

(19)
(12)

(KR)
(Y1)

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H04B 3/54

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(11)
(24)

2002 07 02
20 - 0280506
2002 06 20

(21) 20 - 2002 - 0011639
(22) 2002 04 17
(62) 2001 - 0039835
: 2001 07 04

2001 07 04

(73) ()
1 651 - 3 9

(72)
2 742 102 504
102 - 40
393 - 6

(74)
:
가 :

(54)

(AMR),

(HA)

(FA),

가

가

,

가

가 ,

가

가 ,

4

, , , , , PLC,

1

2
(HA) (FA)

3

4

5

6

7

8

9

OSI 7

10a

10b

10c

<

100 :

102 - 1, ..., 102 - N :

104 - 1, ..., 104 - N :

(Building Automation)

(FA; Factory Automation)

(FA)

NC

) 1999 - 069965 (0060984 (: ")가 .

0060984

0060984

1

1

PL

C , 2 ,

1

1

1999 - 069965 가

1999 - 069965

, 가

가

1

1

2

1

2

가 가

가

2

1

가 가

가

가

0060984

1999 - 069965

(noise)

(carrier frequency)가 1

가

(noise)

가

, HA, FA

가

가 , 가

가 , 가

가

가

1

가

가

가

(AMR)

(HA),

(FA),

1
1
2

2
(carrier)

2
1

가

가 .

가 가

(correlation)

(carrier)

가

가

omation)
Area Network)

가

(Home Automation)
RS - 232, SPI (Serial - Parallel Interface), I2C

(Factory Aut
CAN (Control

OSI 7

2

가 .

2
1

2
1

2
(carrier)

가

가 가

(Home Automation)

(Factory Automation)

가

가

(Home Automation)

(Factory Automation)

(carrier)

가

가

가

1

(100)

(110)

1

(100),

(100)

(104 - 1, ..., 104 - N, 104)

(102 - 1, ..., 102 - N, 102),

(100)

(110),

(110)

(120), (

130)

(140),

(140)

(150),

(140)

(PC), PCS (162),

PDA(164)

(140)

(110)

(100) (104)

가

(104),

(100),

(110)

(140)

(140)

(104)

2

(HA)

(FA)

1

2, 1 HA
106 - N, 106), FA
108 - N, 108)가

(105 - 1, ..., 105 - N, 105), HA
(107 - 1, ..., 107 - N, 107), FA
(100) 가

(106 - 1, ...,
(108 - 1, ...,

05) FA

(107)

(100)

HA

(106)

FA

(108)

HA

(1

(110)

(110)

(120)

(100)

0, 1

(110)

(120) 2 (130) (140)
 (140) (FA) (HA)

3 (100, 110)

3 (320) (300), (320) (100, 110) (320), (330), (330)
 (350), (300), (330) (350) (340)

(100, 110)

(330) 0 1 (330) (330)

(100, 110) 가 (330)

(320) (300) 가 (carrier) 가
 (320) (300) (300)

(310)

(300) (320) , CRC (330) (308), 0,1

(300) (320)

(330) (104) OSI 7 (300)

(9)

(330) (300)

가 가 (330) (

330) 가 가 ,

(330) CRC (330)

(350) ()

(110) (100) 가 (350)

(100) (330)

(340) (340)

(Home Automation)

(Factory Automation) 가 RS -

232C, SPI(Serial - Parallel Interface), I2C CAN(Control Area Network)

4 (300)

4 (300) (302), (304), (304), (310)

(304) CRC (306), (304), (310) CRC (306) (310)

(312), (304), (310) (312)

(314)

(302) ADC (320) 0, 1

(304) (correlation)

(304) () 100us

(314) ROM (314) EEPROM

가 () 가

(1ms) (304)

(308) (330)

(302) (304)

(310) (314) 가 200Khz
400Khz 가 100Khz 200Khz 100us 25 (300)
100us (310)

(carrier) 가
, 1
가

CRC (306) (308) 16 CRC 가
CRC 가 (306) CRC
CRC (306) CRC

(312) (304), (310), CRC (306)
(314) 가

5 6 5
(110) (100)
(100) 6 (100)가 가 (110)
(100)

5 (501). (110)
(100) (503).
(100) (505).
(110) (507).
(100)
(110)가 (110)
(509). (110) (

511). (110)
(100) (513).
(100) (110) (515).

(110) (100)

(517). (100)

(110) (519), (110)

(521). (100)

, FA 가 (HA) (FA) , HA

6 (100)

(601). (100)

623 5 (110) (603). 605

5 6 (100)가 가 (110)

가 (100) . , 가

7

7 (110)

(701), (100) (

703).

(110) (100)

(705). (310)

00) (110) (1

(100) (707, 709).

8

8 (100) 801 803

(110) (100)

(805, 813).

(100)

(110) (110)

(110) (807 811). (110)

9 OSI 7

1 ,

4.

1 ,

5.

1 ,

6.

1 ,

7.

1 ,

가

8.

1 ,

,	(Home Automation)	(Factory Automation)
가	RS - 232, SPI(Serial - Parallel Interface), I2C	CAN(Control Area Network)

9.

1 ,

OSI 7

10.

가

가

11.

2 1 ;

2 (carrier)

가

2 1

가 가

가

;

,

;

;

,

가

;

12.

가

,

가

,

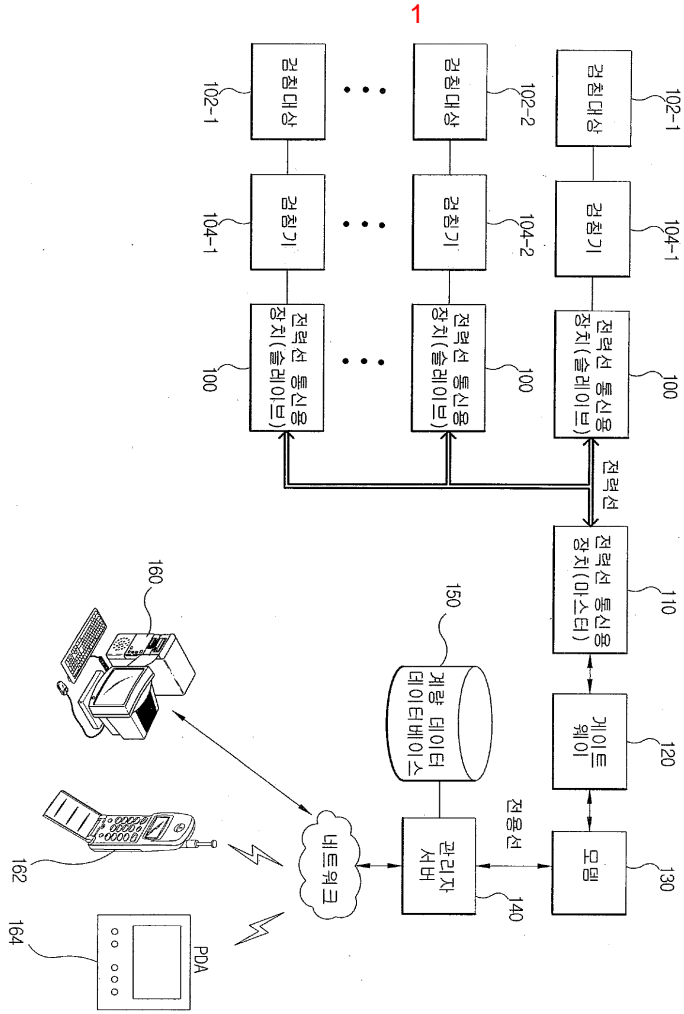
가

;

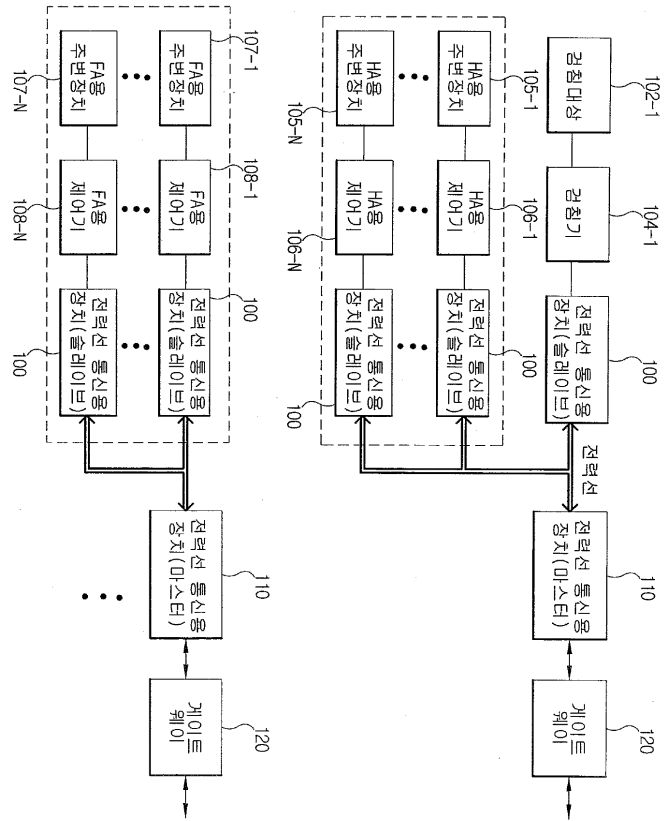
,

가

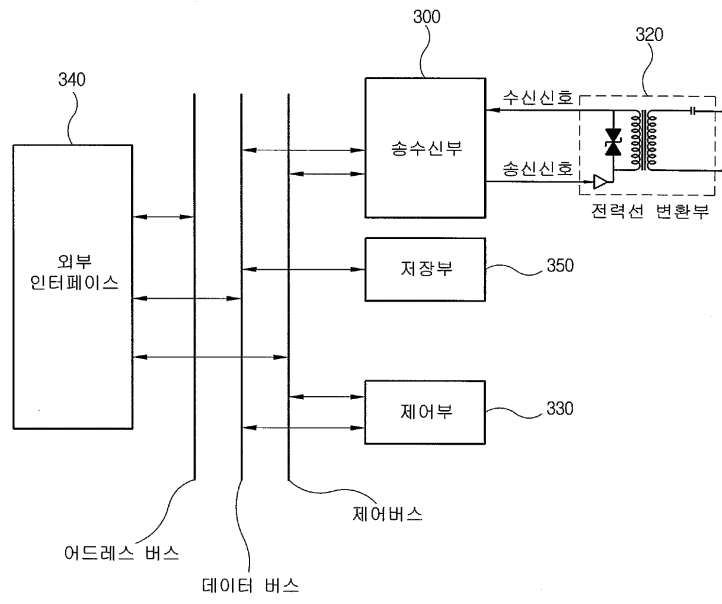
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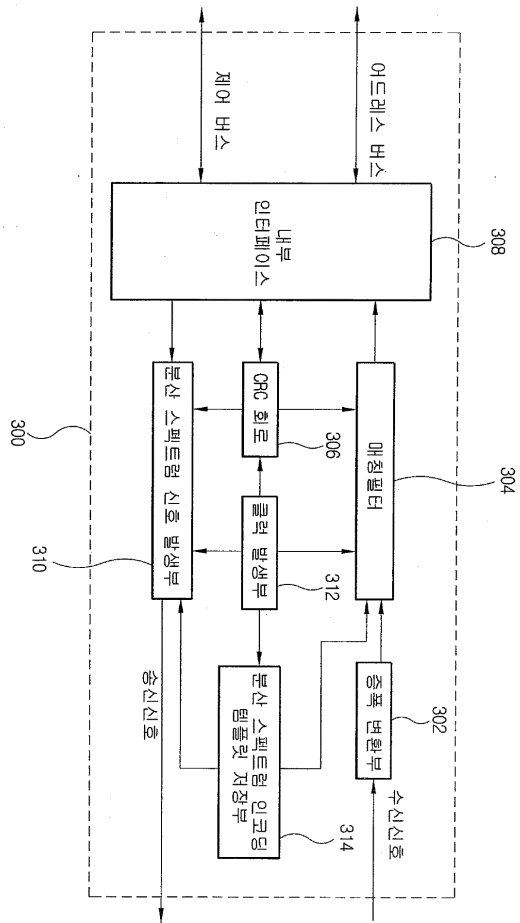


2

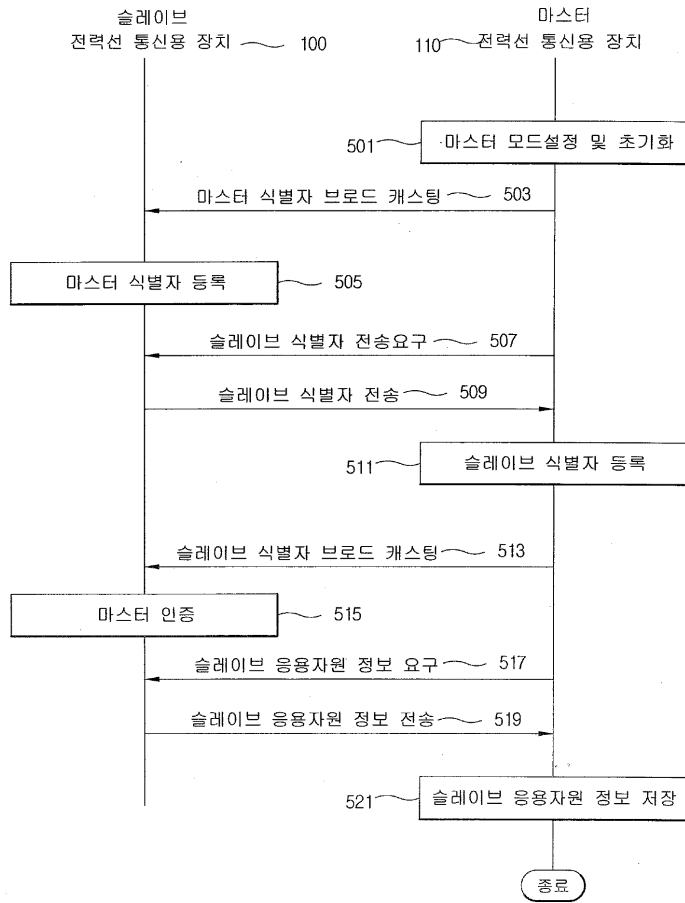


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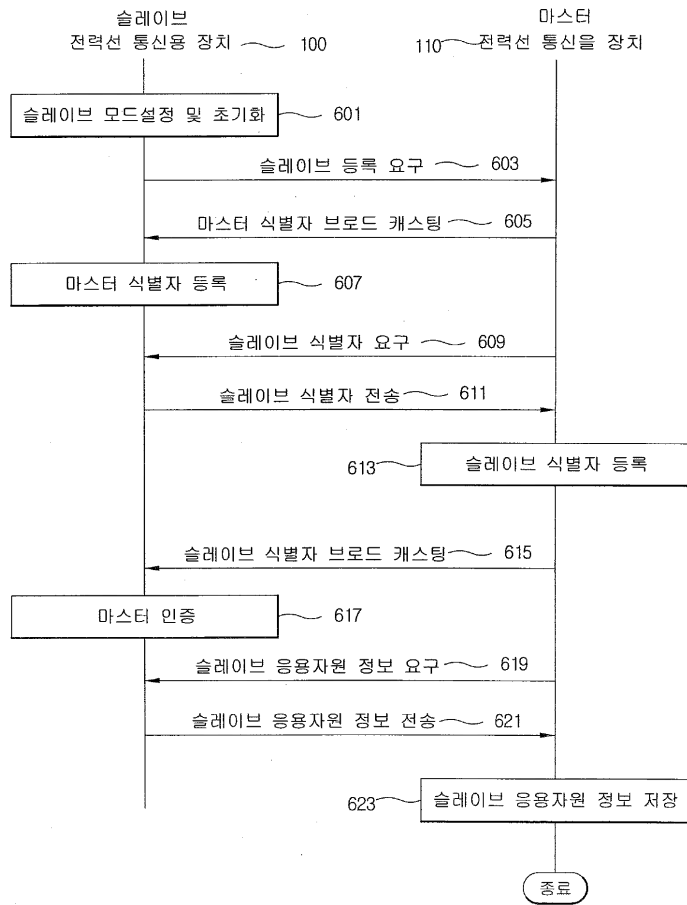




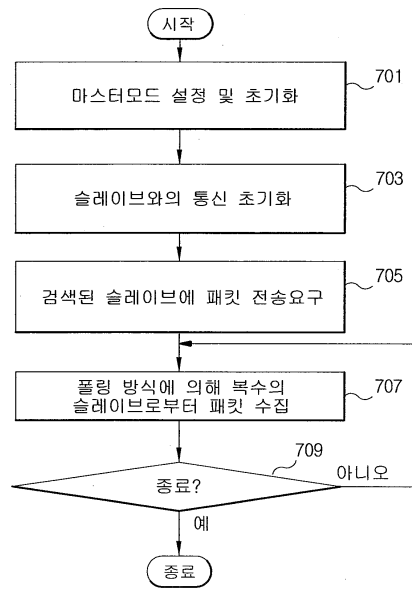
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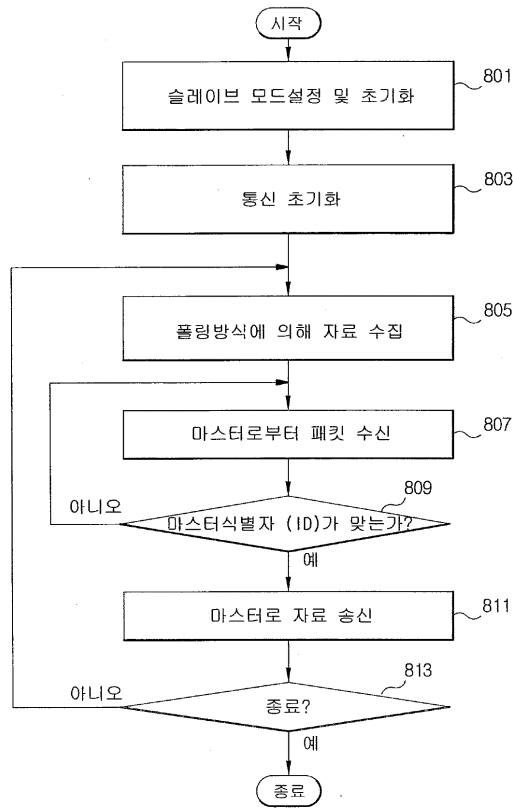
6



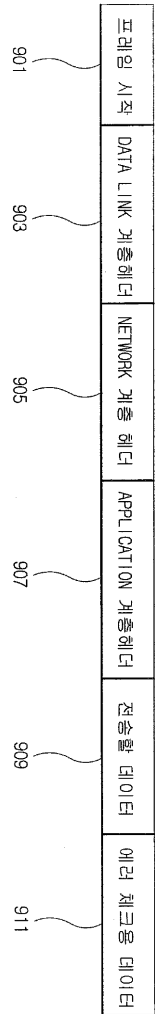
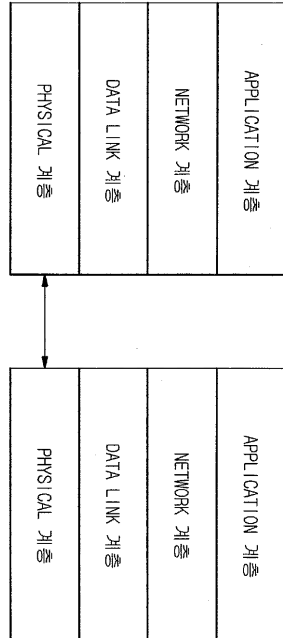
7



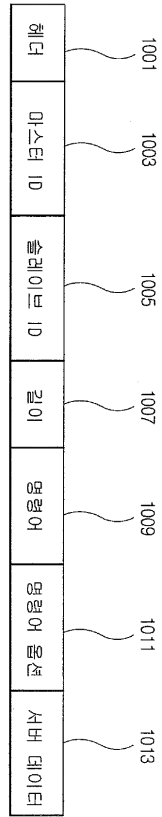
8



6



10a



10b

프로젝트 시작	1015
명령어	1009
슬레이브 시간열 변경	1017
슬레이브 ID	1005
에러 체크용 비트	1019
프로젝트의 끝	1021

10c

포레임 헤더	1015
명령어	1009
슬레이브 시리얼 번호	1017
슬레이브 ID	1005
원시 데이터	1013
주변장치 상태	1023
에러 체크용 비트	1019
포레임의 끝	1021