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(A)

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10-2004-0075951
2004 08 30

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10-2004-7011333
2004 07 22
2004 07 22
PCT/IB2003/000057
2003 01 13

(87)
(87)

WO 2003/063498
2003 07 31

(30)
(71)
(72)
(74)

02075251.5
-5656
-5656

2002 01 22

EP(EP)
1
6
6

:

(54)

(cover)
가
VLC

-
(VLS)
.

(non-overlapping blocks)
(post-processing)
VLC

1

VLS, , - ,

(post-processing)

JPEG, MPEG, H.320

MPEG-2 MPEG-2 . M
 MPEG-2 가 , , , 20, CH1211, ISO/IEC
 56(ISO/IEC Copyright Office Case postal 56, CH 1211, Geneva 20, Switzerland) 가 MP
 MPEG-2 ISO/IEC 13818-1,2,3 .

MPEG-2 (layered structure)

'GOP' , - ,
 P- 가 , , (I-), I-
 (P-),
 (bi-directionally interpolated frames)(B-) MPEG
 GOP (access points) I-

MPEG-2 , I- ' (intra)' , DCT(discrete cosine transform)
 8 × 8 (br
 oken) . MPEG-2 DCT P- ,
 (temporal redundancy)
 (exploit) DCT
 (difference signal) GOP
 DCT 가 (VLS) , DCT 가 (VLC)

가 , MPEG-2
 가 ,

가
 , ± 10

EP-A2-0 599 257

(cover)

- (non-overlapping blocks)
 (post-processing)

ty) , .

, - ,

,

(-1,+1) ,

l) / (incoming/outgoing information signa

,

, /

() - , (-1,+1) (2) / (-1,1)

, () , -

, / - ,

, ' ' ,

가 .

,

.

가 10% ()

.

1 8 x 8

2a

2b 2a

2c 2a

, MPEG-2 가

MPEG-2 ,

MPEG-2 , Y U V , I-

, U V - , DCT Y,U V 8 x 8 ,

MPEG , , 8 × 8 , 64 DCT ,
 DCT , 8 × 8 (10) 1 ,
 (0) , 1 8 × 8 DCT ,
 (0,0) - (10) , 8 × 8 (10
) 'DC- ' DCT 'AC
 (10)
 AC -
 AC-DCT
 (DC, 0, 3, 0, -1, 2, 0, 1, 0, 0, 0, 0, ..., 0)
 EOB(end of block) (marker)
 (D,C),(1,3),(1,-1),(0,2),(1,1),EOB
 VLC (entropy) DCT -
 EOB- (D,C),(001001010),(
 0111),(01000),(0110),(10)가
 가 2a
 (post-processing) (1) DCT
 (2) (2) (1)
 (Q_{in}) MPEG / (3) (1)
 (Q_{out}) / (3) , 8 × 8 (4)
 / (3) (4) DCT (8)
 (4), (2) / (3)
 (2) DCT (2)
 (-1,+1) 2a (2) MPEG (3) (4)
 (Q_{in}), MPEG (parse)
 2a MPEG 2b (4) MPEG
 , (1,3),(1,-1),(0,2),(1,1),..., (10)
 (candidate pairs)', (shadowing) (1,-1) (1,1) -1
 1 (embed) 가 DCT (2)
 (1,1) (1,2)가 , 1 DC,(1,3), (1,-1), (0,2), (1,1), EOB
 , VLC 가 (1,-1) (1,0)
 (run-merge method) 가 (0
 (1,3)(2,2)(1,1)(EOB) VLC / (3)
 , Q_{out}
 VLC
 VLC
 가 , 8 × 8 DCT 3,

10%

p) , / (quantization ste
 , /

- (-1,+1)

- - ,

- (-1,1) - () ,
 , - ,

- (-1,+1) ,

- () 가 , () ,

- - () -
 ,

- - .

2a

, / (optimised) ,

RAM , I/O ROM ,

hilips Electronics North America Corp.)

TM-1000 DSP(P

DIVX , DIVX ,
 - CD 가 ,

(commit) , 가 -

MPEG-2 (sense)가 , MPEG , MPEG-4(
 , DIVX) (cover) , Dolby AC-3

가 5-9 Mb/ , MPEG-2 384 Kb

, 8 × 8 MPEG-2 , MPEG-2
가 16 × 16 .
(), ()
, / , ISO/IEC 13818 가
(bit diddling) 가
,
가 , -
(stuffing bits) MPEG 8 10 %
DVD , PC , PC /
MPEG-4
RTP(real time protocol)
MPEG RTO

(57)

1. (cover) - (non-overlapping blocks)
(post-processing)
(Q) , (Q)
(Q) , (Q)
(Q)

2.

1

(-1,+1)

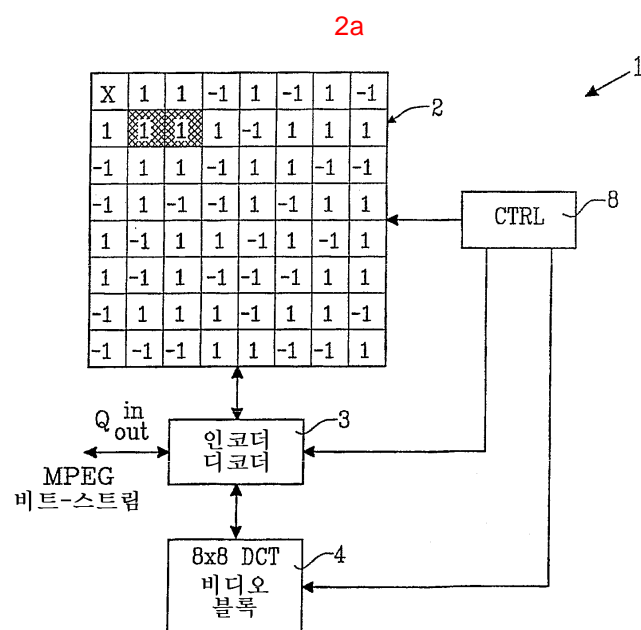
(-1,1) , (()) , ,
(-1,+1) ,
() 가 () ,
- () -
,
(Q) - ,
.
3.
2 ,
, .
4.
3 ,
3 가 ,
.
5.
2 ,
, .
6.
2 ,
, .
7.
2 ,
, .
8.
2 ,
(quantization step) , .
9.
- 가 1 2
.
10.
- (Q) , (Q) 가
, (Q).
11.
- (1) , (1) ,
(-1,+1) (2) ,

signal)(Q) / / (3) , (incoming/outgoing information
(4) ,
() (4), (2) / eld (3) (8) , (8)
(3) (parse) () - () , (-1,+1)
(2) (-1,1) (2) () , (3)
(Q) , (8) .
12.
(1) (Q) , 11
13.

1

DC	0	0	0	0	0	0	0
3	-1	1	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

10



2b

DC	0	2	0	0	0	0	0	0	0
3	1	1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

4

2c

DC	0	2	0	0	0	0	0	0	0
3	0	1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

4