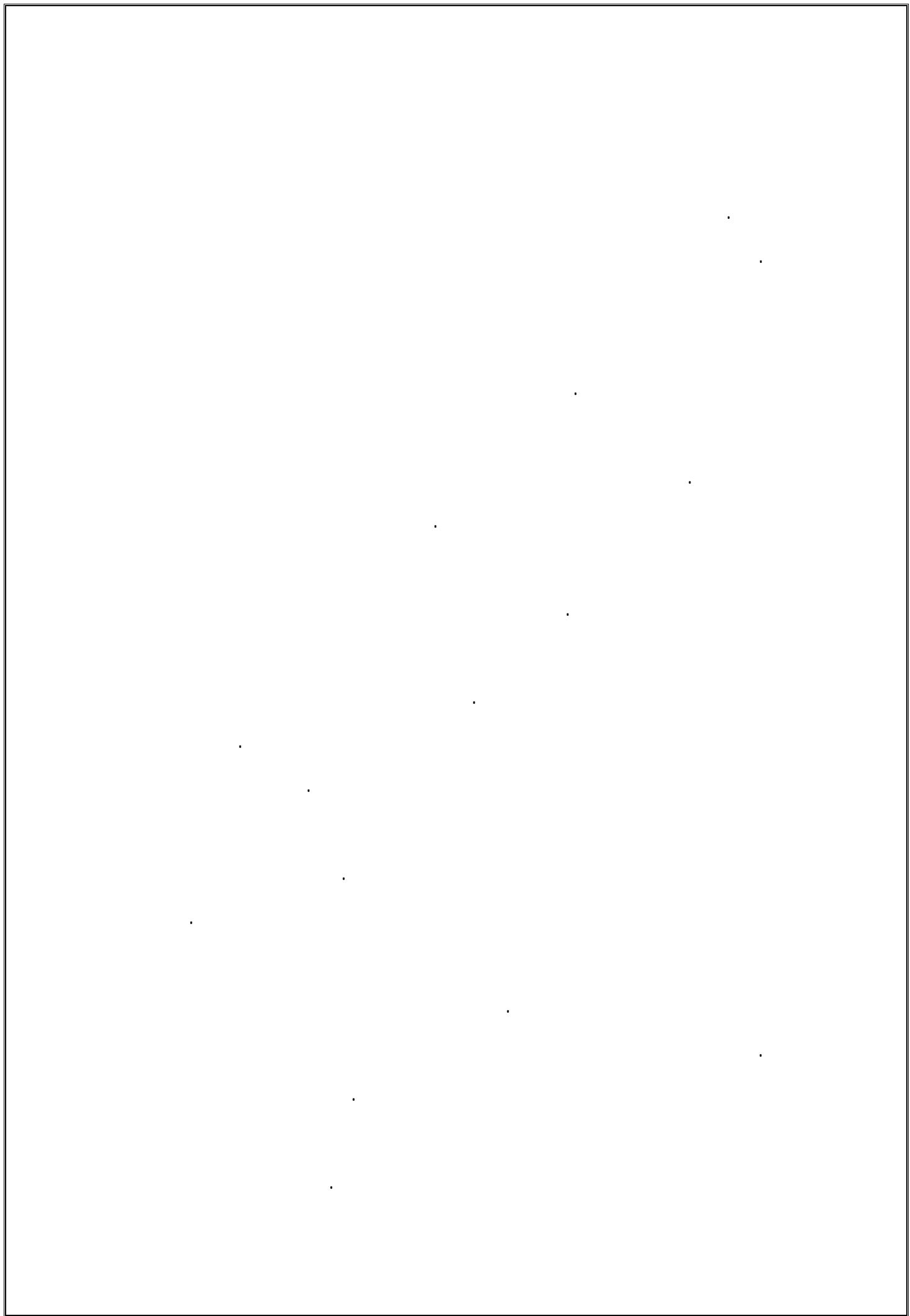
).

(.



" *Add* "

*Sin*





RAM



RAM

RAM

x

x

$x$

$x$

$x$

( )

[  
100001,110011,111010

*Add*

\*.asm

*asm*

).

(.

Re gister )

(.

*Java    C++    C    Fortran    Pascal*

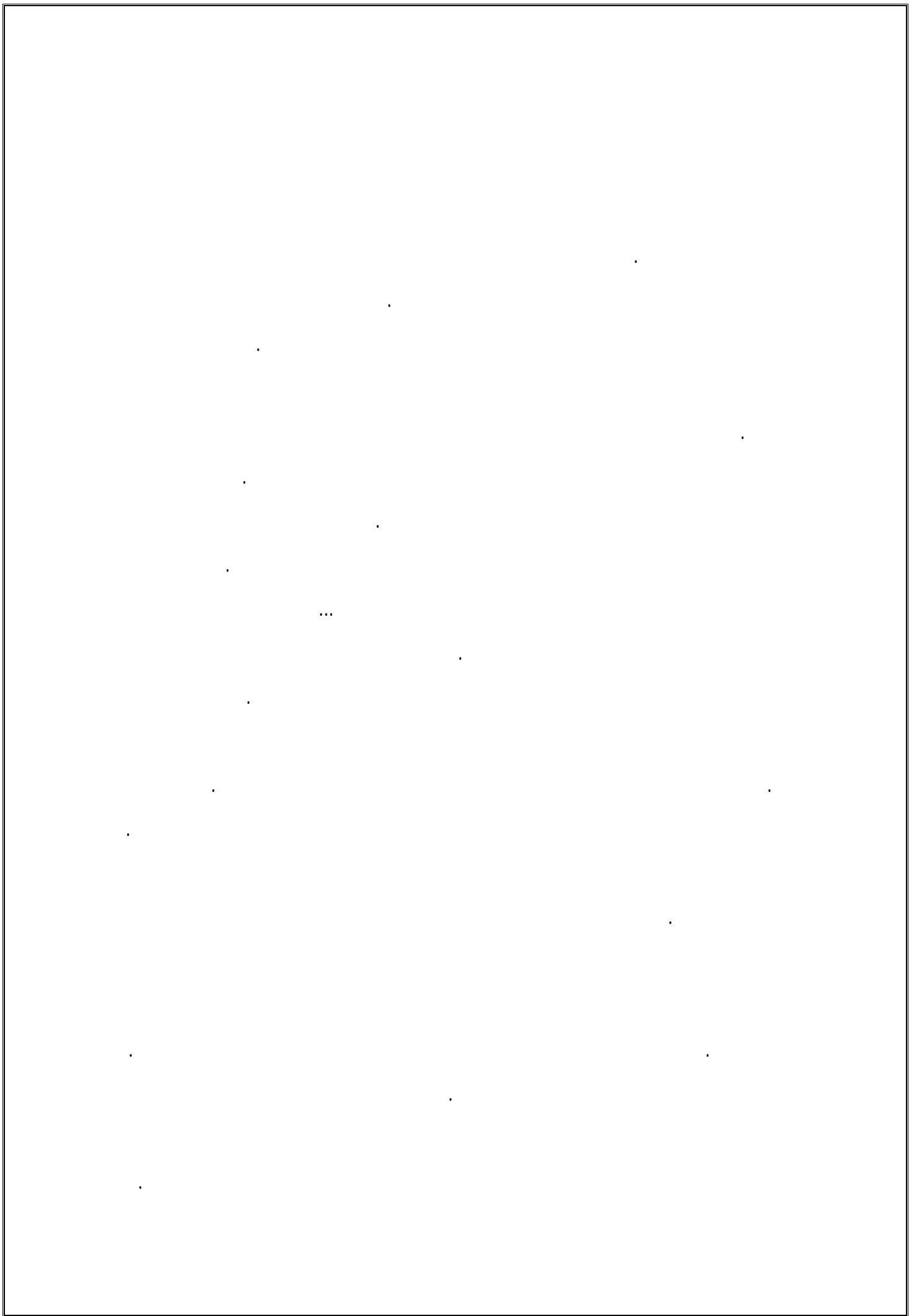
...

*C++*

*C*

a

*Compiler*



*Multi Threading*

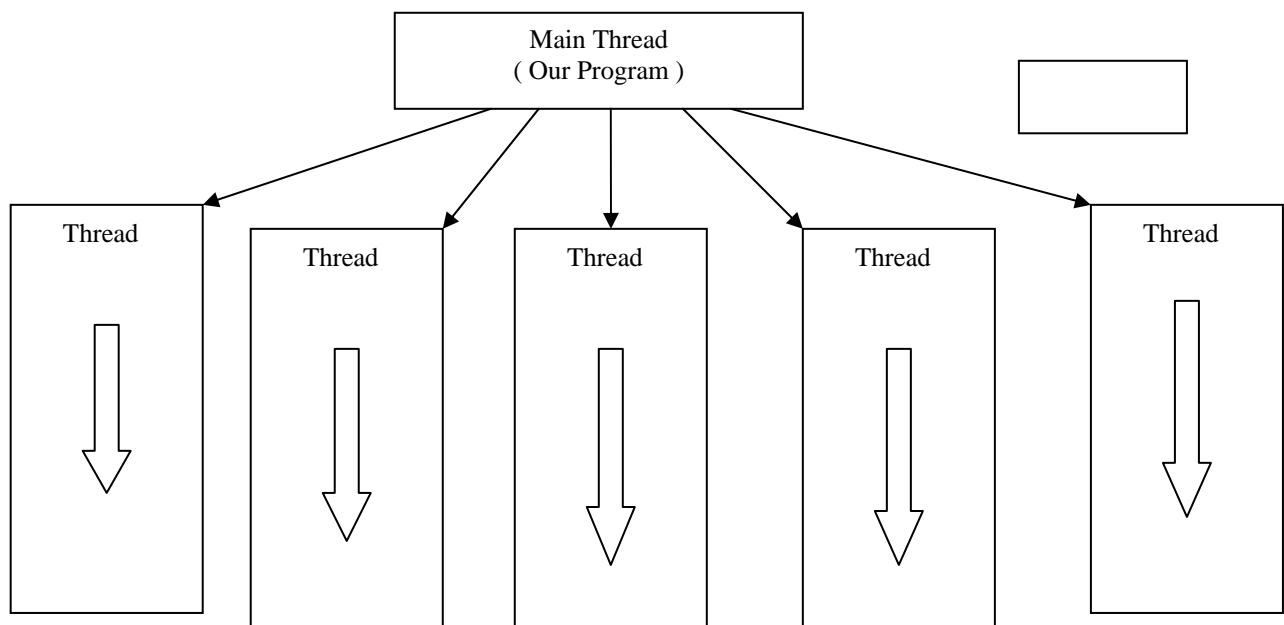
*:Multi Threading (*

*Thread*

*Multi Threading*

*Multi Threading*

*Multi Threading*



*Multi Threading*

(

*Secutiy*

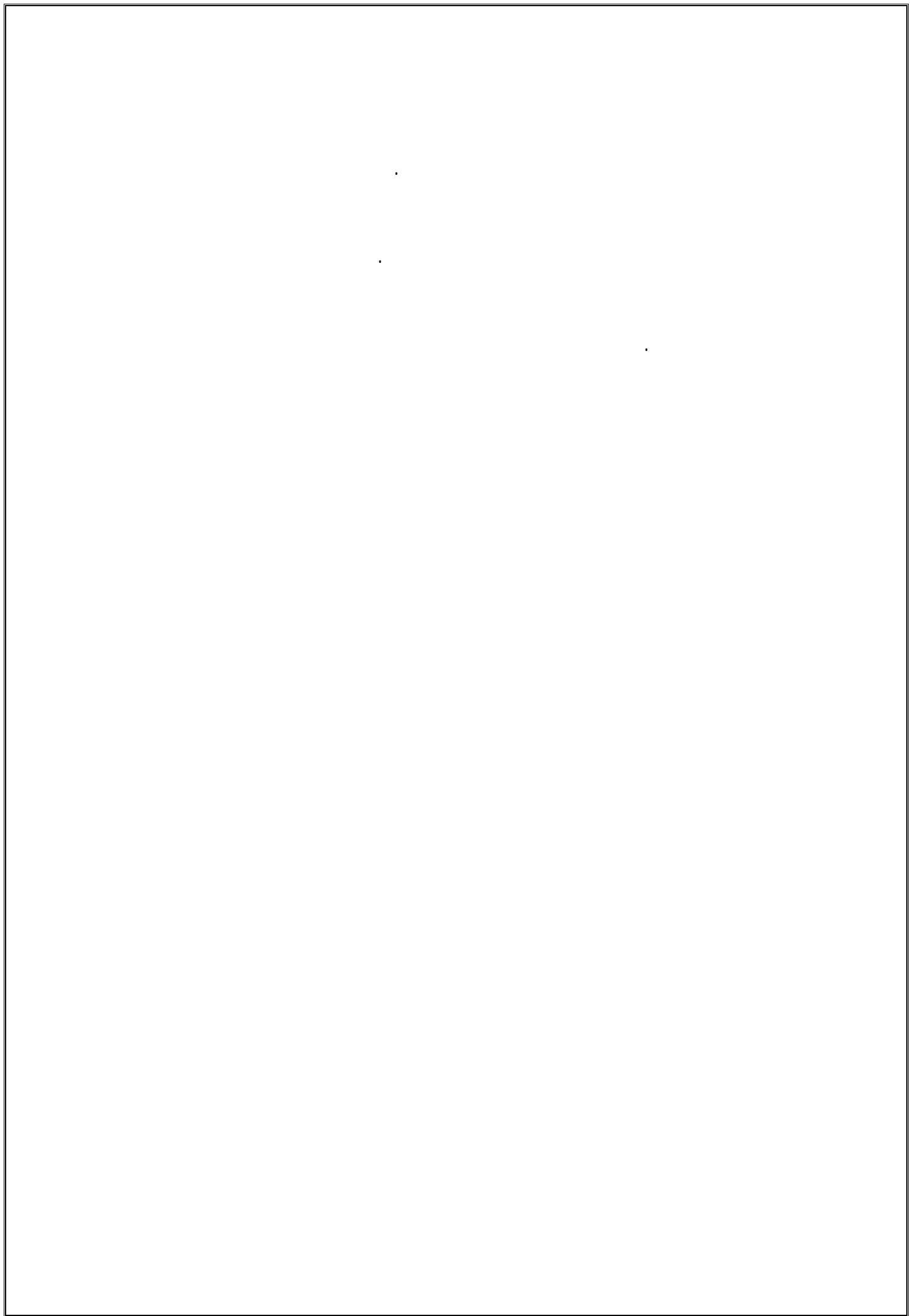
( )

!!!

!!!

*Administrator*

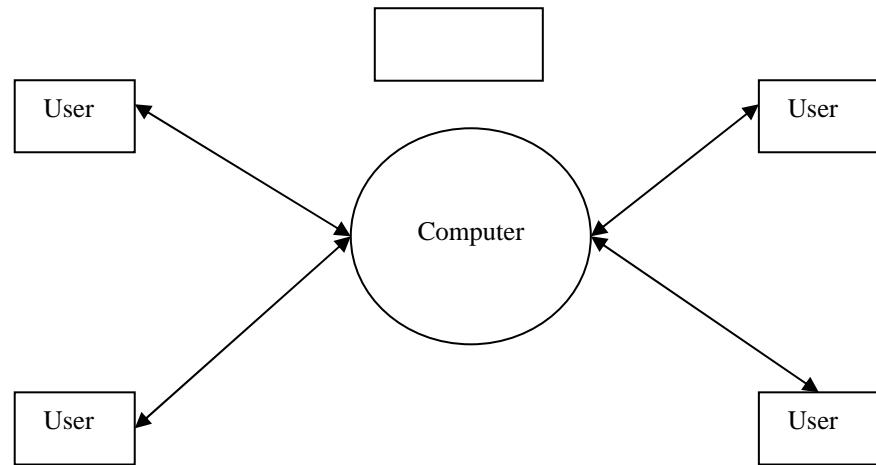
*Policy*



(

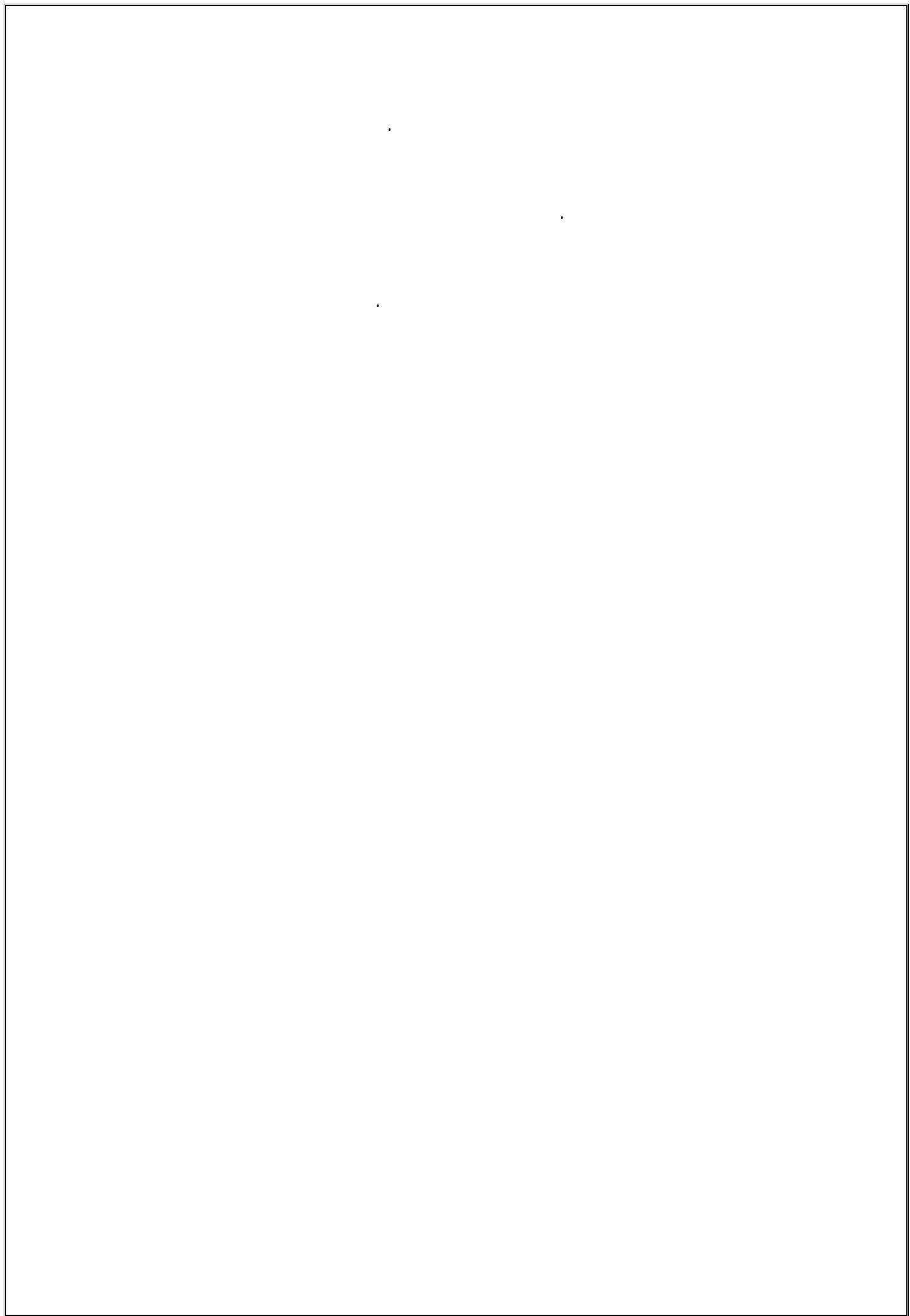
*Multi User*

*Multi Threading*



*Login*

*Windows XP*



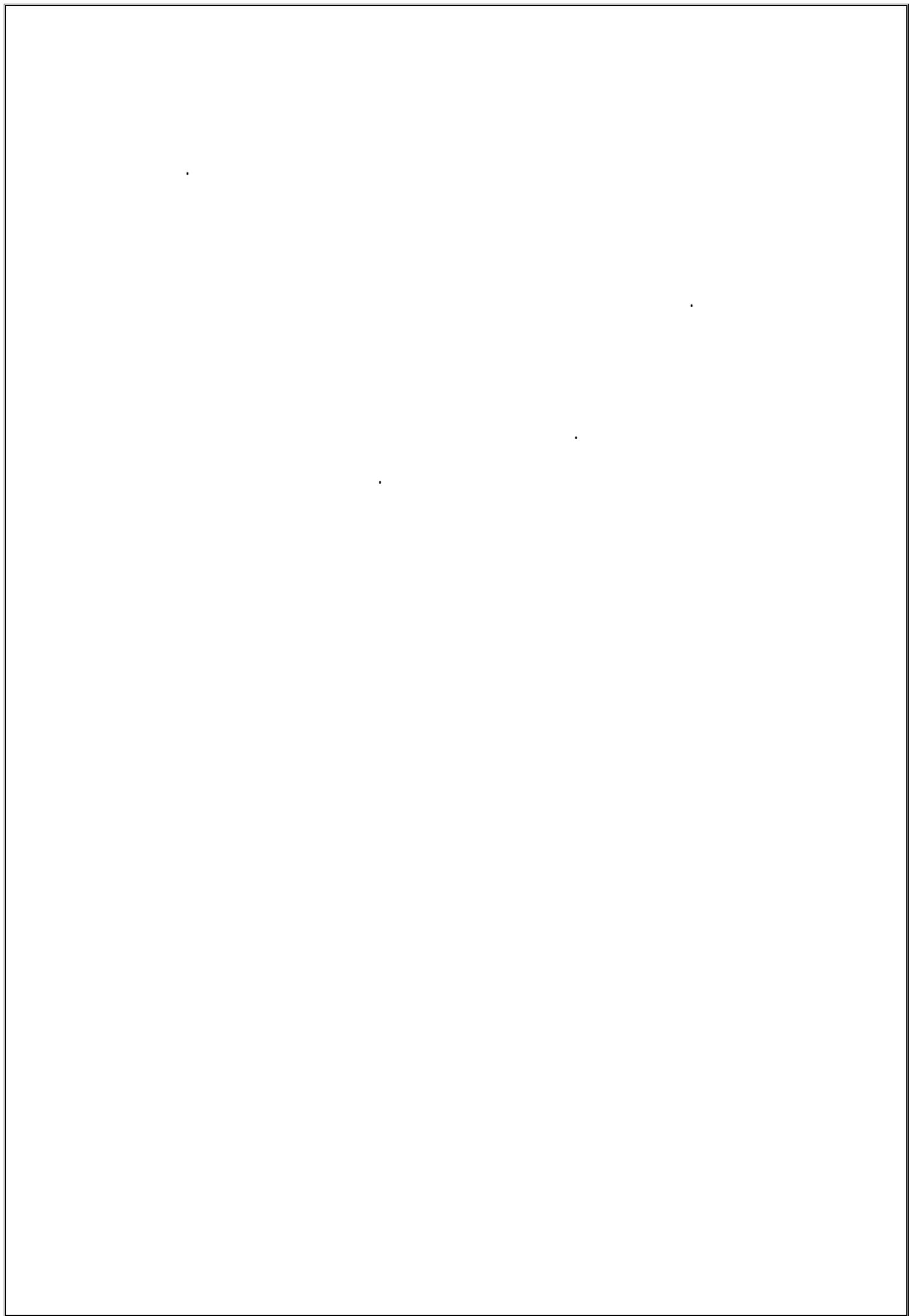
DOS ( )

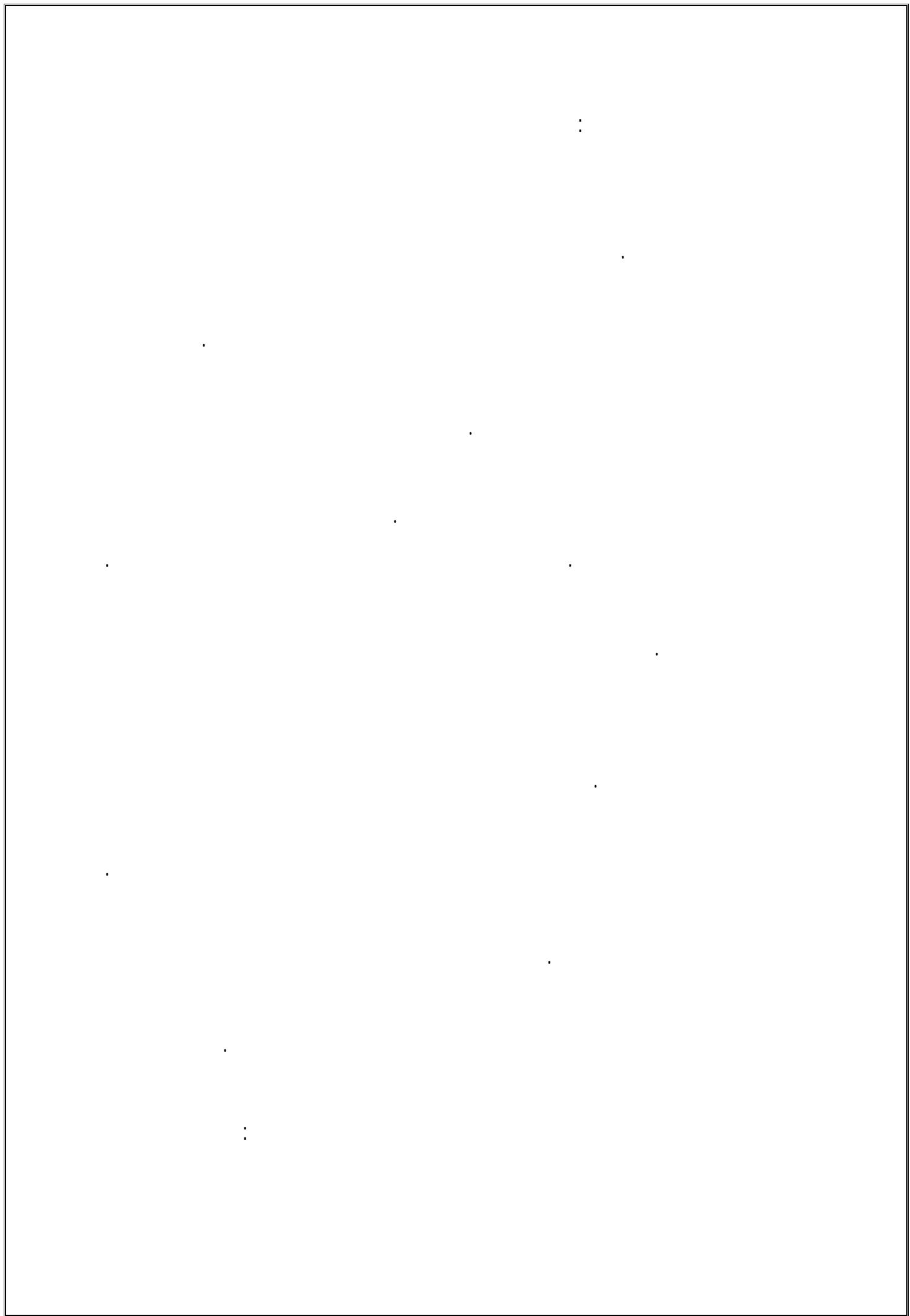
*Miscrosoft*

DOS

... *Internet Explorer*   *Office*

*Bug*





"

"  
..."

RedHat

*GUI*

*Client / Server*

X

X

X

X

*X*

*Windows 3.1*

*X*

! ...

*Gozilla*

*IE*

*Open Office*

*Microdoft Office*

*Open Source*

*Open Source*

RedHat

*Open Source*

*Open Source*

*Open Source*

## ( Open Source Programing) :

*Open Source*

*Open Source*

*Open Source*

*Open Source .*

*Open Source*

( *CopyRigth* ) )

( .

*Open Source*

*Open Source*

*Lisence*

*GPL*

*Open Source*

*Open Source*

*GPL*

*Open Source*

*Open Source*

*GPL*

*Open Source*

*Windows*

*Interface*

*:Interface*

X                X

...

Command Prompt

DOS

GUI

*Client / Server*

X

Visual Studio .net

*directX*

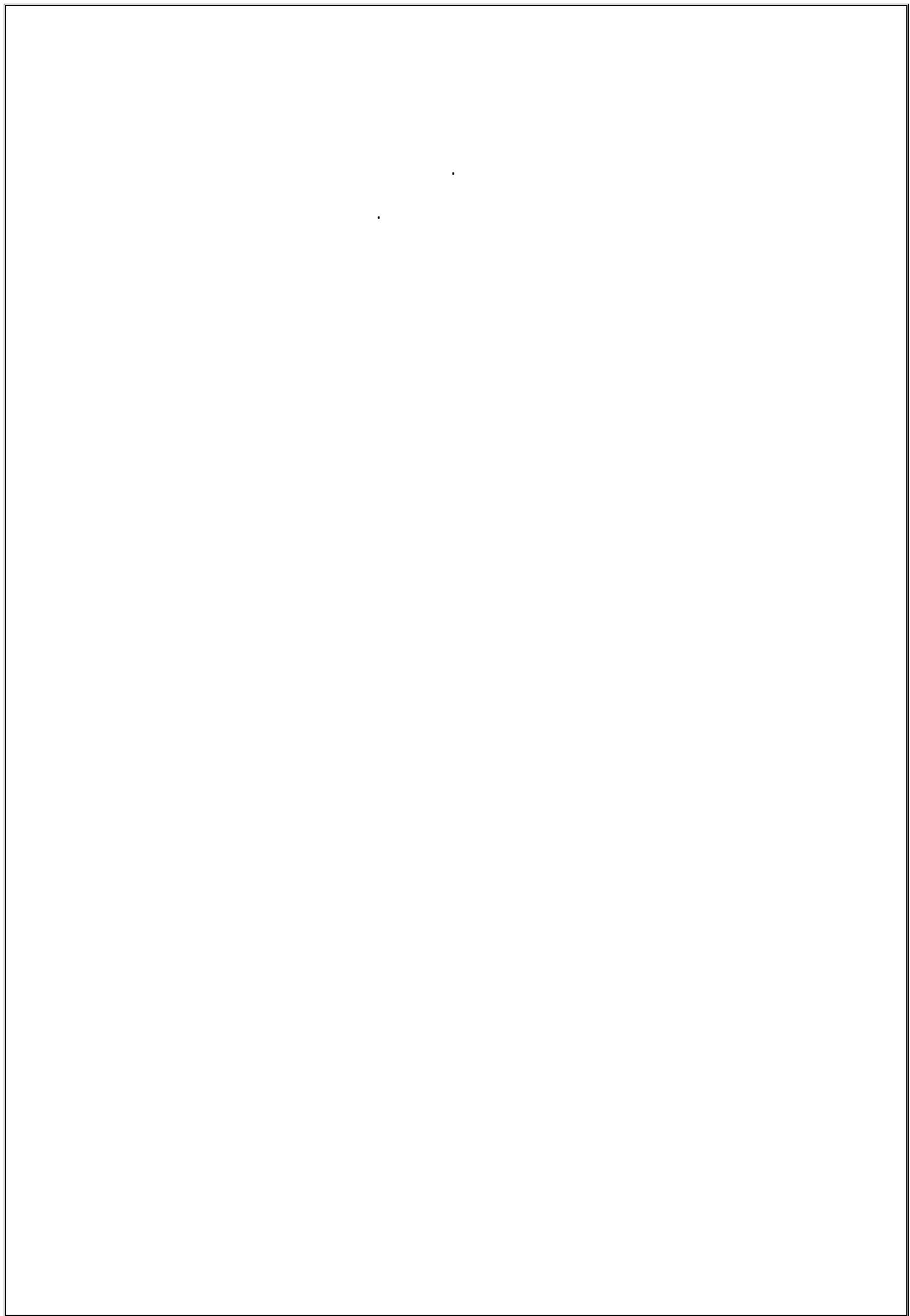
*).*

*(.*

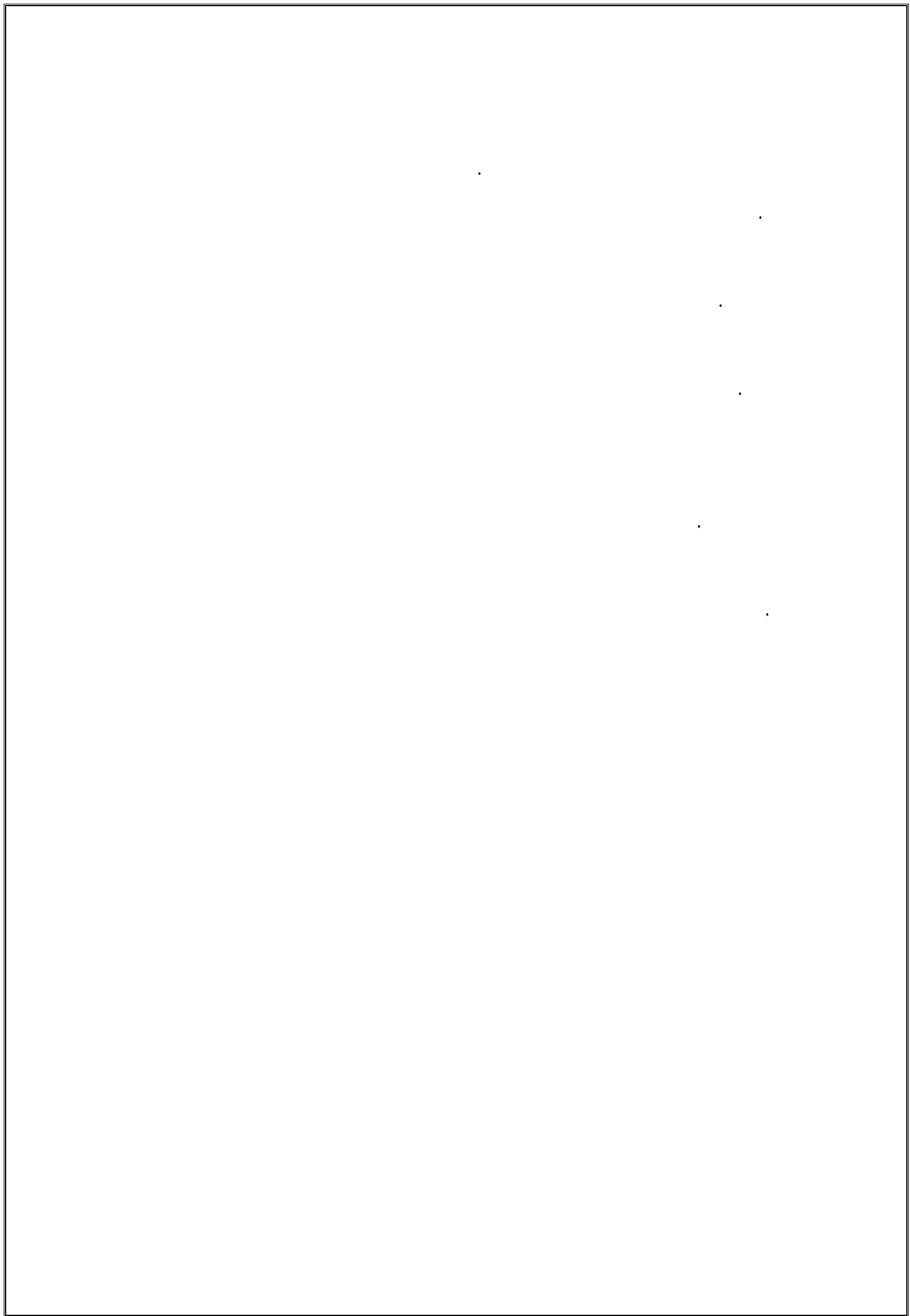
*OpenGL*

*directX*

*directX*



( *driver* )



: ( *File Systems* )

*NTFS*    *FAT32*    *FAT*

*FATX*

*NTFS*

2000

*EXT2*

*SWAP*    *EXT3*

" / "

*Web Server*

*C, D, E, ...*

*mounting*

).

(

"/"

*EXT3    EXT2*

"/"

*SWAP*

*SWAP       EXT3       EXT2*

*My Computer*

*NTFS    FATX*

*Boot Loader*

*Load*

*Loader*

*EXT*

*Boot*

《 》

....

)

(.

*exe*

*exe*

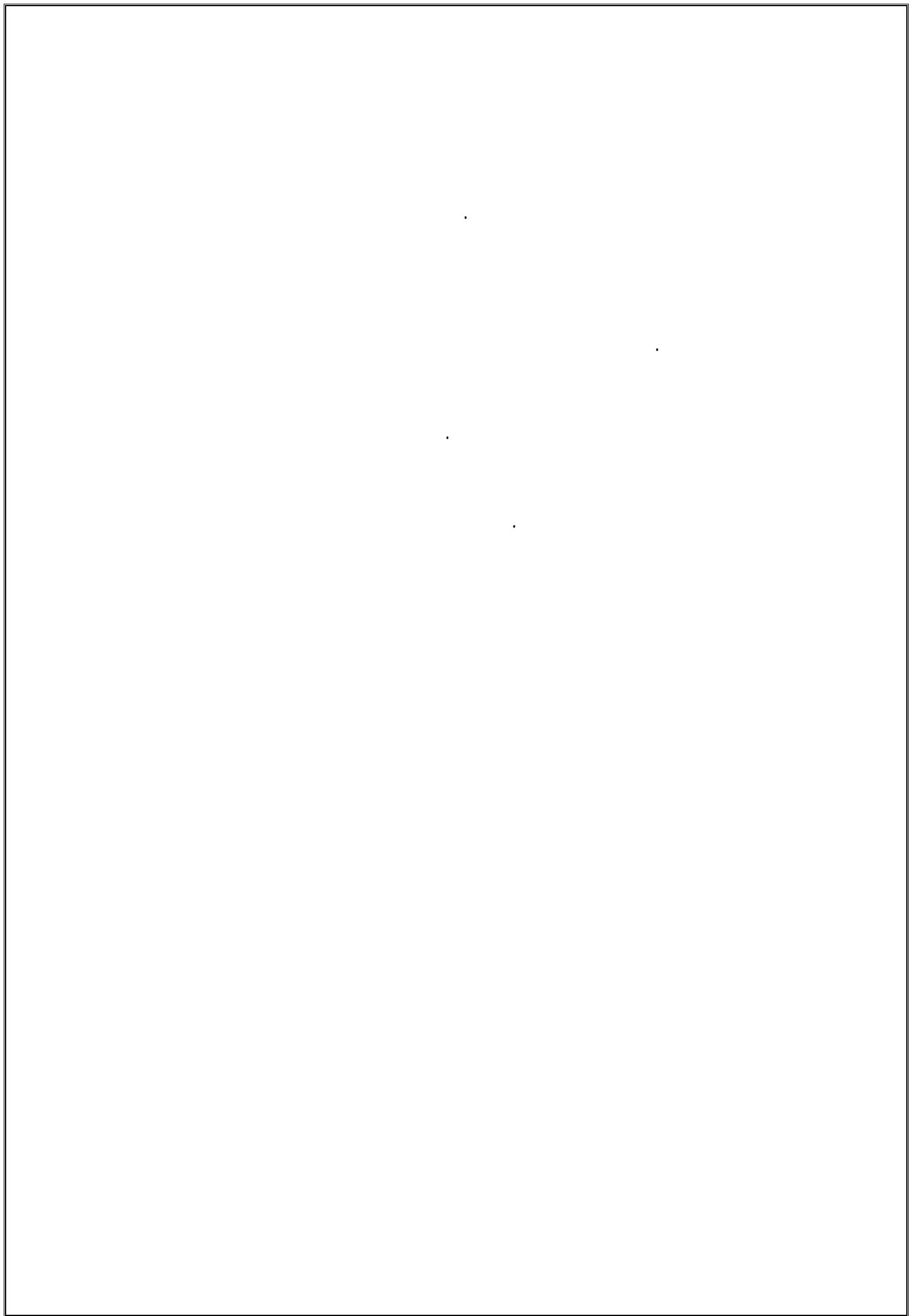
(                  DOS                  )

)  
( !!!

*Setup*

*exe*

(!                  )



*Copyright*

*Windows*

... *Free-BSD*

( )

!!

RedHat

*Suse*

*Ubuntu*

*SlackWare*

*Suse*

RedHat & SlackWare

!!!

) .

( !!!

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).

(.

Page File

*Swap*

*Swap*

*Swap FS*

III ...

## *MultiTasking*

Unix

Dos

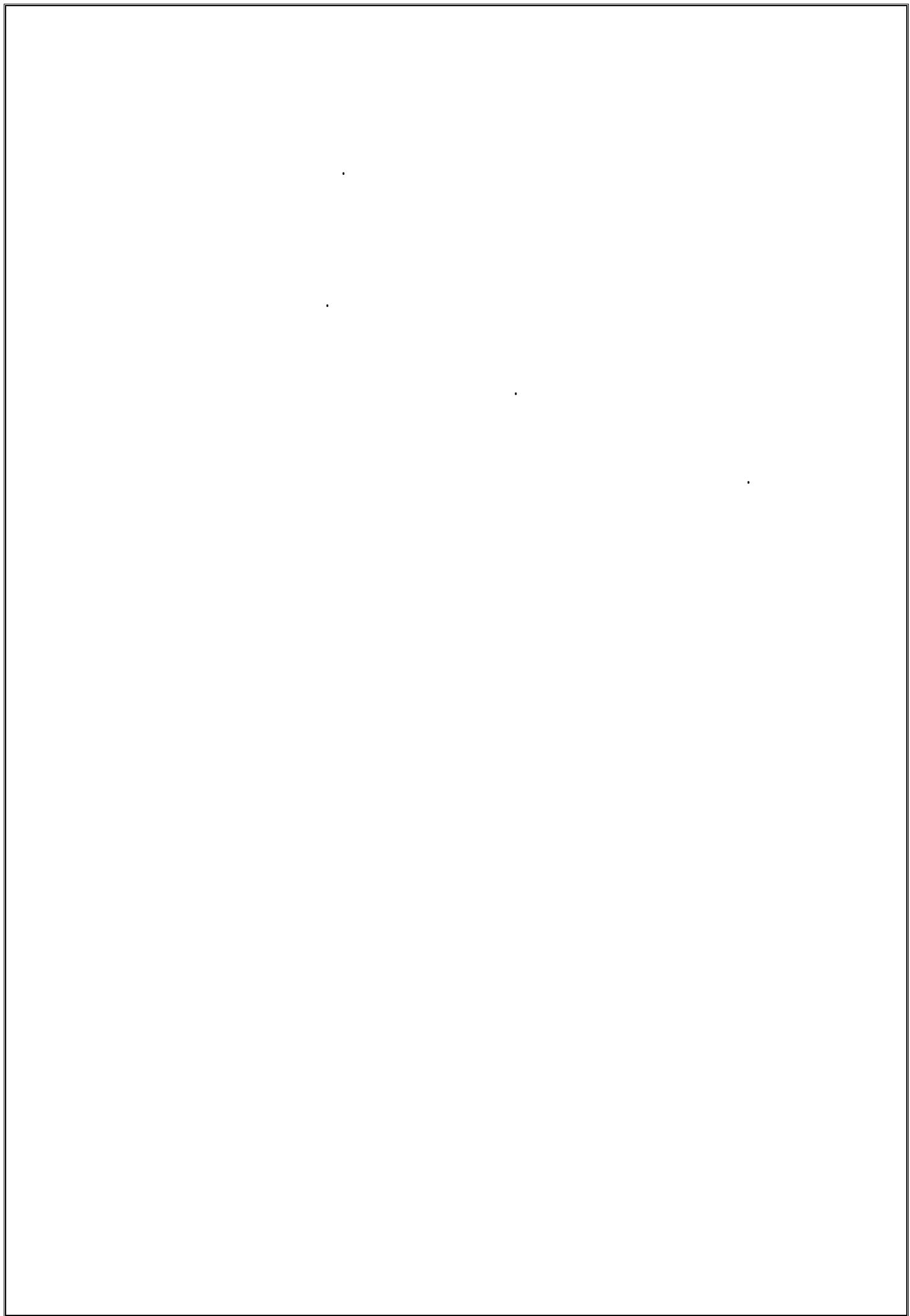
Unix

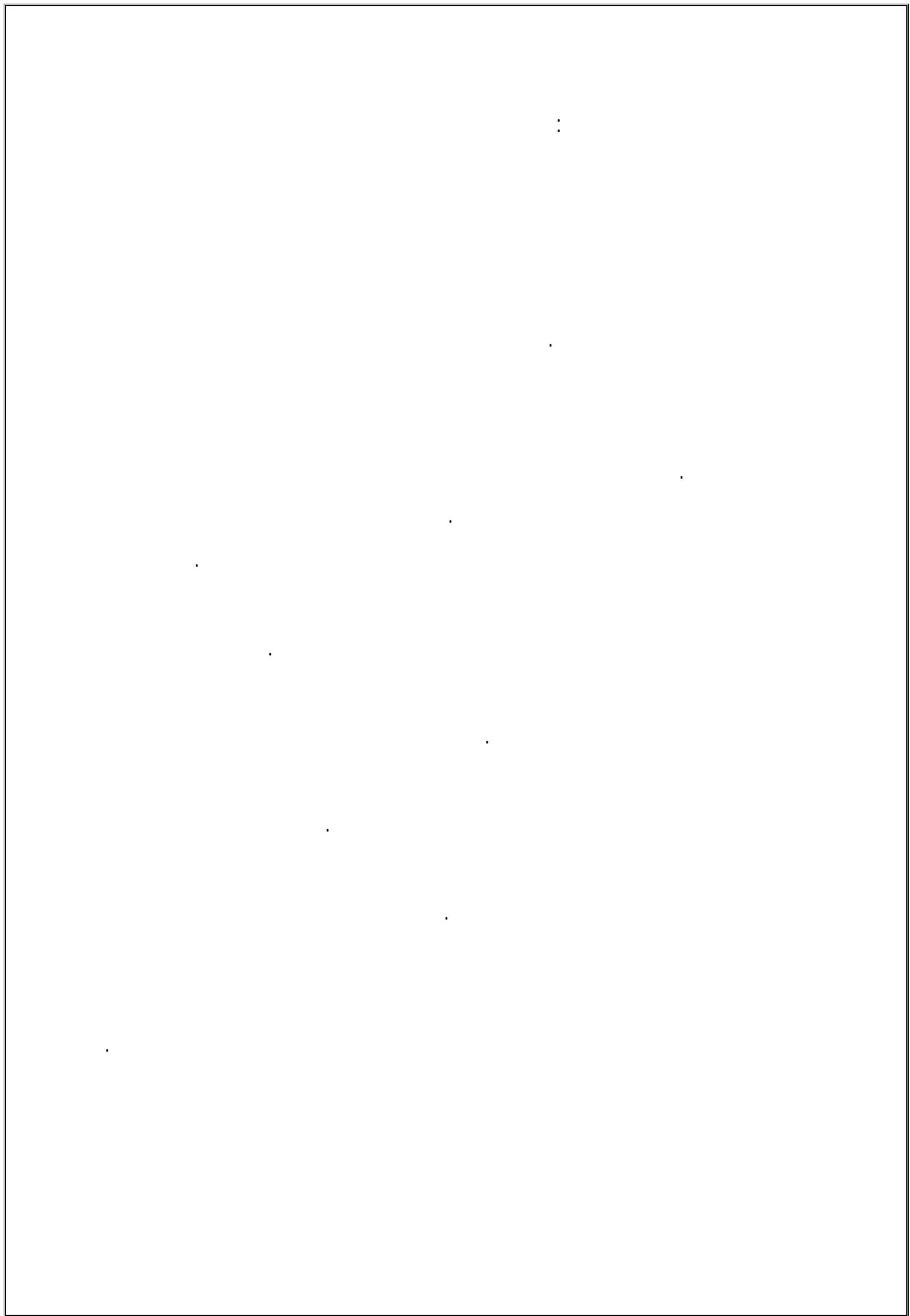
**Unix**

CD

Wizard

UDP      TCP/IP



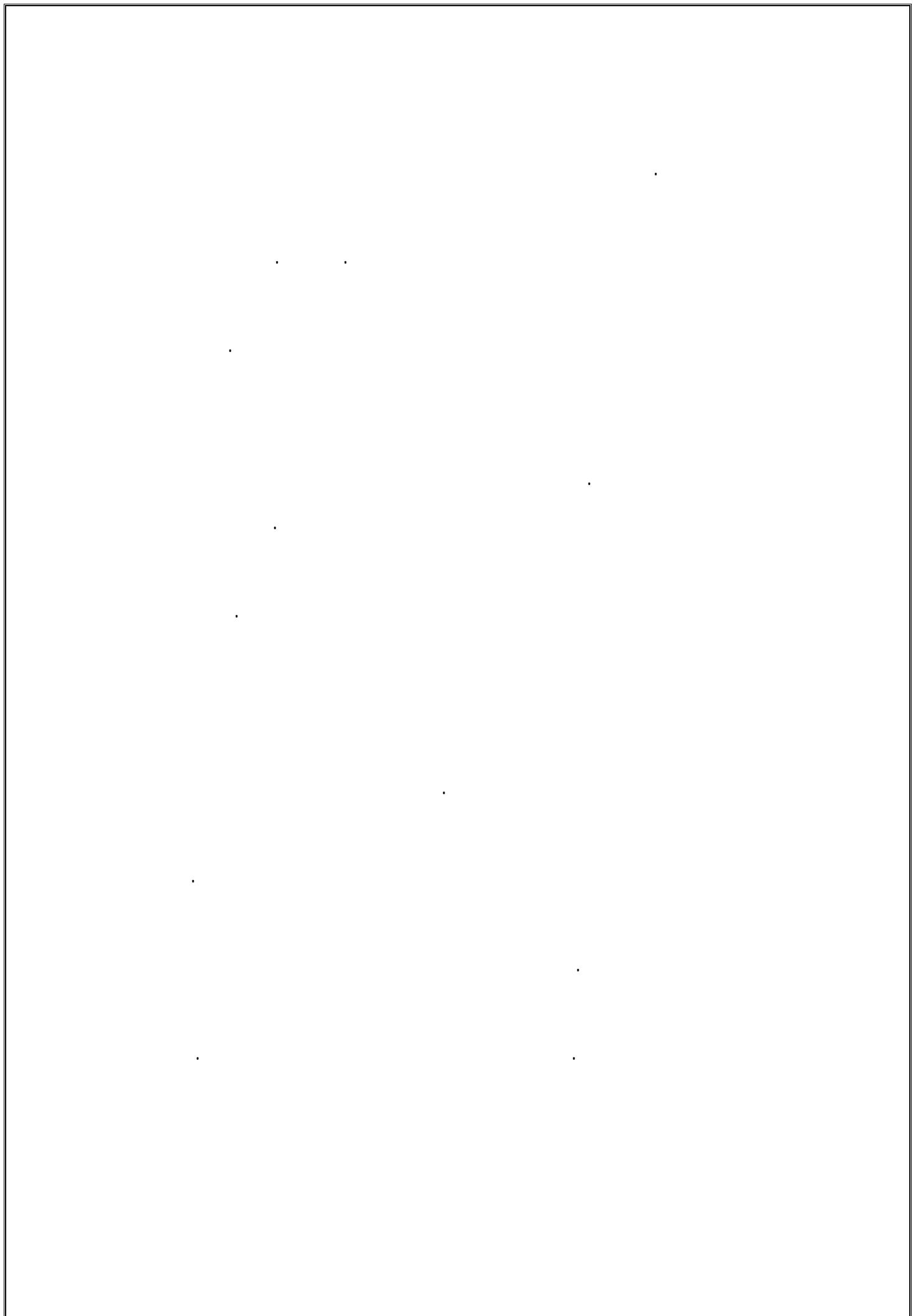


(!!! ... )

Java C++ C

)

( Dynamic Memory Allocation



## *:Multi Threading*

.net

