

(19)  
(12)

(KR)  
(B1)

(51) 。 Int. Cl. 7  
H04B 1/10

(45)  
(11)  
(24)

2003 01 30  
10 - 0369597  
2003 01 13

(21) 10 - 2001 - 0010070  
(22) 2001 02 27

(65) 2002 - 0002190  
(43) 2002 01 09

(30) 09/606,892 2000 06 29 (US)

(73) 3 416

(72) ,75081 , , , 911

(74)  
:

(54)

CDMA , 가  
1 , 1) , 2)  
1 2 1 0 a) 1 1 2  
1 b) 1 0 2 0  
2

1

2

3A 3B

4A

4B 4A

5

(PCS)

PCS

(end - user)

가

가

(infrastructure) 가

(operating) 가

가

가

가 가

(Time Divis

ion Multiple Access: TDMA),

(Frequency Division Multiple Access: FDMA),

(Code Division Multiple Access:

CDMA .)

가

가 / /

CDMA

( :

(Walsh)

(long)

(convolutionally)

64

RF, QPSK, (in-phase; I), (quadrature: Q)  
 TIA IS - 95 CDMA, TIA S - 2000  
 64 PN

1, 64 - (X-OR), 64 - , 0

CDMA 가 (capture) M

가 , M

CDMA 가 , CDMA

CDMA 가

, CDMA

0, 2), 1, 2, 1, 1, 2, 1, 1, 2), 1, 0  
 2, 0, 1), 1, 1, 2, 1, 1, 2), 1, 0

( : ) CDMA

가

(ration)(Eb/No)

+a( 1 ) -a( 0 )  
 (coherent)

, CDMA

, CDMA

, 1 1 2 1

, 1 0 2 0

1 0 2 0 1 1 2 1

1 2 0 1 2 1

가 , 가 (特定) 가

가

1 5

(RF)

1 100 100  
(MS) 111 - 114, 121 - 123, BS 101, BS 102, 103 101 - 103  
, PCS , (metering) ,

101 - 103 121 - 123

가 , (obstructions)

, BS1, BS2, BS3 (BSC) (BTS)

(air conditioning) (heating) (supplies)  
RF RF  
121, 122, 123  
BS1, BS2, BS3

BS1, BS2, BS3 (MSC) 140 (fiber opti  
c) (backbone) 131 T1 T3  
140 (coordination) 140  
가 (coordination)  
BS2, BS3 131 가 BS1,  
MSC 140

100 , MS 111 121 BS 101 , MS 113  
122 BS 102 , MS 114 123 BS 103 M  
S 112 121 , 123 MS 112 MS  
112가 123 가 MS 112가 121 123  
"가

BS1 " " 1 2 , MS 112가  
BS1 가 , MS 112 BS 103 B  
S 103 (on - going) , MS 112 103  
BS 101 BS 103 (seamlessly) " (idle)"

100 , MS 112 BS 101 64 - (Walsh)  
MS 112 BS 101 CDMA 가 (multi copies)  
, MS 112 BS 101 가 CDMA  
omming) (capturing) , MS 112 BS 101 (inc  
가 (pseudo) - " - ( )

2 101 112 101 112 (downconverter) RF  
 210, / (ADC) 201, 215 (RF) 205, 205 201 RF (in-phase) 0  
 (Q) ( ) I Q 1 64 - 64 - (invers  
 e) 2 1 0 1 64 - 64 - (invers  
 . ADC 215 . ADC 215 I Q 220 .

가 ADC 215가 I Q 가 ADC 220  
 , I Q

101 112 225, (randomizer) 230, (matched) /  
 DC 235( " 235"), 240 . 225 , 220 , A  
 215 235, 230 , 1 0 ,

, 225 I Q 235 (matching) I Q  
 ADC 215 가 225 I Q 2  
 25 230 230 I Q ,  
 235 . 225 I Q ,  
 가 가 . 가 가

64 - 1 0 225 230  
 . 230 1 0  
 230 235 ,

235 1 0 가  
 , 235 BS 101 MS 112 - 1 0 24  
 0 ADC 215, 220, 225, 235 , BS 101 MS 112

3A 3B BS 101 MS 112 I, Q  
 . 3A 300 BS 101 MS 112 . 3B 305  
 300 300 1  
 0 +a 1  
 -a 0 . 가  
 T BS 101 MS 112  
 , 300 300 1 0

3B  
 가 305  
 305 300  
 T 300  
 305

4A BS 101 MS 112 400  
 400 1 (going) 0  
 , A U (labeled)  
 1 1 T 1 A E 2 1 T 4  
 Q U 1 0 T 2 F J  
 2 0 T 3 K P

4B 400 BS 101 MS 112  
 405 400 405 1  
 ( 1 4 ) 0 ( 2 3 ) 400  
 1 0

F P 0 400  
 I, M, K, O, H, F, P, N, J, G 1  
 405 405가 400  
 405 가 405

225 230 가 1 I Q  
 (over multi iterations) 0

5 101 112  
 , ADC 500 CDMA 가 I Q ( 505).  
 215 "N" I Q "M"  
 220 M 64

, 225 1 ( 1) 220 1 1  
 ( 510). , 225 0 ( 0) 240 220 0  
 0 ( 515). 240

225 1 0 235  
 ( 520). 가 , -  
 ( 530).

가 , 230 0  
 , 1 ( 525 535).  
 , 225 235 가 1 0  
 ( 540).

5 가 , 235 - ( 545 550).  
 가 , 230 1 ( 535). 22  
 , 535, 540, 545 가 .

(1) CDMA Eb/No , (2)  
 , (3)  
 , (4)  
 . (potential)  
 가 (CDMA)

Eb/No  
 Eb/No ,

k - . - (de - spreading)

(template)  
 - (de - spreading) k -

가 가 .



가  
CDMA

가

(57)

1.

1                    2                    ,                    ,                    2

0                    1                    1                    ,                    2

                  1   1                    2   1                    1   0                    2   0

2.

1                    ,                    가                    가                    .

3.

1                    ,                    .

4.

1                    ,                    .

5.

1                    ,                    1   1                    2   1

6.

1                    ,                    1   0                    2   0

7.

1 , 1 1 2 1 , 1 0  
2 0

8.

1 , 1 2  
0 1 2 1

9.

,  
,

1 2 ,  
1 1 , 2  
0 1 1 2 1 1 0 2 0

10.

9 , 가 가

11.

9 , 1 1 2 1

12.

9 , 1 0 2 0

13.

9 , 1 1 2 1 , 1 0  
2 0

14.

9 , 1 2  
0 1 2 1



0 , 1 1 2 1 1 0 2

22.

21 , 가 가

23.

21 , 1 1 2 1

24.

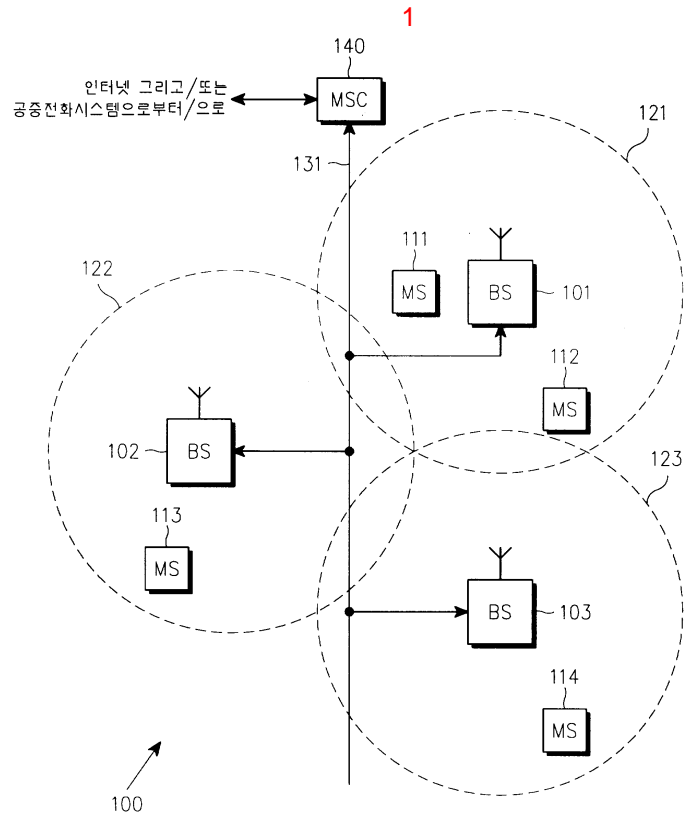
21 , 1 0 2 0

25.

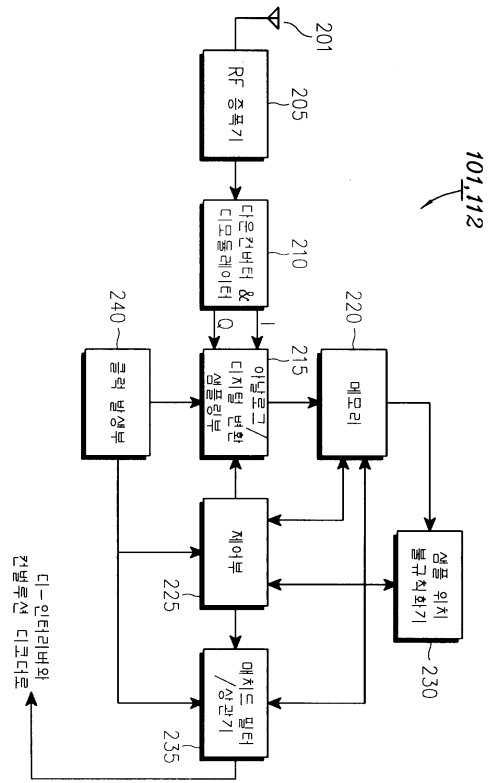
21 , 1 1 2 1 , 1 0  
2 0

26.

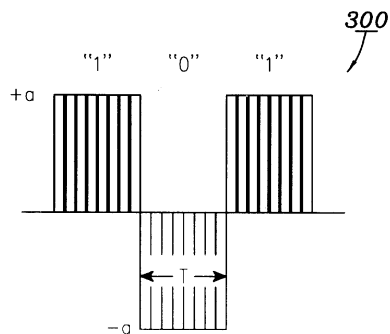
21 , 1 2 0 1 2 1



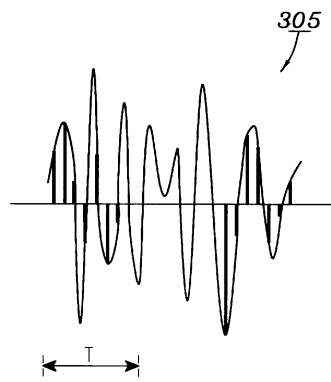
2



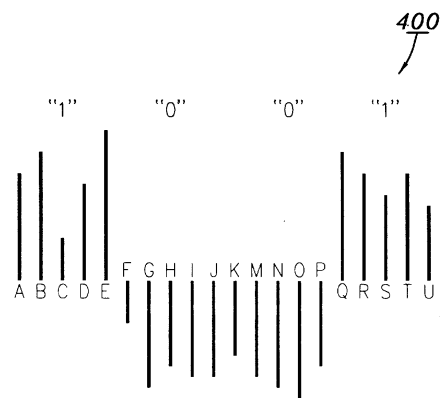
3a



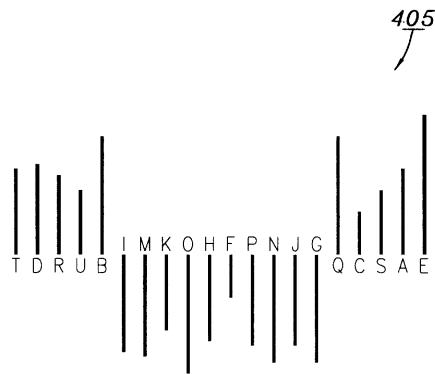
3b



4a



4b



5

