

SAN

Paralle Bus & Tag, ESCON, SCSI

가

가

가 (Static)

가

(Static)

가

PC

PC

가

(Dynamic)

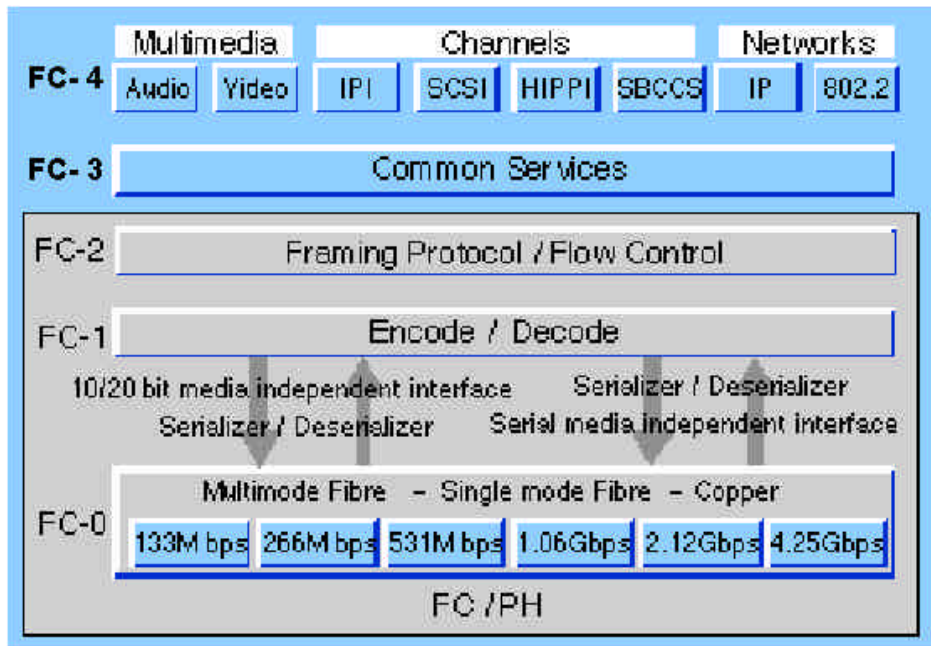
가

SCSI

FDDI, SCSI, HIPPI, IP

가

가



< 1. >

FC-0
가

FC-0

FC-1
FC-1

가

8B/10B

/

가

FC-2
FC-2

가

FC-3
FC-3

- Striping :

. LAN

Etherchannel

Trunk

- Hunt group : 가

가

LAN

4

가

IP

-

:

FC -4

FC-4 SCSI, IP
. FC-4

가

FC-4

SAN

SCSI FCP(SCSI-3 Fibre Channel Protocol)

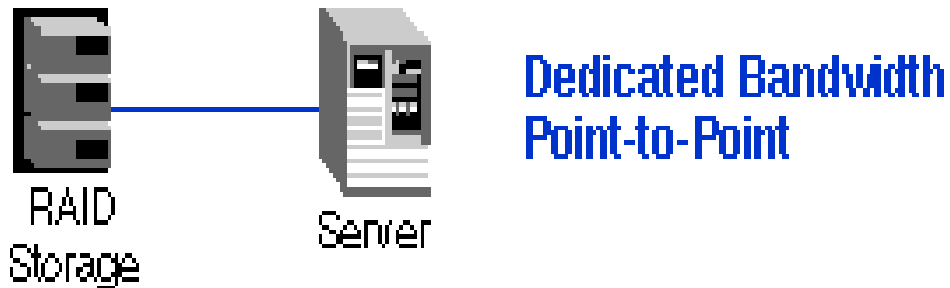
FC-4

- SCSI (Small Computer System Interface)
- SBCCS(Signle Byte Command Code Set Mapping)
- IPI (Intelligent Peripheral Interface)
- HIPPI (High Performance Parallel Interface Framing Protocol)
- IP (Internet Protocol)
- ATM(Asynchronous Transmission Mode)
- IEEE 802.2

SAN

Point-to-Point

2



< 2. Point-to-Point Topology >

FC -AL(Fibre Channel Arbitrated Loop)

Arbitrated Loop

가

Initiator()

가

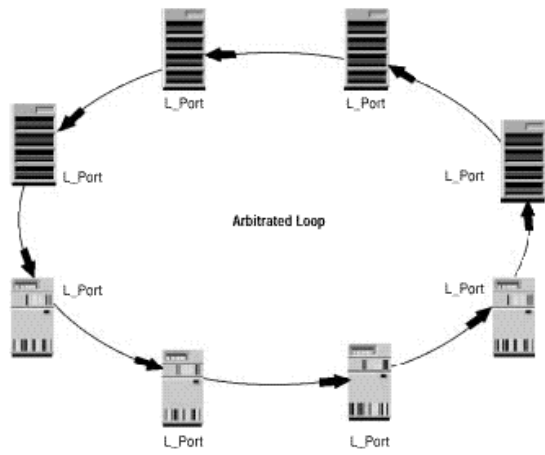
Arbitrated Loop

(arbitrate)

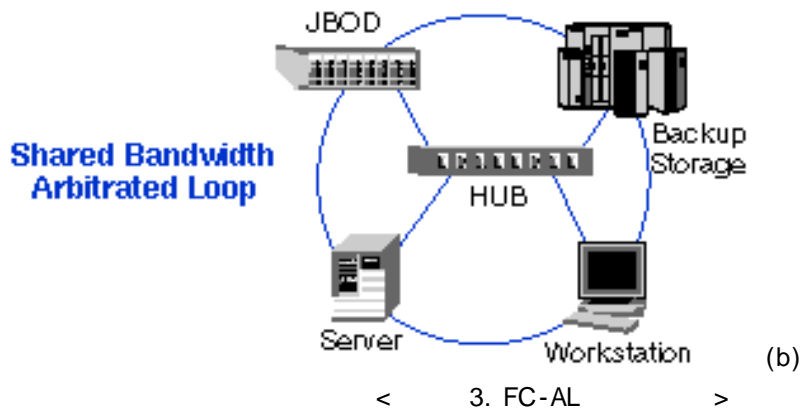
126

가

3 FC-AL



(a)



(b)

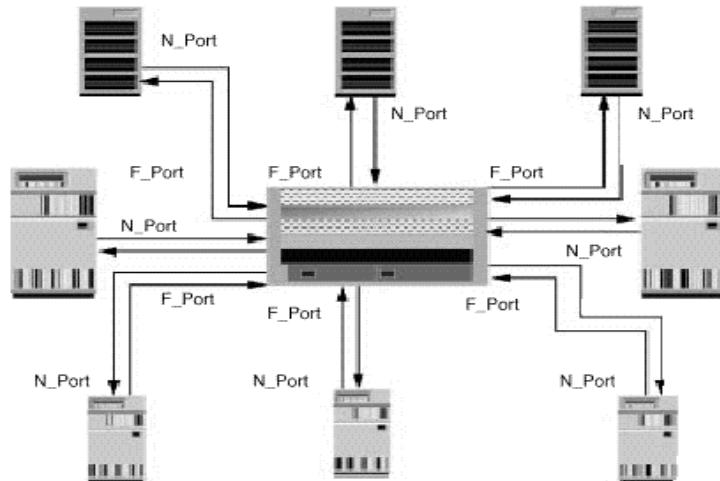
Fabric

N-to-N

가

가

4



Fibre Channel Fabric

< 4. >

SAN
SAN

5

SAN

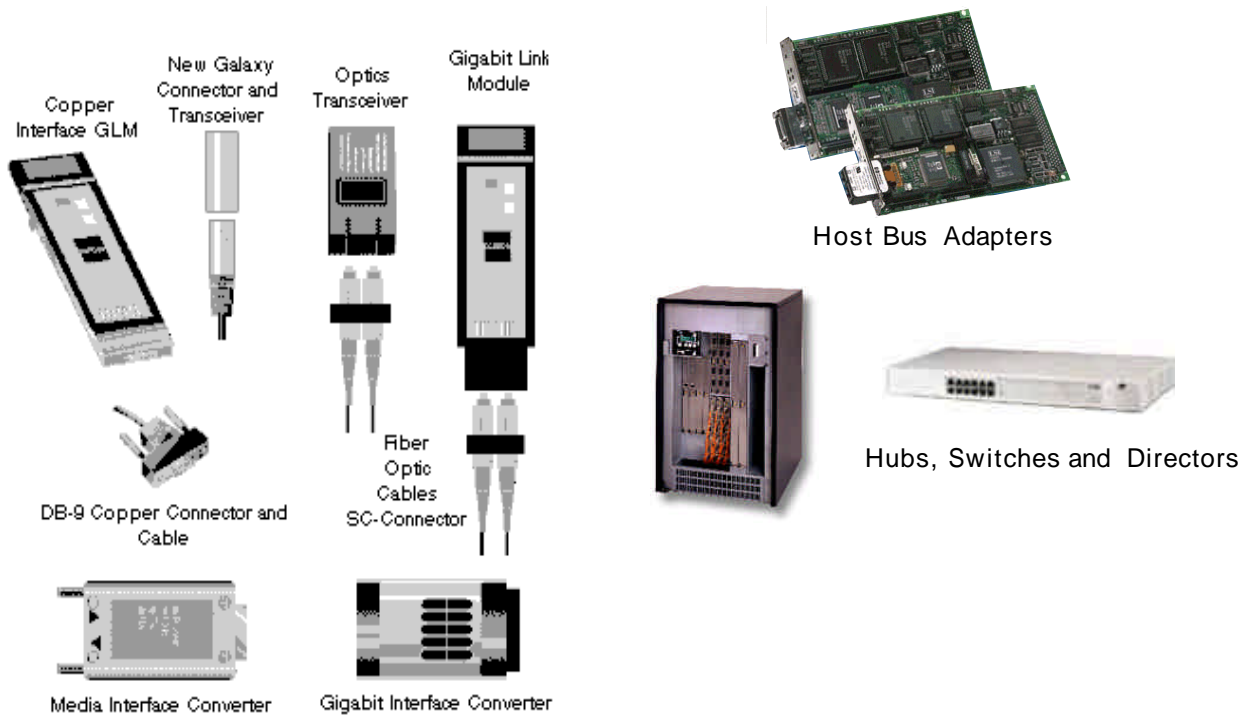
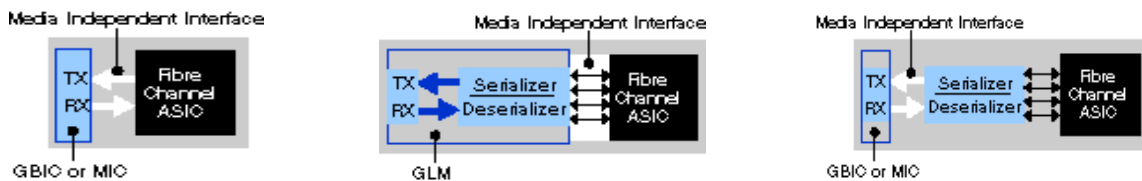


Figure 4.3 Flexible use of gigabit copper or fiber optics



< 5. SAN

>

GBIC(Gigabit Interface Converters)

(Twin-ax Copper)

가

HBA

(Copper)

GBIC MIC(Media Interface Converters)

GLM(Gigabit Link Modules)

GLM

가

GLM

/

HBA

가

(optic)

(copper)

HBA(Host Bus Adaptors)

HBA SCSI HBA LAN NIC(Network Interface Card)

HBA GLM(Gigabit Link Module)

GBIC(Gigabit Interface Card)

HBA

I/O

ASIC

LAN

가

LAN

가

가

Configuration

Configuration

Vixel, Gadzoox

LAN

zone

(IP, SCSI) FC

Point-to-point, FC-AL,

가

EMC, McData

SCSI

가 SCSI

가

Crossroads, Chaparrel

SAN

SAN

가

(Device Discovery)

-

SCSI

가 15

ID

ID

가

/ /

I/

O

SCSI

가

가

/ (reserve/release)

가

/

SCSI가

16

가

16,000,000

가

SCSI

HBA

N- 가

WWPN(World-Wide Port Name)

FC-4

(SCSI)

가

SCSI

World Wide Port Name(WWPN)

64

가

WWPN

(HBA:Host Bus Adaptor)가

ANSI

WWNN(World Wide Node Name)

N-

(

)가

N-

F-

(CoS:Class of Service),

N-

N- 가

N-

ID(SID:Source ID)가

N-

ID(DID:Destination ID)가

S,P

S

ID , P

N-

가

N-

WWPN

N-

HBA

SCSI FCP

가

가

SAN 2 3 (CoS:Class of Service)가 .
 2 Acknowledged Connectionless Service 3 Unacknowledged Connectionless
 Service . 2 N- 가 . HBA
 3 .

Zonning . Zone GUI Zone . Zone 가

LUN - masking 가 LUN - masking . LUN - masking SCSI LUN
 (Logical Unit Numbers) LUN 가 Zone .
 LUN - masking