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Design and Implementation of Set-Top Box Software for Data Carousel

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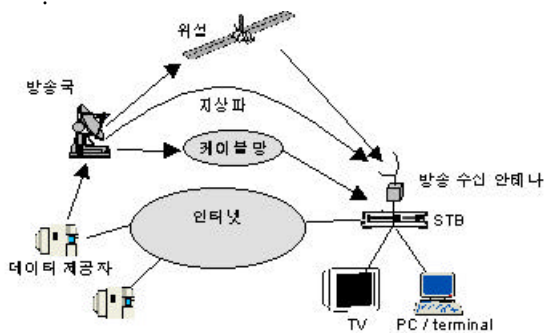
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, , , 가 , (datastreaming), (data piping), (data carousel) . DVB ,

1.

DVB(Digital Video Broadcasting), DASE(DTV Application Software Environment), ETSI(European Telecommunications Standardization Institute) . DVB

가 , 가 . [1]



[1]

TV

TV

(Set-Top box)
(conditional access)

DAVIC (Digital Audio Visual Council),

DVB

가

2.

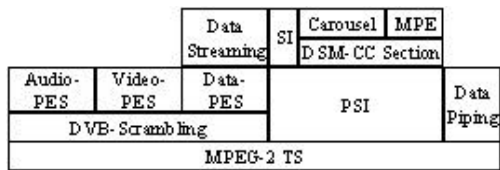
A/V (stream) MPEG-2 TS
 A/V MPEG-2
 PES(program elementary stream)
 MPEG-2 TS
 (private data)

DVB

가

◆ (data piping)
 ◆ (data streaming)
 ◆ (multiprotocol encapsulation)
 ◆ (data carousel)
 ◆ (object carousel)
 DVB . [2]

가



[2]

A/V

가 MPEG-2 TS

(payload)

MPEG-2 TS

PES

가 . DVB SI(Service Information) SDT(Service Description Table) . SDT MPEG-2 TS . SDT 가 . SDT 가 1 2 carousel_type 가 DSI transaction_id . 1 SDT DII transaction_id , 2 DSI transaction_id .

가

TCP/IP

(datagram) MPEG-2

DSM-CC

(private

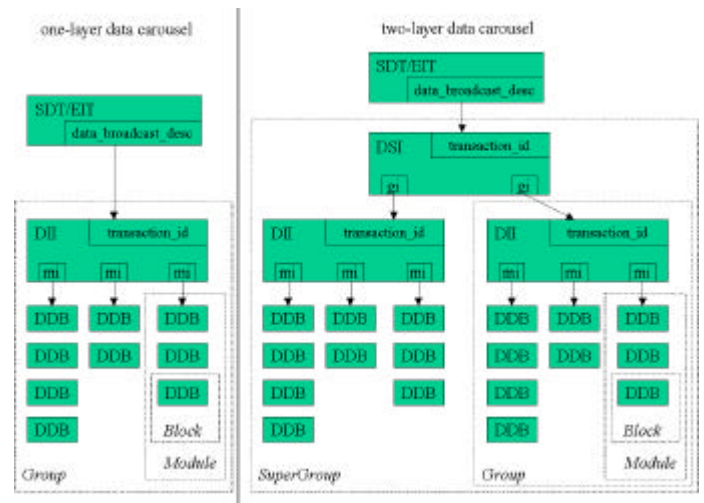
section)

. DSM-CC

(service gateway)

DSM-CC U-U

DSM-CC



[3]

3.

가

가

DSM-

CC

DDB(Download Data Block)

가

DSI, DII 가

가 가

가

가 ,

가

, EPG(Electronic Program Guide)

가

가

, 가

- 가

가

DII(Download Info Indication)

가

4.

DSI(Download Server

Indication)

. DSI

가

1

2

. [3]

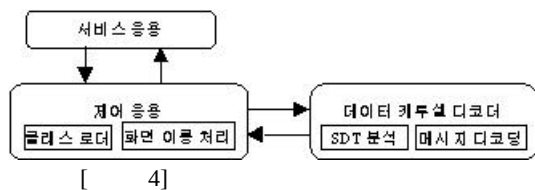
4.1.

(middleware)

가

가

가 , , 가 application) 가 [4] MPEG-2 TS DSM-CC 가 (control SDT 가 가 1 2 가 - - , 가 5. 가



DSI, DII 가 PC 2 DSI DII 가 PC . DII 가 DII 가 가 .

```

if(newClass == null) {
    try { //system class
        newClass = findSystemClass(strClassName);
        if(newClass != null) {
            return newClass;
        }
    }
    catch( ClassNotFoundException e ) {
        byte[] buf=null;
        try { // Data Carousal Decoder
            buf = DataCarousalDecoder.getDataMessage ( ".class",
            strClassName );
        }
        catch(Exception e2) {
            System.out.println(" Reading Class file Failure ");
        }
    }
}

```

6.

- [1] ISO/IEC 13818-1 “Information technology – Generic coding of moving pictures and associated audio information – Part 1 : System – Draft Internation Standard”
- [2] ISO/EC 13818-6 “Information technology – Generic coding of moving pictures and associated audio information – Part 6:Extensio for Digital Storage Media Command and Control – International Standard”
- [3] EN 300 468 “Digital Vidoe Broadcasting(DVB); Specification for Service Information in DVB Systems”
- [4] TS 101 192 “Digital Video Broadcasting; DVB Specification for data broadcasting

class