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(22) 2000 11 08

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2002 05 15

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(72) APT109-401

(74)

:

(54) NO.7 M T P

MC NO.7 M T P , 가 M NO.7
M T P , 가 MMC NO.7
NO.7 , NO.7
가 .

1

NO.7 M T P , NO.7 , SSHP, M T P , ISUP , TCAP
, SCCP ,

1 NO.7 M T P
,
2 NO.7 M T P
3 2 NO.7 M T P M T P (START-M T P-
TRC) ,

4	2		NO.7 M T P				(MtpTrace_
Start)							
5	2		NO.7 M T P	200	(S200)		
6	2		NO.7 M T P	300	(S300)		
7	6		NO.7 M T P	300	(S300)	330	(S3
30)							
8	2		NO.7 M T P	400	(S400)		
9	2		NO.7 M T P	500	(S500)		
10	9		NO.7 M T P	530	(S530)		
	MTP						
11	9		NO.7 M T P	550	(S550)		SCCP
	MTP						
12	9		NO.7 M T P	570	(S570)		TSAP IS
UP		MTP					
<			>				
100 :		200 :	NO.7				
300 :		SSHP 301 :	MTP				

NO.7 M T P (Message Transfer Part; "MTP" (Trace)
가 (Hardware) MMC(Man Machine Communicati
on; "MMC" .) NO.7 (Monitering)

NO.7 M T P
(User) (Print) (S

signal Trace)

NO.7 (Turbo-7) (Trunk) 가 (Port) , 가가
가 , 가 , 가

가 / 가 (Signal Link) 가

ID(Identification)
가 , 가 가 가 (User) (Print)
, 가 , 가

NO.7 M T P NO.7

TP , NO.7 MTP , NO.7 , M
 가 MTP (START-MTP-TRC) NO.7 100 ;
 NO.7 MTP (MtpTrace_Start) MTP
 200 ;
 MTP / (MtpTrace_RP_M2D) NO.7 (MtpTrace_Start_ACK) 300
 ;
 NO.7 MTP (MtpTrace_Start_ACK) /
 (MtpTrace_RP_M2D) 400 ;
 NO.7 / (MtpTrace_RP_M2D) 500 ;
 MTP NO.7 MTP 600 .

NO.7 MTP
 NO.7 MTP
 NO.7 MTP (100), NO.7
 (200), MTP (S7MH : Signaling No.7 Message Handling)(301)
 (100) 가 MTP MMC (START-MTP-TRC)
 NO.7 (200) , NO.7 (200) MTP
 (START-MTP-TRC)
 (Display) NO.7 (200) (100) MTP MMC (ST
 ART-MTP-TRC) (MtpTrace_Start)
 MTP (301) , MTP (301)
 / (MtpTrace_RP_M2D) (Decoding)
 (100)
 , MTP (301) SSHP(Signaling Subsystem Message Handling Processor)(300)
 (Link-set), MTP
 , NO.7 (200) (MtpTrace_
 Start) (MtpTrace_Start_ACK) NO.7 (200)
 / (MtpTrace_Start_ACK) MTP 가 가
 (MtpTrace_RP_M2D) NO.7 (200)
 , SSHP(300) ASS-7(Access Switching Subsystem) (PP : Peripheral Processor)

가 NO.7 MTP
 NO.7 MTP
 (100) MTP (START-MTP-TRC)
 (100) 가 MTP (START-MTP-TRC) NO.7
 (200) (S100). , MTP (START-MTP-TRC)(10) 3
 (11), MTP (NI : Network Indicator)
 (12), (OPC : Own Point Code)
 (Timer) (13),
 (Count) (14)
 , NO.7 (200) (100) MTP (START-MTP-
 TRC) (MtpTrace_Start) MT
 P (301) (S200). ,
 MtpTrace_Start)(20) 4 ,
 (NI) (21), MTP (OPC)
 (22), (23),
 , 200 (S200) (24) 5 .

RC) NO.7 (200) (100) MTP (START-MTP-T
(S220). NO.7 (200) 가 MTP 가 가
NO.7 (200) PLD(Processor Load Data)
220 (S220) 가 MTP 가 가 (YES), NO.7
(200) 4 (MtpTrace_Start)
MTP (301) (S230). 가 MTP 가 가 (NO), NO.7
(200) 220 (S220) 가 MTP 가 가 (NO), NO.7
(S240). (100) MTP (301) NO.7 (200)
200 (S200) MTP (MtpTrace_Start) (301) NO.7 (200)
(MtpTrace_Start_ACK) / (MtpTrace_RP_M2
D) NO.7 (200) (S300). 가 (OK) 가 (NOK)
(MtpTrace_Start_ACK) MTP (MtpTrace_RP_M2D)
/ (MtpTrace_RP_M2D)
, SCCP(Signaling Connection Part; "SCCP" .) , TCAP(Transaction Capability Application
Part; "TCAP" .) , ISUP(ISDN - User Part; "ISUP" .)
, SCCP , TCAP , ISUP
(SIO : Service Indicator Octet)
(SIO) "0" (SIO) "3" , TCAP (SIO) "1" , SCCP
(SIO) "5" (SIO) "4" , ISUP
300 (S300) 6
MTP (301) NO.7 (200)
(MtpTrace_Start) (S310). 가 가
S320). MTP (301) 가 MTP 가 가 (PLD(Processor Load Data)
320 (S320) 가 MTP 가 가 (YES), MTP
(301) 가 (OK) 가 (MtpTrace_Start_ACK)
/ (MtpTrace_RP_M2D) NO.7 (200) (S330).
330 (S330) 7 (MtpTrace_Start_ACK) NO.7
301) 가 (OK) 가 (MtpTrace_Start_ACK) NO.7
(200) (S331). MTP (301) /
(MtpTrace_RP_M2D) NO.7 (200) (S332). MTP
(301) (MtpTrace_Start) 가 (S333). 3
33 (S333) 가 (NO)
MTP (301) 332 (S332) 가 (301) NO.7
(200) 가 (YES) MTP (S334). (301) NO.7
320 (S320) 가 MTP 가 가 (NO), MTP
(301) 가 (NOK) 가 (MtpTrace_Start_ACK)
NO.7 (200) (S340). (200) MTP (301)
ace_Start_ACK) / (MtpTrace_Start_ACK) (MtpTrace_RP_M2D) (MtpTr
(S400).
400 (S400) 8
NO.7 (200) MTP (301)
(MtpTrace_Start_ACK) (S410).
NO.7 (200) (MtpTrace_Sta
rt_ACK)가 가 (OK) 가 (NOK) (S420).
420 (S420) (MtpTrace_Start_ACK)가
가 (OK) , NO.7 (200) MTP (301)
/ (MtpTrace_RP_M2D) (S430).
가 420 (S420) (MtpTrace_Start_ACK)
가 (NOK) , NO.7 (200) (100) MTP

(MtpTrace_RP_M2D) 100 (S500).
 (S400) NO.7 (200) (S440). /
 (S500) 500 (200) / 9 (MtpTrace_RP_M2D)
 (SIO)가 (SIO)가 (S510) / (MtpTrace_RP_M2D) (SIO = 0 or 1) NO.7 (S520).
 (S530). (200) MTP MTP (31),
 (30) 10 (100) (S530). , MTP (LI : Length Indicator) (32), MTP
 MTP (NI : Network Indicator) (3)
 3), MTP (SI : Service Indicator) (3)
 4), MTP (DPC : Destination Point Code) (OPC : Own Point Code)
 (Routing Table) (35), MTP
 (Heading Code) (36), MTP (37)
 (SIO)가 SCCP (SIO = 3) NO.7 (MtpTrace_RP_M2D) (200) /
 (MtpTrace_RP_M2D) SCCP (S540).
 NO.7 (200) SCCP MTP MTP
 (100) (S550). , SCCP MTP
 (40) 11 , MTP
 (41), MTP (LI) (42), MTP
 (NI) (43), MTP
 (SI) (44), MTP (DPC)
 (45), MTP
 (OPC) (Message Type) (46), MTP (Protoc
 of Class) (47), MTP / (48), M
 TP (49) /
 (SIO)가 TSAP (S510) / (MtpTrace_RP_M2D)
 ISUP (SIO = 4 or 5) NO.7 (200)
 (S560). (MtpTrace_RP_M2D) TSAP ISUP
 NO.7 (200) TSAP ISUP MTP
 (100) (S570). , TSAP ISUP
 MTP (50) 12 , MTP
 (51), MTP
 (LI) (52), MTP (NI)
 (53), MTP (SI) (54), MTP
 (DPC) (OPC) (55), CIC
 CIC (56), MTP (57)
 , 400 (S400) , (100) NO.7 (200)
 MTP (S600). (200)
 , (100) NO.7 (200) MTP
 (30) 10 , SCCP
 MTP (40) 11
 , TSAP ISUP MTP (50) 12

MMC NO.7 NO.7 MTP NO.7 가 , 가
 O.7 가 . N

(57)

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7.

, NO.7 , MTP MTP
 , 가 MTP (START-MTP-TRC) NO.7
 100 ; NO.7 MTP (START-MTP-TRC)
 NO.7 (MtpTrace_Start) MTP
 200 ; MTP (MtpTrace_Start_ACK)
 MTP / (MtpTrace_RP_M2D) NO.7 300
 ; NO.7 MTP (MtpTrace_Start_ACK) /
 (MtpTrace_Start_ACK) (MtpTrace_RP_M2D) 400 ;
 NO.7 MTP / (MtpTrace_RP_M2D) 500 ;
 MTP NO.7 MTP
 600 NO.7 MTP
 NO.7 MTP

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7 , NO.7 MTP (START-MT
 P-TRC) 200 , NO.7 210 ; 가 MTP 가 가 220 ;
 NO.7 가 MTP 가 가 , NO.7 230
 220 (MtpTrace_Start) MTP NO.7 MTP

14.

13 , 가 MTP 가 가 , NO.7 240
 가 MTP NO.7 MTP

15.
7 300 , MTP NO.7
(MtpTrace_Start) 310 ;
MTP 가 MTP 가 가 320 ;
320 가 MTP 가 가 MTP
가 (OK) 가 (MtpTrace_Start_ACK) /
(MtpTrace_RP_M2D) NO.7 400 330
NO.7 M T P .

16.
15 330 , MTP 가 (OK) 가 (M
tpTrace_Start_ACK) NO.7 331 ;
MTP / (MtpTrace_RP_M2D) NO.7
MTP 332 ; (MtpTrace_Start)
가 3
33 ;
333 가
MTP 332 MTP NO.7
가 334 MTP NO.7 M T P .

17.
15 320 , 가 MTP 가 가 MTP
가 (NOK) 가 가 (MtpTrace_Start_ACK) NO.7
400 340 가
NO.7 M T P .

18.
7 400 , NO.7 MTP
(MtpTrace_Start_ACK) 410 ;
NO.7 가 (OK) , 가 (NOK) (MtpTrace_Start_ACK)가
420 (MtpTrace_Start_ACK)가 가
(OK) NO.7 MTP /
(MtpTrace_RP_M2D) 500 430
NO.7 M T P .

19.
18 420 , (MtpTrace_Start_ACK)가
가 (NOK) , NO.7 MTP
440 가
NO.7 M T P .

20.
7 500 , NO.7 / (MtpTrace_RP_M2D)
(SIO)가 510 ;
510 / (MtpTrace_RP_M2D) (SIO)가
(SIO) , NO.7
520 ;
NO.7 MTP
600 530 NO
.7 M T P .

21.

22.

23.

20 CP ; NO.7 (SIO) / NO.7 (MtpTrace_RP_M2D) SCCP (SIO)가 SC 540

NO.7 SCCP 600 MTP 가 550

NO.7 MTP

24.

25.

26.

20 AP ; NO.7 ISUP (SIO) / NO.7 (MtpTrace_RP_M2D) TSAP (SIO)가 TS ISUP

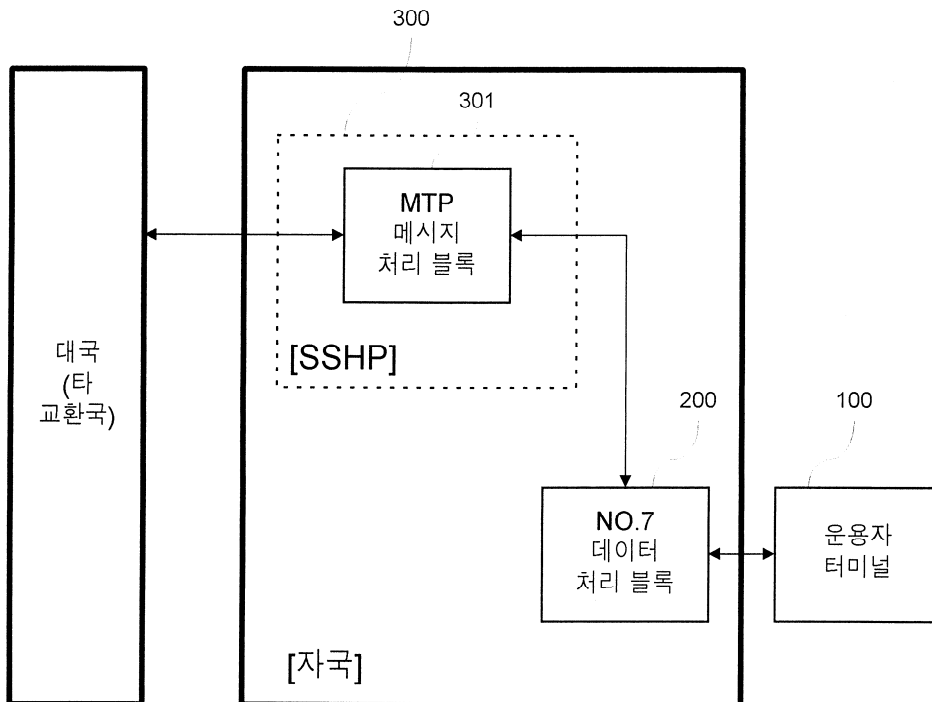
NO.7 TSAP 560 ; ISUP 600 MTP 가 570

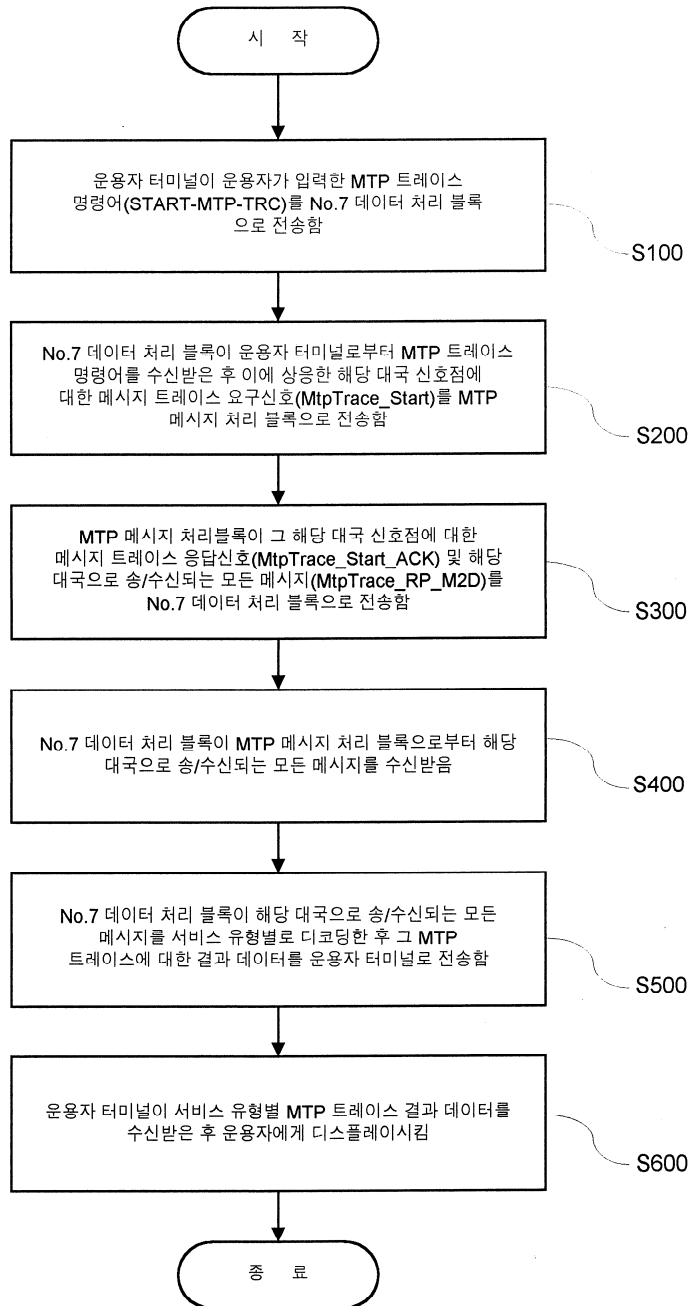
NO.7 MTP

27.

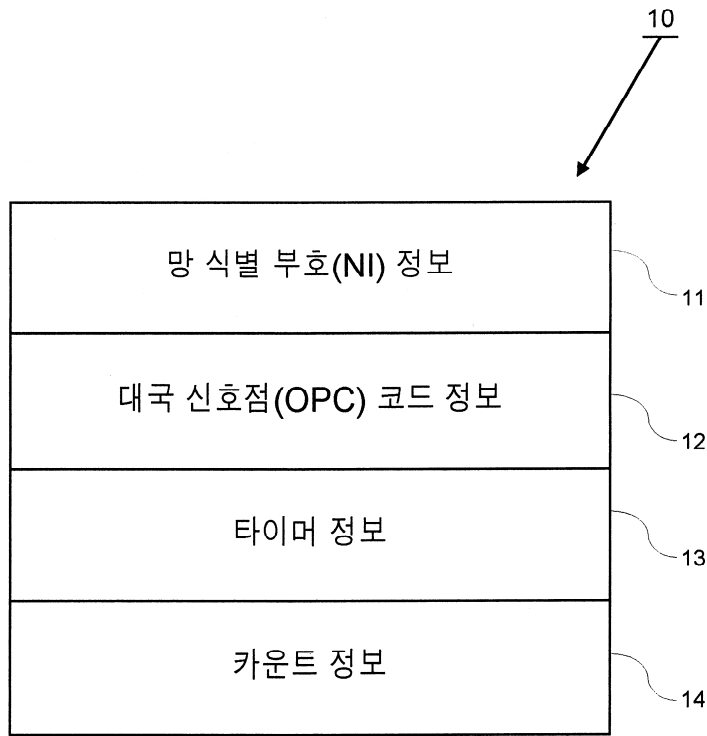
28.

1



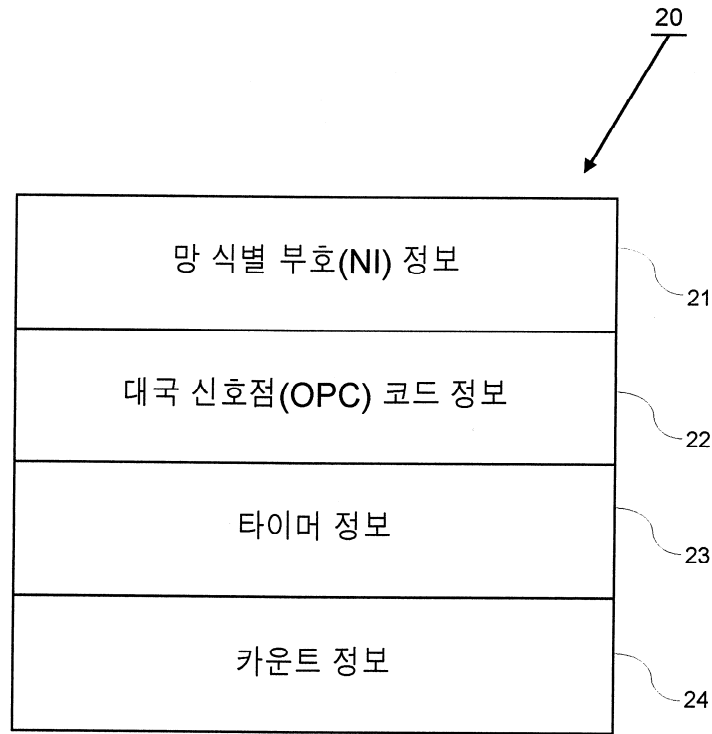


3



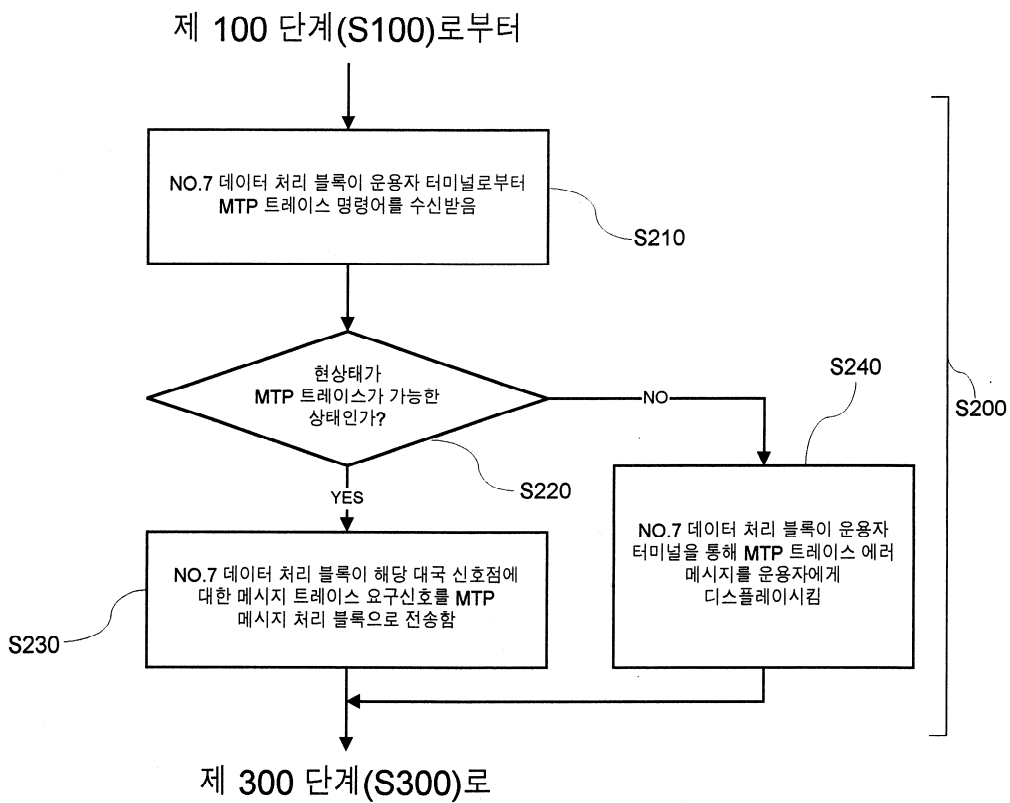
[MTP 트레이스 명령어(START-MTP-TRC)]

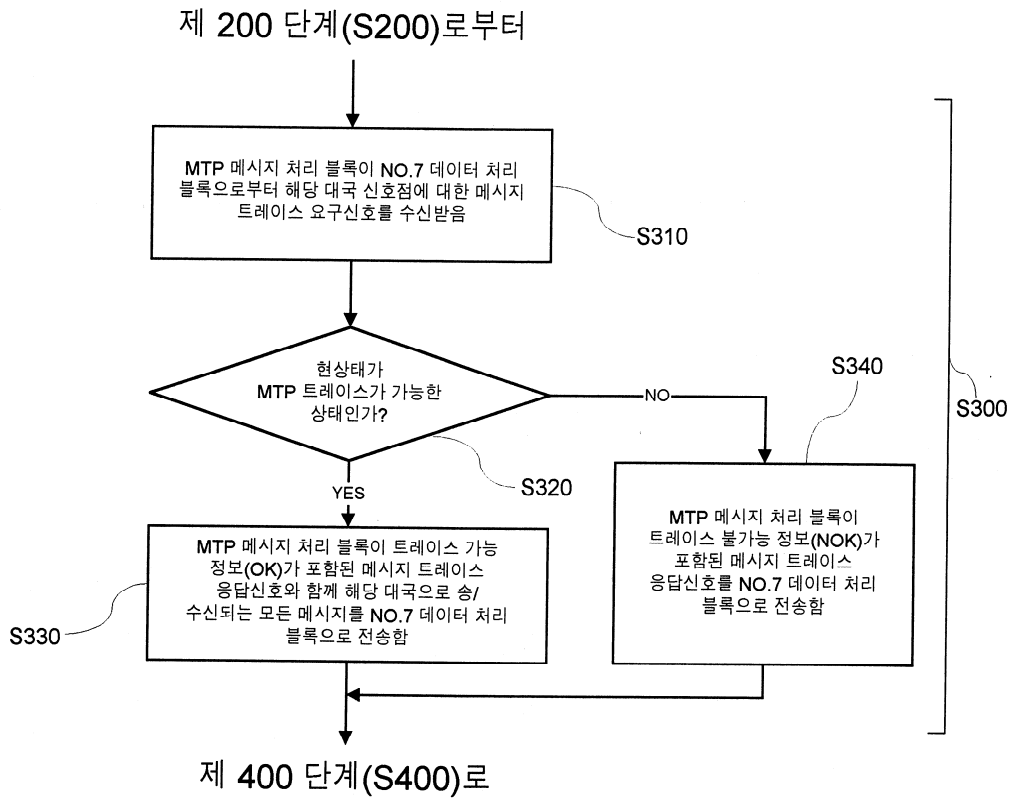
4



[MTP 트레이스 명령어(START-MTP-TRC)]

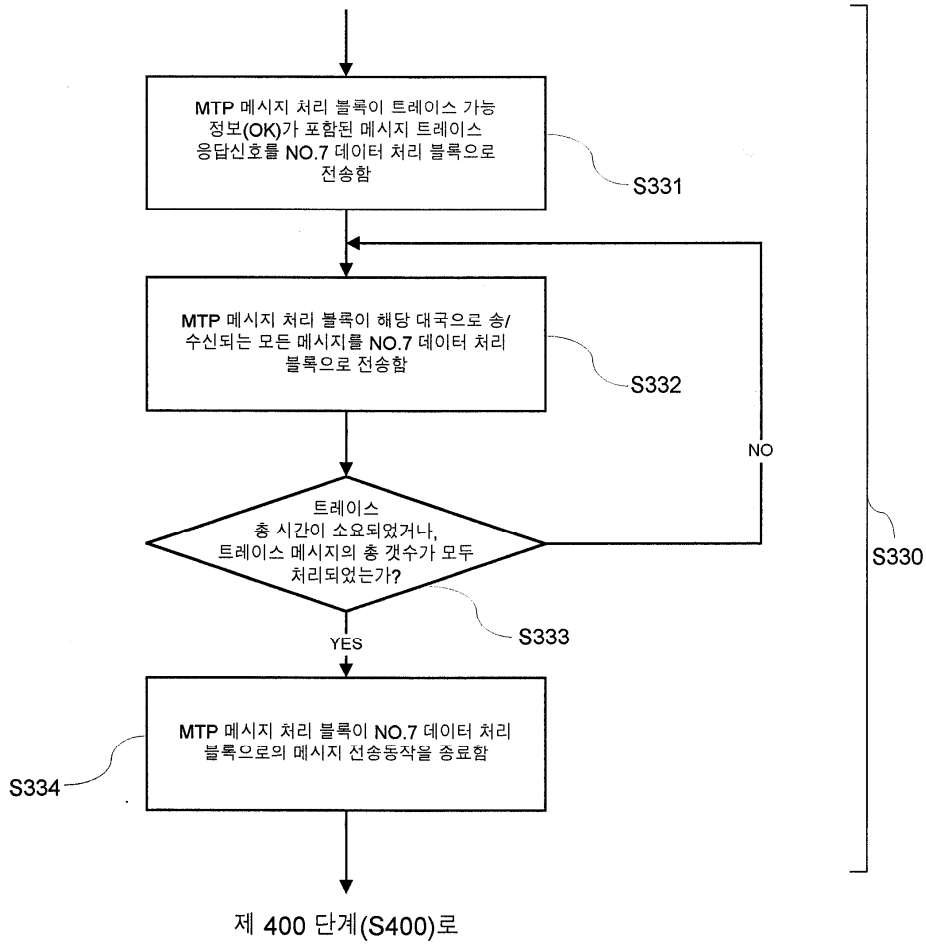
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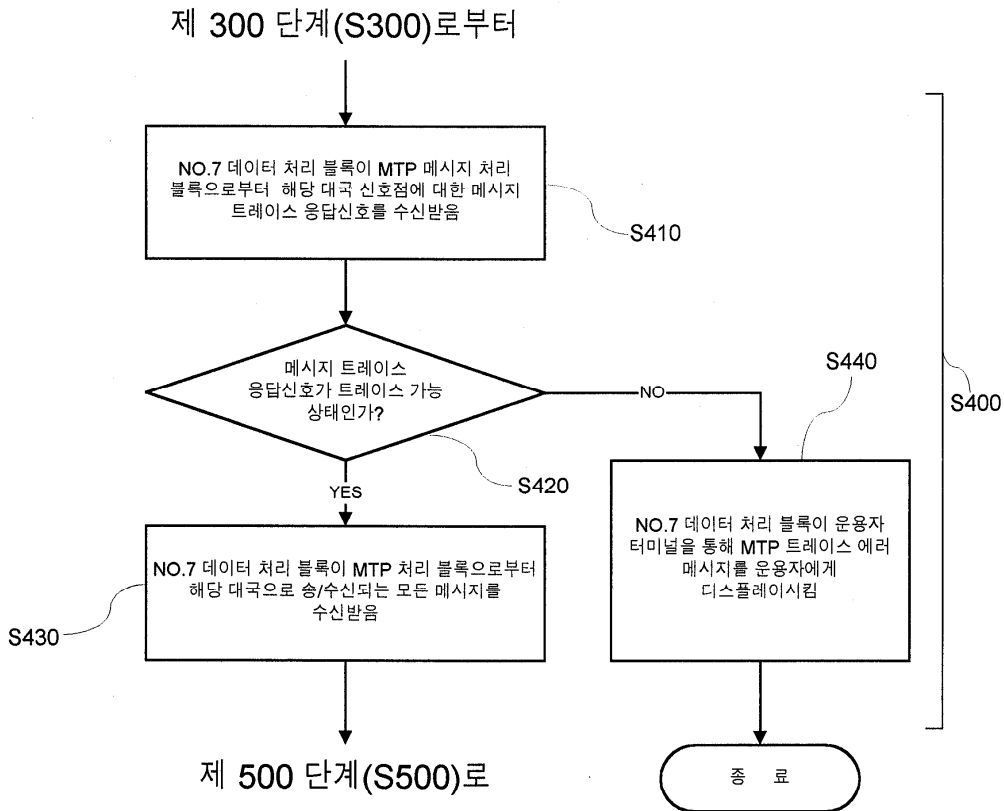


7

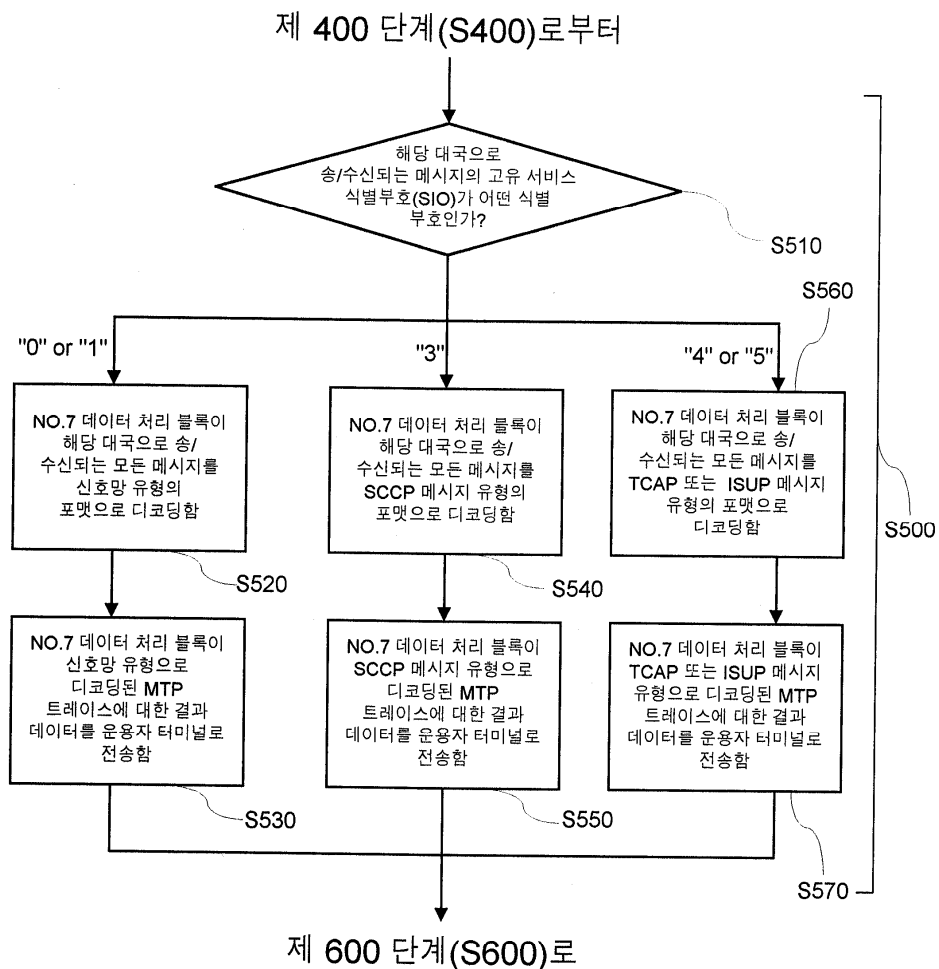
제 320 단계(S320)에서 현상태가
MTP 트레이스
가능상태이면(YES),



8

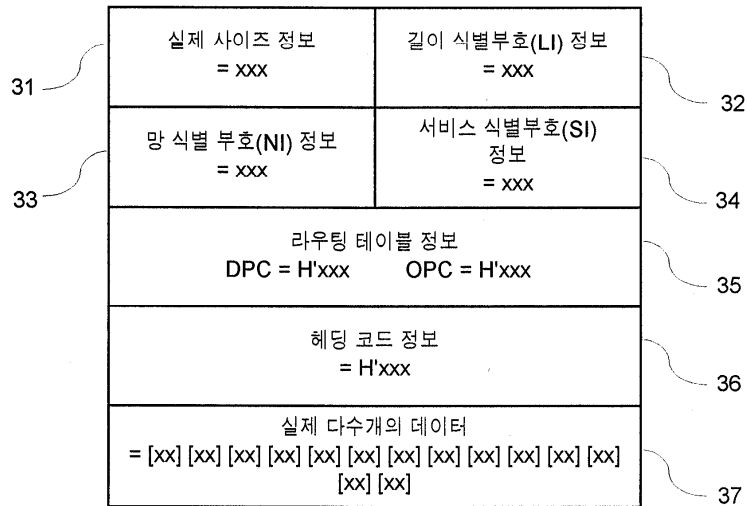


9



10

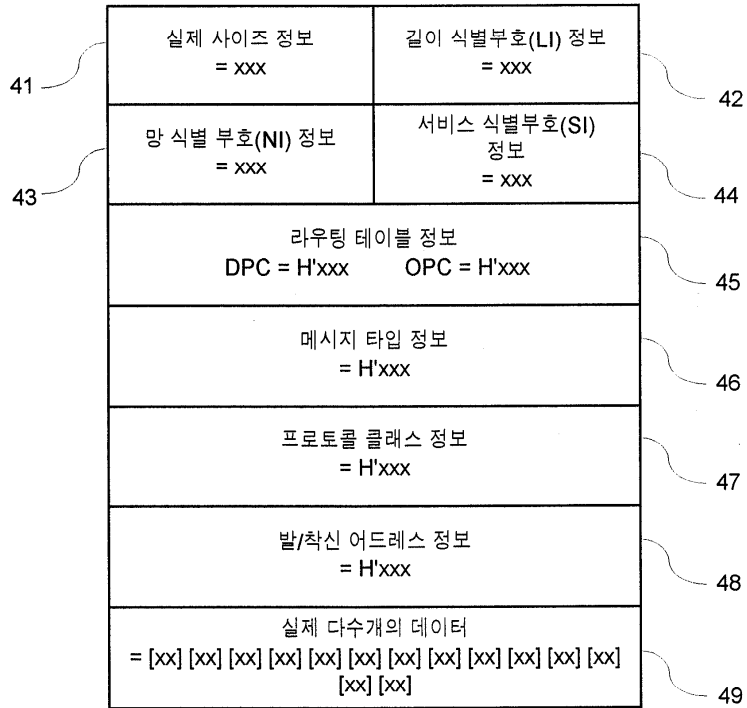
30



[신호망 포맷으로 디코딩된 MTP
트레이스에 대한 결과 데이터]

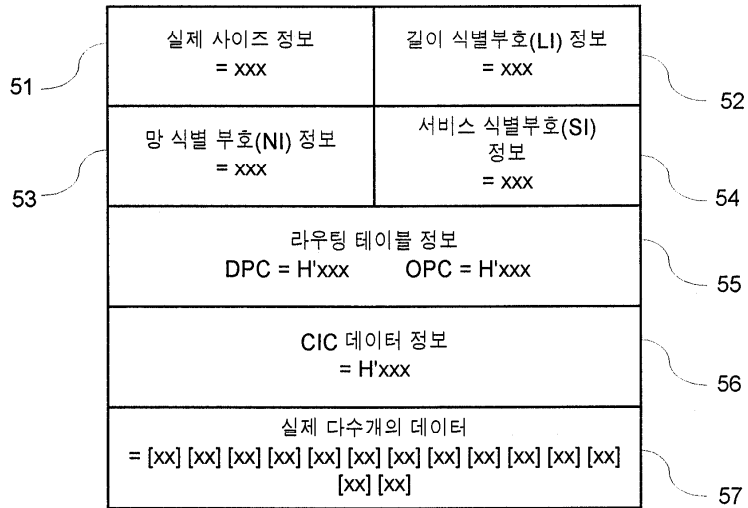
11

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[SCCP 메시지 포맷으로 디코딩된 MTP 트래이스에 대한 결과 데이터]

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[TCAP or ISUP 메시지 포맷으로 디코딩된
MTP 트레이스에 대한 결과 데이터]