

FIG. 1

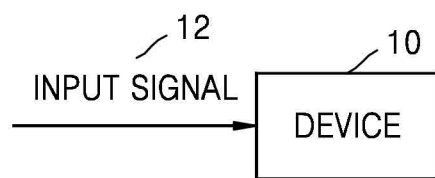


FIG. 2

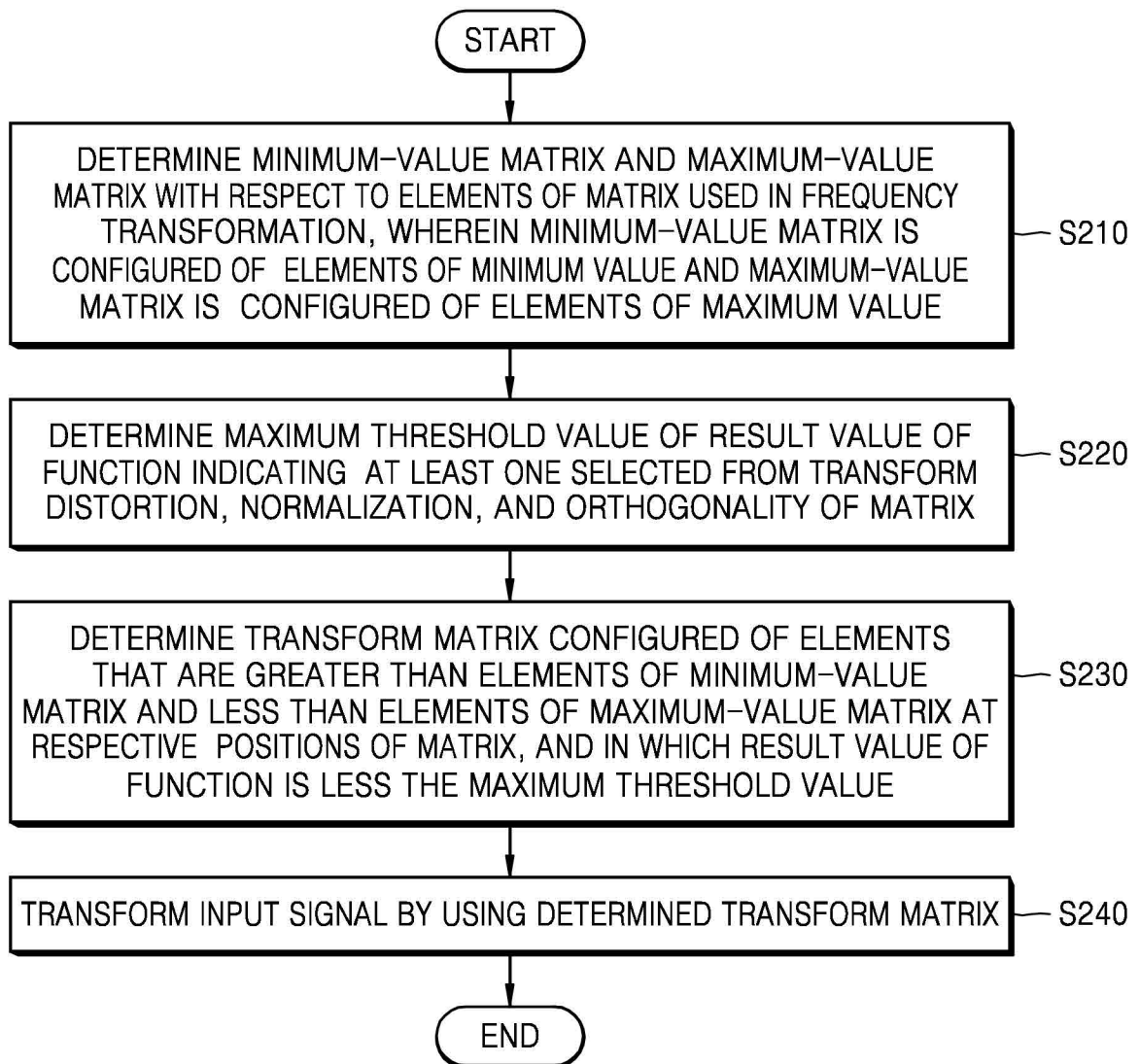


FIG. 3

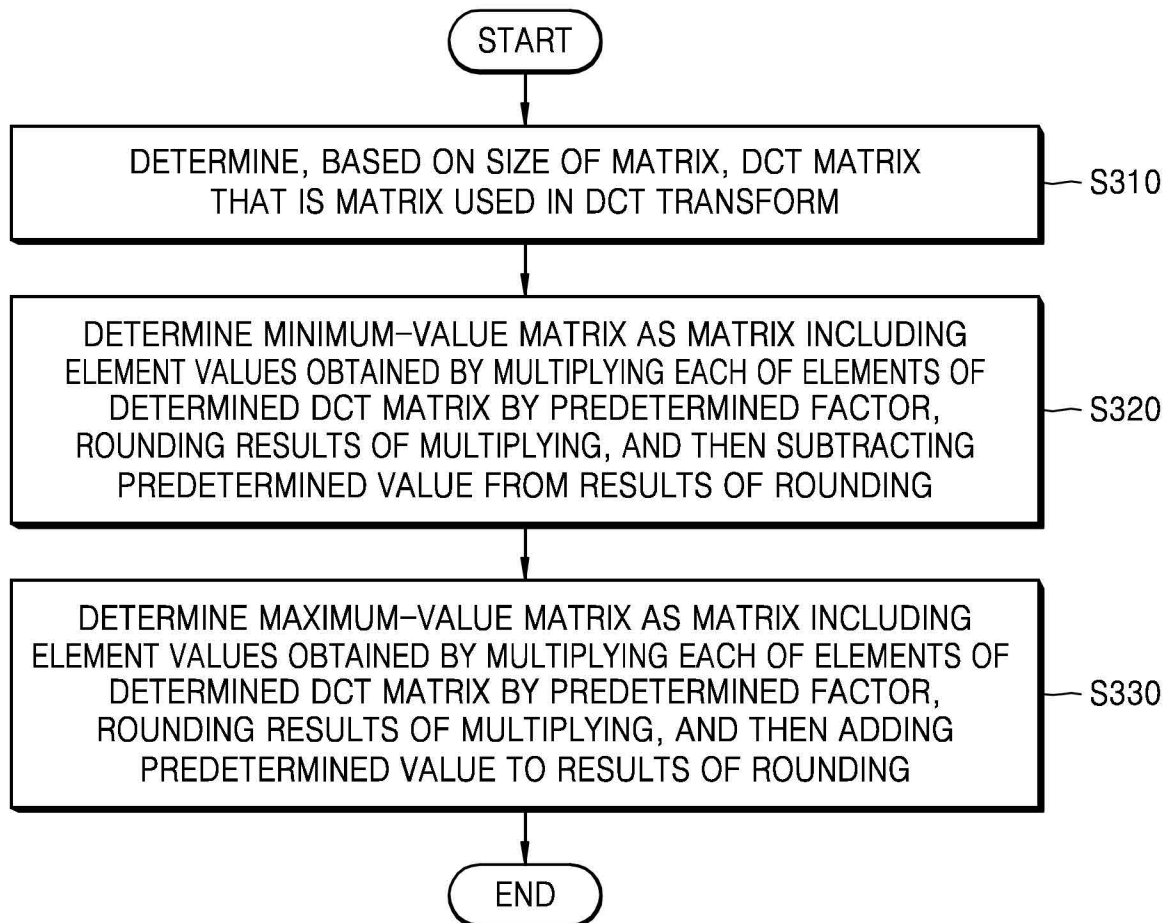


FIG. 4A

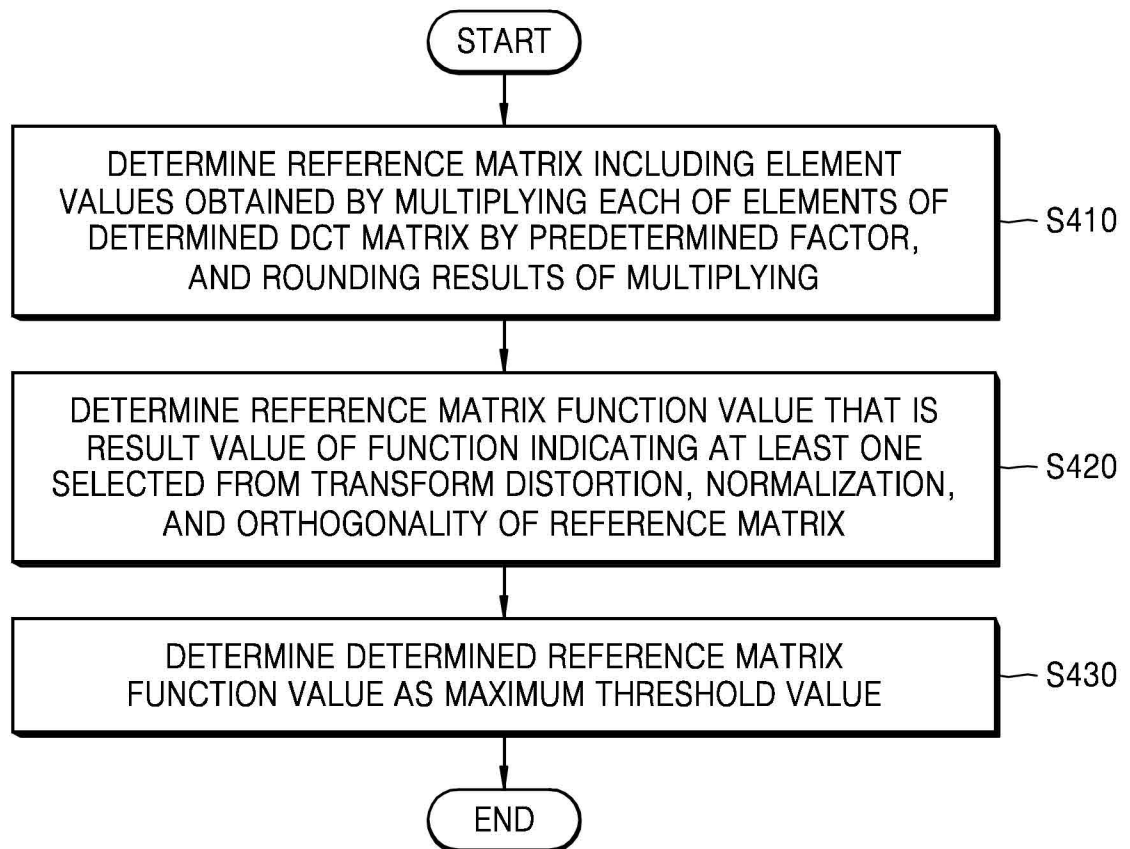


FIG. 4B

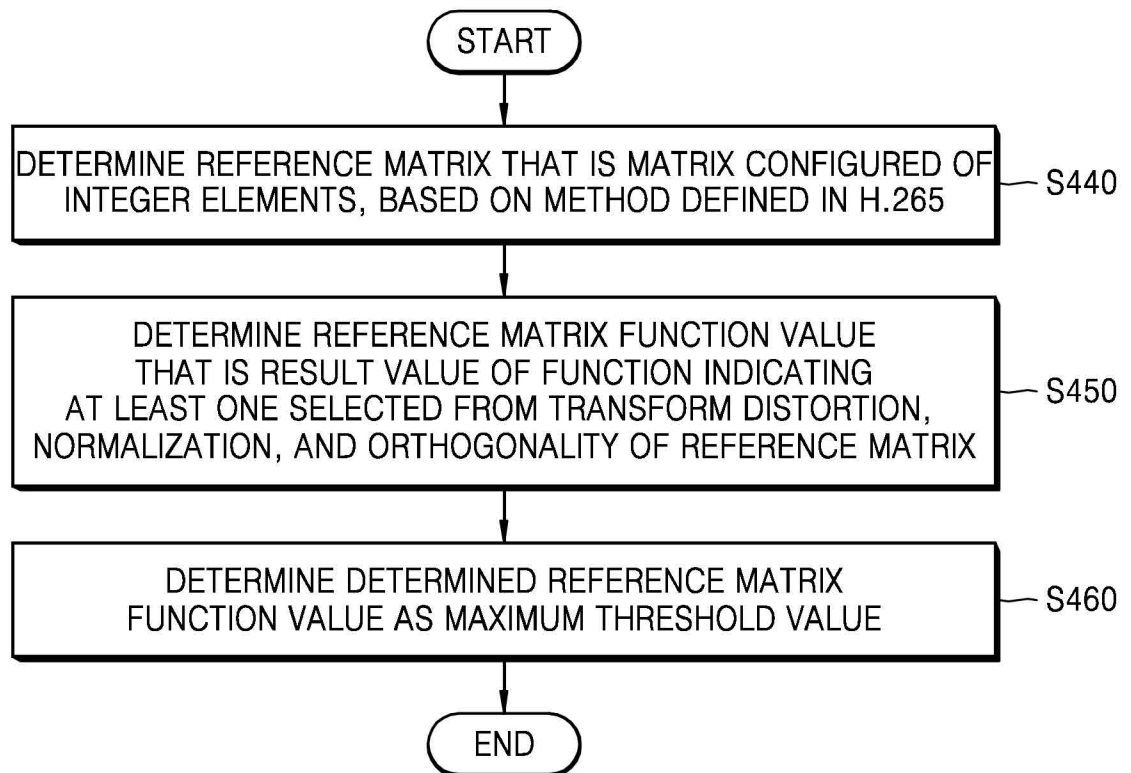


FIG. 5

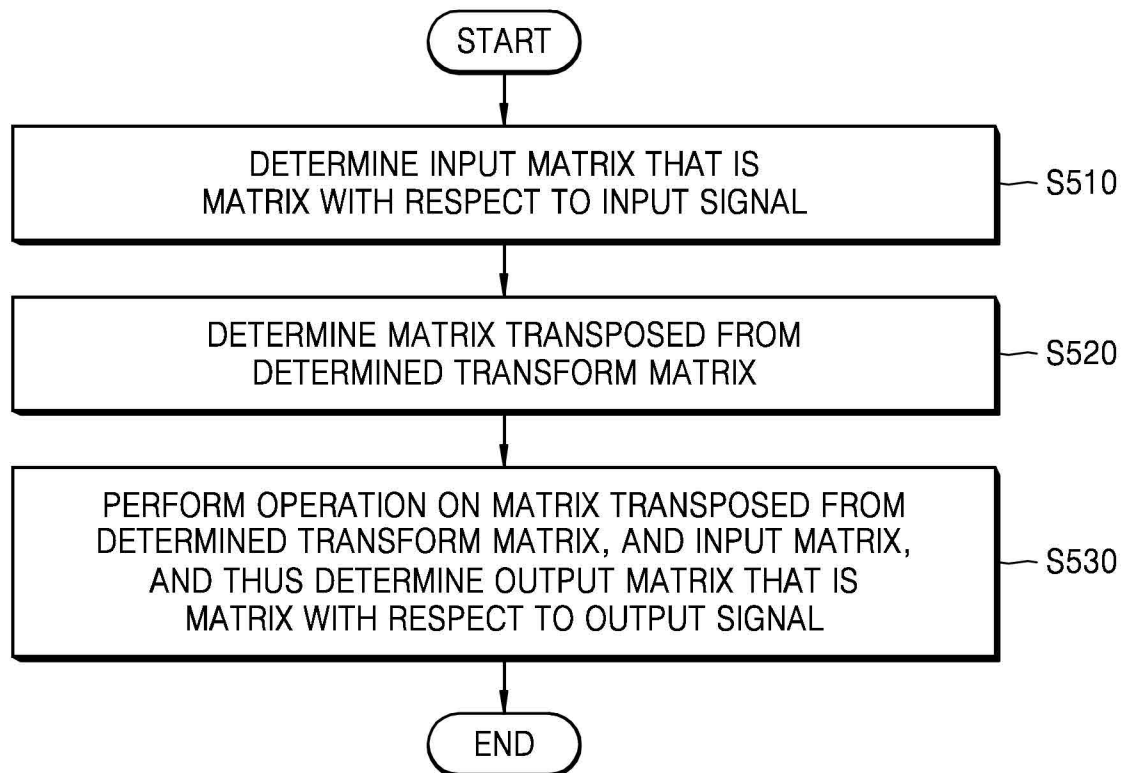


FIG. 6A

M =	128	128	128	128	128	128	128	128
	178	151	101	35	-35	-101	-151	-178
	167	69	-69	-167	-167	-69	69	167
	151	-35	-178	-101	101	178	35	-151
	128	-128	-128	128	128	-128	-128	128
	101	-178	35	151	-151	-35	178	-101
	69	-167	167	-69	-69	167	-167	69
	35	-101	151	-178	178	-151	101	-35

FIG. 6B

$$\mathbf{A} = \begin{bmatrix} 128 & 128 & 128 & 128 & 128 & 128 & 128 & 128 \\ 177 & 150 & 100 & 35 & -35 & -100 & -150 & -177 \\ 167 & 69 & -69 & -167 & -167 & -69 & 69 & 167 \\ 150 & -35 & -177 & -100 & 100 & 177 & 35 & -150 \\ 128 & -128 & -128 & 128 & 128 & -128 & -128 & 128 \\ 100 & -177 & 35 & 150 & -150 & -35 & 177 & -100 \\ 69 & -167 & 167 & -69 & -69 & 167 & -167 & 69 \\ 35 & -100 & 150 & -177 & 177 & -150 & 100 & -35 \end{bmatrix}$$

[illegible]

FIG. 6E

$$M = \begin{pmatrix} 64 & 64 & 64 & 64 & 64 & 64 & 64 & 64 \\ 89 & 75 & 50 & 18 & -18 & -50 & -75 & -89 \\ 83 & 36 & -36 & -83 & -83 & -36 & 36 & 83 \\ 75 & -18 & -89 & -50 & 50 & 89 & 18 & -75 \\ 64 & -64 & -64 & 64 & 64 & -64 & -64 & 64 \\ 50 & -89 & 18 & 75 & -75 & -18 & 89 & -50 \\ 36 & -83 & 83 & -36 & -36 & 83 & -83 & 36 \\ 18 & -50 & 75 & -89 & 89 & -75 & 50 & -18 \end{pmatrix}$$

FIG. 6F

$$A = \begin{pmatrix} 64 & 64 & 64 & 64 & 64 & 64 & 64 & 64 \\ 89 & 75 & 50 & 18 & -18 & -50 & -75 & -89 \\ 84 & 35 & -35 & -84 & -84 & -35 & 35 & 84 \\ 75 & -18 & -89 & -50 & 50 & 89 & 18 & -75 \\ 64 & -64 & -64 & 64 & 64 & -64 & -64 & 64 \\ 50 & -89 & 18 & 75 & -75 & -18 & 89 & -50 \\ 35 & -84 & 84 & -35 & -35 & 84 & -84 & 35 \\ 18 & -50 & 75 & -89 & 89 & -75 & 50 & -18 \end{pmatrix}$$

FIG. 6G

$$M = \begin{pmatrix} 64 & 64 & 64 & 64 \\ 83 & 36 & -36 & -83 \\ 64 & -64 & -64 & 64 \\ 36 & -83 & 83 & -36 \end{pmatrix}$$

FIG. 6H

$$A = \begin{pmatrix} 64 & 64 & 64 & 64 \\ 84 & 35 & -35 & -84 \\ 64 & -64 & -64 & 64 \\ 35 & -84 & 84 & -35 \end{pmatrix}$$

FIG. 6I

$$\mathbf{M} = \begin{pmatrix}
 32 & 32 & 32 & 32 & 32 & 32 & 32 & 32 \\
 44 & 38 & 25 & 9 & -9 & -25 & -38 & -44 \\
 42 & 18 & -18 & -42 & -42 & -18 & 18 & 42 \\
 38 & -9 & -44 & -25 & 25 & 44 & 9 & -38 \\
 32 & -32 & -32 & 32 & 32 & -32 & -32 & 32 \\
 25 & -44 & 9 & 38 & -38 & -9 & 44 & -25 \\
 18 & -42 & 42 & -18 & -18 & 42 & -42 & 18 \\
 9 & -25 & 38 & -44 & 44 & -38 & 25 & -9
 \end{pmatrix}$$

FIG. 6J

$$\mathbf{A} = \begin{bmatrix} 32 & 32 & 32 & 32 & 32 & 32 & 32 & 32 \\ 44 & 38 & 25 & 9 & -9 & -25 & -38 & -44 \\ 42 & 17 & -17 & -42 & -42 & -17 & 17 & 42 \\ 38 & -9 & -44 & -25 & 25 & 44 & 9 & -38 \\ 32 & -32 & -32 & 32 & 32 & -32 & -32 & 32 \\ 25 & -44 & 9 & 38 & -38 & -9 & 44 & -25 \\ 17 & -42 & 42 & -17 & -17 & 42 & -42 & 17 \\ 9 & -25 & 38 & -44 & 44 & -38 & 25 & -9 \end{bmatrix}$$

[illegible]

[illegible]

FIG. 6M

32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
45	43	40	35	29	21	13	4	-4	-13	-21	-29	-35	-40	-43	-45
44	38	25	9	-9	-25	-38	-44	-44	-38	-25	-9	9	25	38	44
43	29	4	-21	-40	-45	-35	-13	13	35	45	40	21	-4	-29	-43
42	17	-17	-42	-42	-17	17	42	42	17	-17	-42	-42	-17	17	42
40	4	-35	-43	-13	29	45	21	-21	-45	-29	13	43	35	-4	-40
38	-9	-44	-25	25	44	9	-38	-38	9	44	25	-25	-44	-9	38
35	-21	-43	4	45	13	-40	-29	29	40	-13	-45	-4	43	21	-35
32	-32	-32	32	32	-32	-32	32	32	-32	-32	32	32	-32	-32	32
29	-40	-13	45	-4	-43	21	35	-35	-21	43	4	-45	13	40	-29
25	-44	9	38	-38	-9	44	-25	-25	44	-9	-38	38	9	-44	25
21	-45	29	13	-43	35	4	-40	40	-4	-35	43	-13	-29	45	-21
17	-42	42	-17	-17	42	-42	17	17	-42	42	-17	-17	42	-42	17
13	-35	45	-40	21	4	-29	43	-43	29	-4	-21	40	-45	35	-13
9	-25	38	-44	44	-38	25	-9	-9	25	-38	44	-44	38	-25	9
4	-13	21	-29	35	-40	43	-45	45	-43	40	-35	29	-21	13	-4

FIG. 6N

32	32	32	32
42	17	-17	-42
32	-32	-32	32
17	-42	42	-17

FIG. 7

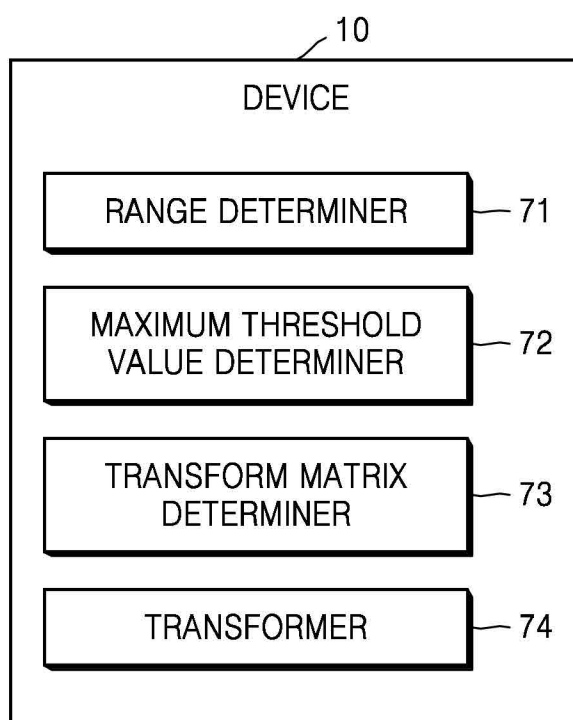


FIG. 8

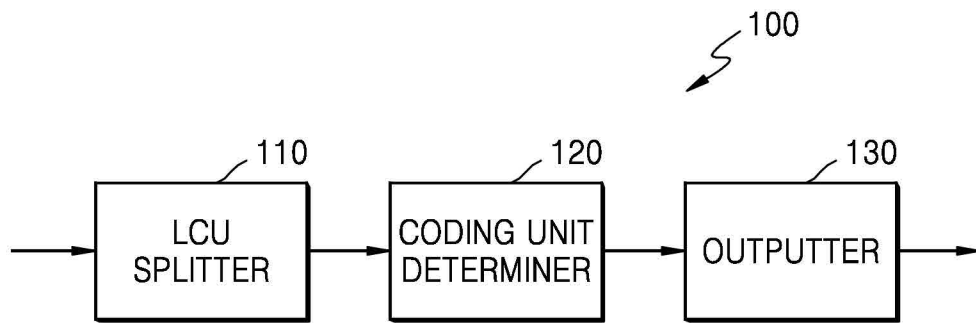


FIG. 9

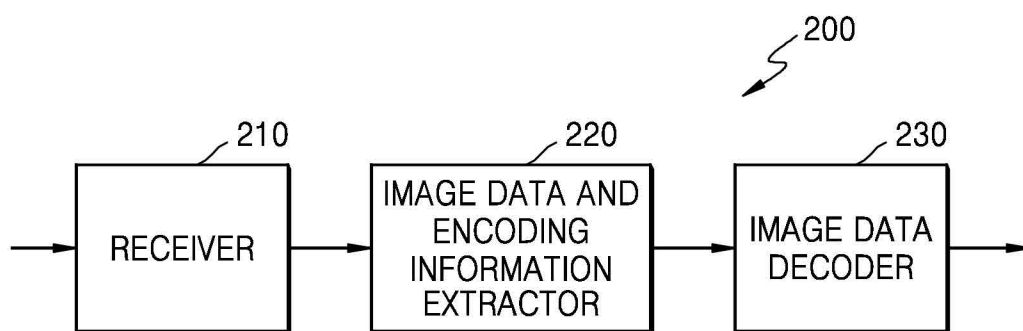


FIG. 10

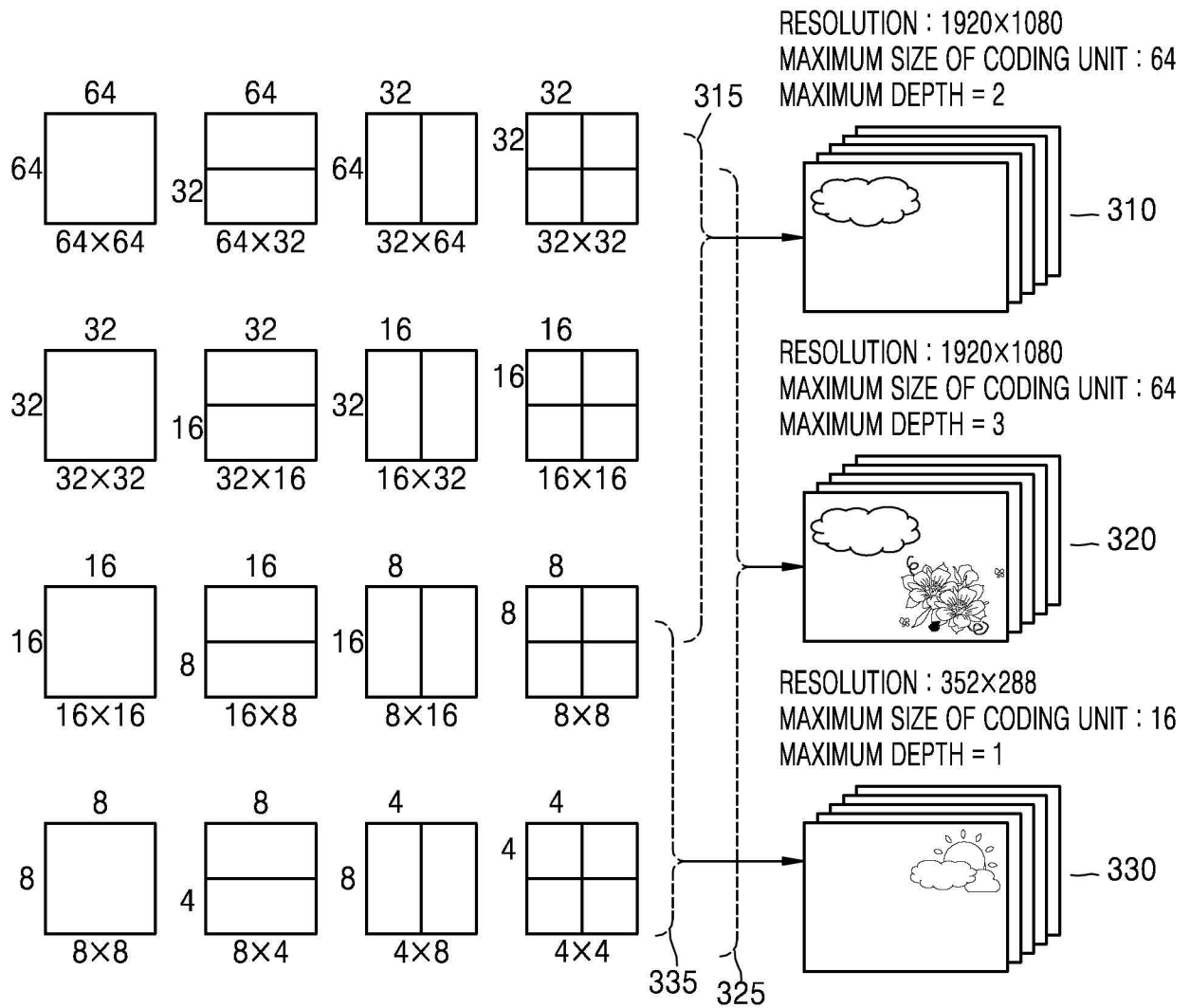


FIG. 11

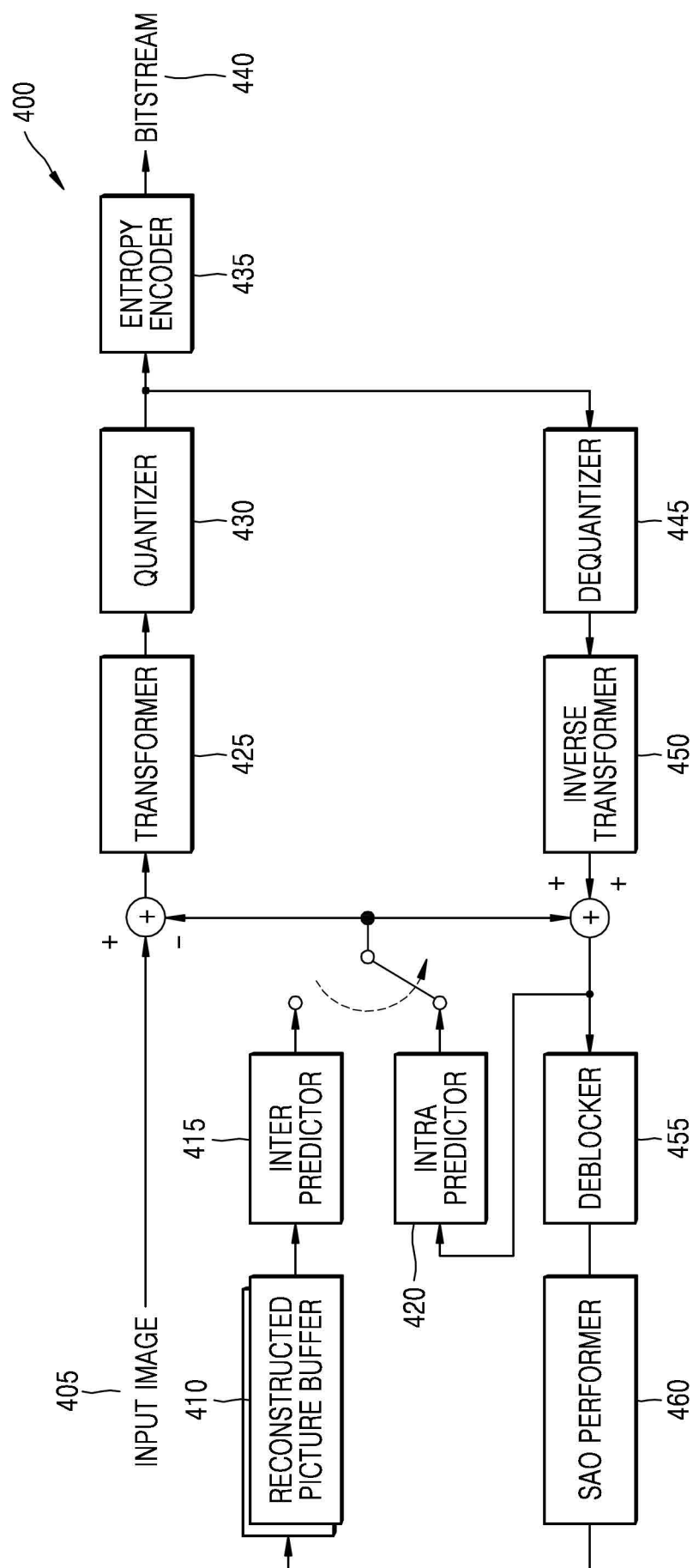


FIG. 12

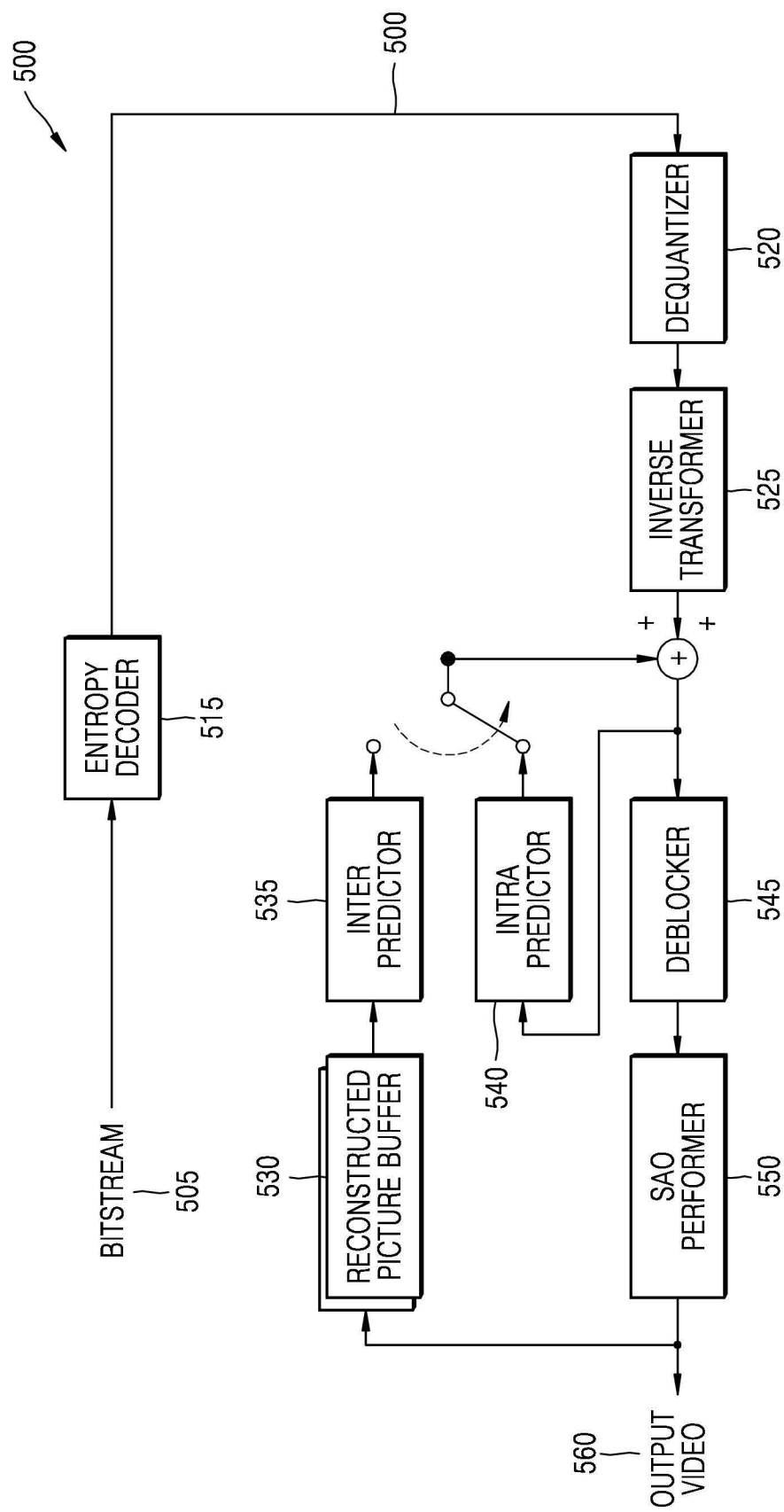


Diagram illustrating the structure of a Coding Unit (CU) tree, showing the hierarchy of CUs at different depths (Maximum Depth = 3).

The tree structure is defined by the following parameters:

- MAXIMUM HEIGHT AND WIDTH OF CODING UNIT=64
- MAXIMUM DEPTH = 3
- LCU (Largest Coding Unit) is the root node.
- SCU (Smallest Coding Unit) is the leaf node.
- PREDICTION UNIT/PARTITION is the output of the tree.

The CUs are organized into a grid structure, with dimensions and reference numbers indicated:

- Top Row (Depth 0): 64x64 (610), 64x32 (612), 32x64 (614), 32x32 (616)
- Second Row (Depth 1): 32x32 (620), 32x16 (622), 16x32 (624), 16x16 (626)
- Third Row (Depth 2): 16x16 (630), 16x8 (632), 8x16 (634), 8x8 (636)
- Bottom Row (Depth 3): 8x8 (640), 8x4 (642), 4x8 (644), 4x4 (646)

The diagram shows the hierarchical structure of CUs at different depths, with the maximum depth being 3. The CUs are labeled with their dimensions and a reference number (e.g., 610, 612, 614, 616, 620, 622, 624, 626, 630, 632, 634, 636, 640, 642, 644, 646).

FIG. 14

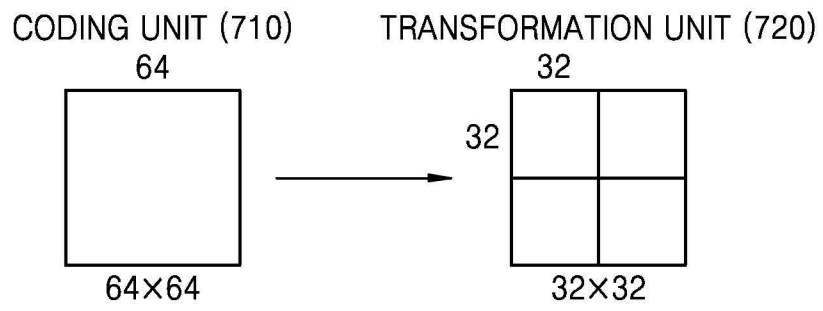


FIG. 15

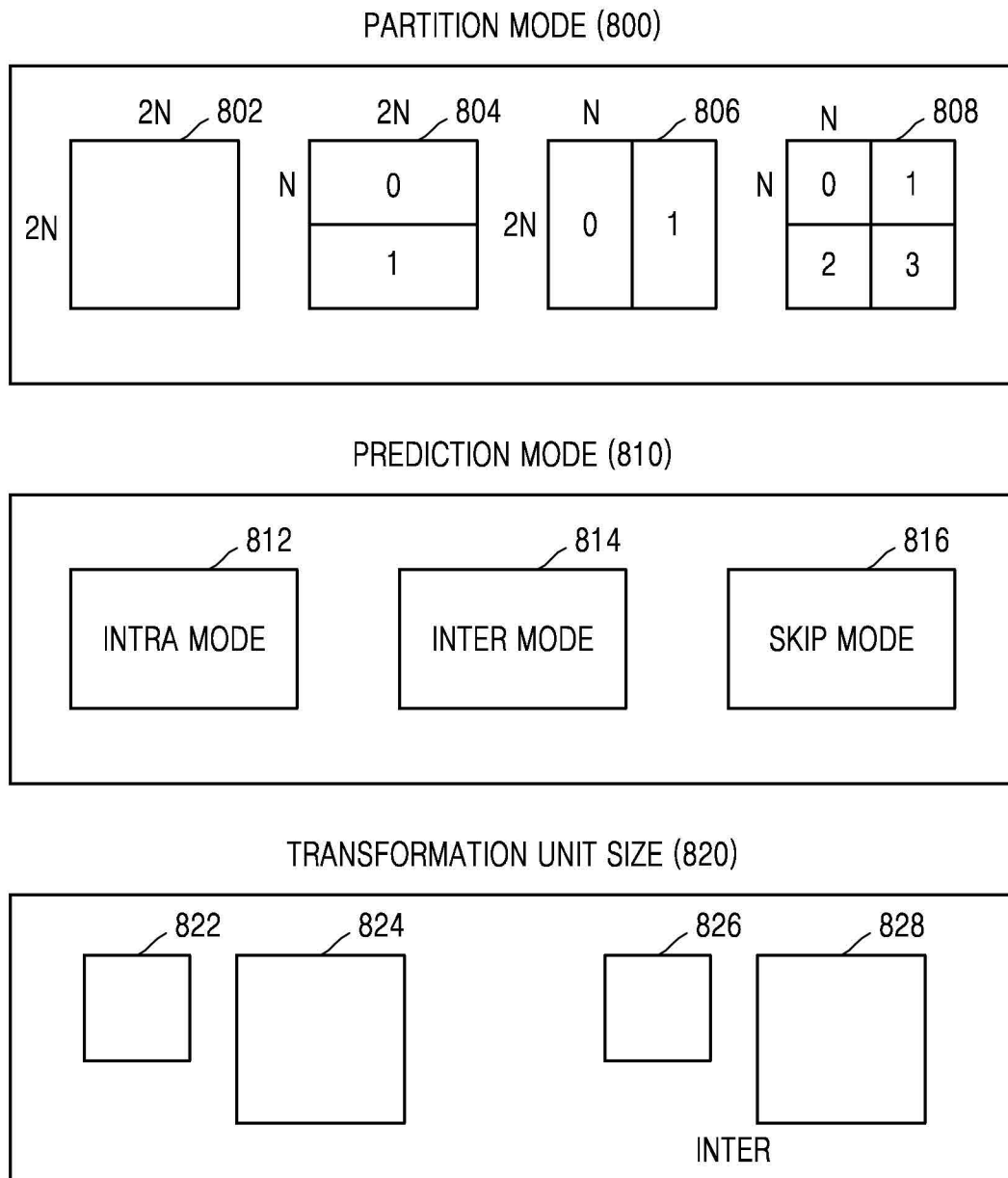


FIG. 16

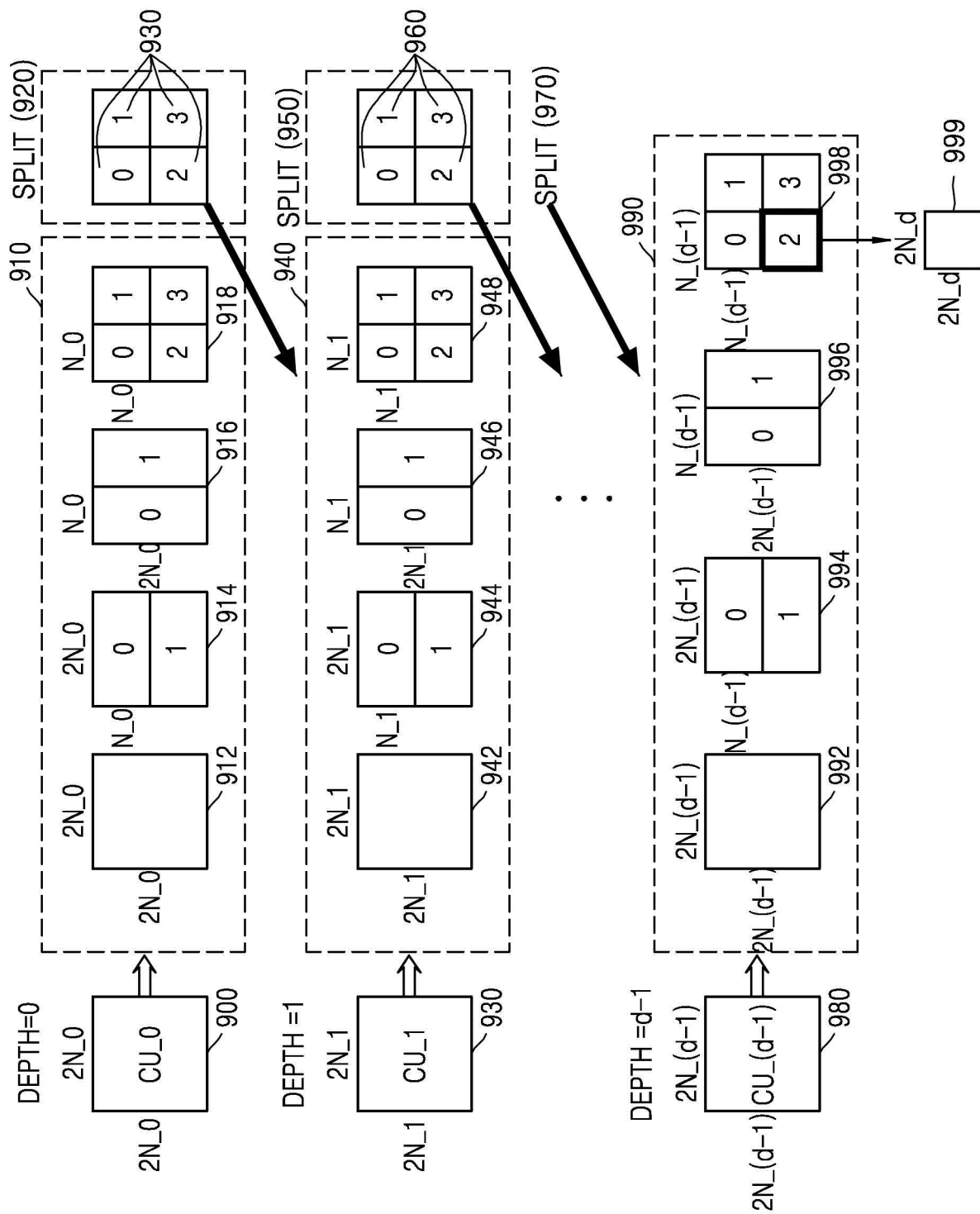
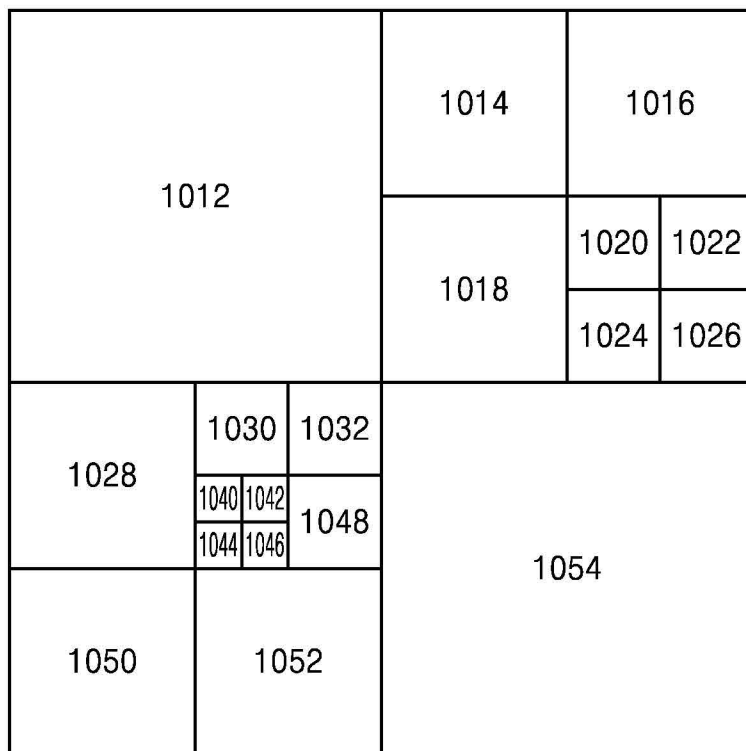


FIG. 17



CODING UNIT (1010)

FIG. 18

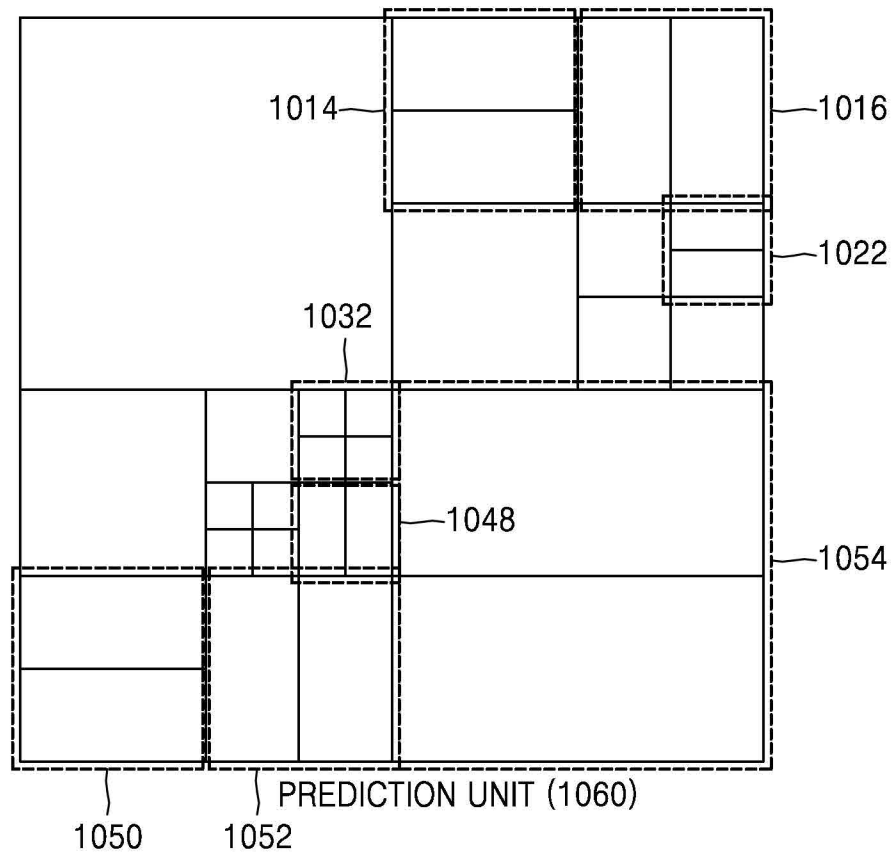


FIG. 19

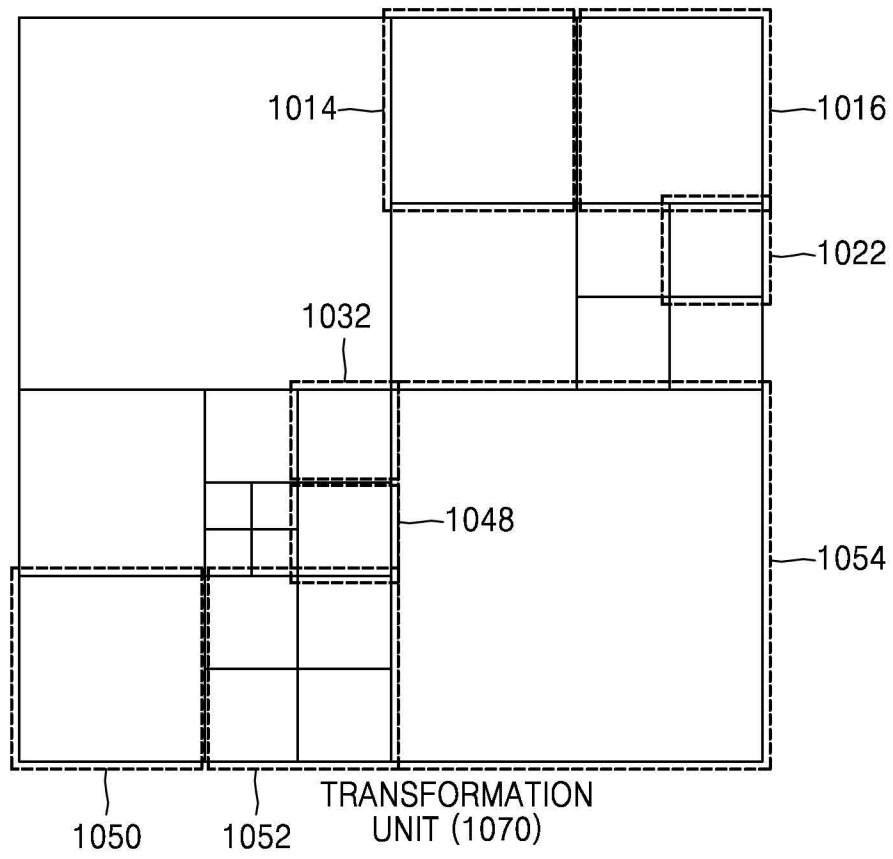


FIG. 20

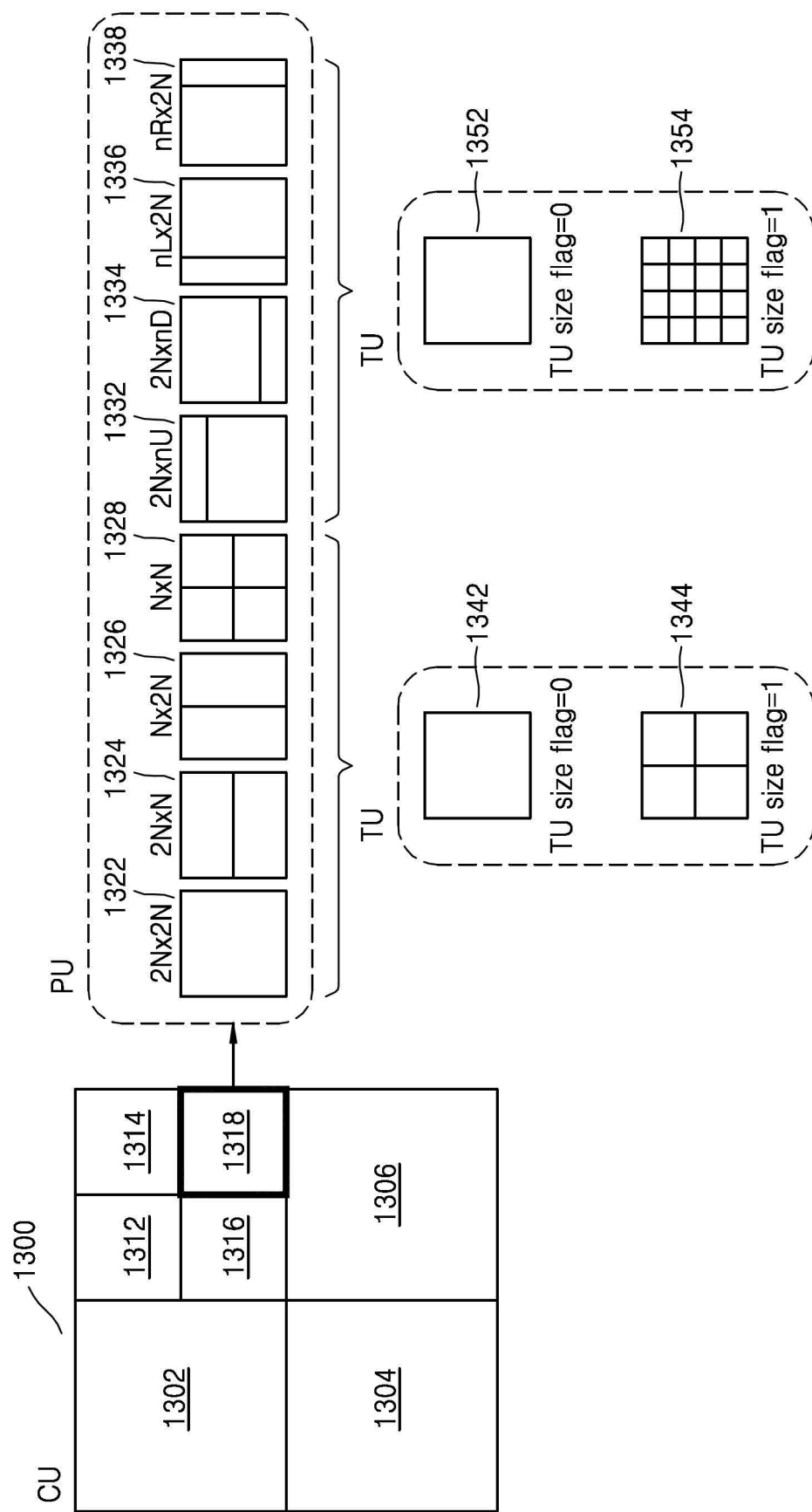


FIG. 21

FIG. 21

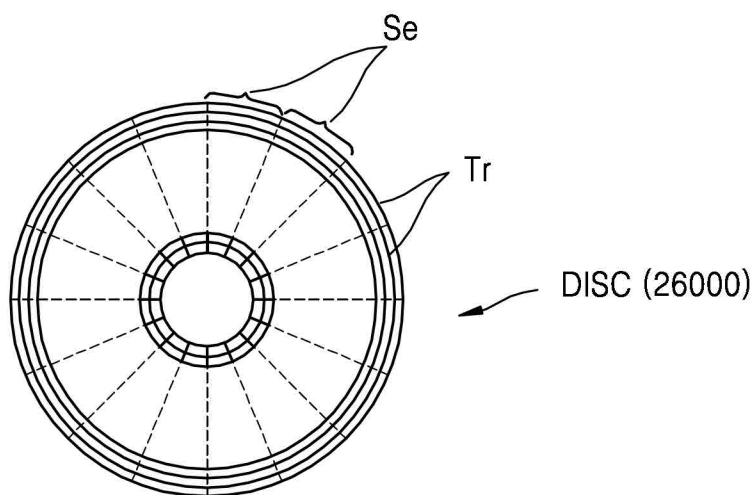


FIG. 22

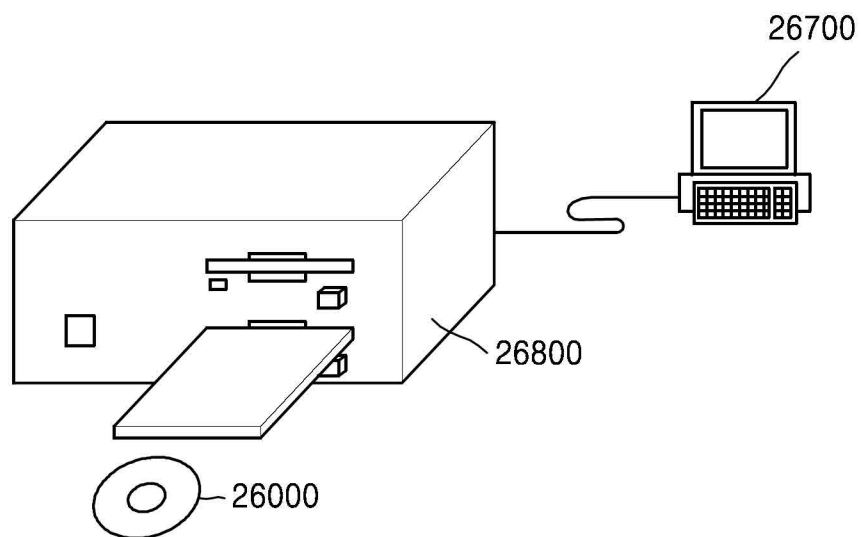


FIG. 23

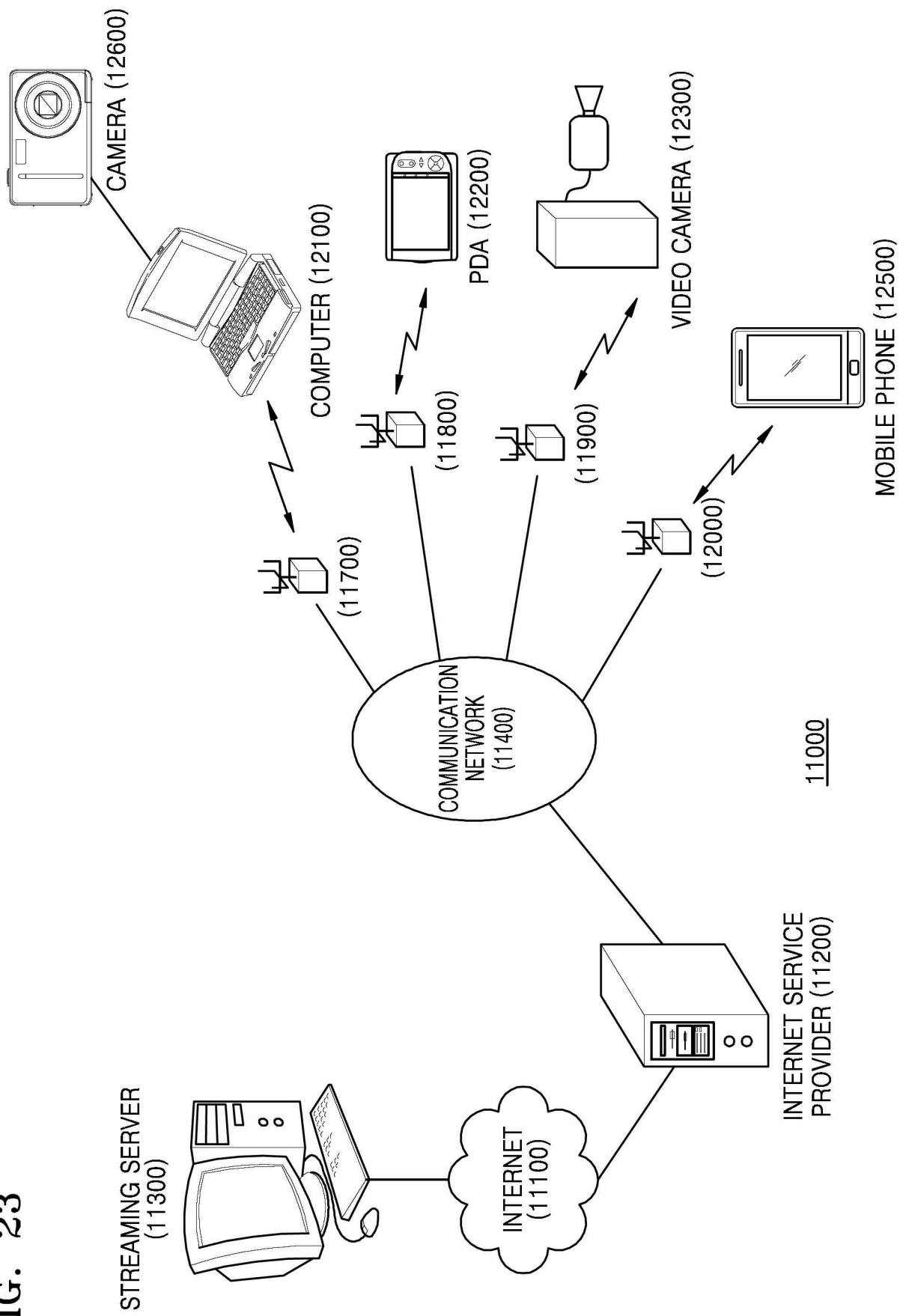


FIG. 24

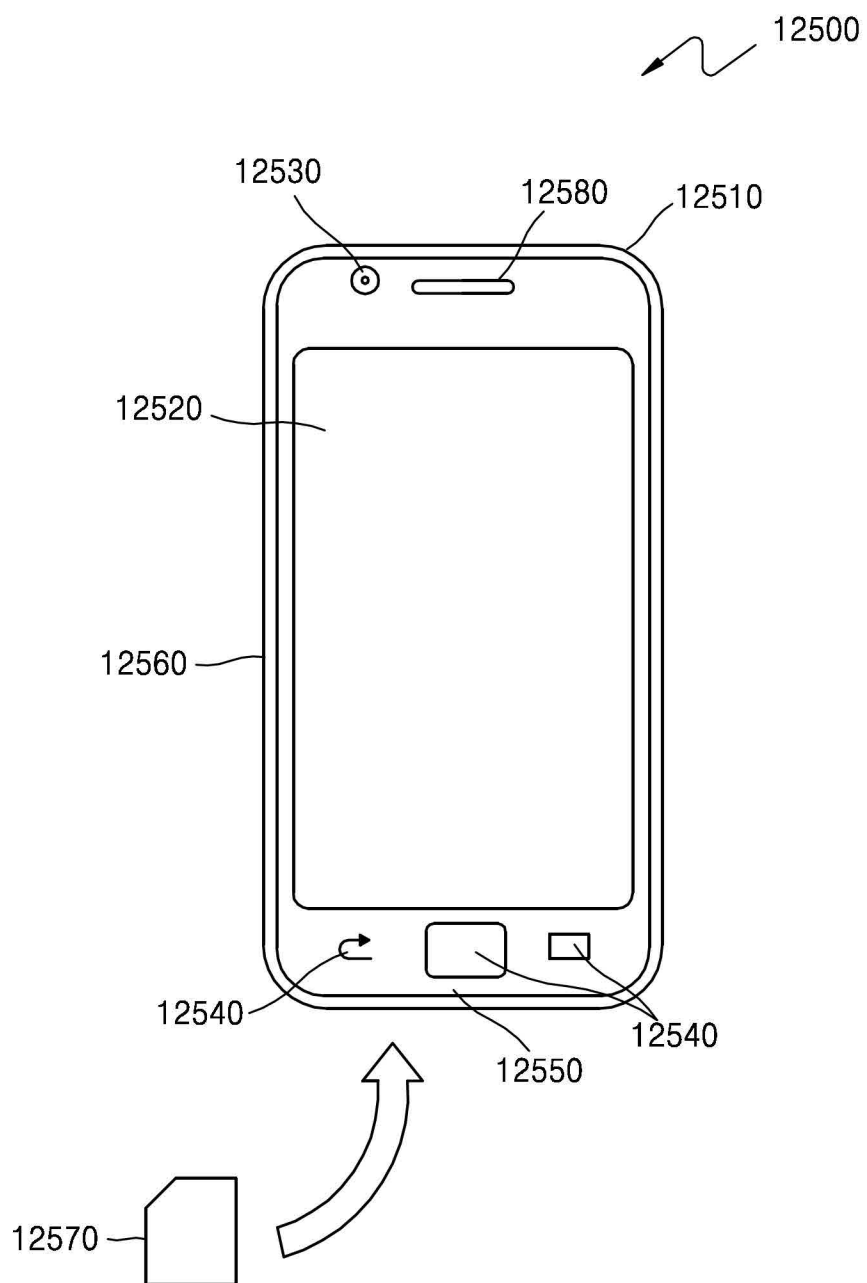


FIG. 25

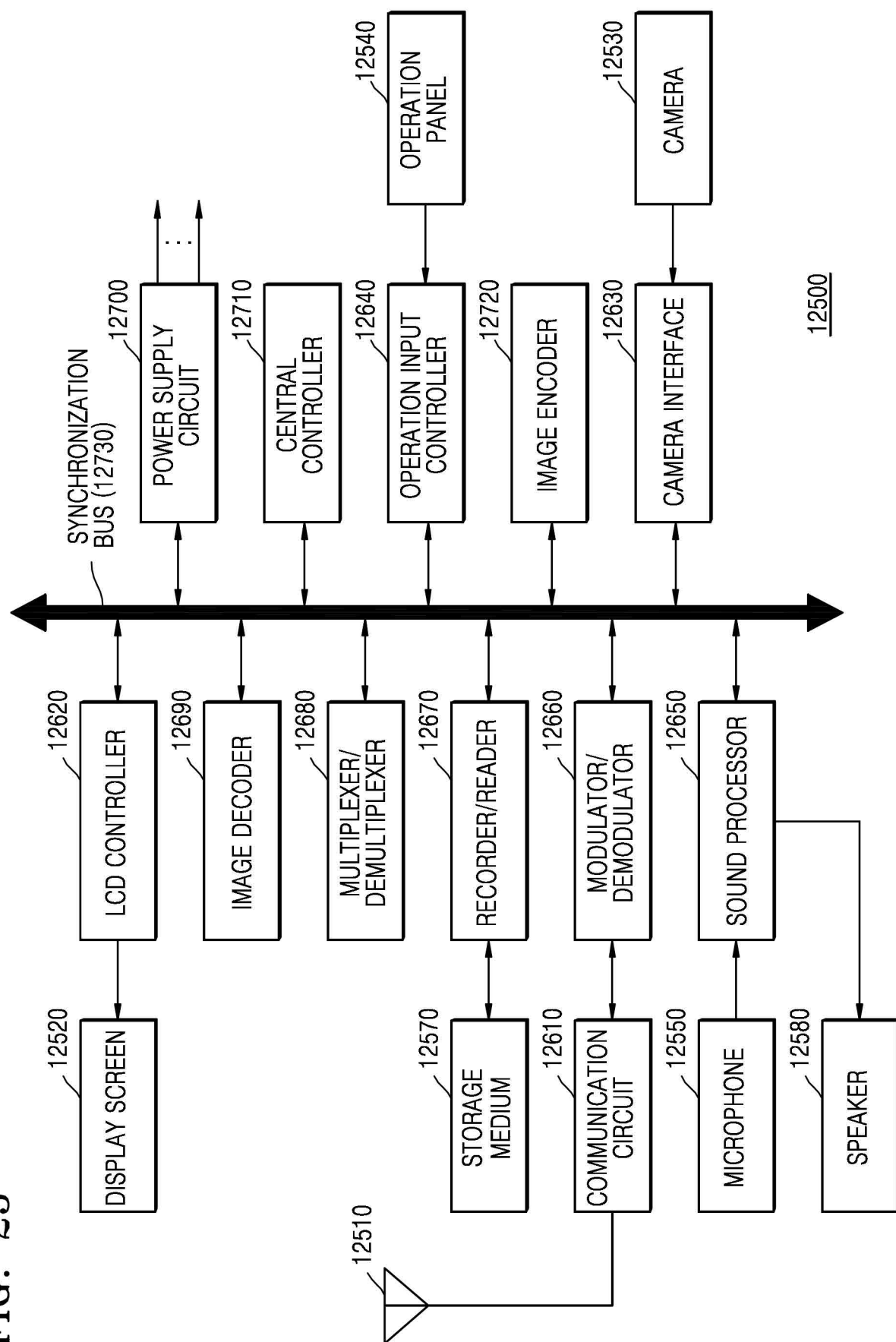


FIG. 26

FIG. 26

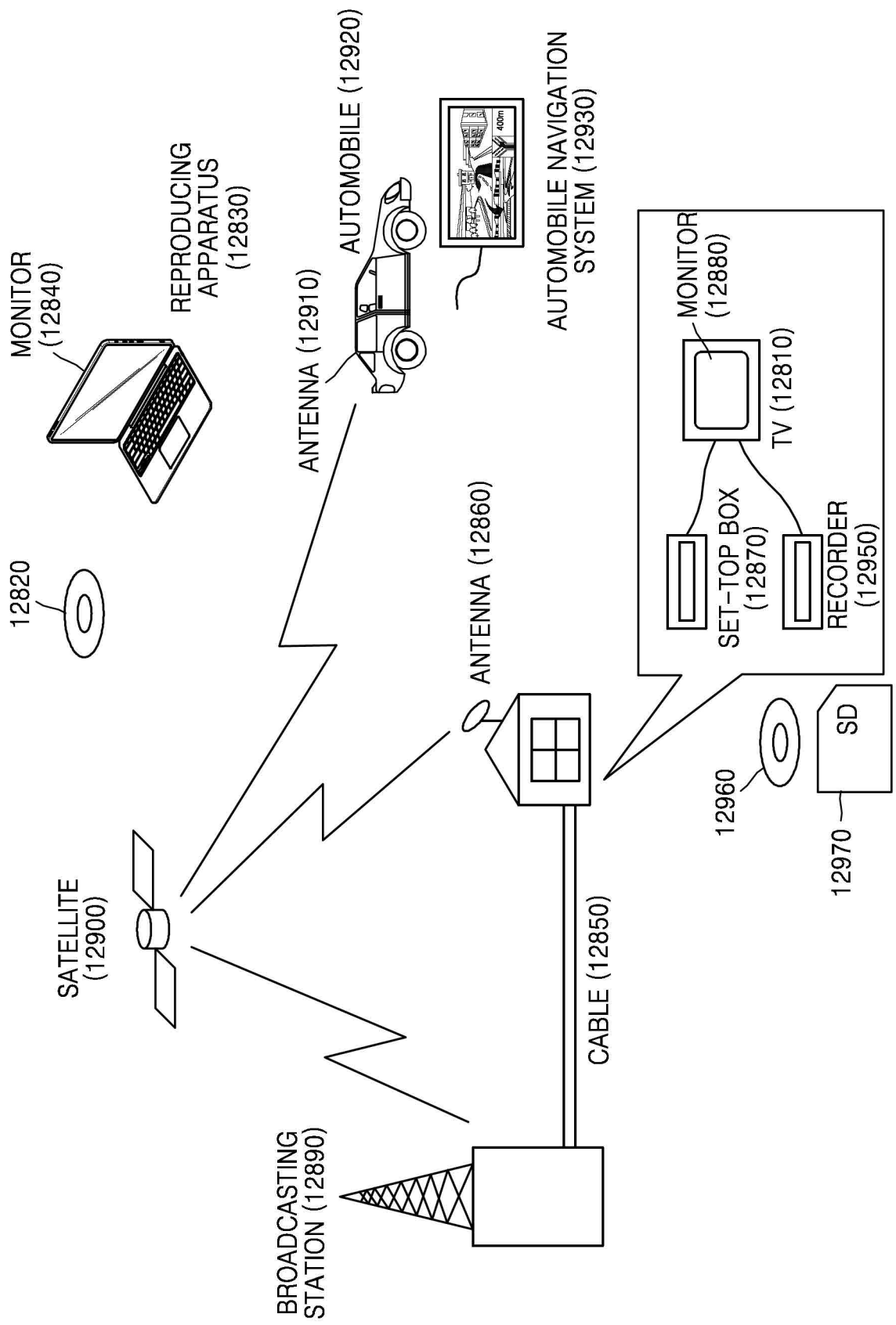


FIG. 27

