

# 1. TV

, 1995 EBU SMPTE ‘

(EBU/SMPTE Task Force for Harmonized Standards for the Exchange for Programme Material as Bitstreams)

, ,  
200 가가 7

- (Compression Algorithm)
- (File Formats)
- (Transport Streams)
- (Transfer Protocols)
- (Interface)
- (Wrapper and Metadata)
- (System Management)

, EBU SMPTE

1998

2.

TV

가

가

(Object Modelling)

가

가

가

가.

가 , 가 ,  
가

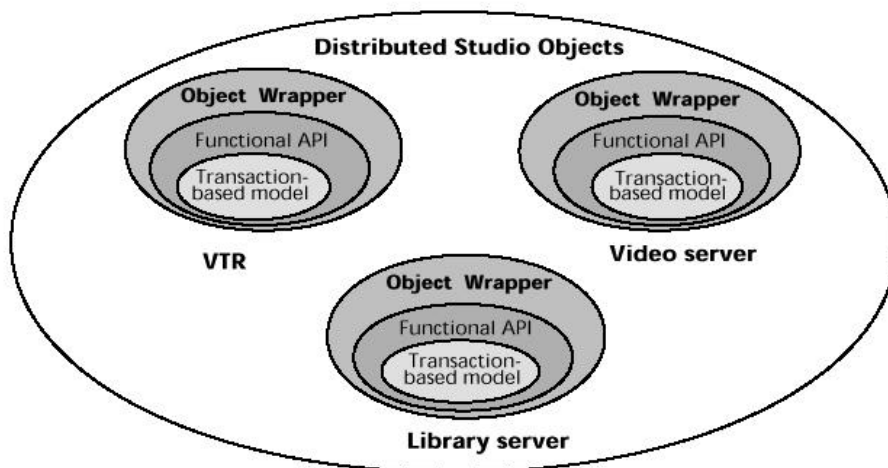
1)

2

(Transaction-based Model)

( , RS-422

)



2.

API(Functional API)

API

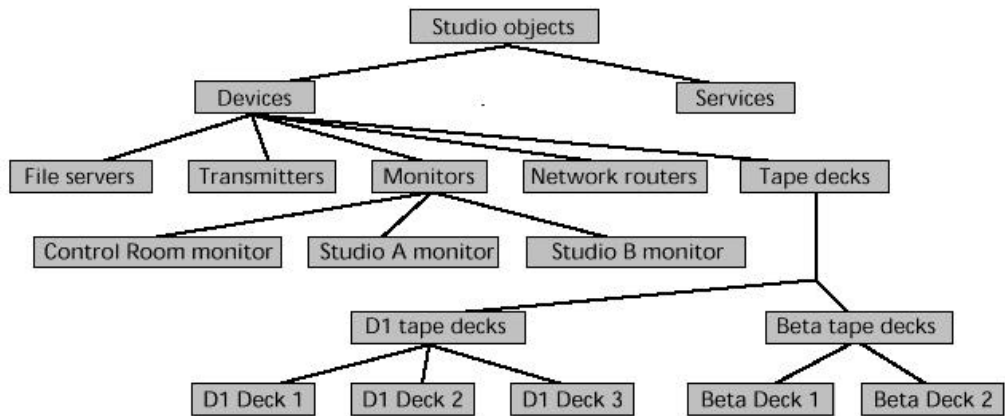
(Object Wrapper)

2)

(Network Object

Registry)가

3



3.

·è

가

가

(Network Routers)

가

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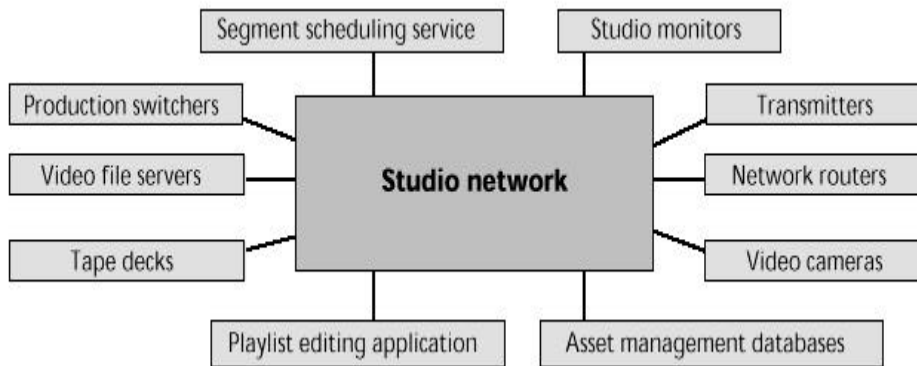
A

,

B

가

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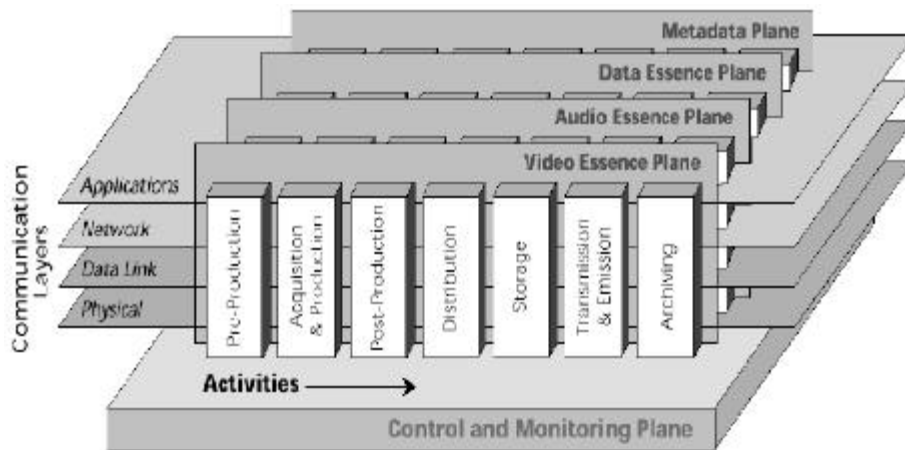
4.

가 . 4  
가

가 5

(Activity)

1) (Activities)



5.

1) ,

2) (Essence and Metadata)

가

가

가

가

가

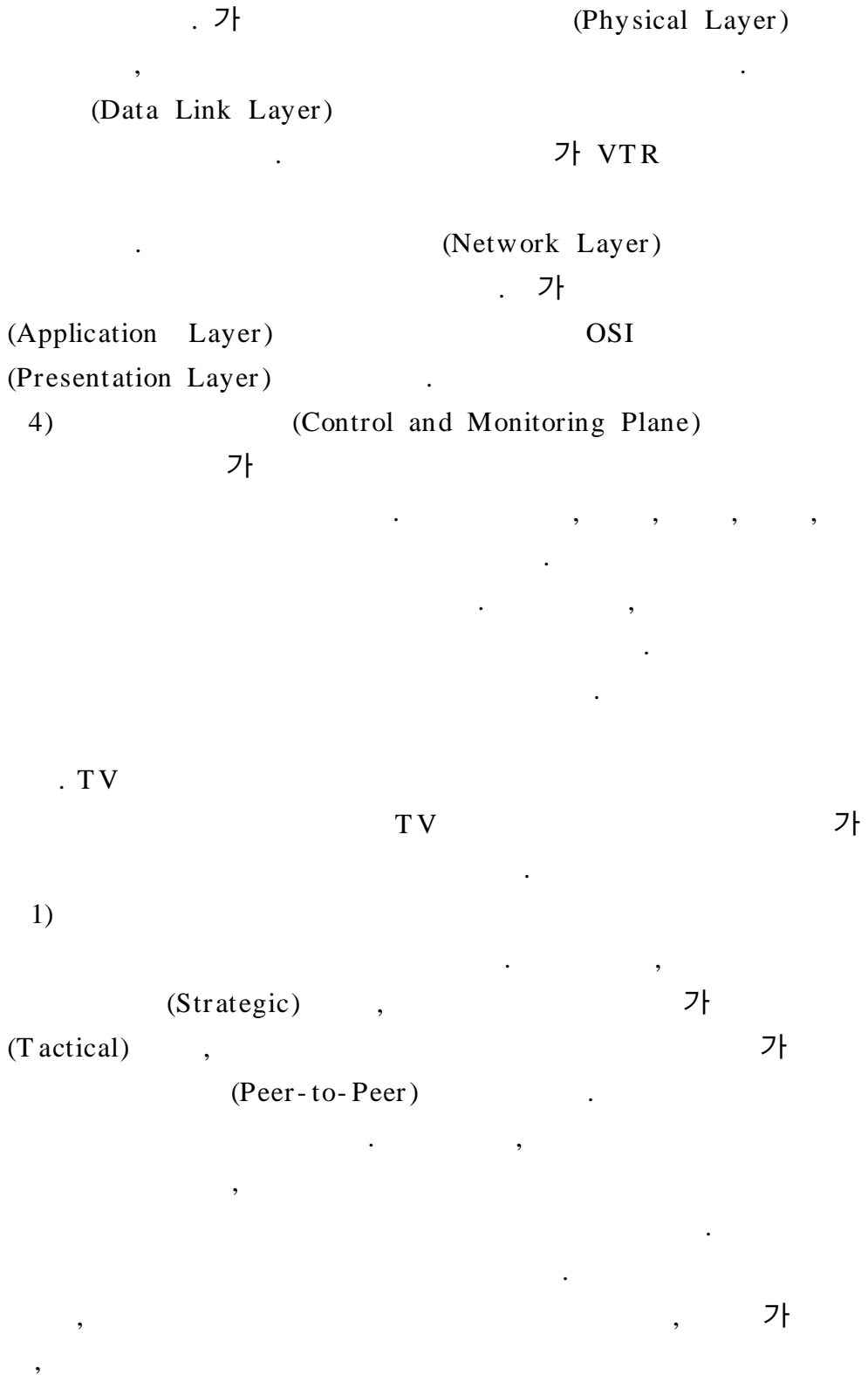
가

가

3) (Communication Layers)

OSI(Open Systems

Interconnection)





2) , ,

가

3)

가

가

가

가

4)

(Serial Data Transport Interface)

SDI

SDTI

5)

가

가

가  
DV(Digital Video)

MPEG

. SDTI

가

가

6)

BB(Black-Burst)

가

가

가

가

가

가

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가

가

### 3. (Compression)

1

가

MPEG DV

가.

- 
- 
- 

'97 4 1

가

가

가  
(Agile encoder)

가

6

가

- Professional MPEG
- DV
- M-JPEG
- Digital Betacam
- Wavelet Encoding
- Fractal Encoding

가 DV MPEG

가

. M-JPEG

, Digital Betacam

가

가

가 . MPEG-2 4:2:2 P@ML(Professional MPEG) DV

VCR

Betacam SX

DVCPRO

. EBU

가

가 18 25Mbps

MPEG-2 4:2:2 P@ML DV

가

가

(Agile

Decoder) 가

MPEG-2 4:2:2 P@ML

가 18Mbps/sec SX

7

가

가

. DV

50Mbps

GOP

(Agile Decoder)

6

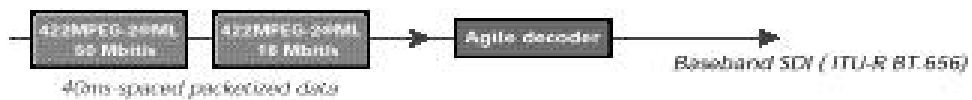
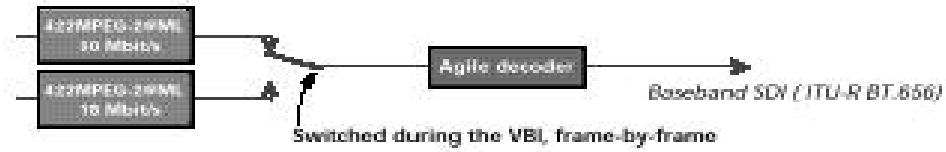
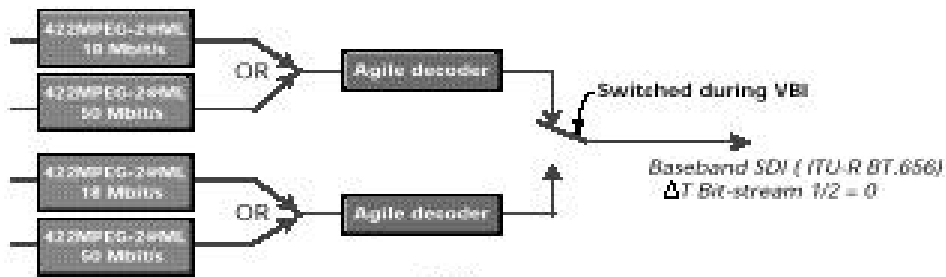
가

6

MPEG DV

SDTI

SDI



6.

(a)

(b)

(c)

SDTI

가

M-JPEG

M-JPEG

(NLE : Non-Linear Editor)

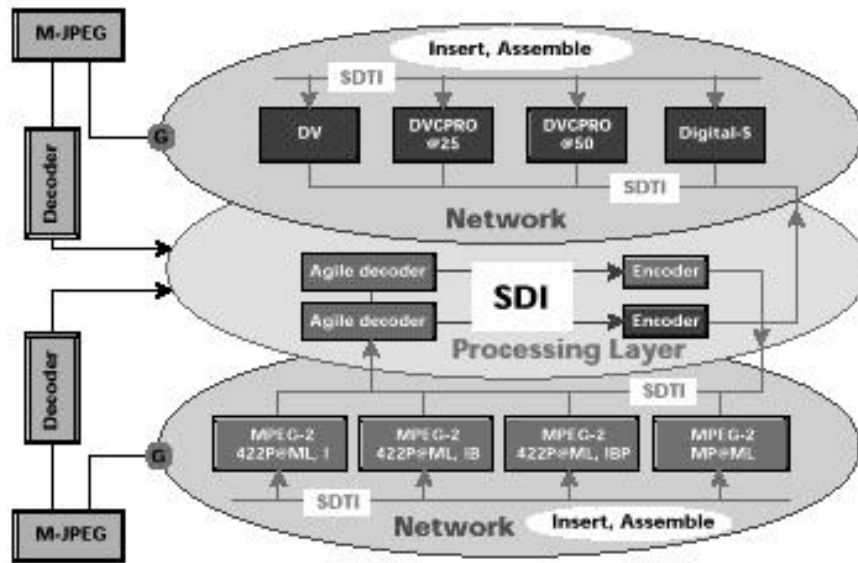
DV

MPEG

가

M-JPEG

가 가



7.

4. (Wrapper & Metadata)

가.

**Individual**

Header 1	Label 1	Value 1	Header 2	Label 2	Value 2
----------	---------	---------	----------	---------	---------

**Group**

Header	Label	Tag x	Value x	Tag y	Value y	Tag p	Value p
--------	-------	-------	---------	-------	---------	-------	---------

**Packed**

Header	Label	Value 1	Value 2	Value 3	Value 4
--------	-------	---------	---------	---------	---------

8.



SMPTE

,

8

가

ANSI

SMPTE

(Universal Label)

,

SMPTE

(Registry)

. SMPTE

가

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가 가

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( , , )

‘ , ’

가

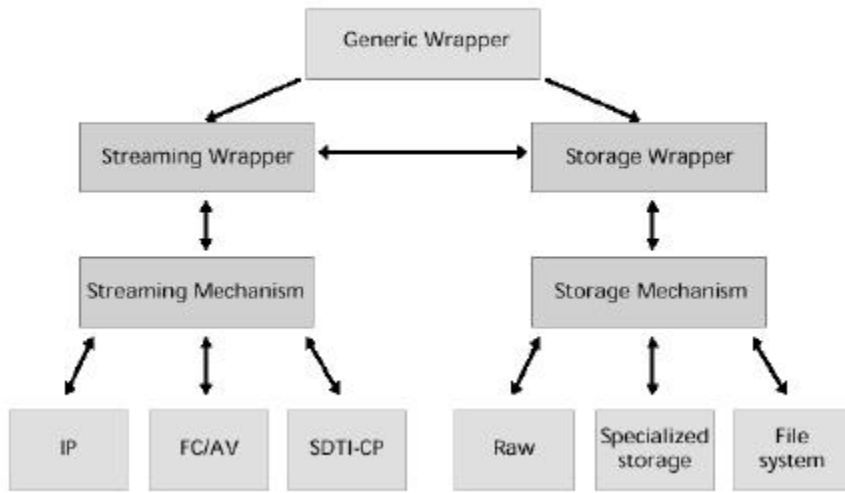
( , )

가

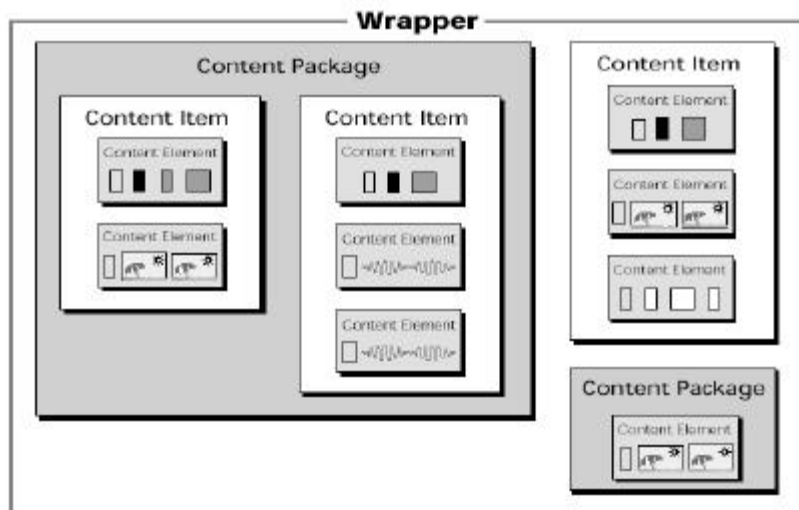
9

10 DAVIC

SMPTE



9.



These are all Content Components:

- |  |                                |  |                                      |
|--|--------------------------------|--|--------------------------------------|
|  | Essence Component (Video)      |  | Metadata Item                        |
|  | Essence Component (Audio)      |  | Vital Metadata (e.g. Essence Type)   |
|  | Essence Component (Other Data) |  | Association Metadata (e.g. Timecode) |

10.

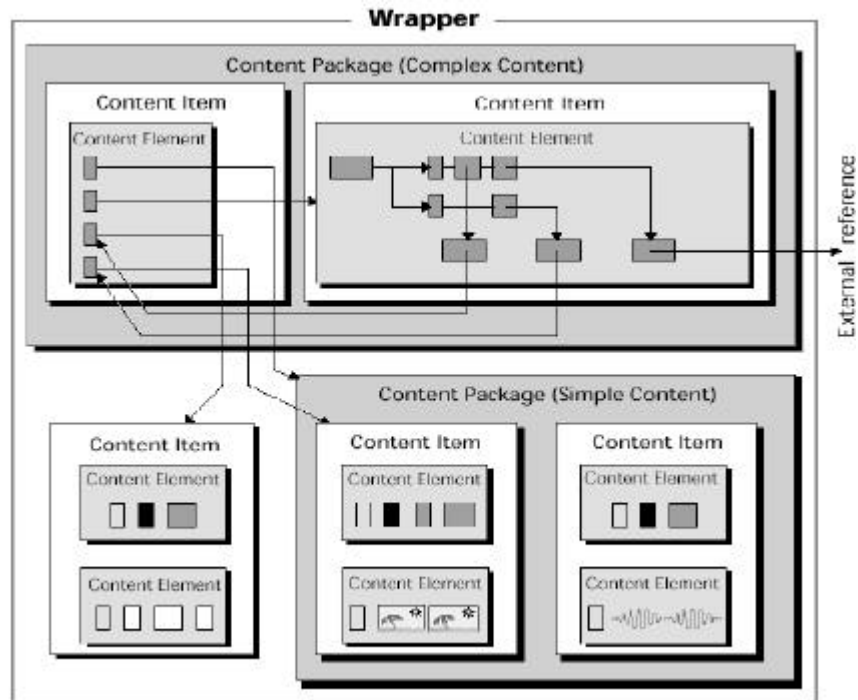
가 가

(Hierarchical)

(Recursive) 가

11

(EDL),



11.

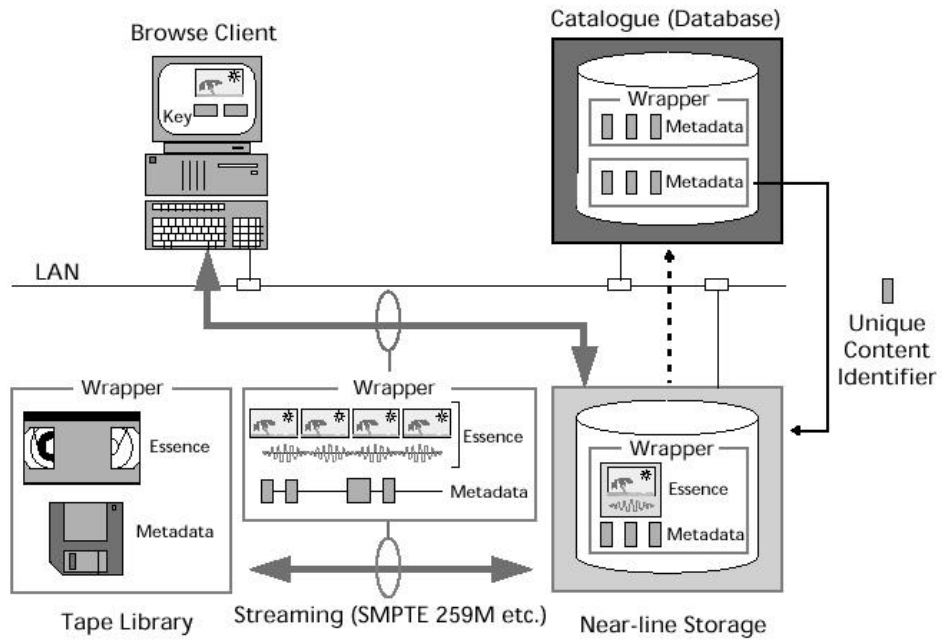
12

가

SMPTE

가

가



12.

5.

(i)

, (ii)

, (iii)

(RFT : Request For Technology)

Advanced Streaming Format

(ASF),

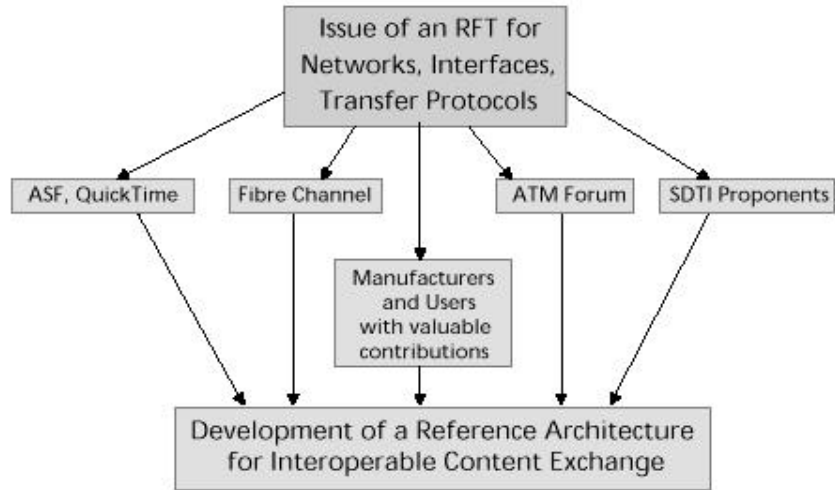
Quick Time,

Fibre

Channel Audio/Video, ATM (Asynchronous Transfer Mode),

SDTI (Serial Data Transport Interface)

, HP AI Kovalick



13.

가

(Streaming)

, DV ATM MPEG FC(Fibre Channel)

, 가 , FC, SDTI, SDI, ATM 가

가

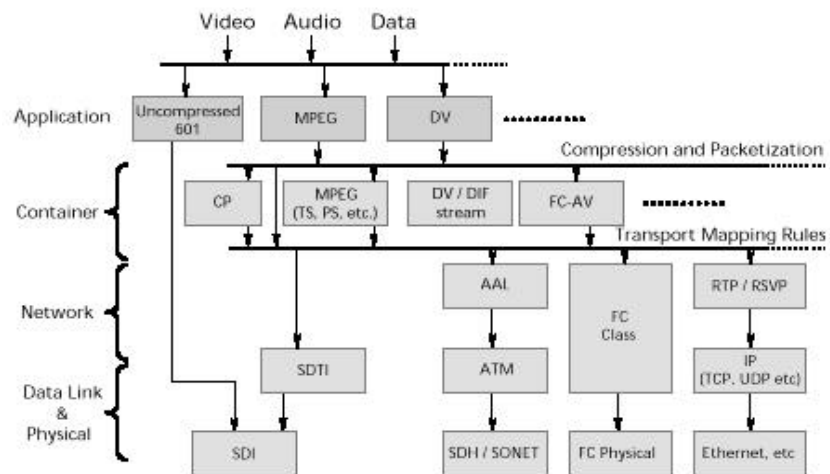
가. (Point-to-Point) (Point-to-Multipoint)

가 , FC ATM

가 (Parameter)

14

SDI가, SDH(Synchronous Digital Hierarchy) SONET(Synchronous optical Network)



14.

, FC, , 가

SDTI

, ATM WAN

가 , FC IP

가 DV, MPEG, FC A/V

가 , SMPTE

○ SDTI

SDTI

○ FCh

SDTI

FC A/V 가

, FC

○ ATM WAN

, AAL1 AAL5

(jitter)

가

, SDTI

WAN

WAN

가

, MPEG ATM

MPEG FC

. DV ATM





, FC  
FTP+ ANSI . , FC

FTP  
SMPTE가 FTP+ FTP  
TCP/IP , FTP+  
FTP가 ,

:

- FC A/V LAN ,
- FC .
- ATM WAN .
- IP .
- XTP .

6.

EBU SMPTE가 ,

TV

1. H. Schachlbauer et al., "EBU/SMPTE Task Force - Final Report", EBU Technical Review, pp. 1-27, Autumn 1998.