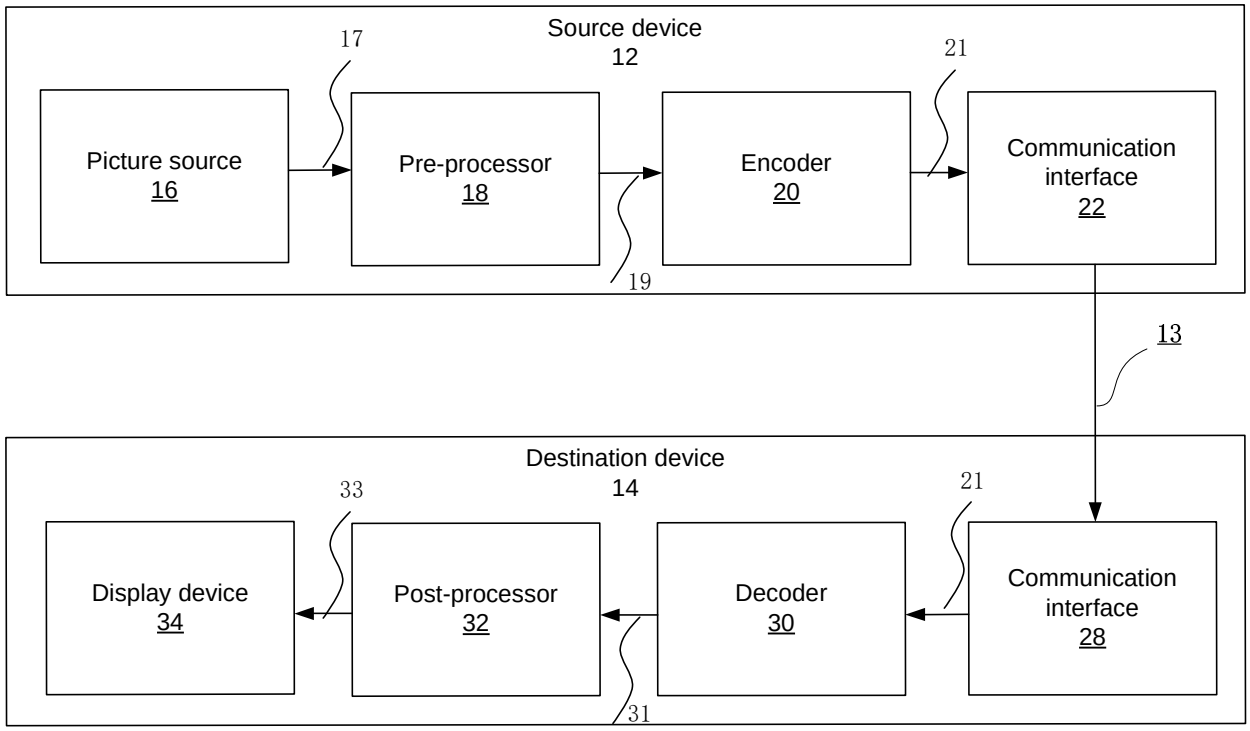

Source device
12
17
21
Picture source
16
Pre-processor
18
Encoder
20
Communication
interface
22
19
13
Destination device
14
33
21
Display device
34
Post-processor
32
Decoder
30
Communication
interface
28
31

Fig. 1

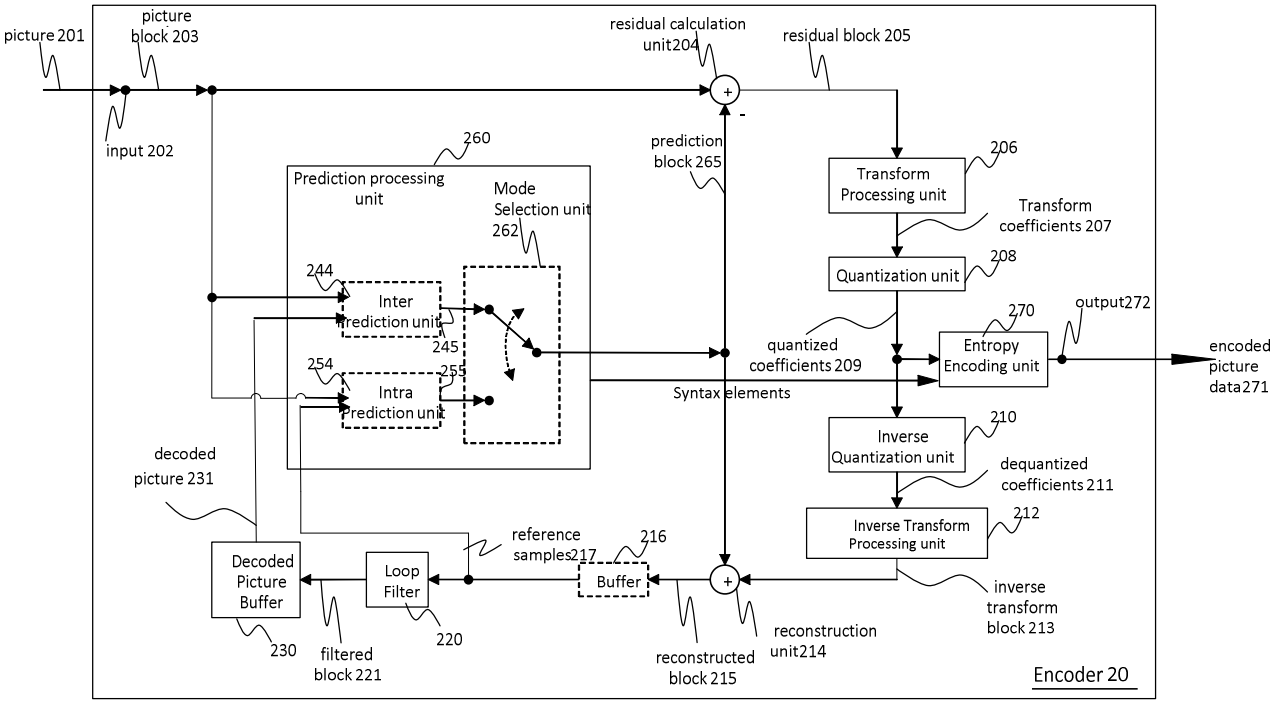

picture 201
picture block 203
input 202
residual calculation unit204
residual block 205
prediction block 265
260
Prediction processing unit
Mode Selection unit 262
244
Inter Prediction unit
245
254
255
Intra Prediction unit
Transform Processing unit
206
Transform coefficients 207
Quantization unit
208
quantized coefficients 209
Syntax elements
270
Entropy Encoding unit
output272
encoded picture data271
Inverse Quantization unit
210
dequantized coefficients 211
Inverse Transform Processing unit
212
inverse transform block 213
reconstruction unit214
reconstructed block 215
Buffer
216
reference samples 217
Loop Filter
220
filtered block 221
Decoded Picture Buffer
230
decoded picture 231
Encoder 20

Fig. 2

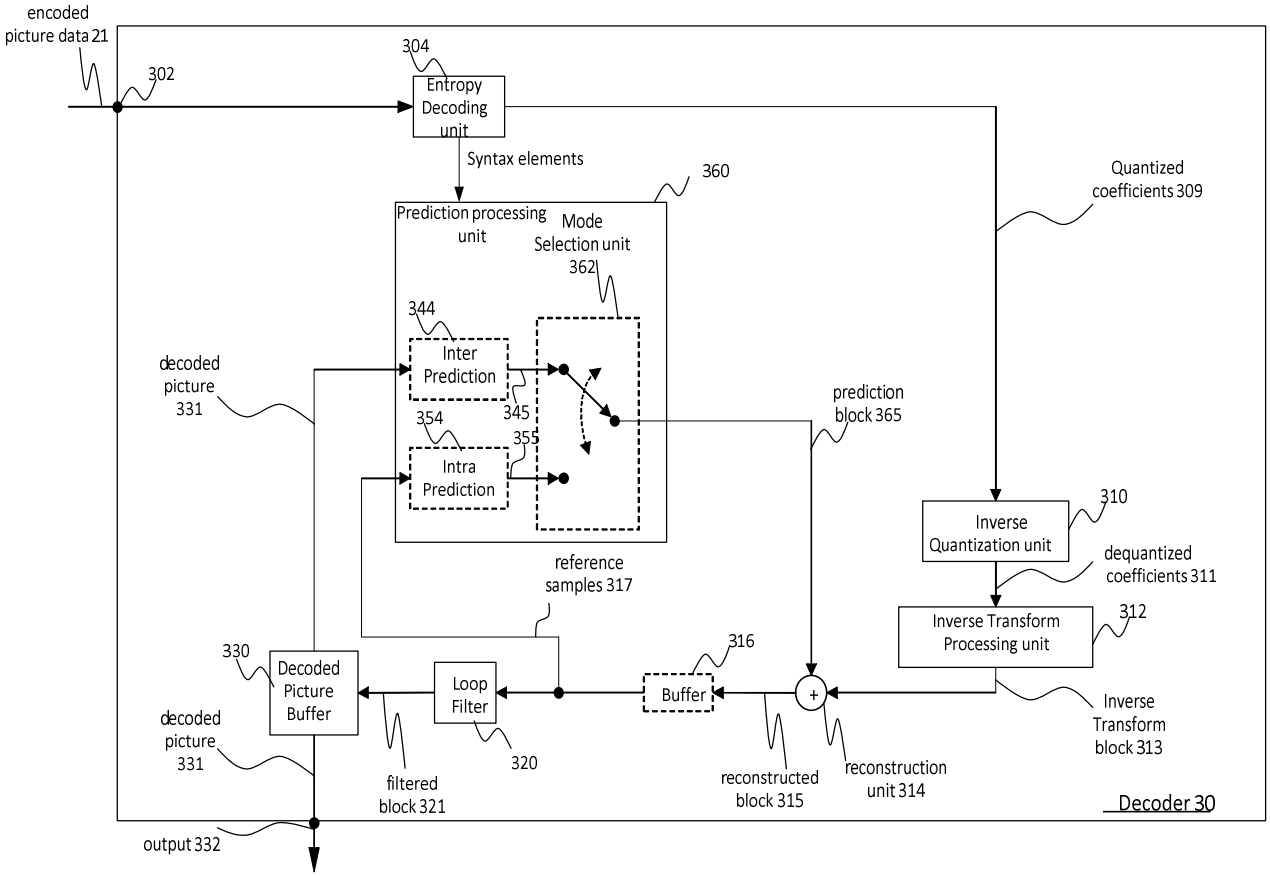

encoded picture data 21
302
304
Entropy Decoding unit
Syntax elements
360
Prediction processing unit
Mode Selection unit
362
344
Inter Prediction
345
354
Intra Prediction
355
decoded picture 331
prediction block 365
Quantized coefficients 309
310
Inverse Quantization unit
dequantized coefficients 311
312
Inverse Transform Processing unit
Inverse Transform block 313
reference samples 317
316
Buffer
+
330
Decoded Picture Buffer
Loop Filter
320
filtered block 321
decoded picture 331
reconstructed block 315
reconstruction unit 314
output 332
Decoder 30

Fig. 3

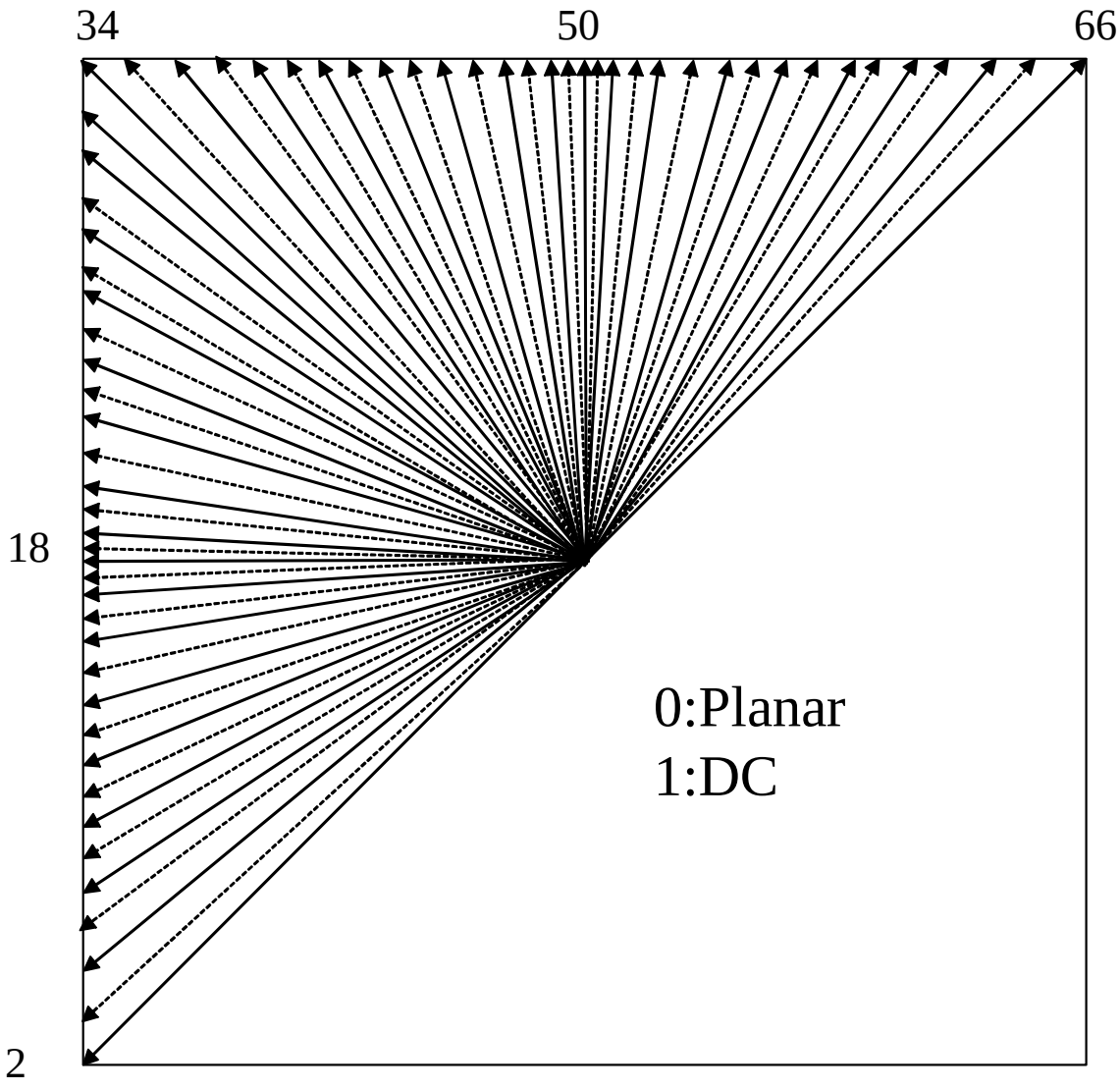


Fig. 4

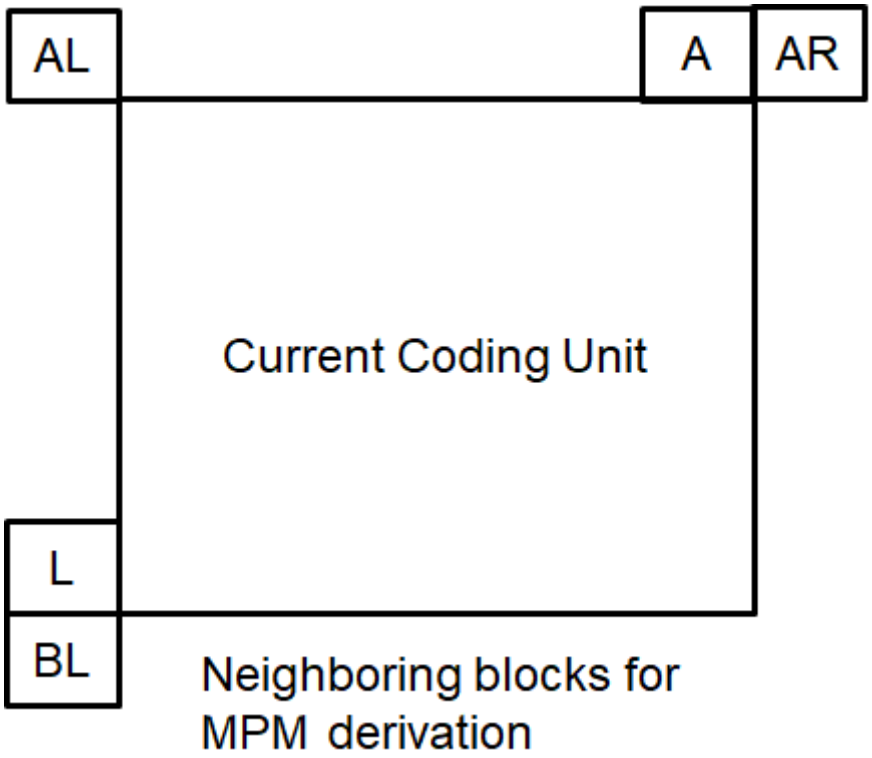

AL
A
AR
Current Coding Unit
L
BL
Neighboring blocks for
MPM derivation

Fig. 5

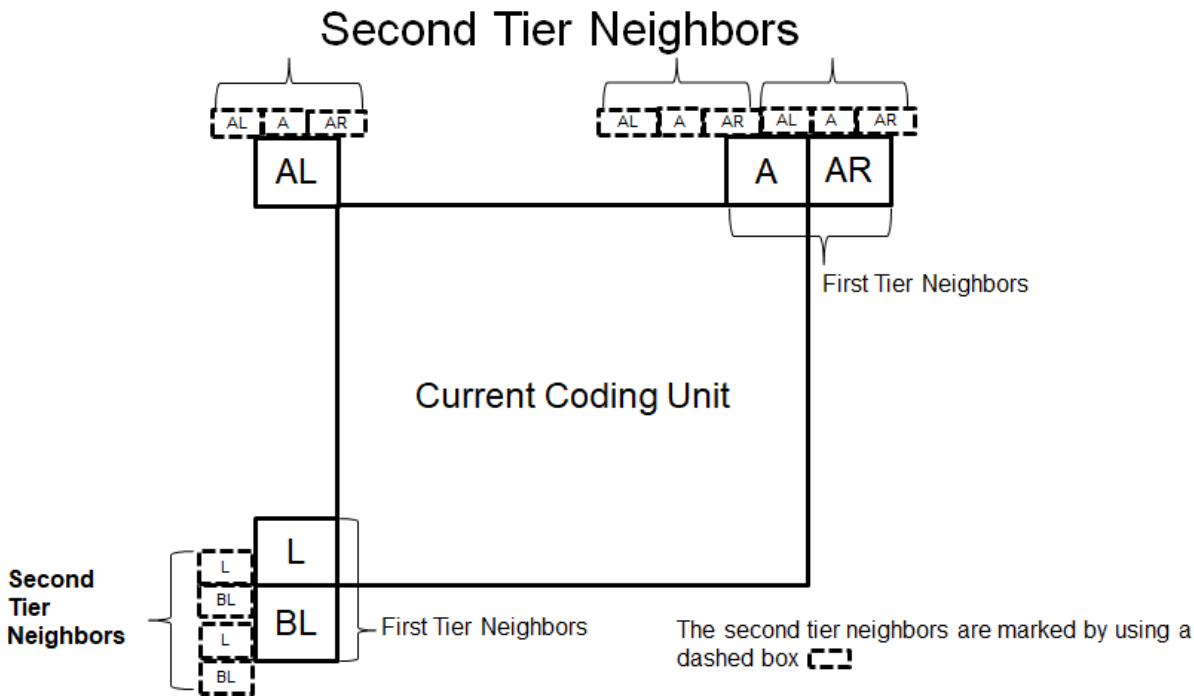

Second Tier Neighbors
AL
A
AR
AL
A
AR
AL
A
AR
AL
A
AR
First Tier Neighbors
Current Coding Unit
L
BL
L
BL
Second Tier Neighbors
First Tier Neighbors
The second tier neighbors are marked by using a dashed box

Fig. 6

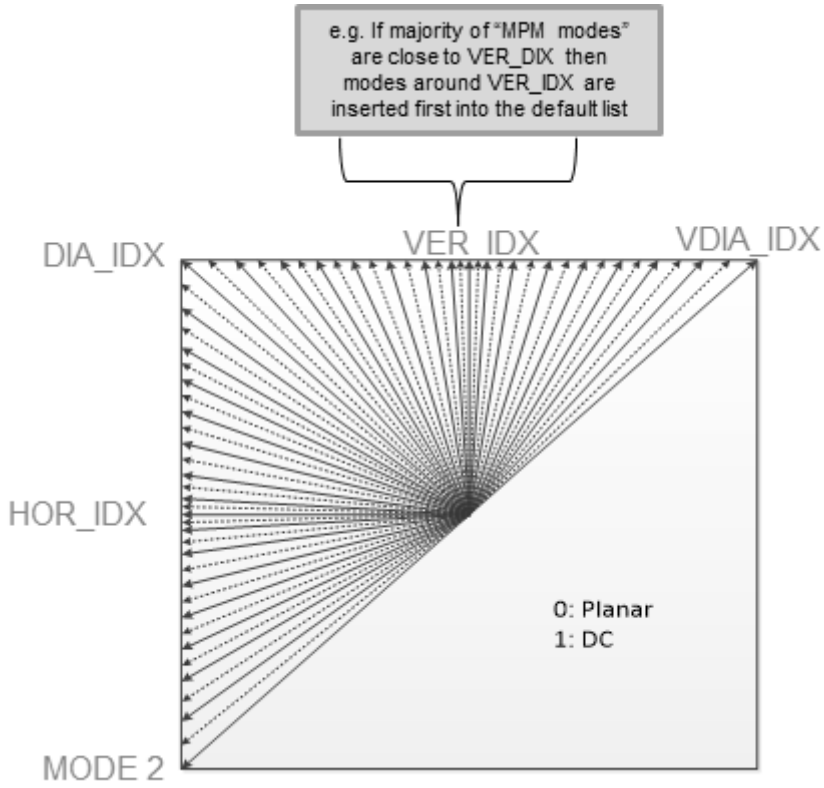

e.g. If majority of "MPM modes" are close to VER_DIX then modes around VER_IDX are inserted first into the default list
DIA_IDX
VER_IDX
VDIA_IDX
HOR_IDX
0: Planar
1: DC
MODE 2

Fig. 7

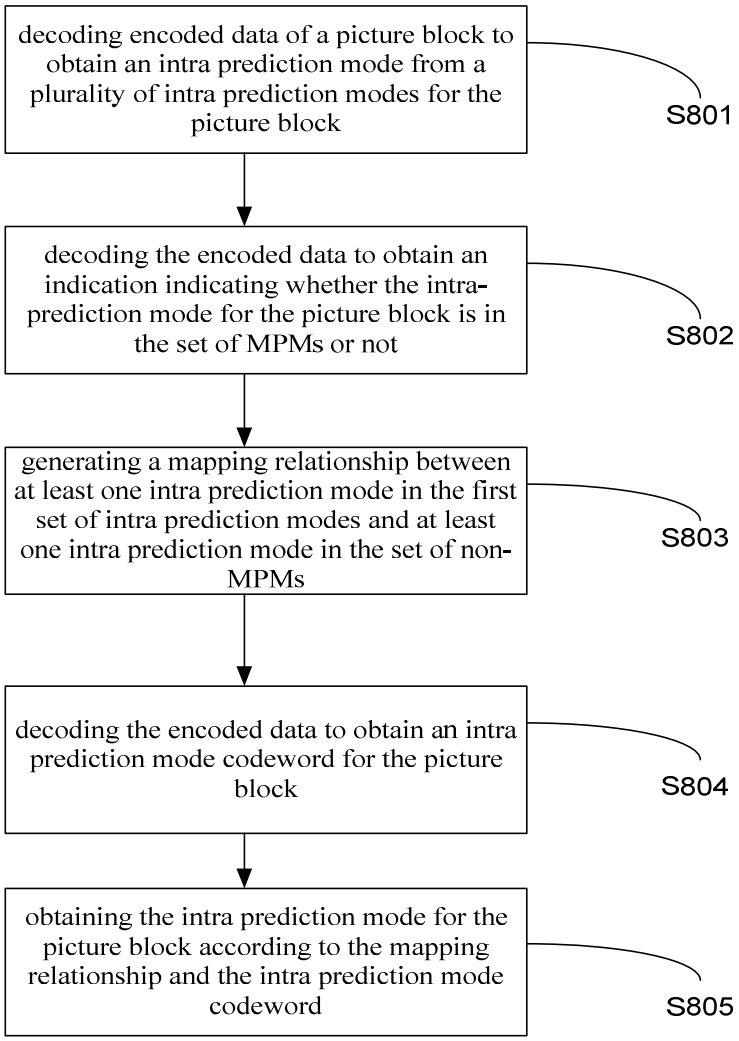

decoding encoded data of a picture block to obtain an intra prediction mode from a plurality of intra prediction modes for the picture block
S801
decoding the encoded data to obtain an indication indicating whether the intra-prediction mode for the picture block is in the set of MPMs or not
S802
generating a mapping relationship between at least one intra prediction mode in the first set of intra prediction modes and at least one intra prediction mode in the set of non-MPMs
S803
decoding the encoded data to obtain an intra prediction mode codeword for the picture block
S804
obtaining the intra prediction mode for the picture block according to the mapping relationship and the intra prediction mode codeword
S805

Fig. 8

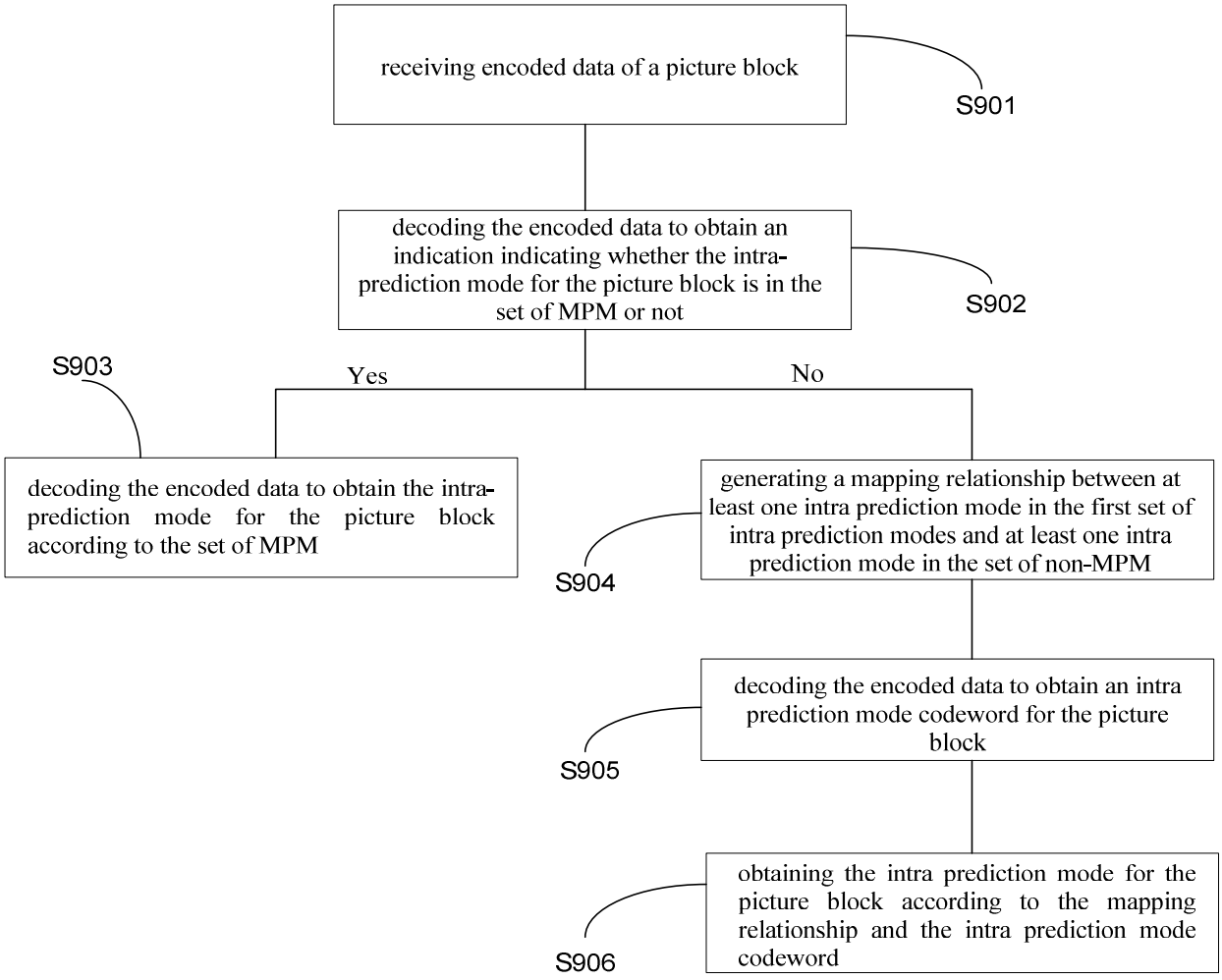

receiving encoded data of a picture block
S901
decoding the encoded data to obtain an indication indicating whether the intra-prediction mode for the picture block is in the set of MPM or not
S902
S903
Yes
No
decoding the encoded data to obtain the intra-prediction mode for the picture block according to the set of MPM
generating a mapping relationship between at least one intra prediction mode in the first set of intra prediction modes and at least one intra prediction mode in the set of non-MPM
S904
decoding the encoded data to obtain an intra prediction mode codeword for the picture block
S905
obtaining the intra prediction mode for the picture block according to the mapping relationship and the intra prediction mode codeword
S906

Fig. 9

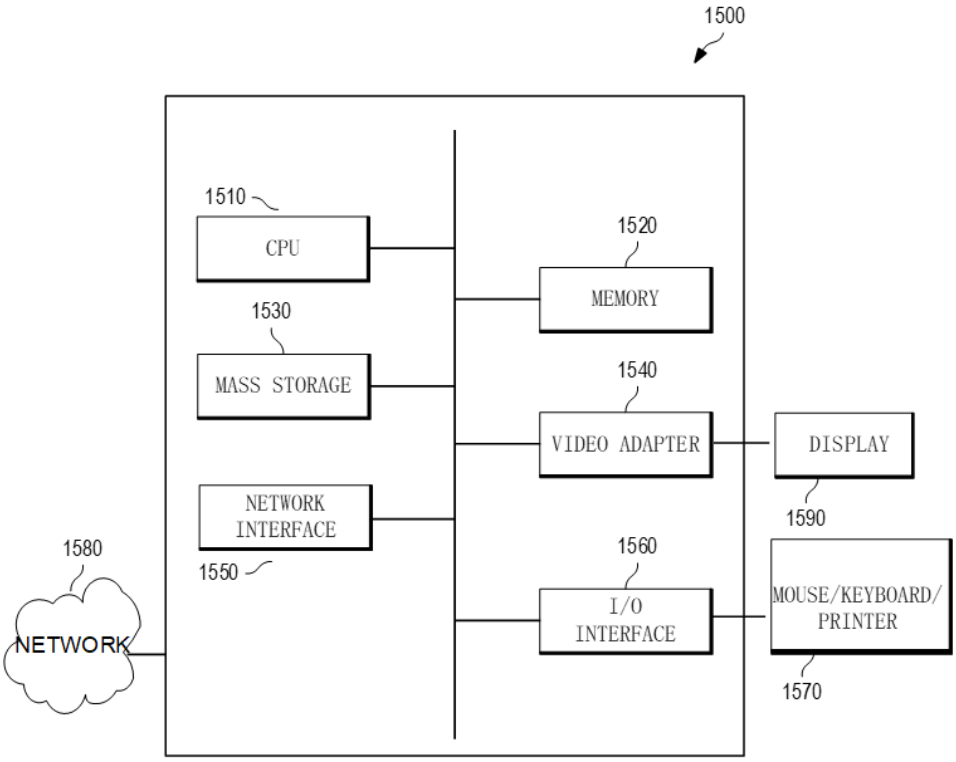

1500
1510
CPU
1520
MEMORY
1530
MASS STORAGE
1540
VIDEO ADAPTER
DISPLAY
1590
NETWORK INTERFACE
1550
1580
NETWORK
1560
I/O INTERFACE
MOUSE/KEYBOARD/ PRINTER
1570

Fig. 10