

(19)  
(12)

(KR)  
(B1)

(51) 。 Int. Cl. <sup>6</sup>  
H04L 12/28

(45)  
(11)  
(24)

2001 11 02  
10 - 0306166  
2001 08 06

(21) 10 - 1999 - 0046846  
(22) 1999 10 27

(65) 2001 - 0038736  
(43) 2001 05 15

(73)

3 416

(72)

112 213

(74)

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(54)

(Asynchronous Transfer Mode)

(Guaranteed Frame Rate)

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가

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가

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ATM, GFR , , , ,

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2  
3

Asynchronous Transfer Mode; 'ATM' ) (Guaranteed Frame Rate; 'GFR' )

GFR ATM (non - realtime application) (minimum rate) (bandwidth) 가 (flow control protocol) 가 GFR ABR(Available Bit Rate) AAL - 5 PDU(ATM Adaptation Layer 5 Protocol Data Unit; ) 가 가 PDU , PDU AAL PDU , ATM (Payload Type) PT

GFR , GFR ATM (delineate) (end system) (Peak Cell Rate; 'PCR' ) (Minimum Cell Rate; 'MCR' ) MCR PCR . MCR 가 (Maximum Frame Size; 'MFS' ), MCR 가 MFS . GFR MCR 가

(mark) (Cell Loss Priority; 'CLP' ) 가 '1' , , (CLP 가 '0' )

P=1) (CLP=0) . MCR  
 가 SVC(Switched Virtual Channel) PVC(Permanent Virtual Channel)  
 (tag) 가 CLP 1 (tagging)  
 , 가 (Virtual Path Connection)  
 GFR 가 (Virtual Channel Connection)

GFR GFR.1 GFR.2 가 (Generic Cel  
 I Rate Algorithm; 'GCRA' ) CLP 가 . GFR.1  
 CLP가 0 1 CLP , . GFR.  
 2 GCRA

GFR ATM Forum 'Traffic Man  
 agement Specification Draft Version 4.1'

GFR GFR.2 GCRA  
 가 가 , 가 가  
 CLP , GFR.1 가 가  
 가 CLP (Confirming Cell), (non - confirming cell)  
 가

GFR

GFR

CLP

가

가

가

가

가

1

1

ATM GFR (Cell Confirming Block)(100) (Cell Confirming Test Block) (100)

Buffer Management Block)(110) (101) (101) (Confirming Bit Setting Block)(102)

(101) (110) (102) (Cell Allocation Block)(111) ,

(111) (Buffered Queue)(113) , (113) (Queue Control Block)(112)

(100) GFR

(100) GCRA, CLP (101) GFR MFS

'Traffic Management Specification Draft Version 4.1'

2 (101)가

CR MFS PCR, PCR, (Sustainable Cell Rate; 'SCR' ), M

(minimum inter - arrival time)

ATM (ATM Layer) (Cell Delay Variation)

d) OAM(Operation Administration and Management) 가 (physical layer overhead)

(peak emission interval) T PCR UNI(User Network

Interface) (inter - arrival time)

clumping) (upper bound) (Cell Delay Variation Tolerance; 'CDVT'

)

(GCRA) (traffic contract) (confirmance)

, GCRA GCRA 가

(virtual scheduling algorithm) (continuous - state Leaky Bucke

t Algorithm) . 가 GCRA PCR

CDVT SCR BT(Burst Tolerance) . GCRA (Increment) I

(Limit) L 가 GCRA 가 GCRA(I,L) I

GFR , , ,

가 가

1: GCRA(1/PCR, CDVT)가

2: CLP CLP

3: 가 MFS

2 가

, 1 (101)

2 , 200 (101) , (1

01) 210 GCRA GCRA GCRA PCR CLP=0+1 , CLP 1/PCR 가 0

CDVT 1 GCRA GCRA CDVT 1/PCR , 1/PCR

, 220 1/PCR CDVT GCRA

(101) 220 221 CLP 221

(101) 221 (101) 222 CLP 220 CLP

CLP CLP CLP

222 CLP 가 , (101) 230 가 MFS 2

30 MFS 231 가 MFS 가 MFS MFS

231 MFS

240

210, 222 231

241

e) (Congested Threshold Valu 가

1 가 , (101)  
 Path)(103) (102) (Confirming  
 onfirming Path)(104) (102) 가 (Non - c

(102) (103)  
 HEC(Header Error Control) (Confirming Bit) CB '0'(Low)  
 CB가 '0' (103) (104)  
 HEC CB '1'(High)  
 FS CB가 '1' , GCRA, CLP M  
 3  
 '0' , '1' CB HEC CB  
 (110) (102) CB

(110) (Cell Allocation Block)(111) CB C  
 B가 '0' (High Priority Queue)(114) CB가 '1' (L  
 ow Priority Queue)(115) CB (114)

(110) (114) MCR (110)  
 (115) (Congested Queue Depth)  
 (115) , (110)  
 ABR ATM 가  
 (110) 가  
 (115) 가  
 ( )  
 가 가  
 (CLP=0) (115) CLP  
 CLP=1

2 가 , CB GFR.1 GFR.  
 가

, 가가

(57)

1.

가

가

가

2.

1

3.

1

2

가

4.

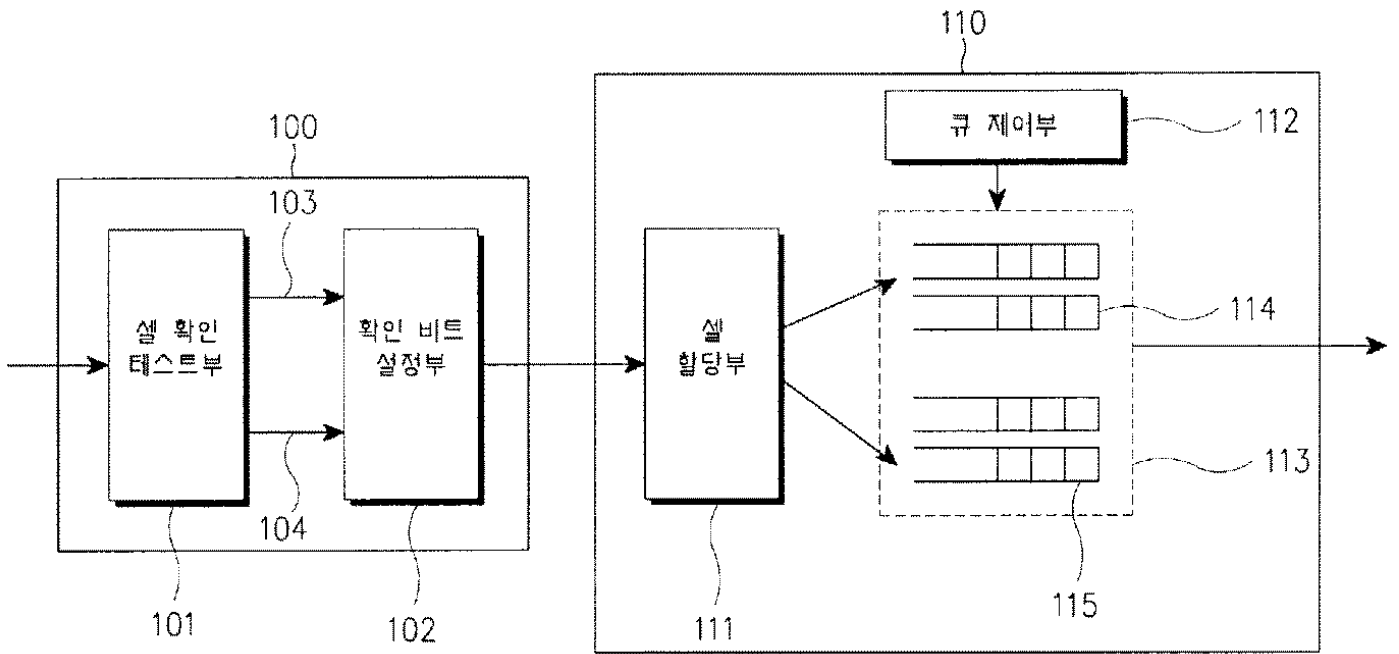
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5.

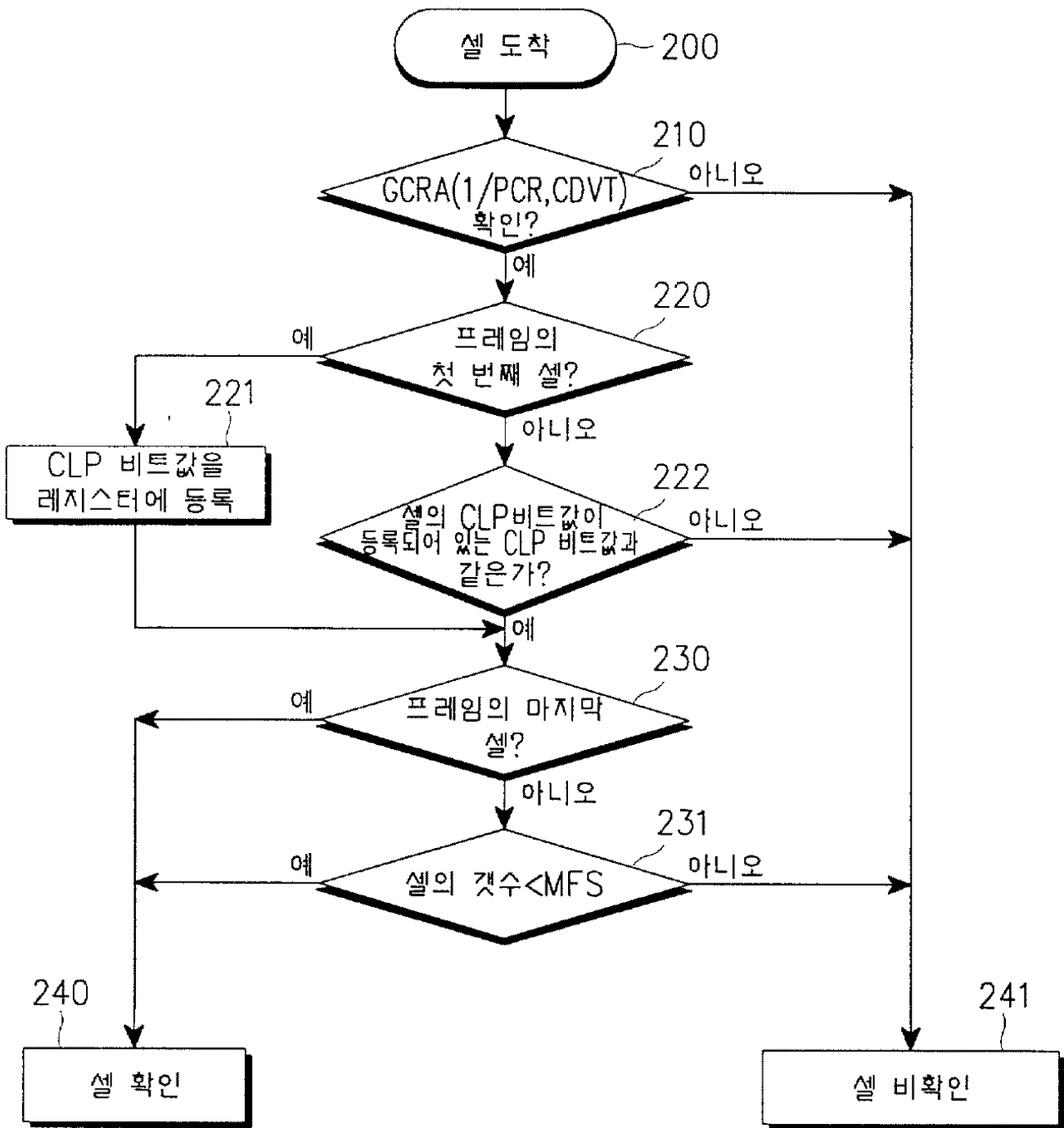
4

가

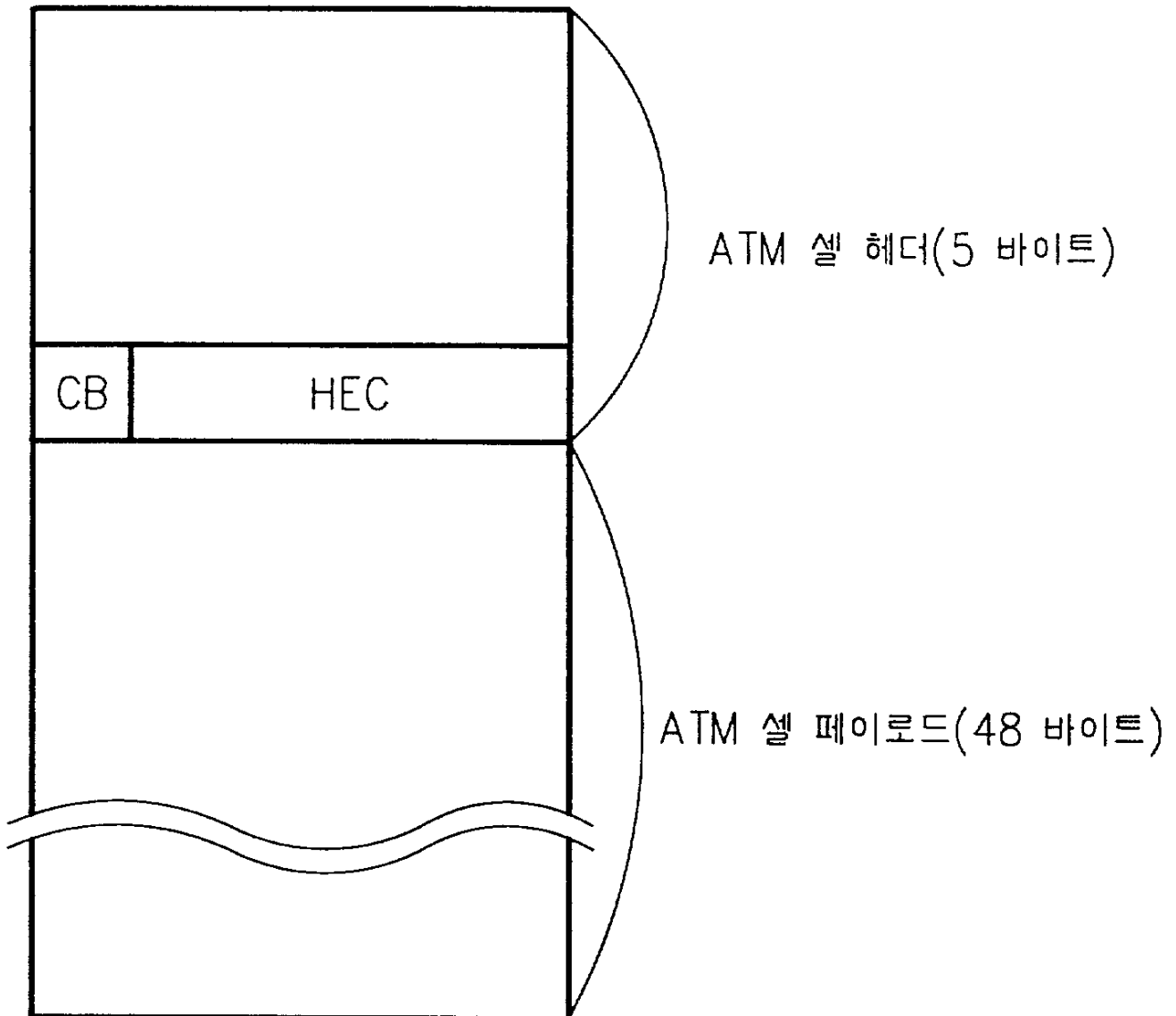
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$\left\{ \begin{array}{l} \text{CB}=0 \Rightarrow \text{확인 셀} \\ \text{CB}=1 \Rightarrow \text{비 확인 셀} \end{array} \right.$