

FIG.1

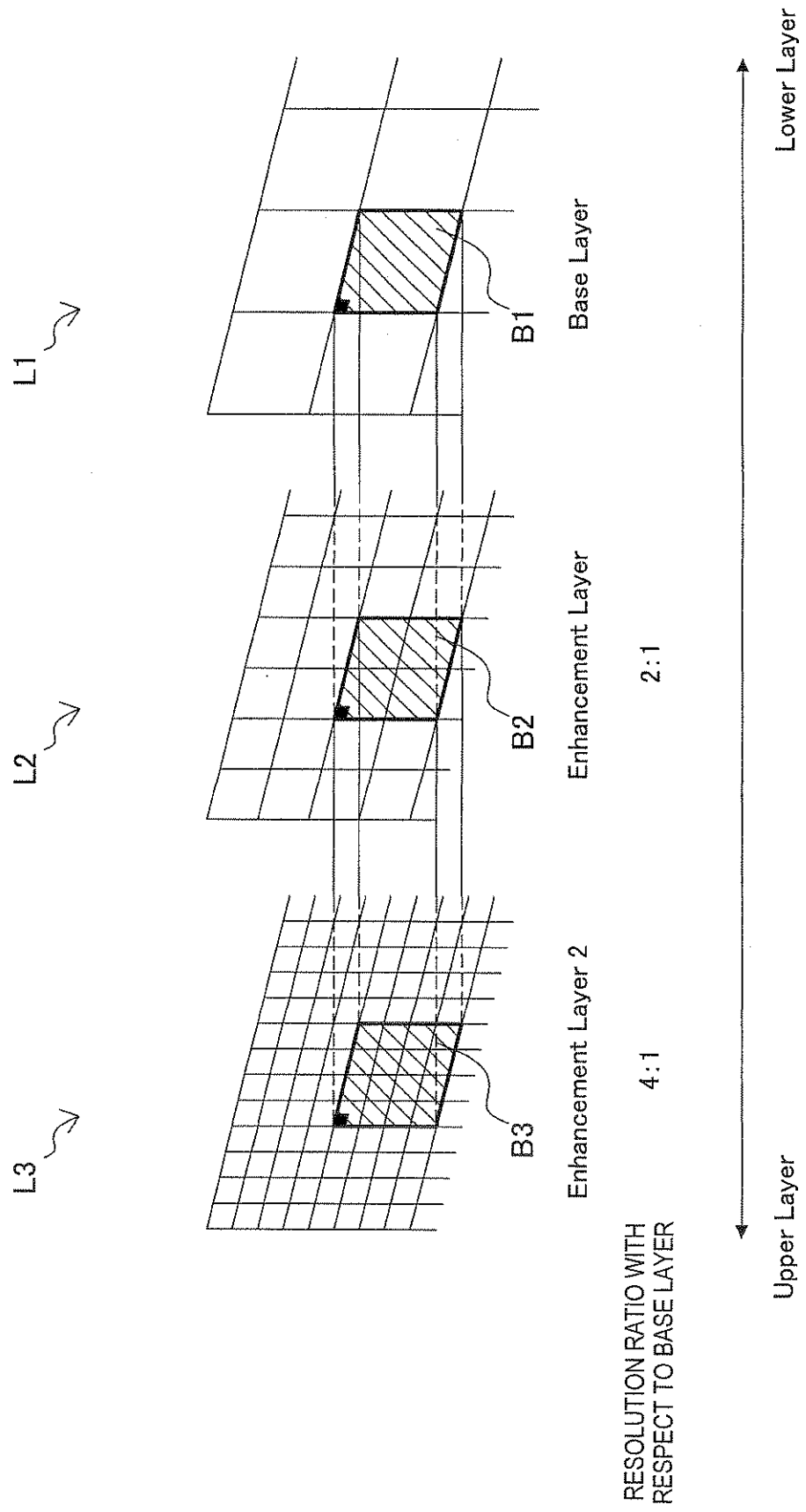
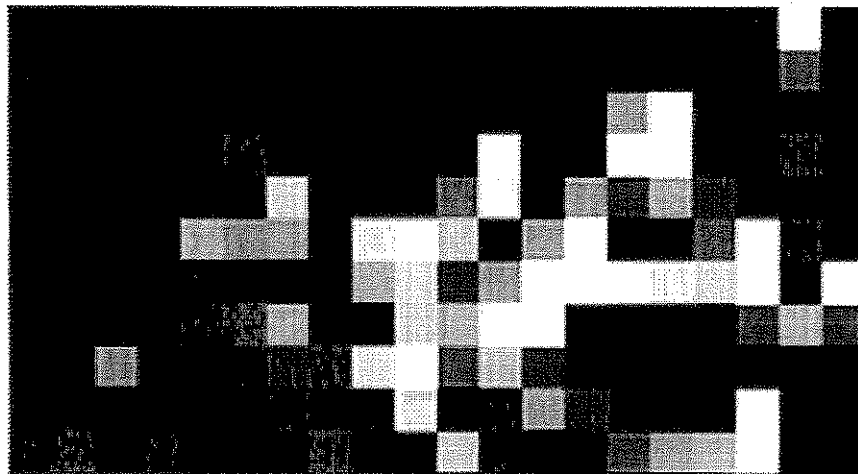


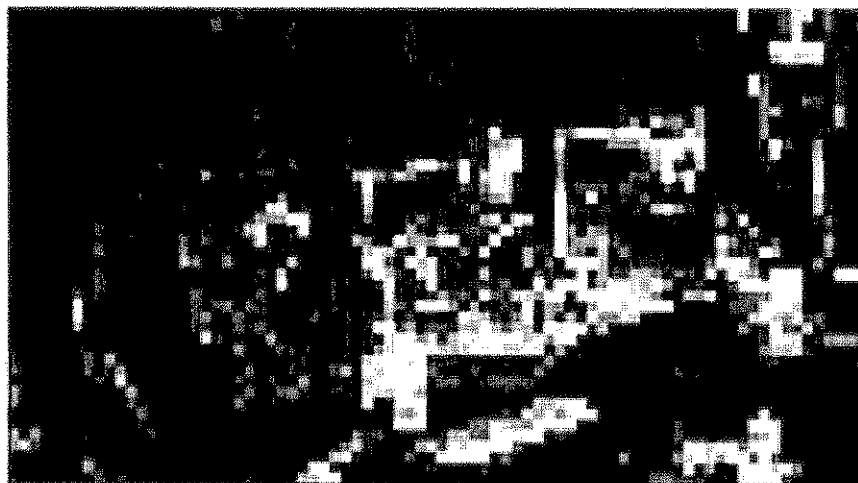
FIG.2



Original
Image



Activity
(64 x 64)



Activity
(16 x 16)

FIG.3

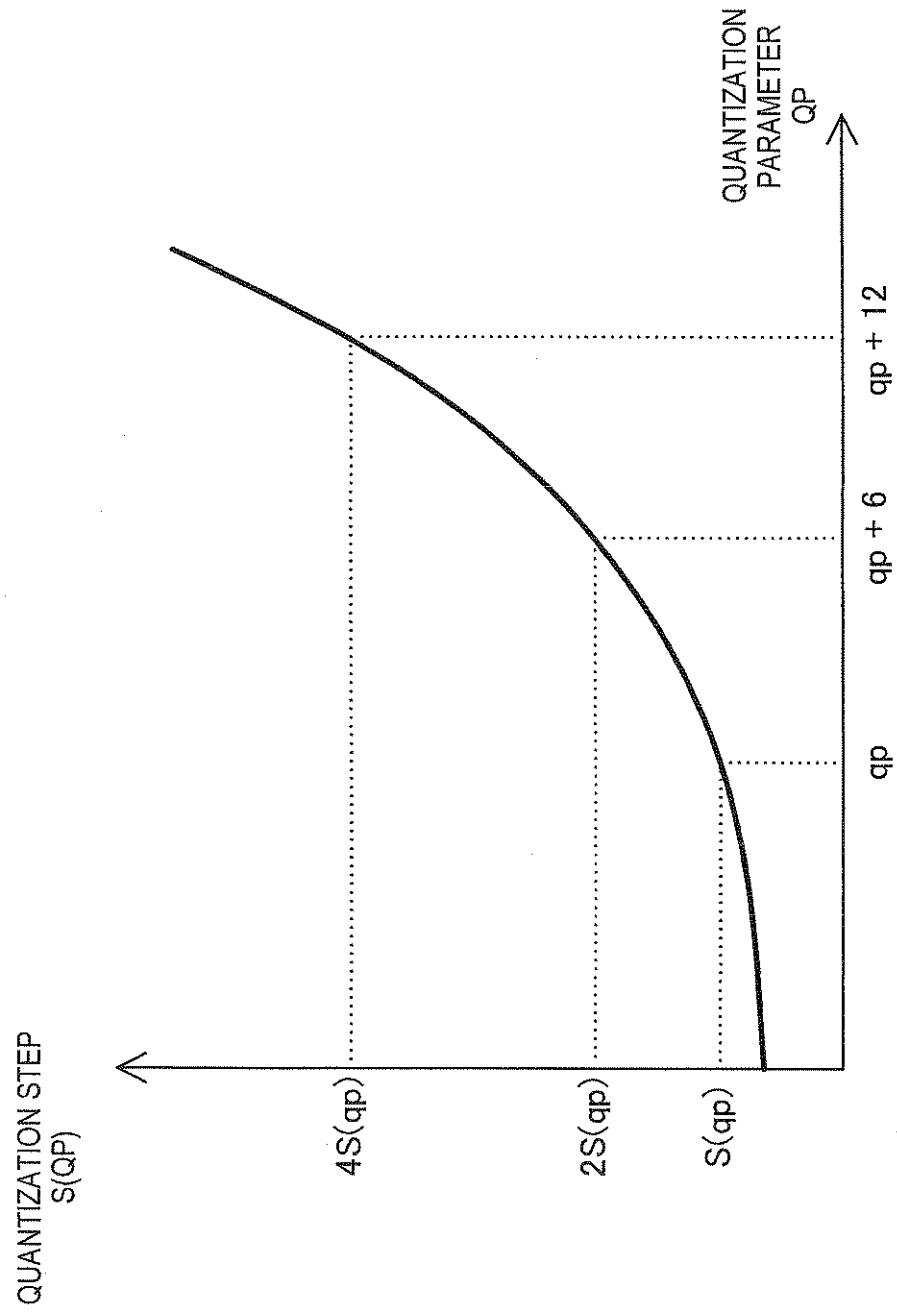


FIG.4

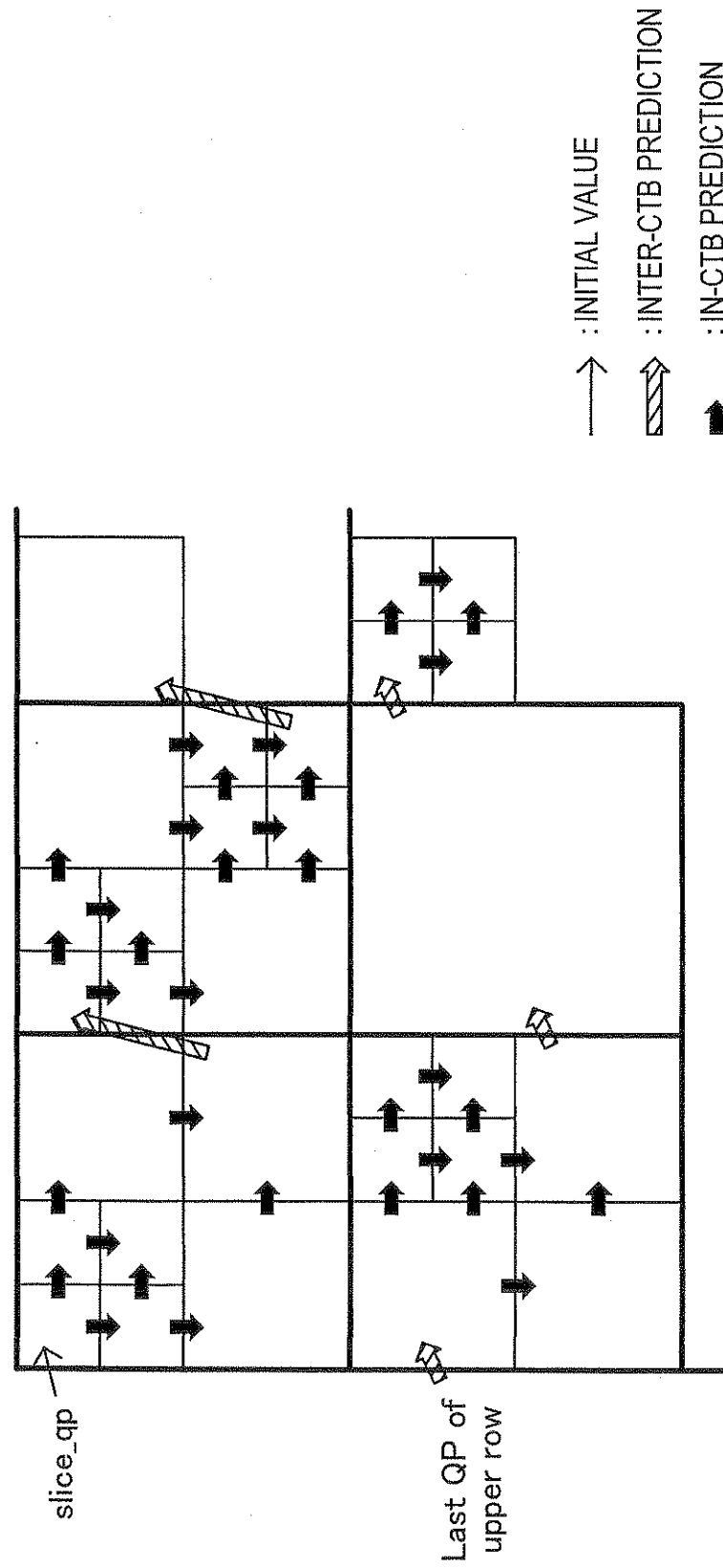


FIG.5

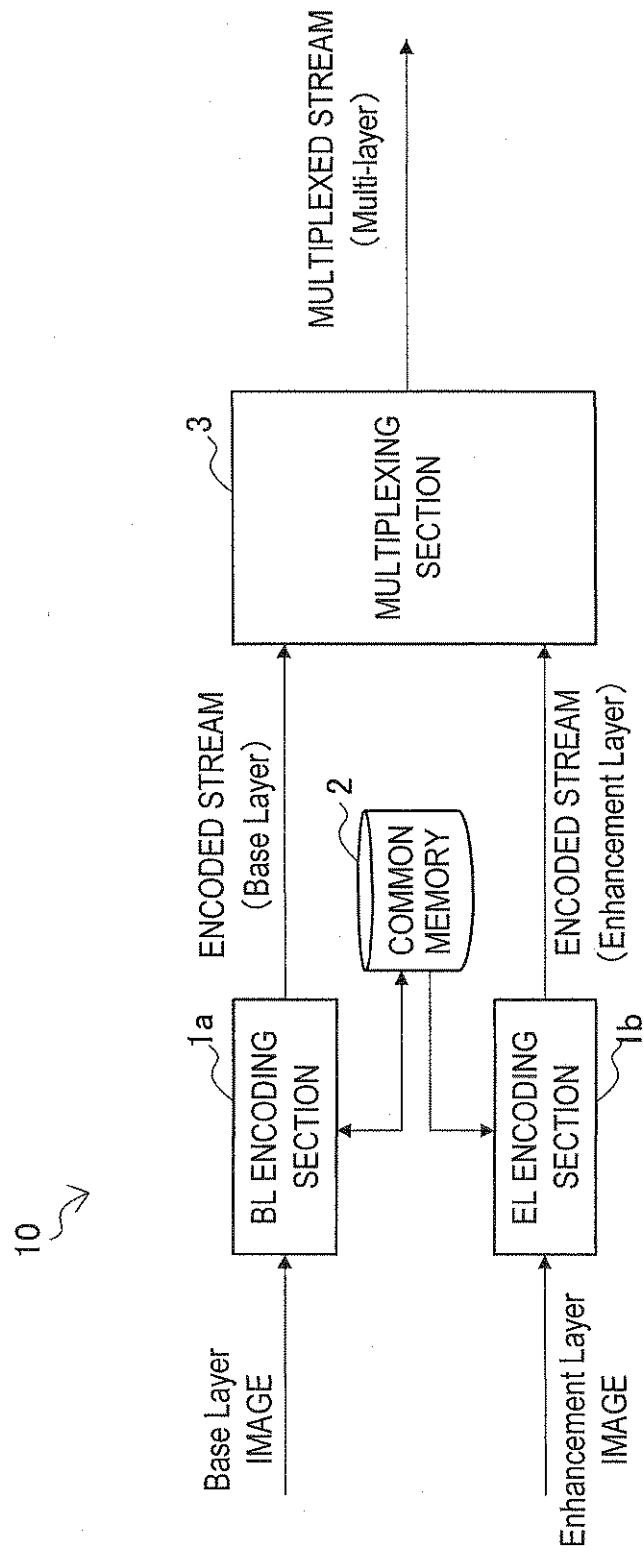


FIG. 6

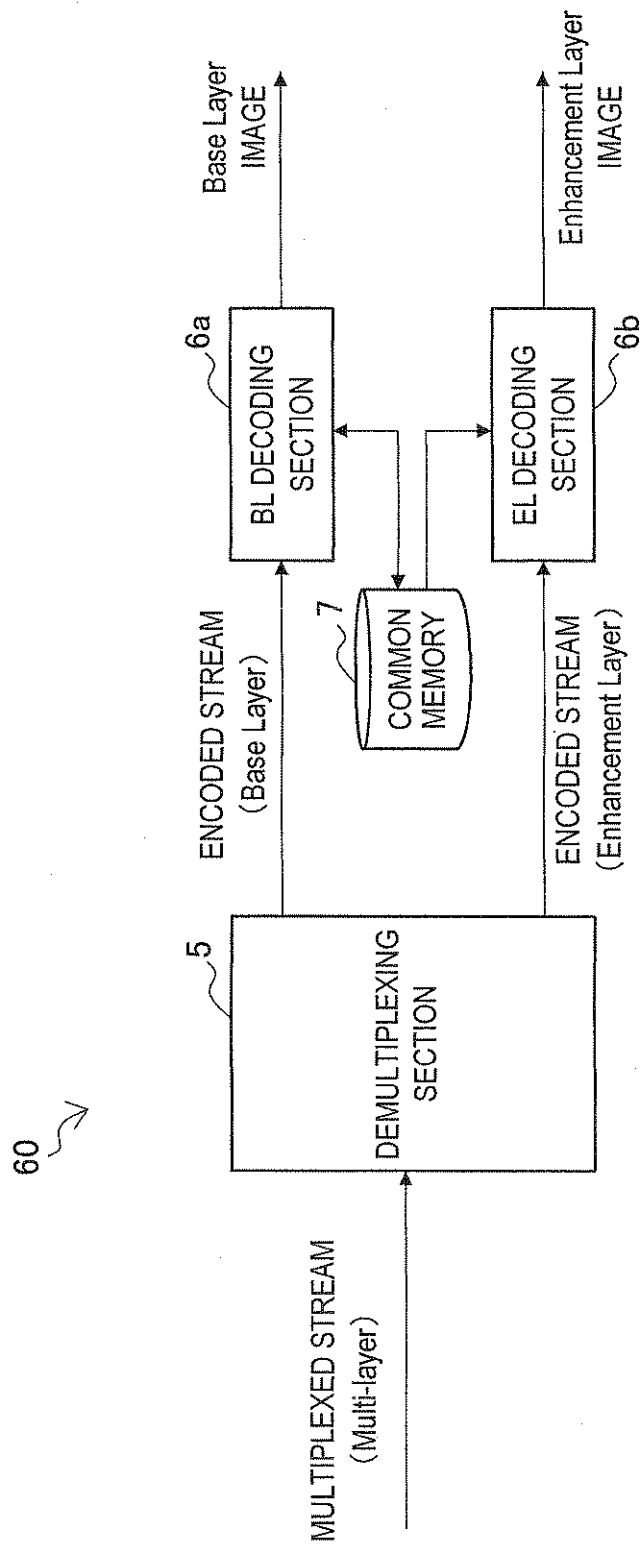


FIG.8

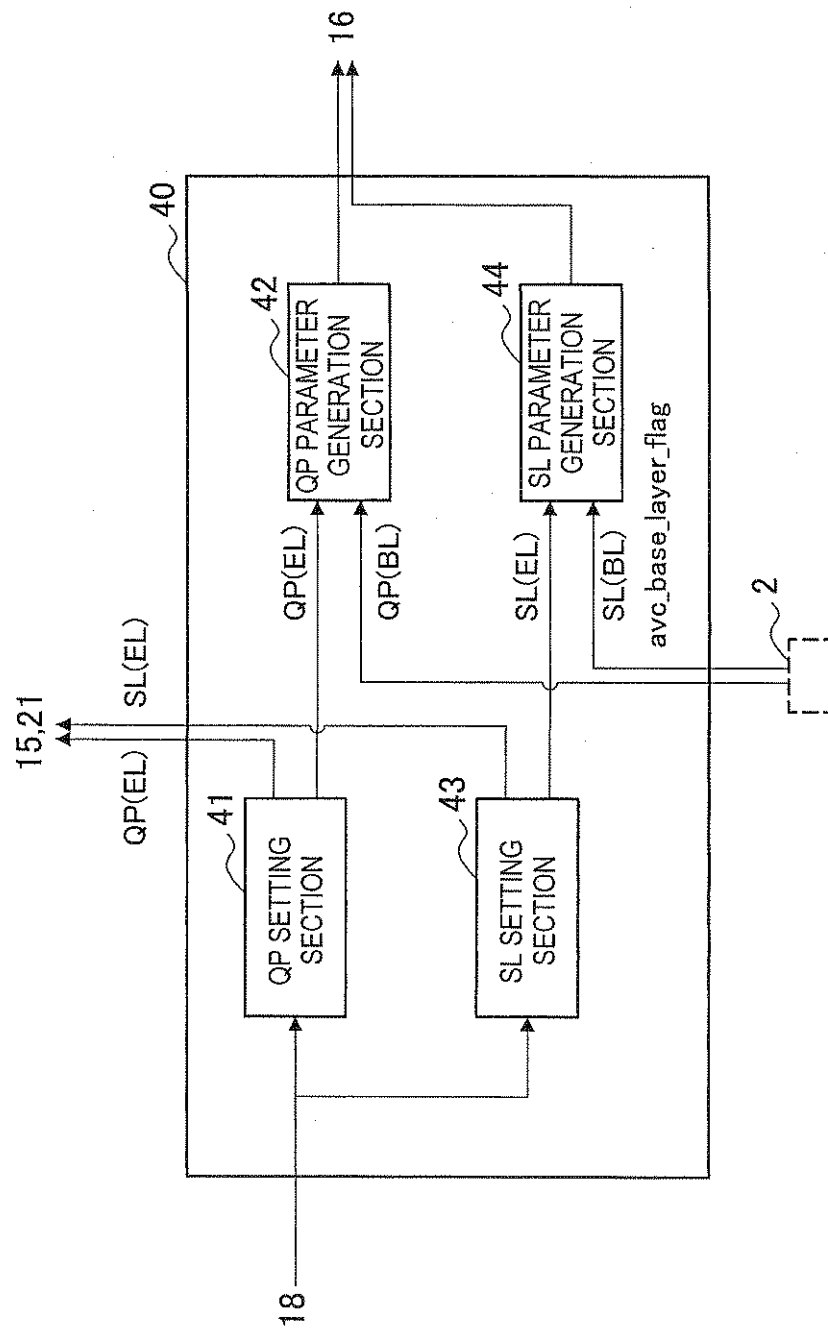


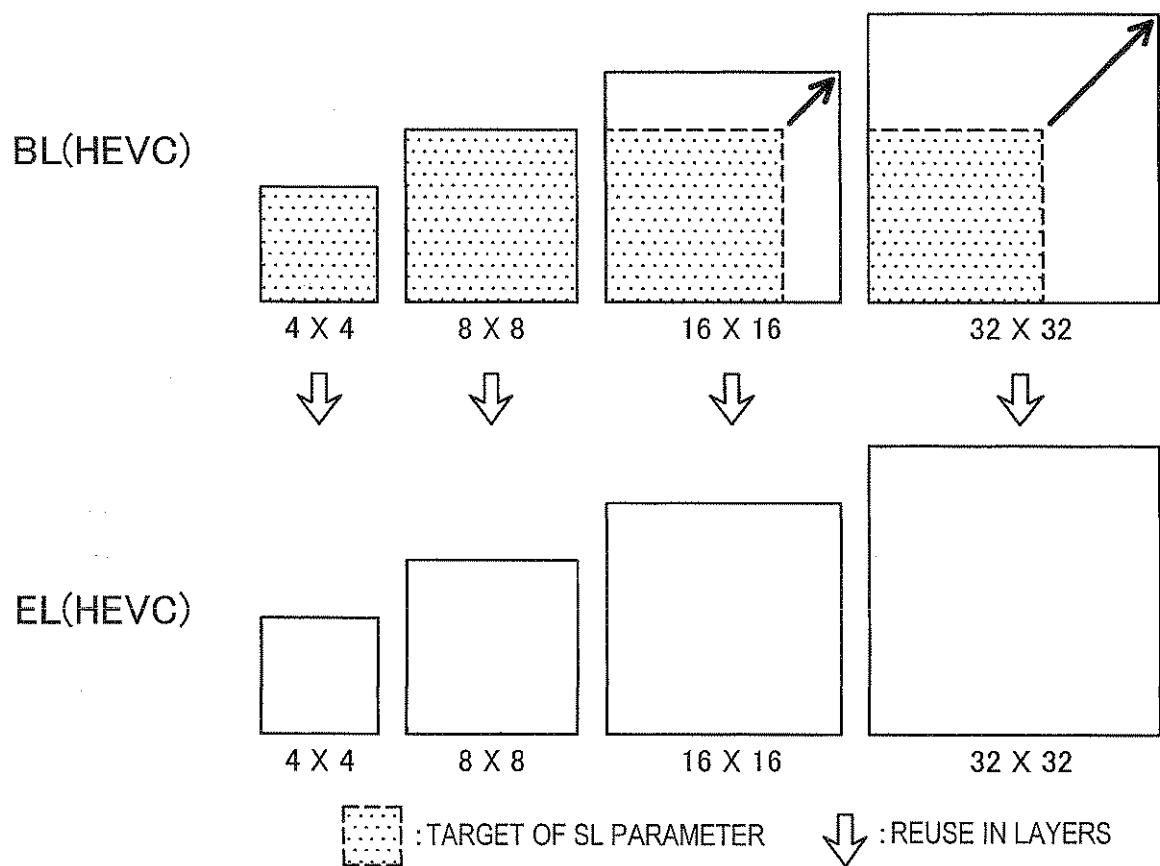
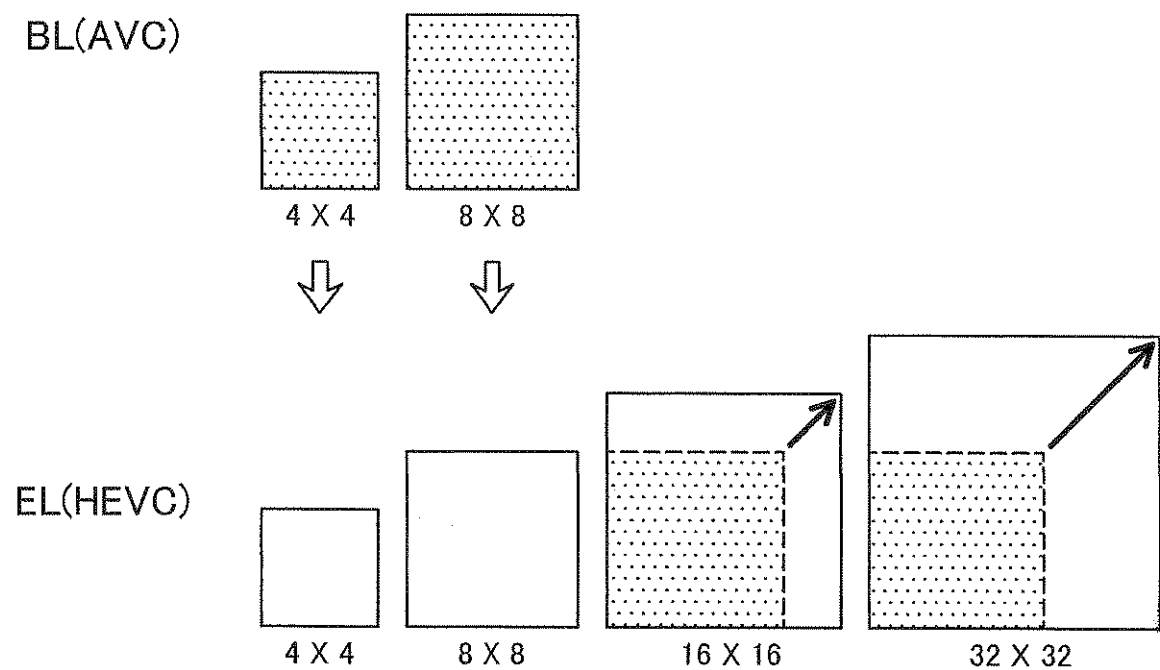
FIG.9A**FIG.9B**

FIG.9C

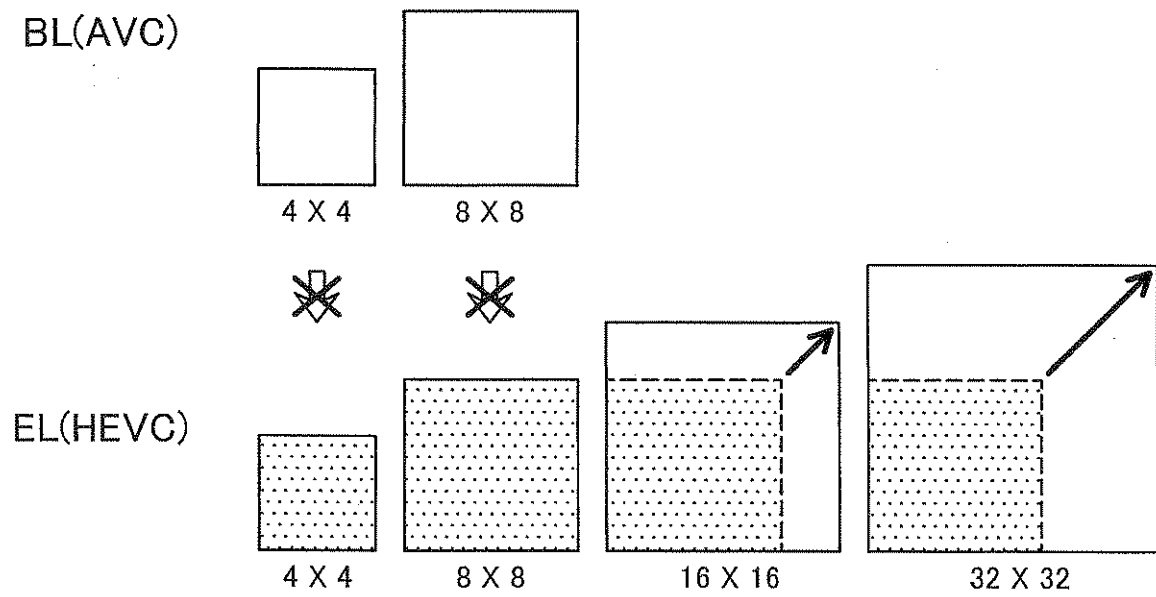


FIG.9D

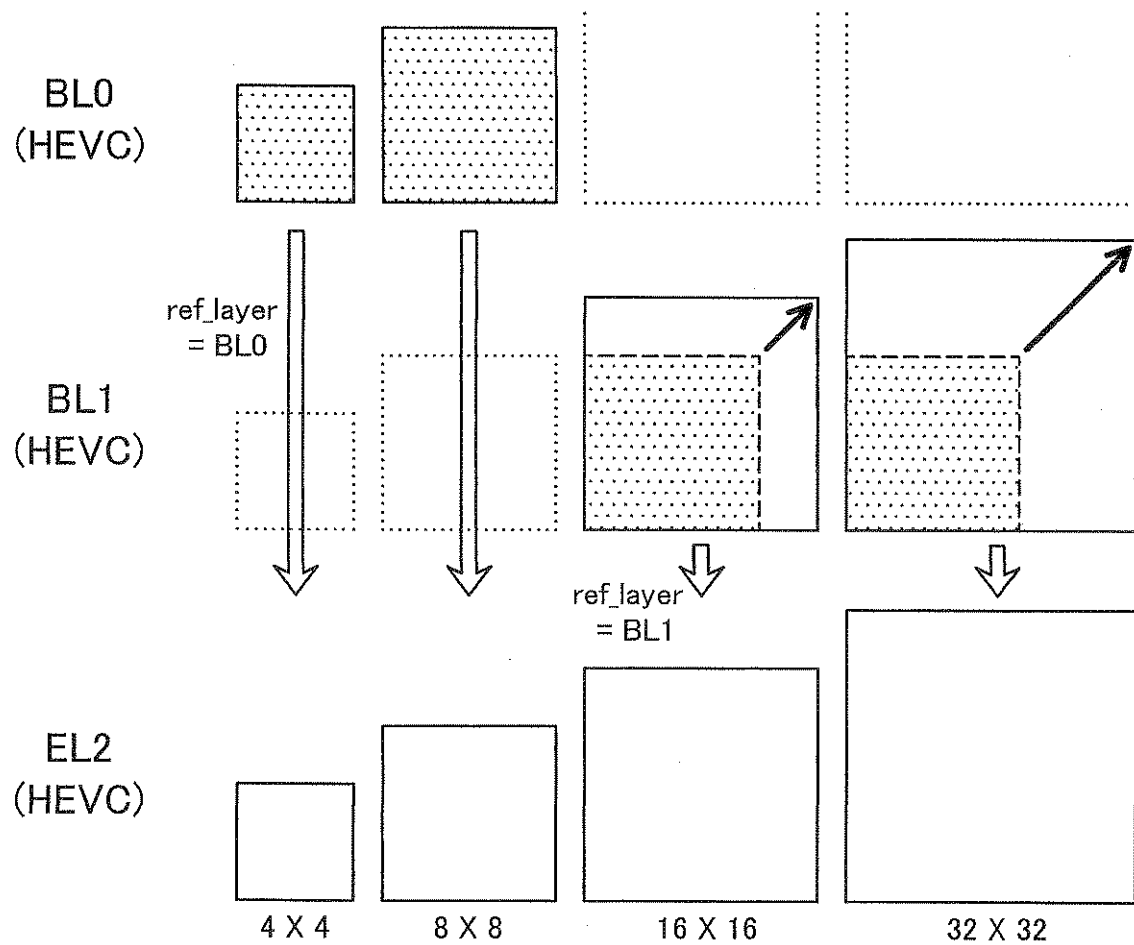


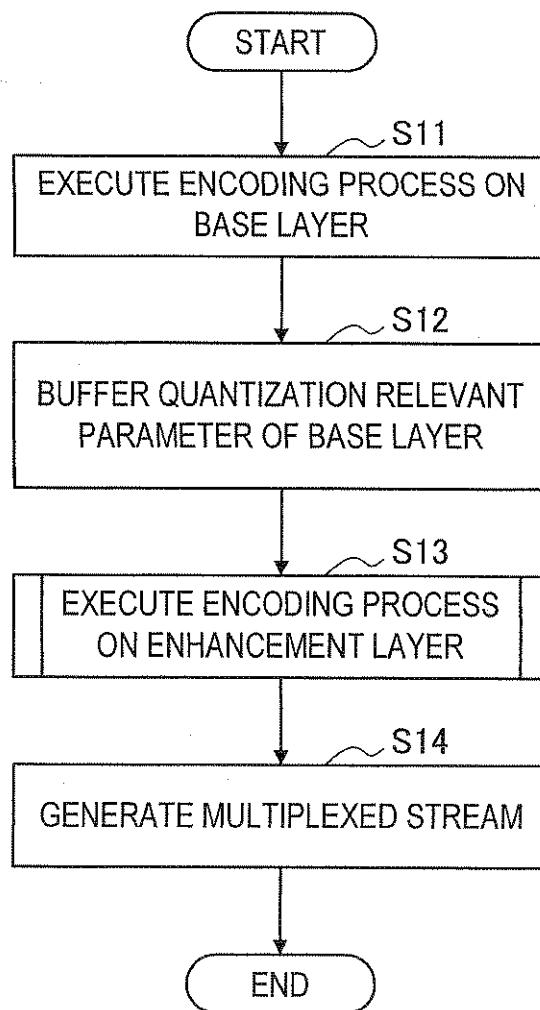
FIG.10

FIG.11

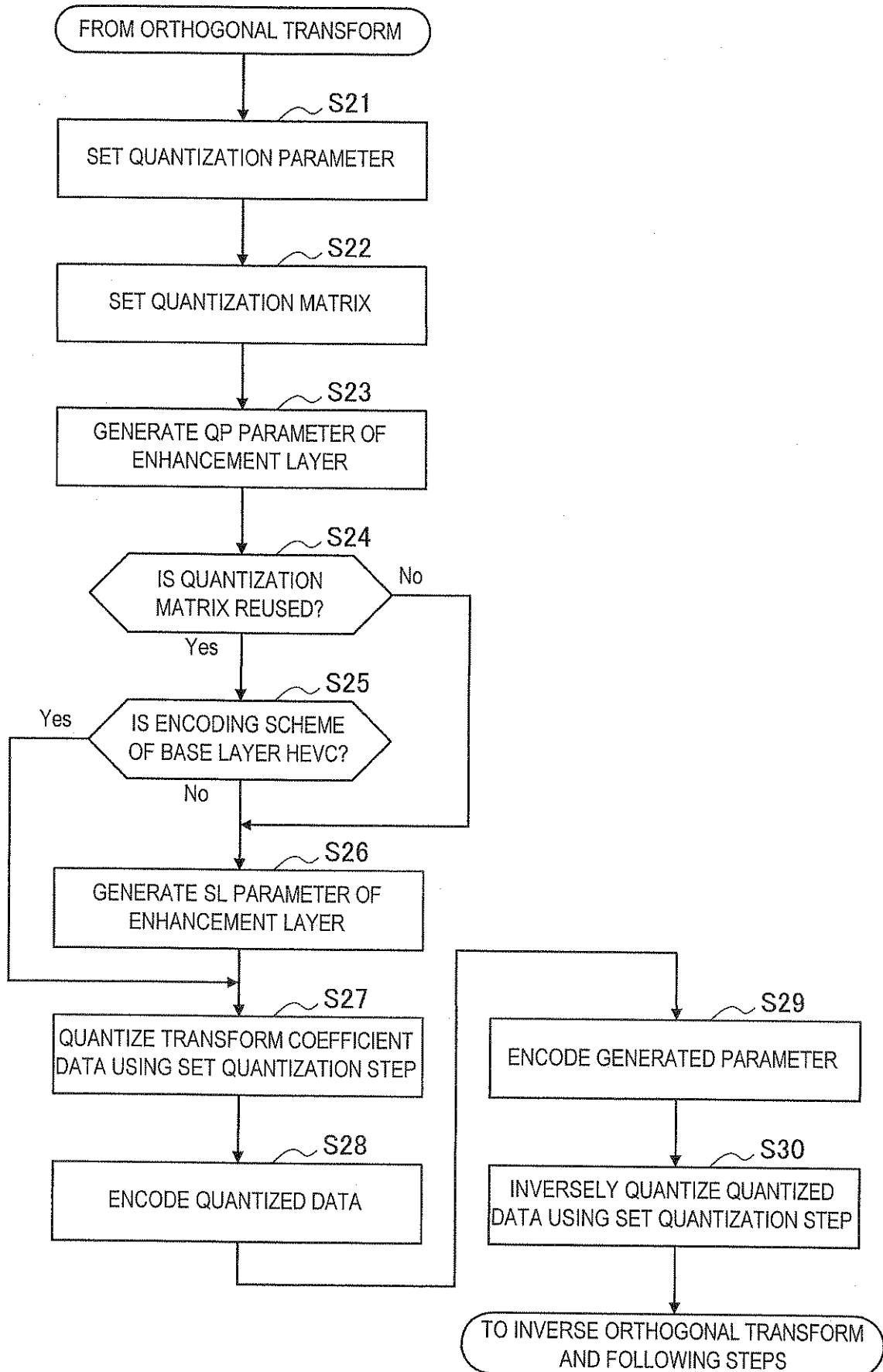


FIG.12

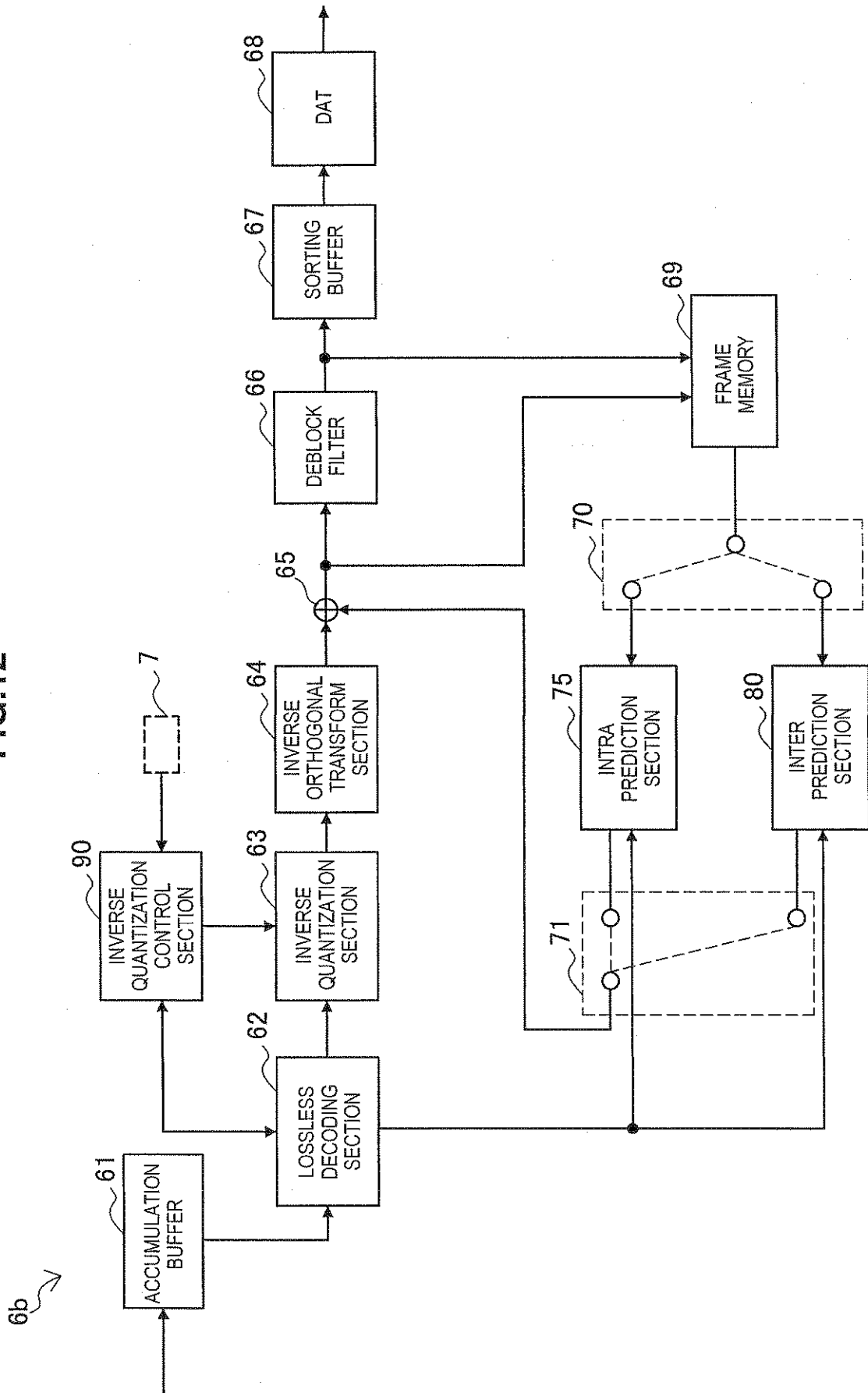


FIG.13

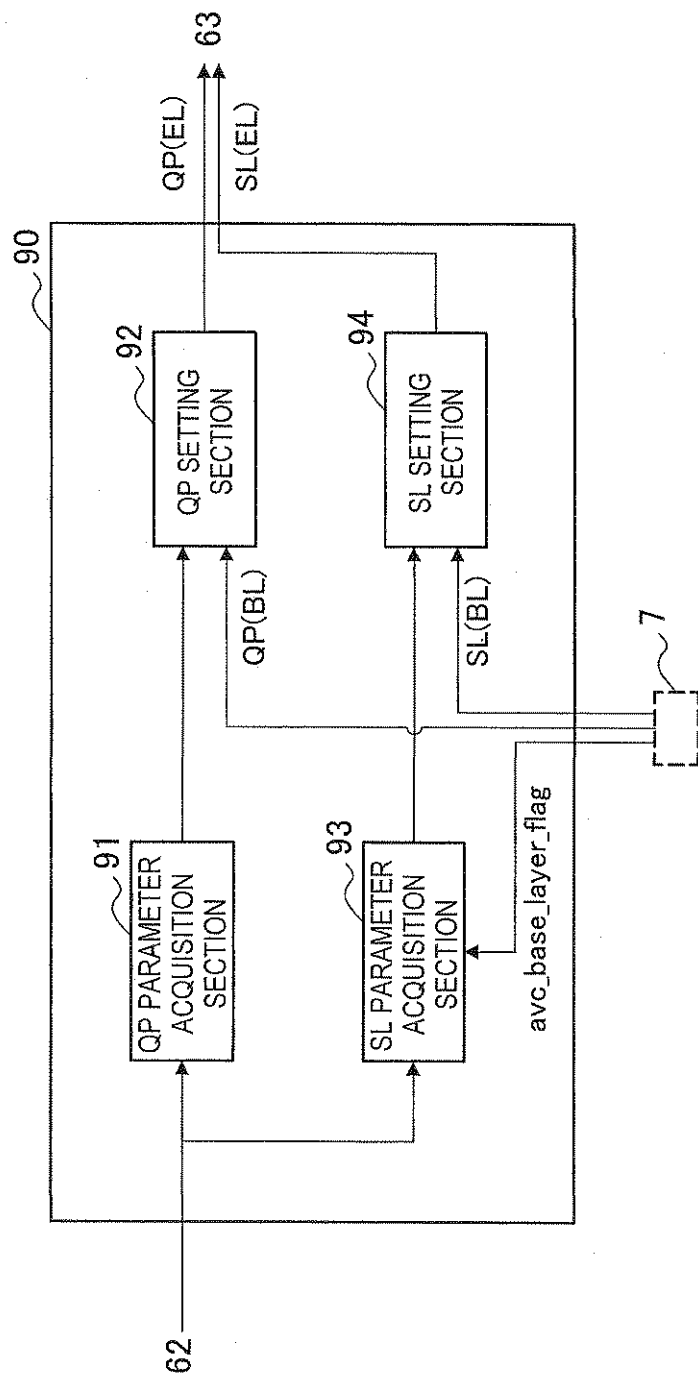


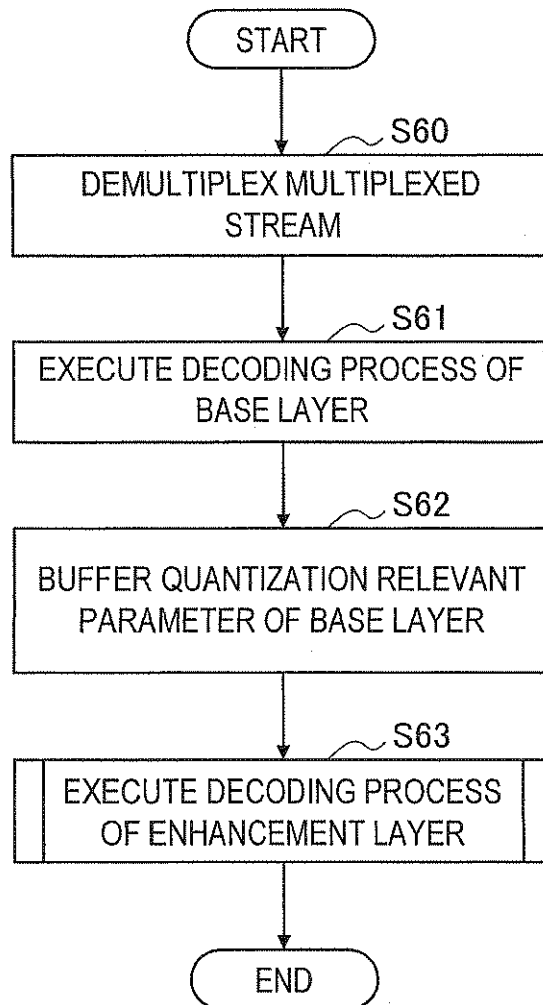
FIG.14

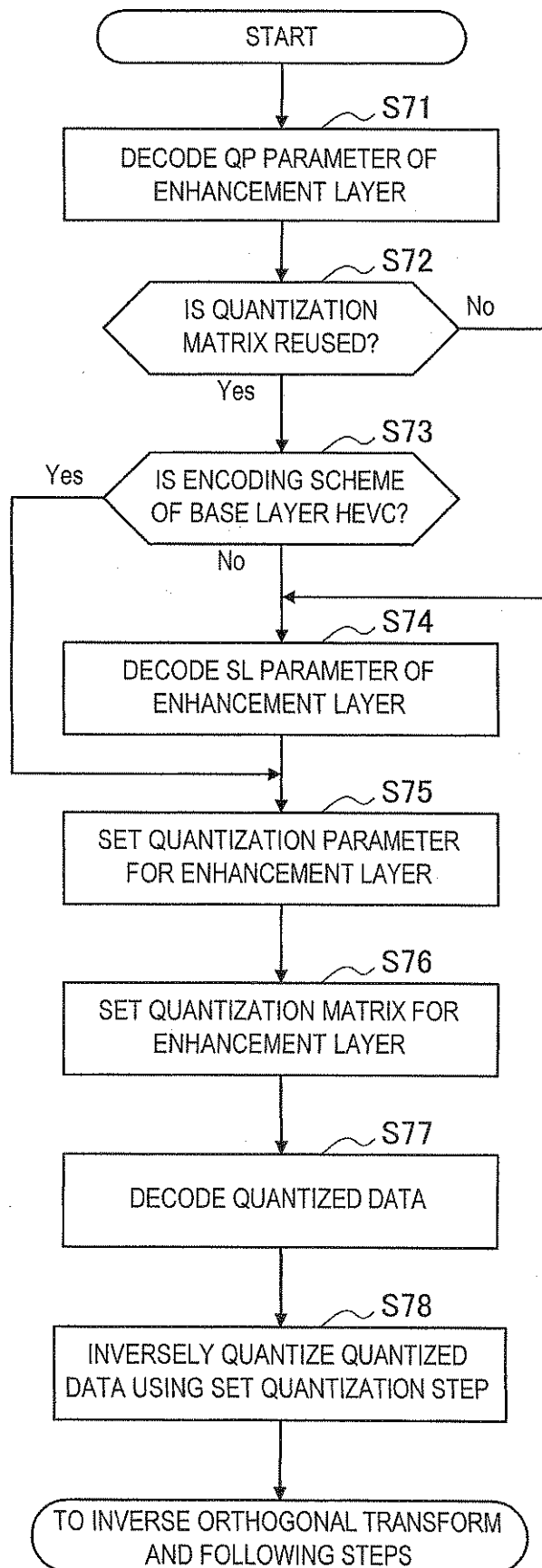
FIG.15

FIG.16A

```

01 | pic_parameter_set_rbsp() {
02 |     pic_parameter_set_id
03 |     seq_parameter_set_id
04 |     dependent_slice_segments_enabled_flag
05 |     sign_data_hiding_flag
06 |     cabac_init_present_flag
07 |     num_ref_idx_l0_default_active_minus1
08 |     num_ref_idx_l1_default_active_minus1
09 |     pic_init_qp_minus26
10 |     constrained_intra_pred_flag
11 |     transform_skip_enabled_flag
12 |     cu_qp_delta_enabled_flag
13 |     if ( cu_qp_delta_enabled_flag )
14 |         diff_cu_qp_delta_depth
15 |     BL_chroma_qp_offset_flag      <-- QP PARAMETER REUSE FLAG
16 |     if( !BL_chroma_qp_offset_flag )
17 |     {
18 |         pic_cb_qp_offset          <-- QP PARAMETER (EL)
19 |         pic_cr_qp_offset          <--
20 |     }
21 |     pic_slice_chroma_qp_offsets_present_flag
22 |     weighted_pred_flag
23 |     weighted_bipred_flag
24 |     output_flag_present_flag
25 |     transquant_bypass_enable_flag
26 |     tiles_enabled_flag
27 |     entropy_coding_sync_enabled_flag
28 |     if( tiles_enabled_flag ) {
29 |         num_tile_columns_minus1
30 |         num_tile_rows_minus1
31 |         uniform_spacing_flag
32 |         if( !uniform_spacing_flag ) {
33 |             for( i = 0; i < num_tile_columns_minus1; i++ )
34 |                 column_width_minus1[ i ]
35 |             for( i = 0; i < num_tile_rows_minus1; i++ )
36 |                 row_height_minus1[ i ]
37 |         }
38 |         loop_filter_across_tiles_enabled_flag
39 |     }
40 |     loop_filter_across_slices_enabled_flag

```

FIG.16B

```

41 | deblocking_filter_control_present_flag
42 | if( deblocking_filter_control_present_flag ) {
43 |     deblocking_filter_override_enabled_flag
44 |     pic_disable_deblocking_filter_flag
45 |     if( !pic_disable_deblocking_filter_flag ) {
46 |         beta_offset_div2
47 |         tc_offset_div2
48 |     }
49 | }
50 | pic_scaling_list_data_present_flag
51 | if( pic_scaling_list_data_present_flag )
52 |     scaling_list_data( )           ← -- SL PARAMETER (EL)
53 | lists_modification_present_flag
54 | log2_parallel_merge_level_minus2
55 | num_extra_slice_header_bits
56 | slice_segment_header_extension_present_flag
57 | pps_extension_flag
58 | if( pps_extension_flag )
59 |     while( more_rbsp_data( ) )
60 |         pps_extension_data_flag
61 |     rbsp_trailing_bits( )
62 | }

```

FIG.16C

```

01 | scaling_list_data( ) {
02 |     BL_scaling_list_flag          ←-- QUANTIZATION MATRIX REUSE FLAG
03 |     for( sizeId = 0; sizeId < 4; sizeId++ )
04 |         for( matrixId = 0; matrixId < ( sizeId == 3 ) ? 2 : 6; matrixId++ ) {
05 |             if( !( BL_scaling_list_flag == 1 &&
06 |                 (avc_base_layer_flag == 0) ||
07 |                 (avc_base_layer_flag == 1 && (sizeId==0 || sizeId==1)) ) ) {
08 |                 scaling_list_pred_mode_flag[ sizeId ][ matrixId ]
09 |                 if( !scaling_list_pred_mode_flag[ sizeId ][ matrixId ] )
10 |                     scaling_list_pred_matrix_id_delta[ sizeId ][ matrixId ]
11 |             else {
12 |                 nextCoef = 8
13 |                 coefNum = Min( 64, ( 1 << ( 4 + ( sizeId << 1 ) ) ) )
14 |                 if( sizeId > 1 ) {
15 |                     scaling_list_dc_coef_minus8[ sizeId - 2 ][ matrixId ]
16 |                     nextCoef =
17 |                         scaling_list_dc_coef_minus8[ sizeId - 2 ][ matrixId ] + 8
18 |                 }
19 |                 for( i = 0; i < coefNum; i++ ) {
20 |                     scaling_list_delta_coef
21 |                     nextCoef = ( nextCoef + scaling_list_delta_coef + 256 ) % 256
22 |                     ScalingList[ sizeId ][ matrixId ][ i ] = nextCoef
23 |                 }
24 |             }
25 |         }
26 |     }
27 | }

```

FIG.16D

```

01 | sps_extension( ) {
02 |   ...
03 |   copy_scaling_list_from_ref_layer_flag
04 |   if(copy_scaling_list_from_ref_layer_flag)
05 |       scaling_list_ref_layer
06 |   ...
07 | }

01 | pps_extension( ) {
02 |   ...
03 |   copy_scaling_list_from_ref_layer_flag
04 |   if(copy_scaling_list_from_ref_layer_flag)
05 |       scaling_list_ref_layer
06 |   ...
07 | }

```

FIG.16E

```

01 | sps_extension( ) {
02 |   ...
03 |   scaling_list_extension()
04 |   ...
05 | }

01 | pps_extension( ) {
02 |   ...
03 |   scaling_list_extension()
04 |   ...
05 | }

01 | scaling_list_extension( ) {
02 |   for(sizeId = 0; sizeId < 4; sizeId++)
03 |       for(matrixId = 0; matrixId < ((sizeId == 3) ? 2 : 6); matrixId++) {
04 |           copy_scaling_list_from_ref_layer_flag[sizeId][matrixId]
05 |           if(copy_scaling_list_from_ref_layer_flag[sizeId][matrixId])
06 |               scaling_list_ref_layer[sizeId][matrixId]
07 |       }
08 | }
09 | }

```

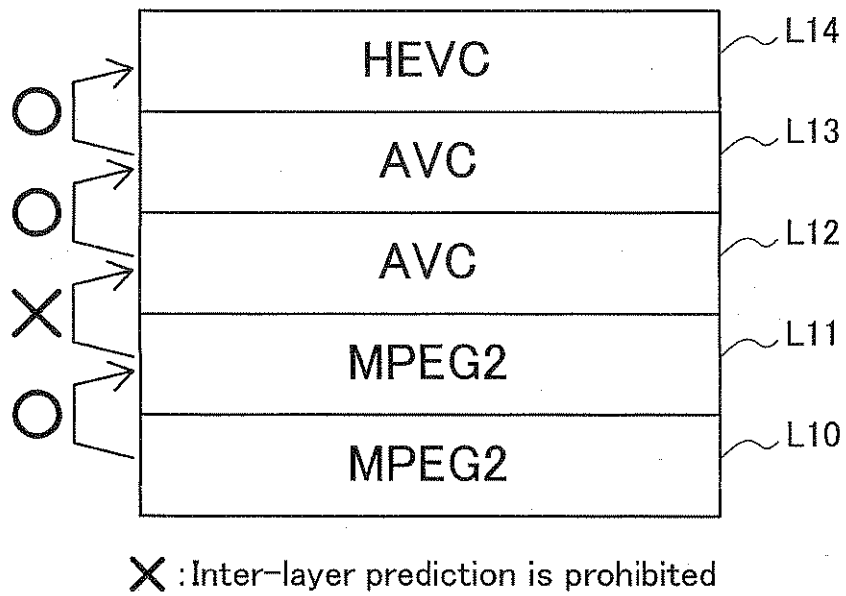
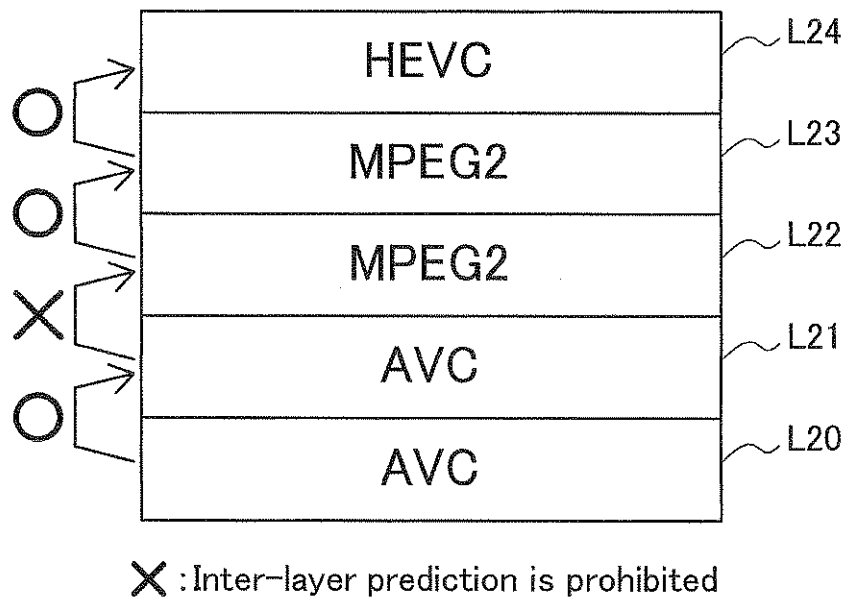
FIG.17A**FIG.17B**

FIG.18

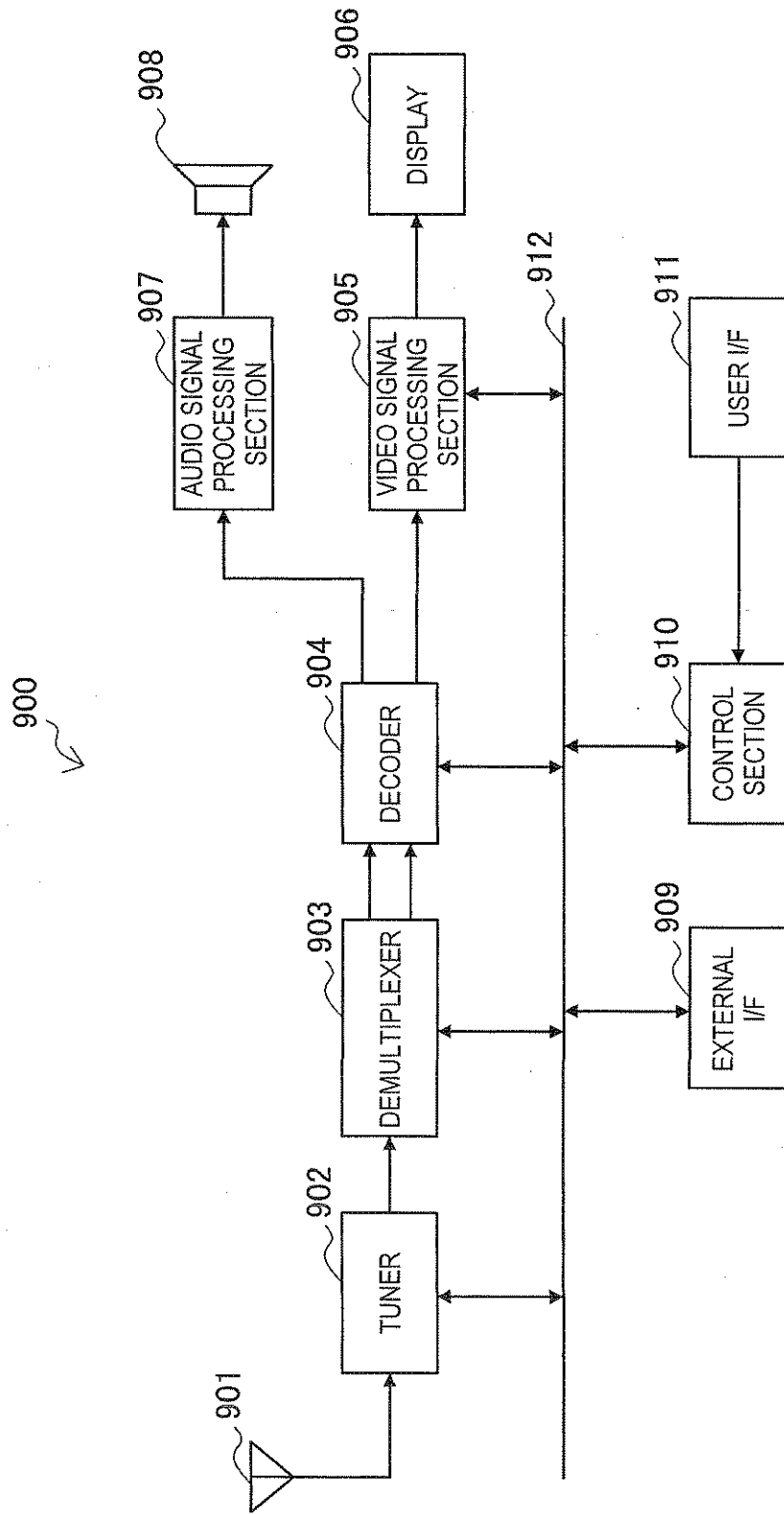


FIG.19

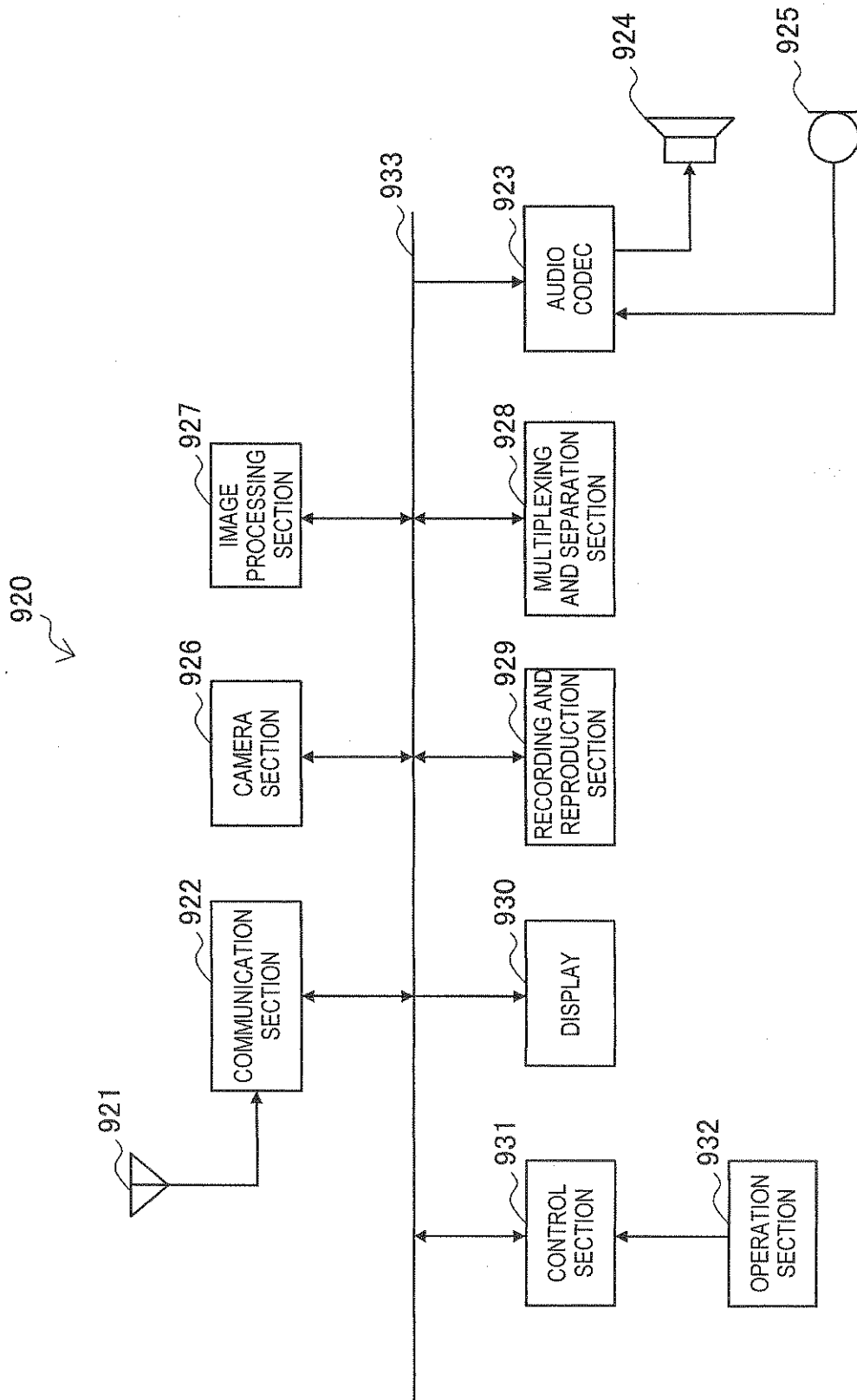


FIG.20
940

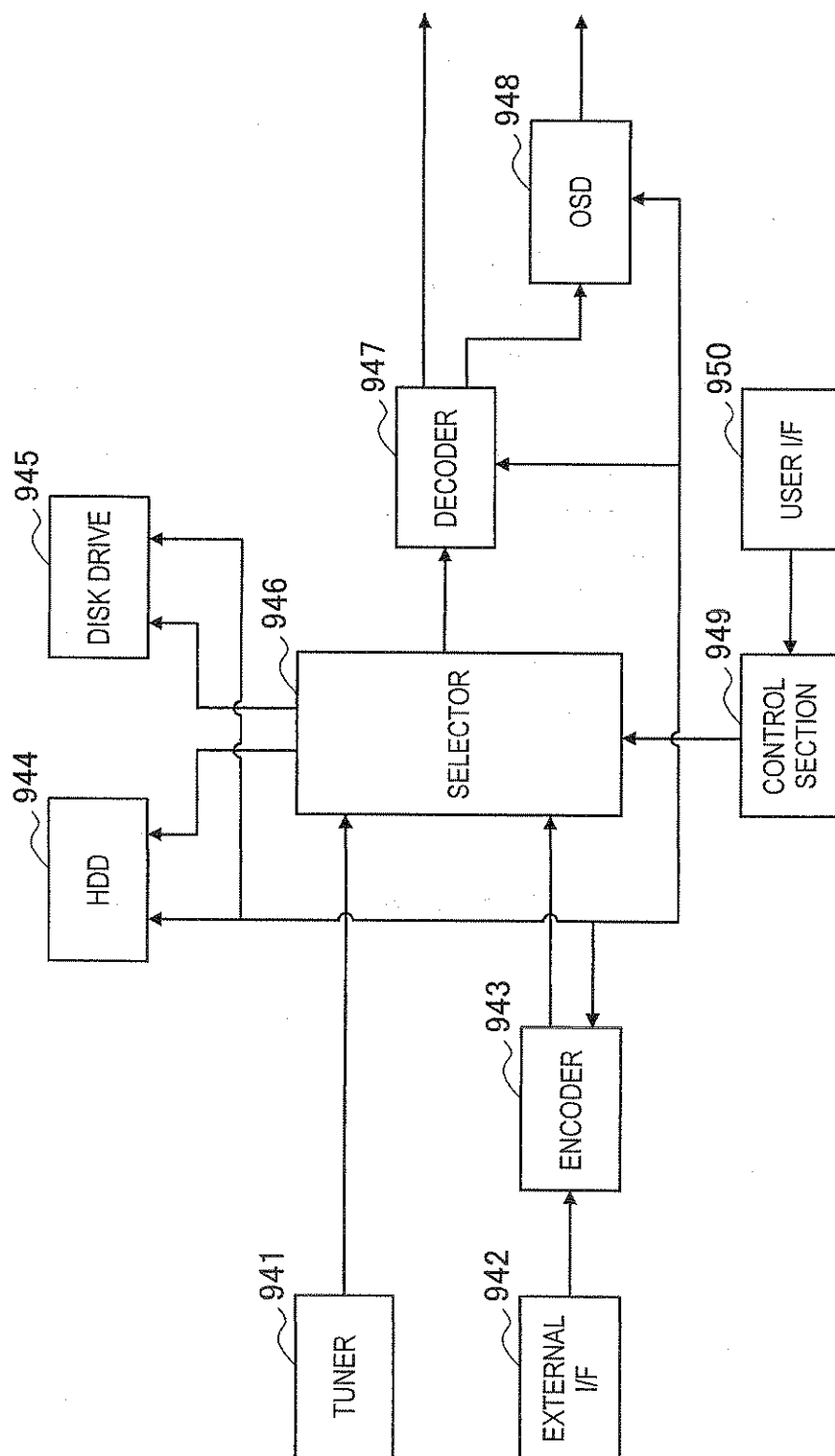


FIG. 21

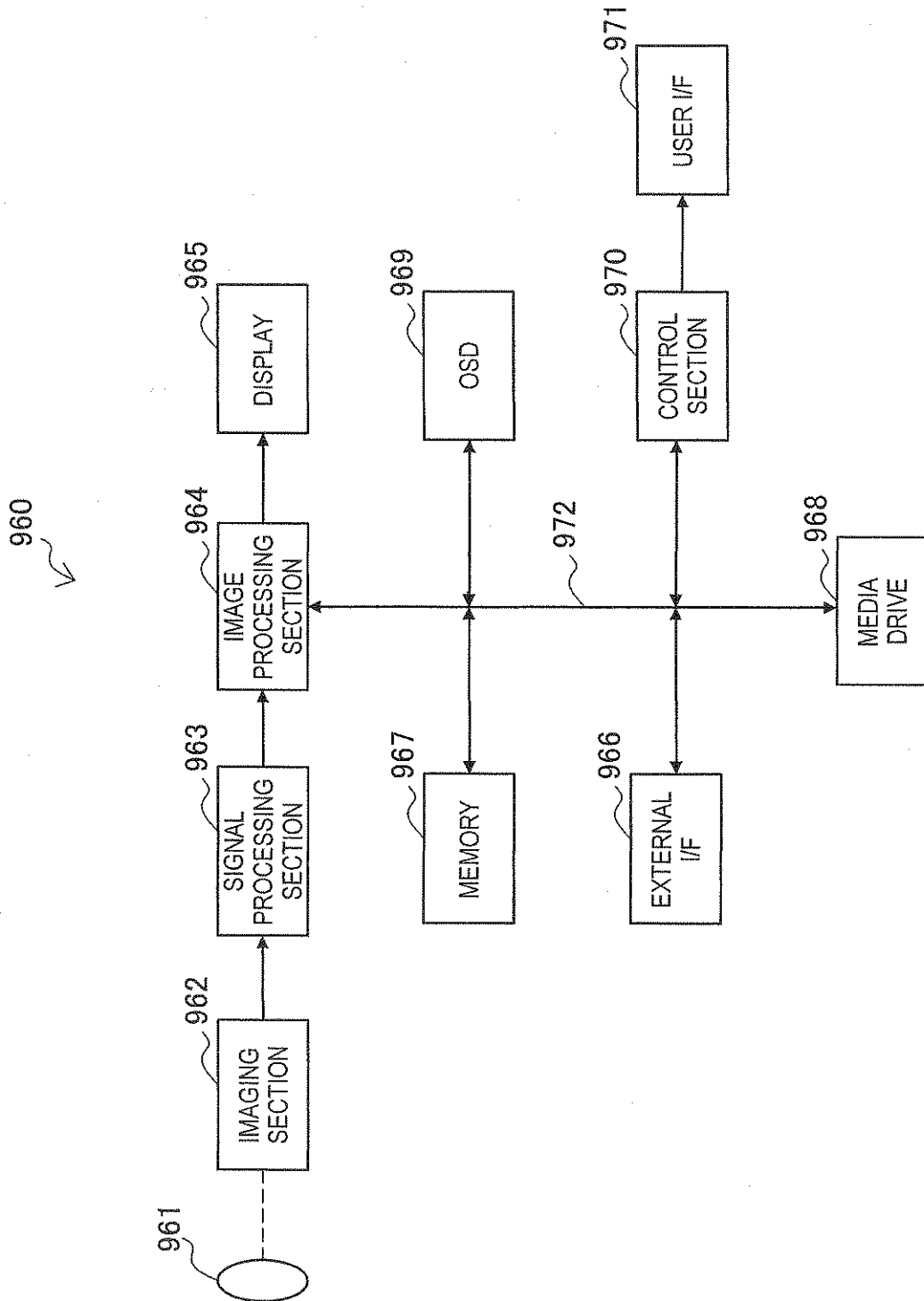


FIG.22

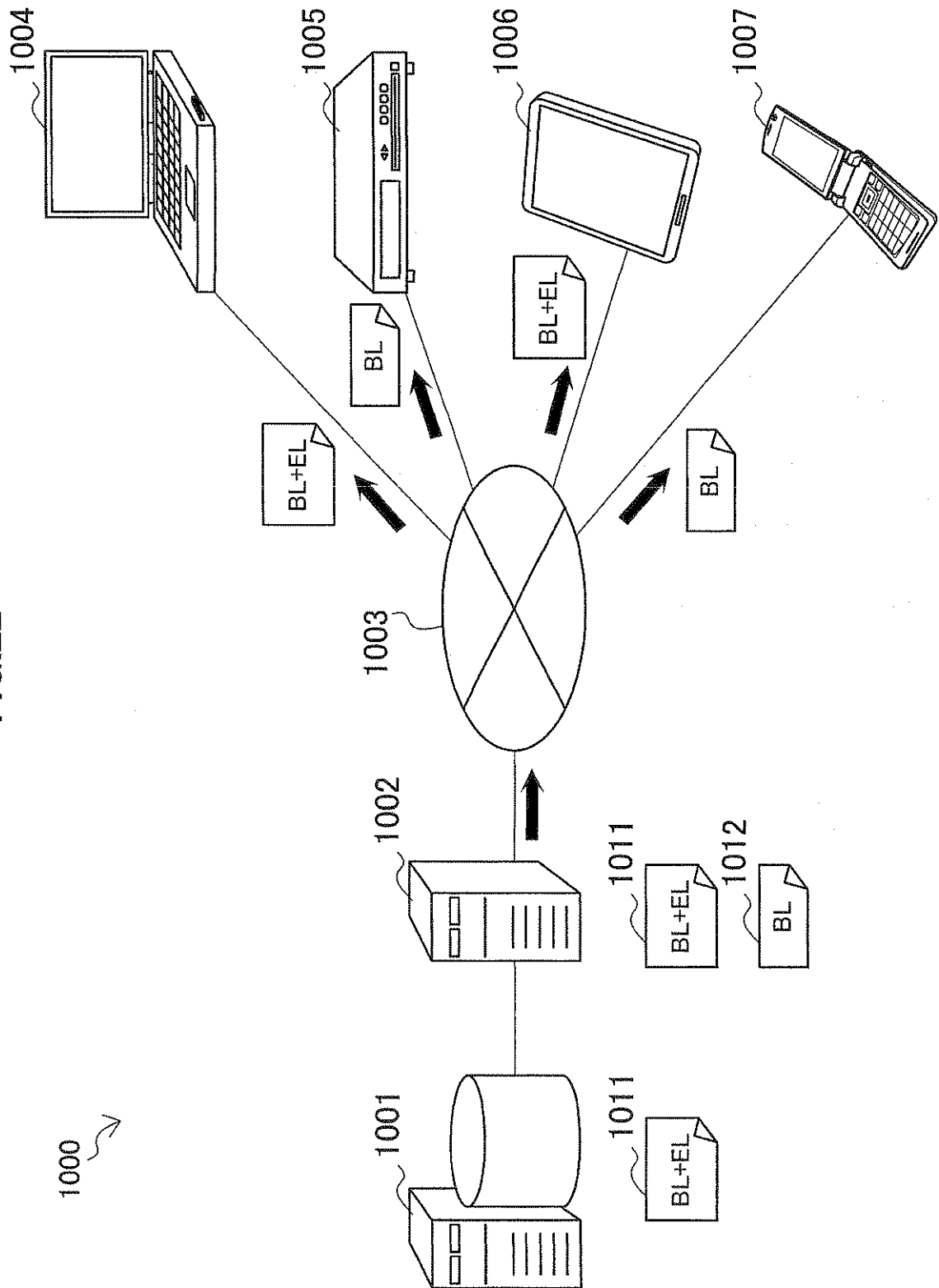


FIG.23

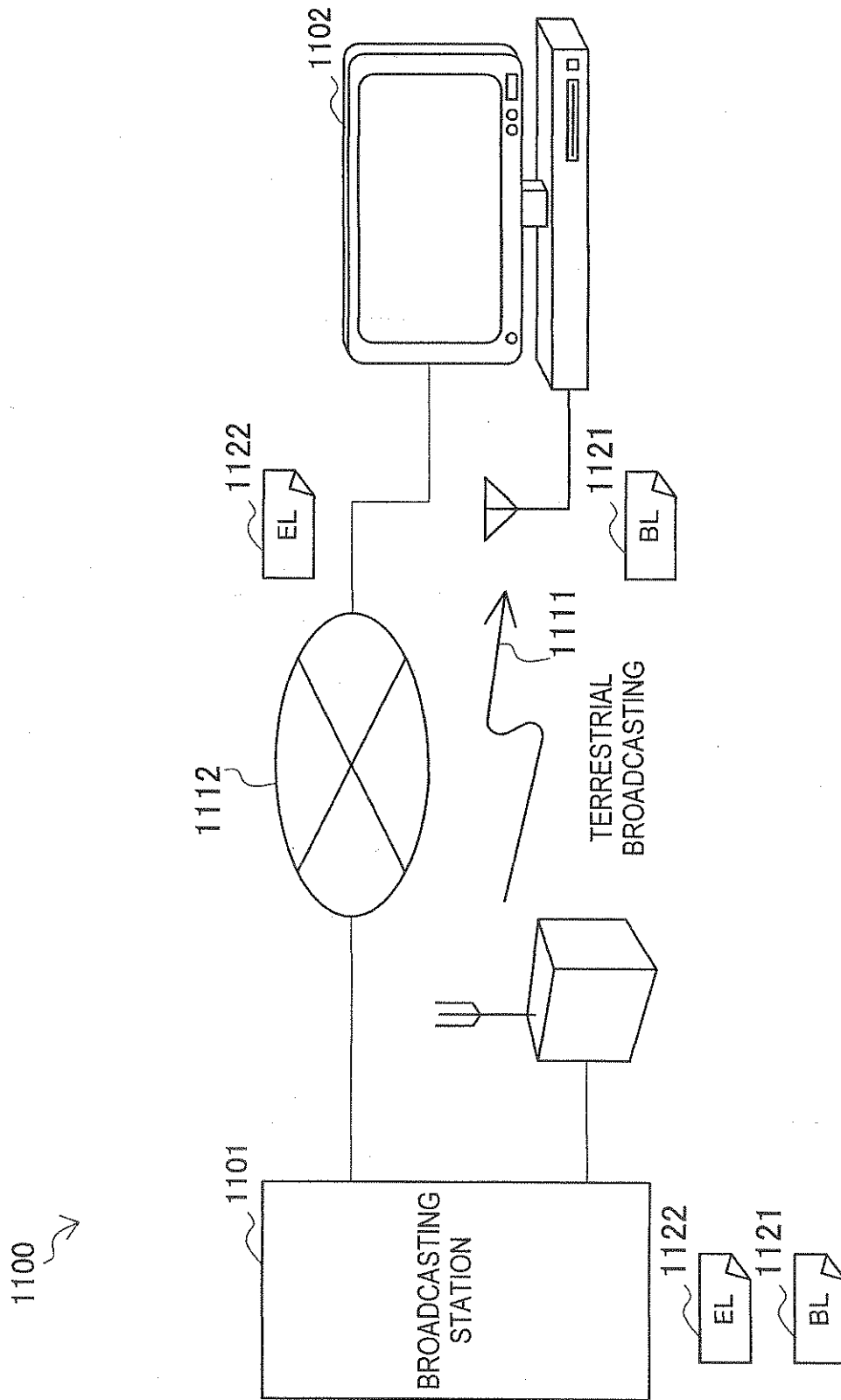


FIG.24

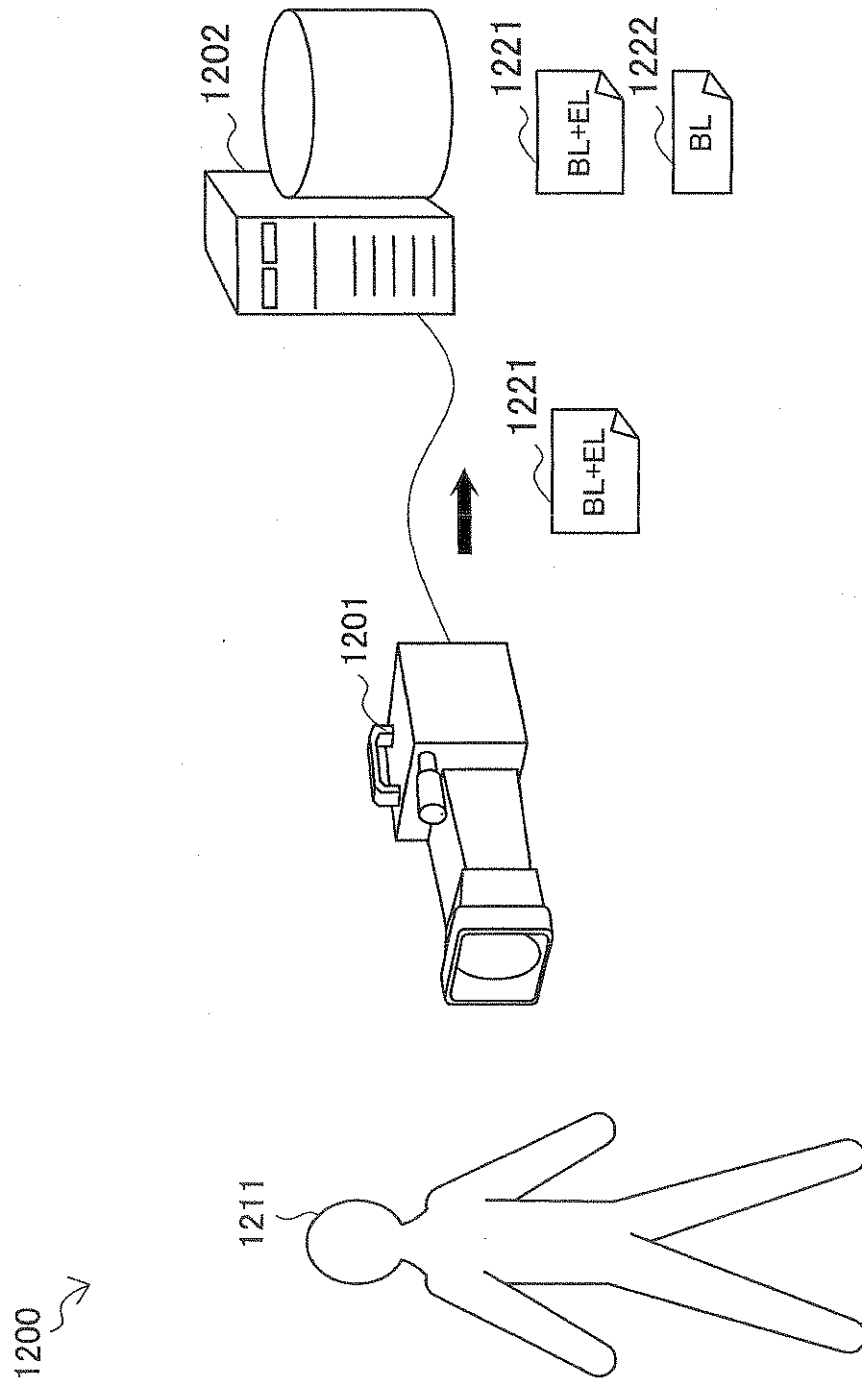


FIG.25

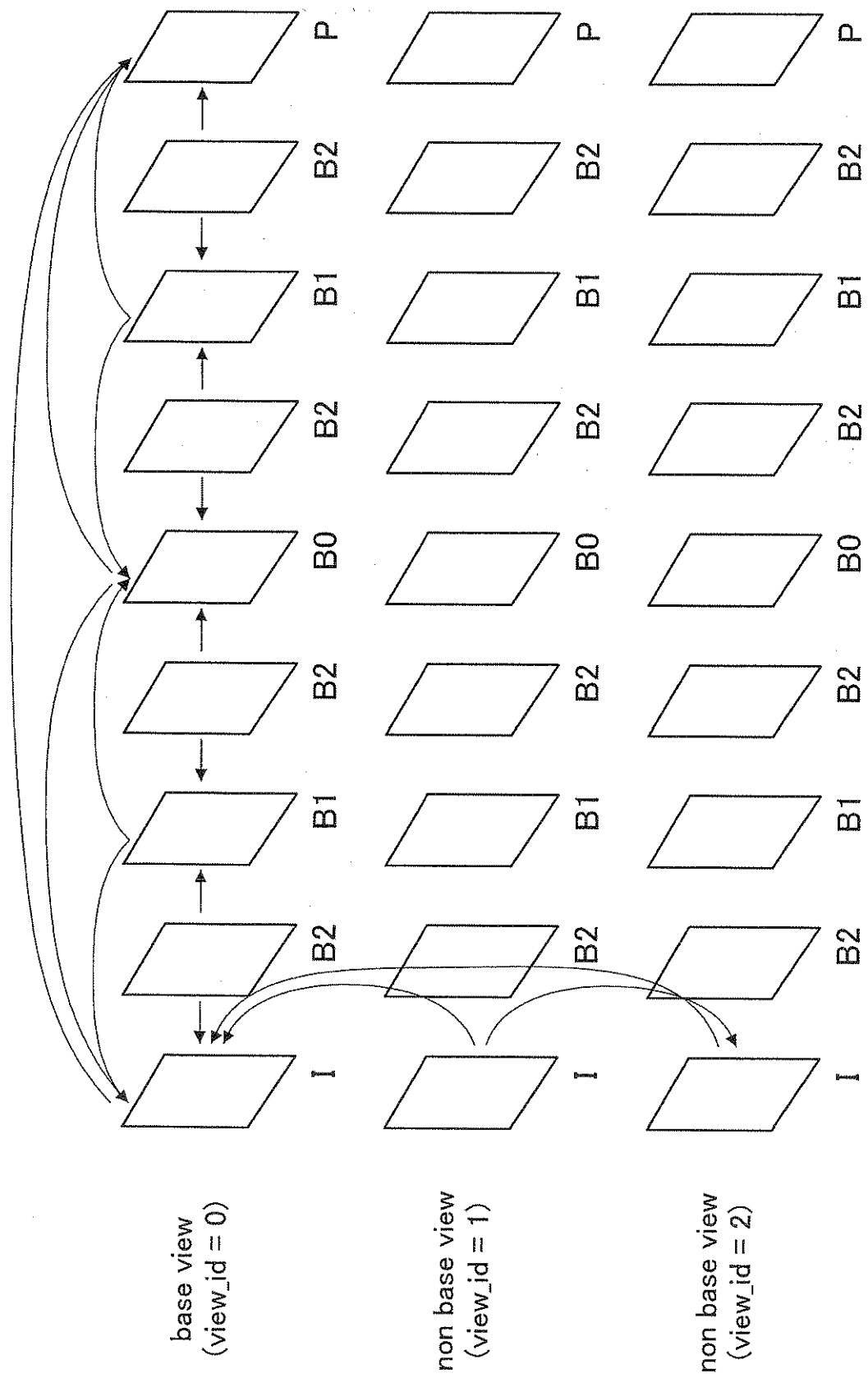


FIG.26

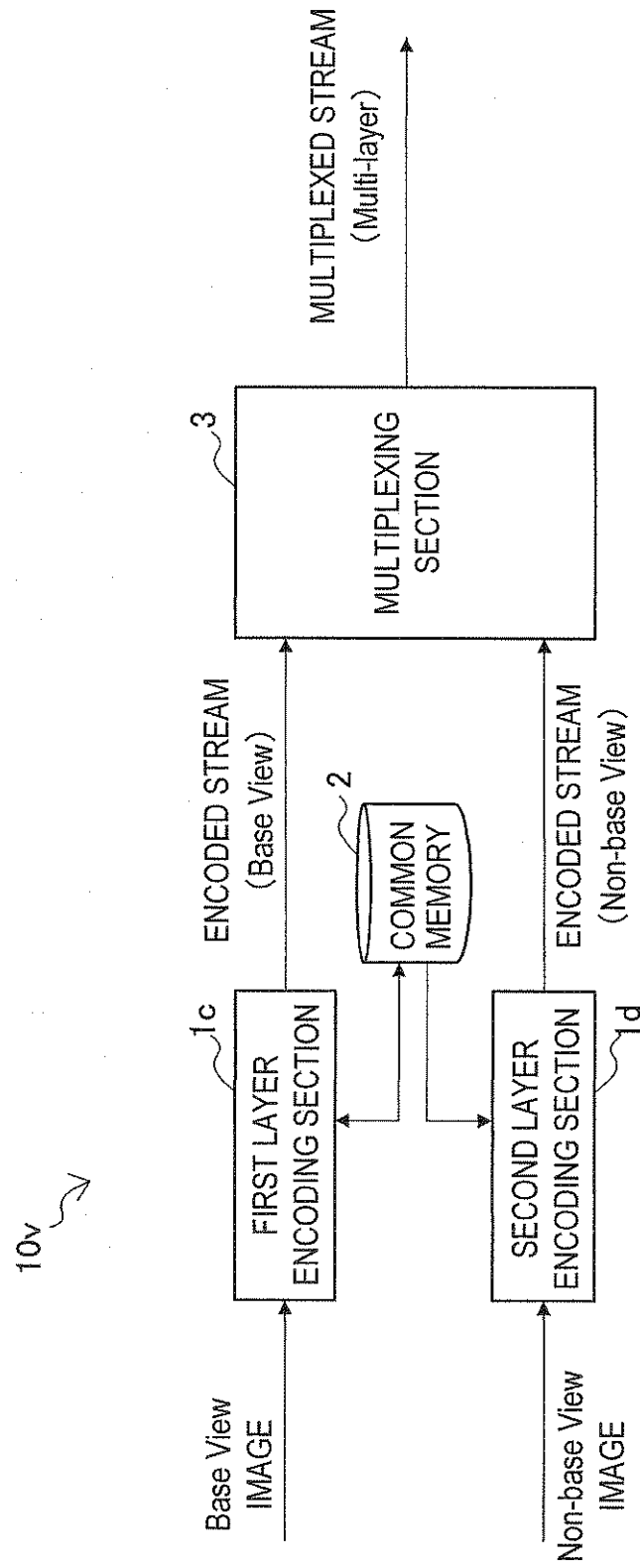


FIG.27

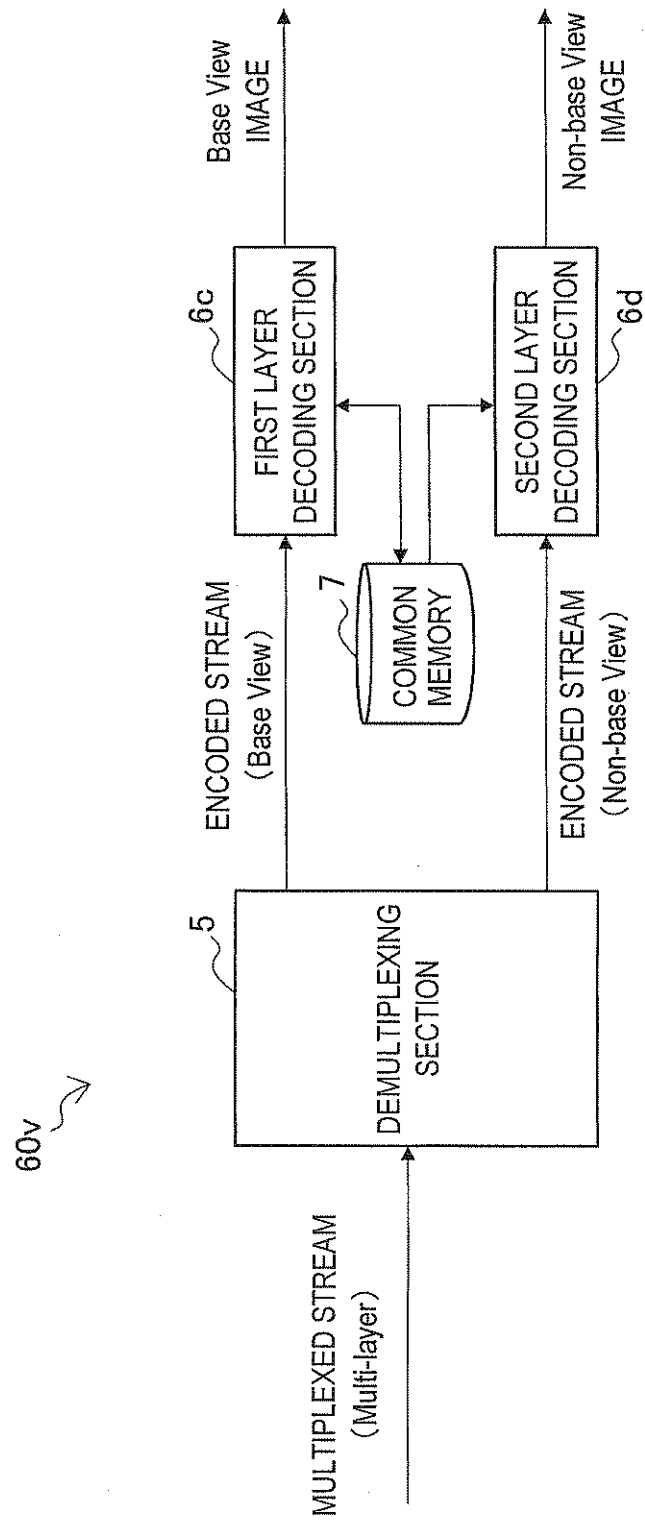
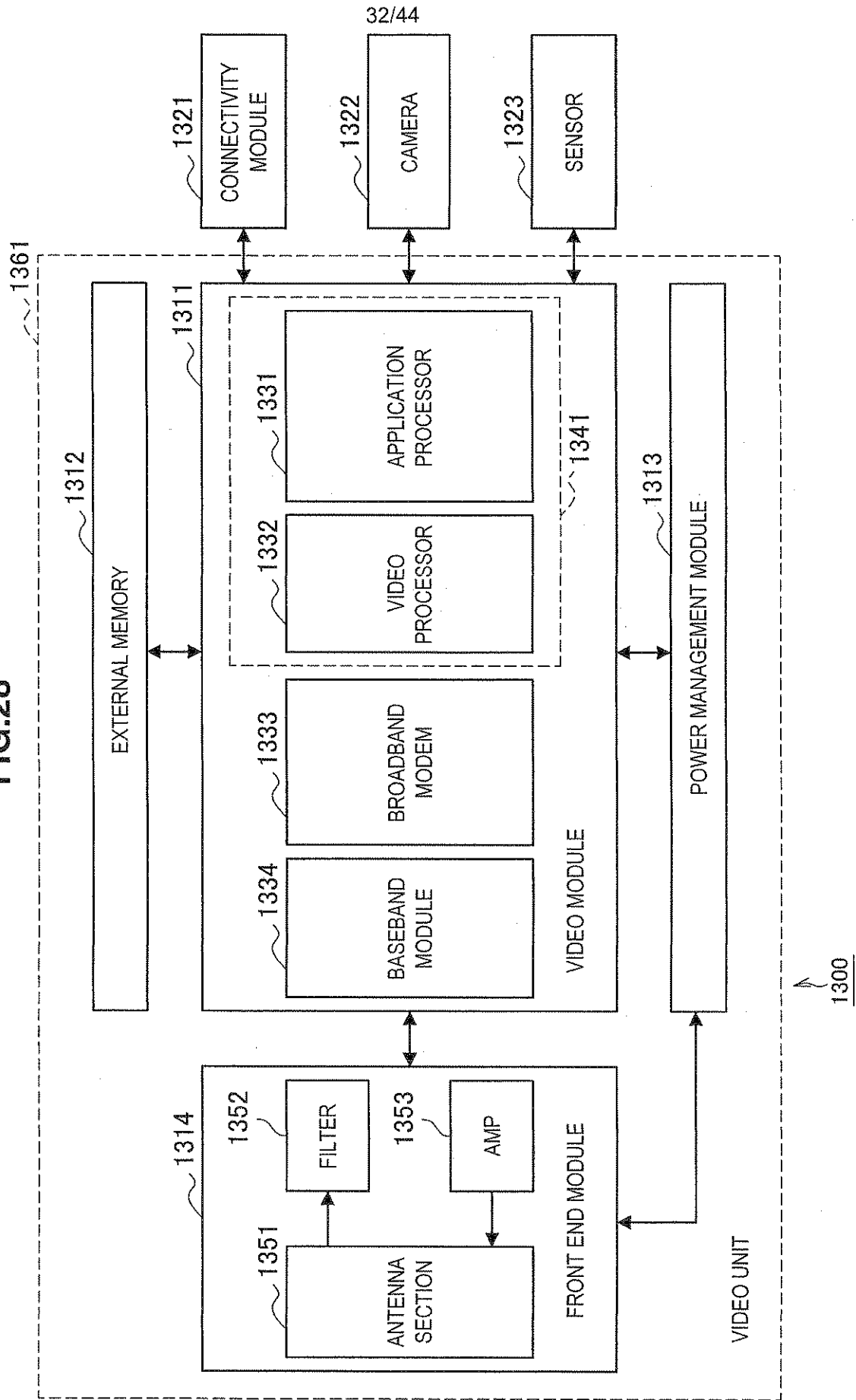


FIG.28



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FIG.29

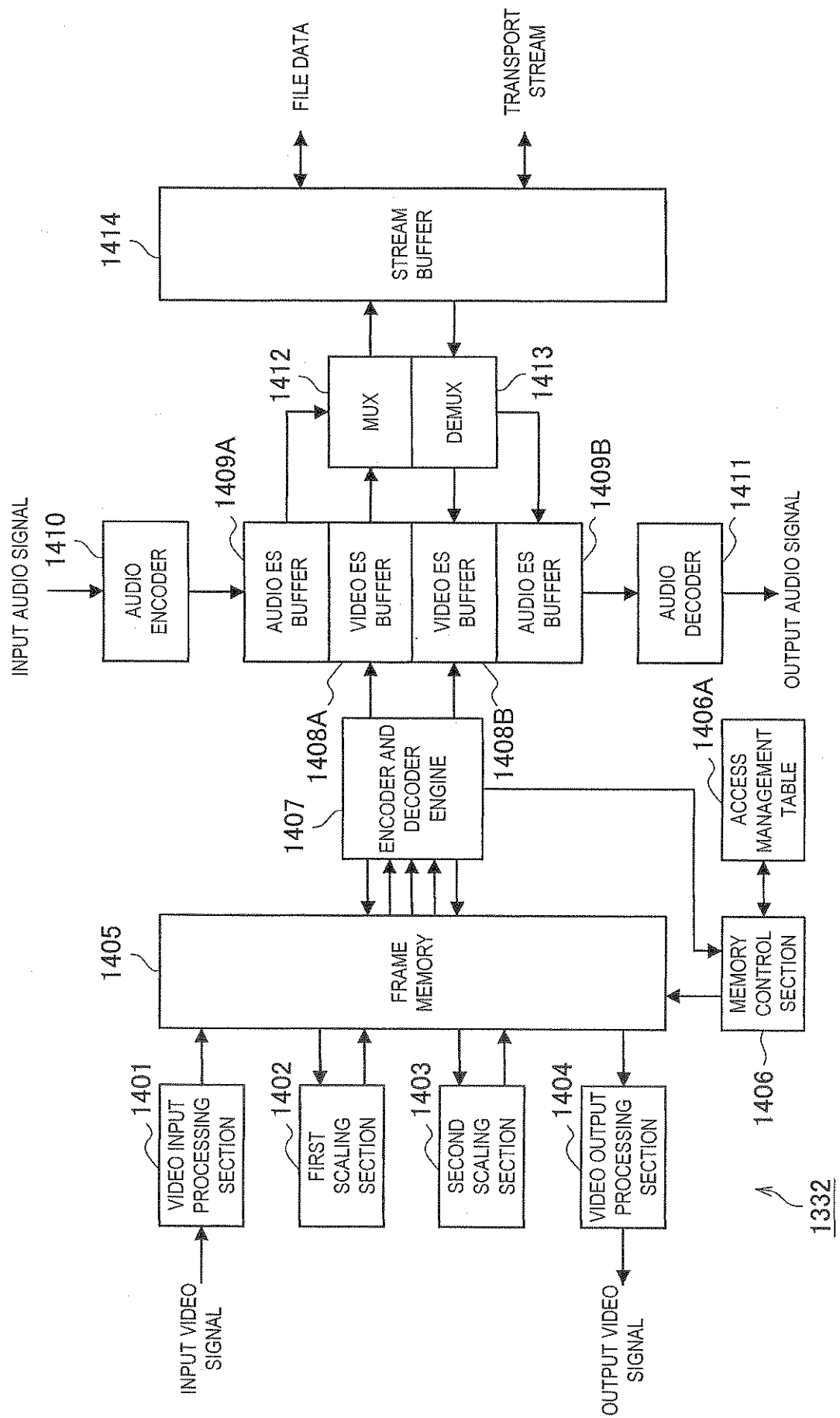


FIG.30

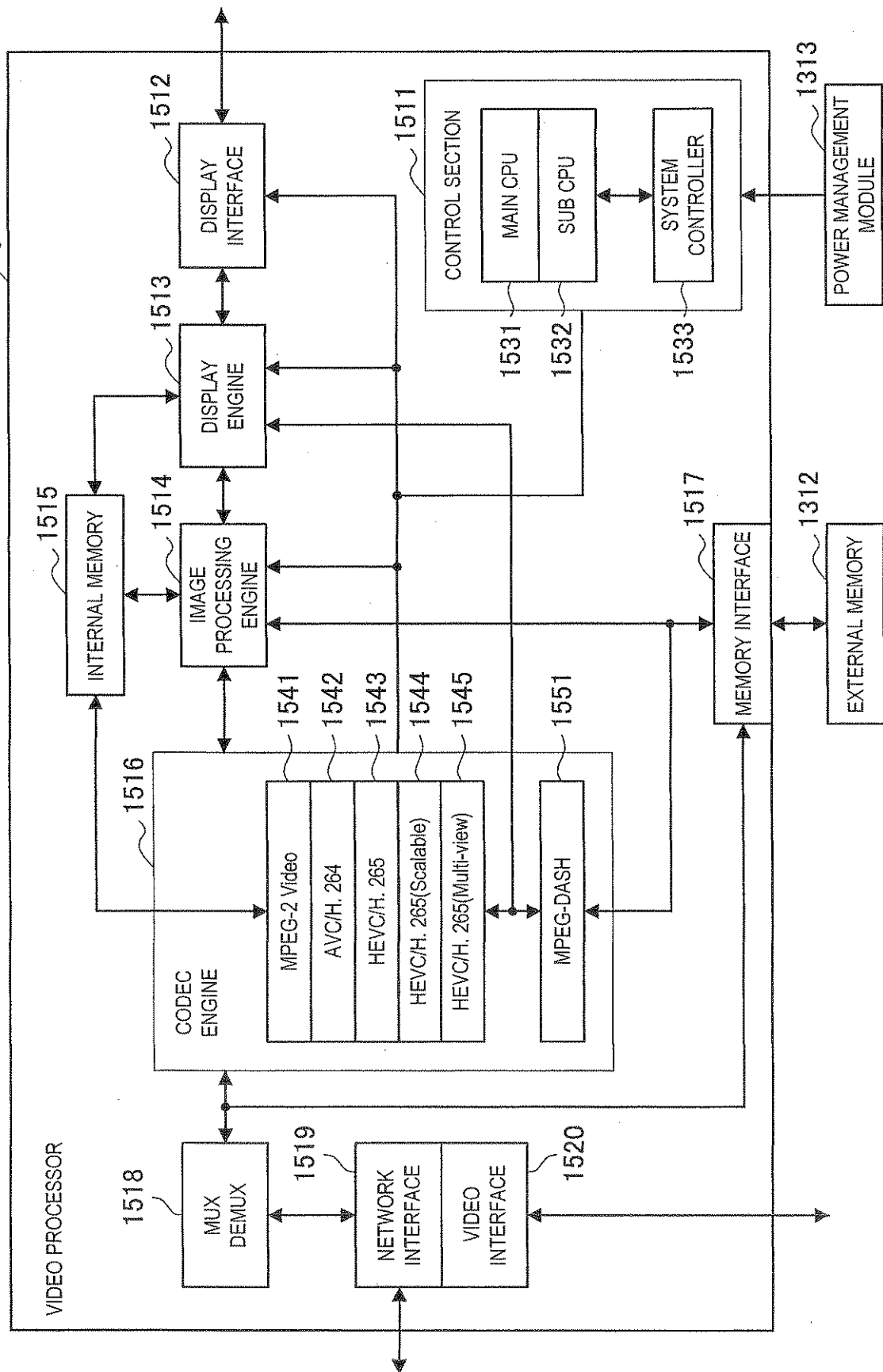


FIG.31

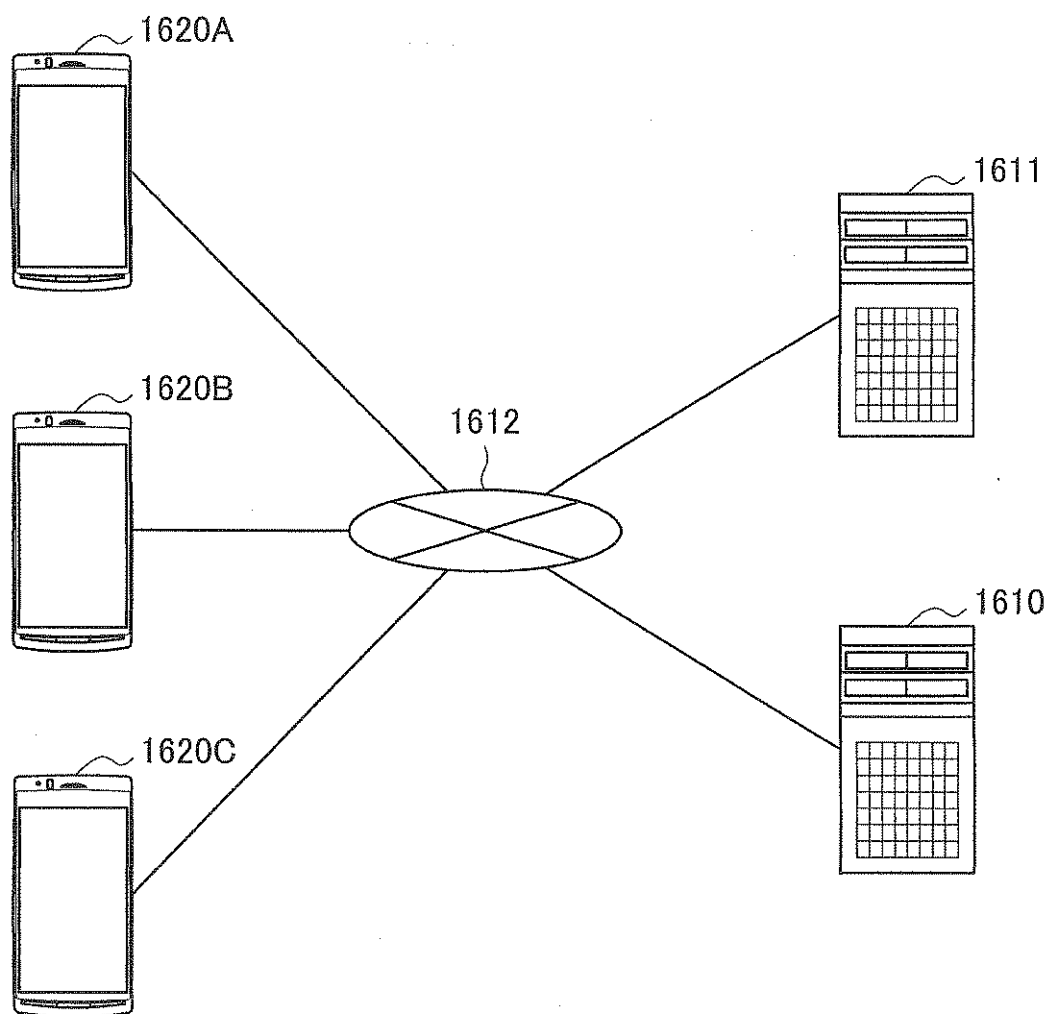


FIG.32

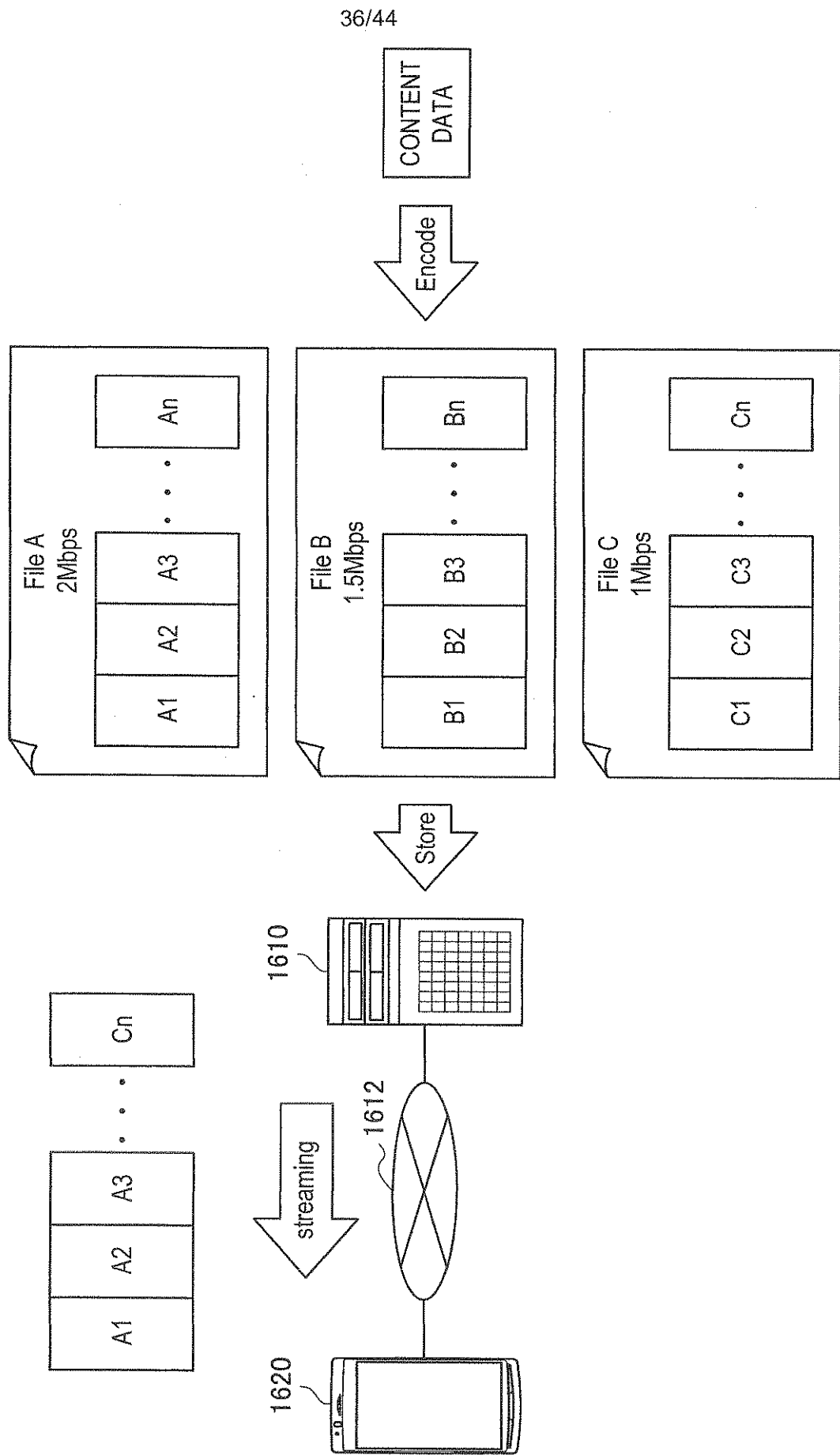


FIG.33

```

01 | <?xml version="1.0"?>
02 | <MPD
03 |   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
04 |   xmlns="urn:mpeg:DASH:schema:MPD:2011"
05 |   xsi:schemaLocation="urn:mpeg:DASH:schema:MPD:2011 DASH-MPD.xsd"
06 |   type="static"
07 |   mediaPresentationDuration="PT3256S"
08 |   minBufferTime="PT1.2S"
09 |   profiles="urn:mpeg:dash:profile:isoff-on-demand:2011">
10 |
11 |   <BaseURL>http://cdn1.example.com/</BaseURL>
12 |   <BaseURL>http://cdn2.example.com/</BaseURL>
13 |
14 |   <Period>
15 |     <!-- English Audio -->
16 |     <AdaptationSet mimeType="audio/mp4" codecs="mp4a.40.2" lang="en"
17 |       subsegmentAlignment="true" subsegmentStartsWithSAP="1">
18 |       <ContentProtection schemeIdUri="urn:uuid:706D6953-656C-5244-4D48-656164657221"/>
19 |       <Representation id="1" bandwidth="64000">
20 |         <BaseURL>7657412348.mp4</BaseURL>
21 |       </Representation>
22 |       <Representation id="2" bandwidth="32000">
23 |         <BaseURL>3463646346.mp4</BaseURL>
24 |       </Representation>
25 |     </AdaptationSet>
26 |     <!-- Video -->
27 |     <AdaptationSet mimeType="video/mp4" codecs="avc1.4d0228"
28 |       subsegmentAlignment="true" subsegmentStartsWithSAP="2">
29 |       <ContentProtection schemeIdUri="urn:uuid:706D6953-656C-5244-4D48-656164657221"/>
30 |       <Representation id="6" bandwidth="256000" width="320" height="240">
31 |         <BaseURL>8563456473.mp4</BaseURL>
32 |       </Representation>
33 |       <Representation id="7" bandwidth="512000" width="320" height="240">
34 |         <BaseURL>56363634.mp4</BaseURL>
35 |       </Representation>
36 |       <Representation id="8" bandwidth="1024000" width="640" height="480">
37 |         <BaseURL>562465736.mp4</BaseURL>
38 |       </Representation>
39 |       <Representation id="9" bandwidth="1384000" width="640" height="480">
40 |         <BaseURL>41325645.mp4</BaseURL>
41 |       </Representation>
42 |       <Representation id="A" bandwidth="1536000" width="1280" height="720">
43 |         <BaseURL>89045625.mp4</BaseURL>
44 |       </Representation>
45 |       <Representation id="B" bandwidth="2048000" width="1280" height="720">
46 |         <BaseURL>23536745734.mp4</BaseURL>
47 |       </Representation>
48 |     </AdaptationSet>
49 |   </Period>
50 | </MPD>

```

FIG.34

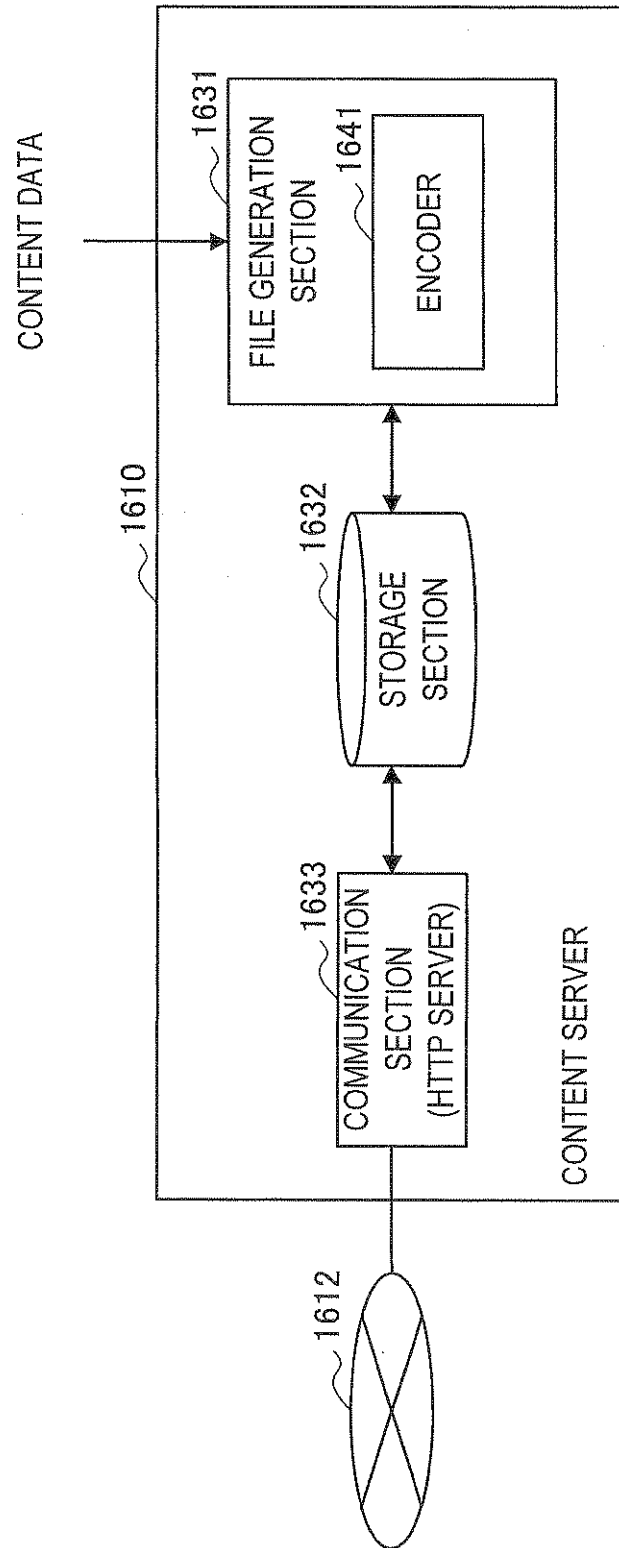


FIG.35

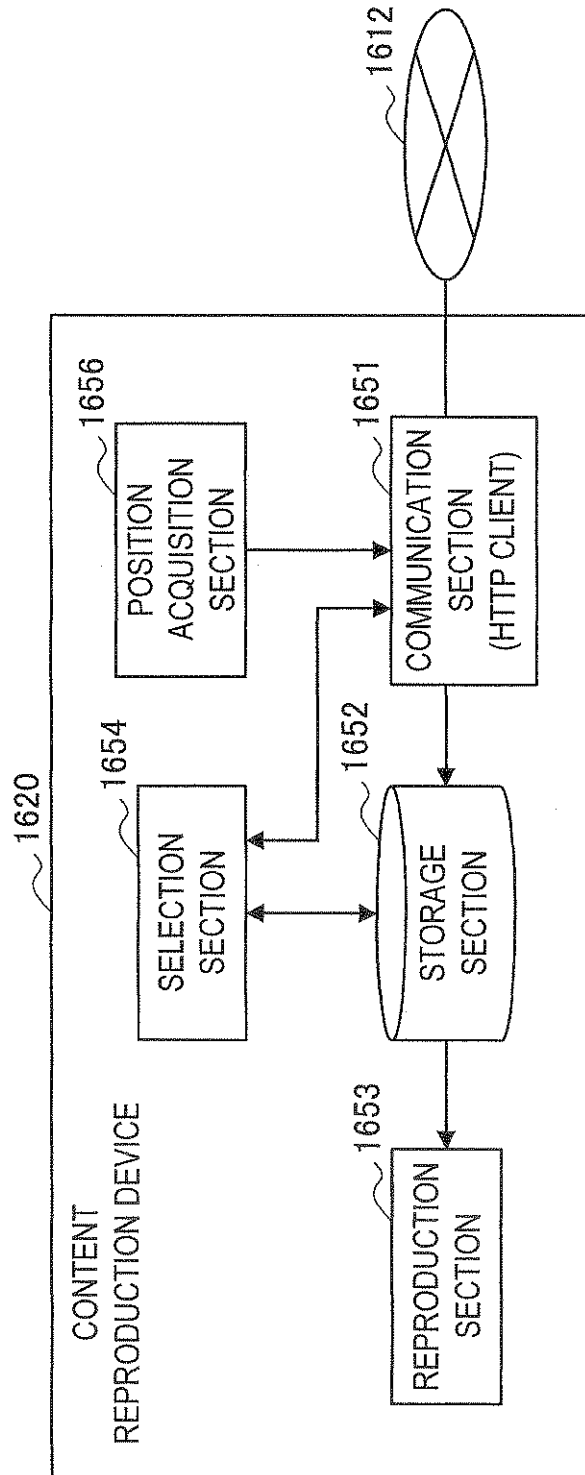


FIG.36

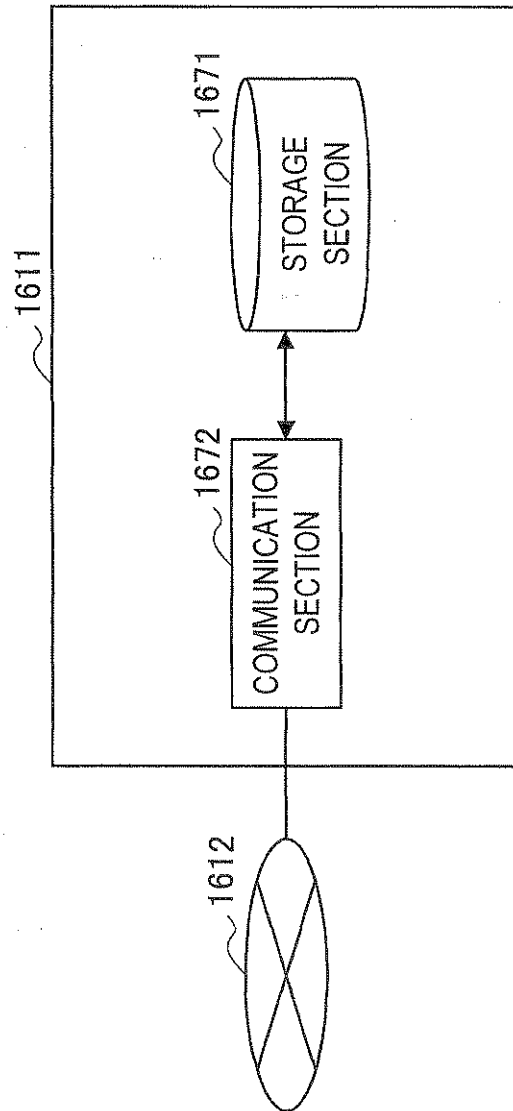


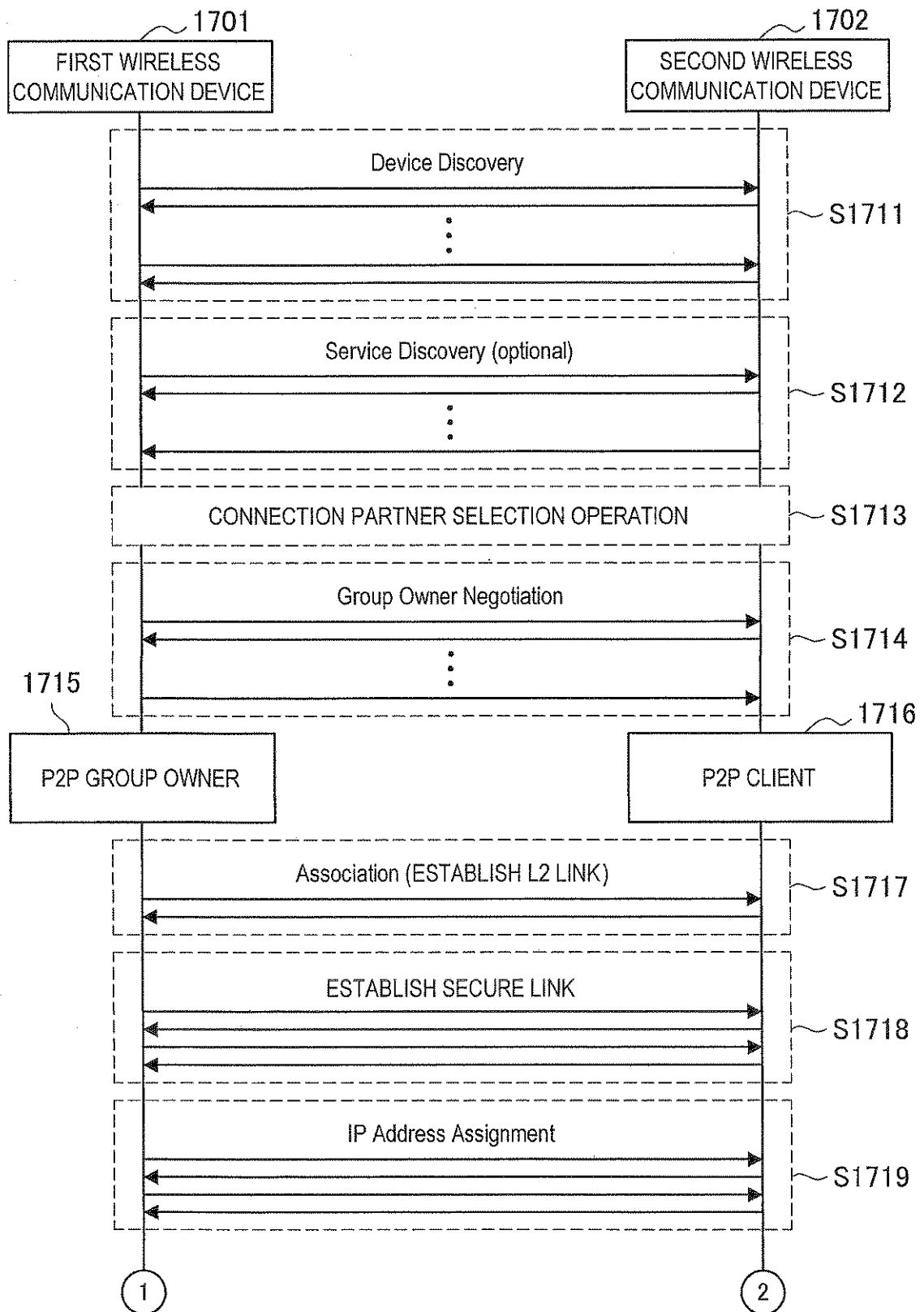
FIG.37

FIG.38

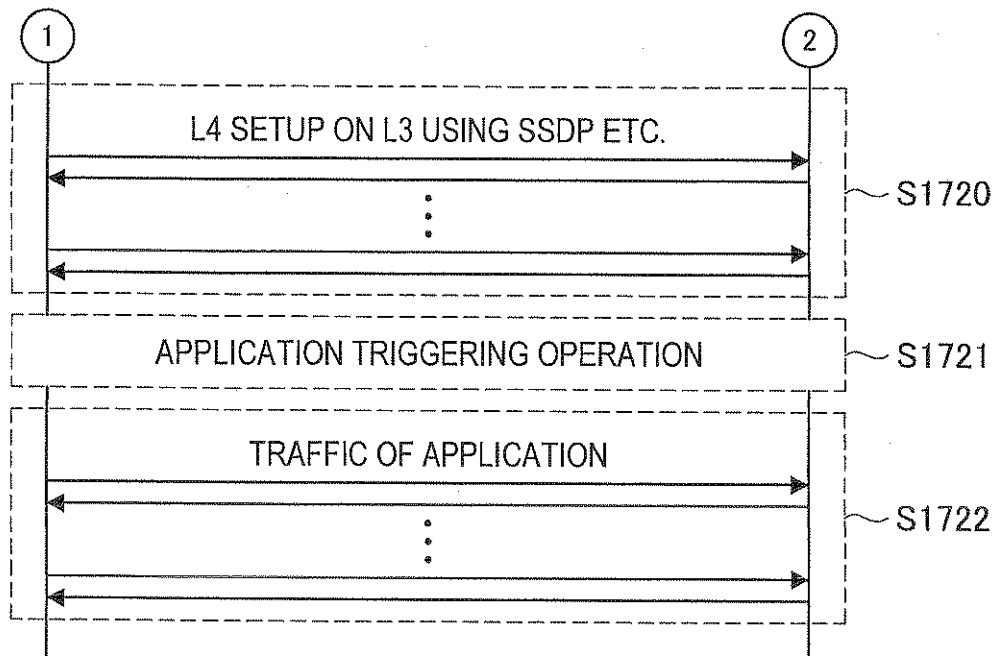


FIG.39