

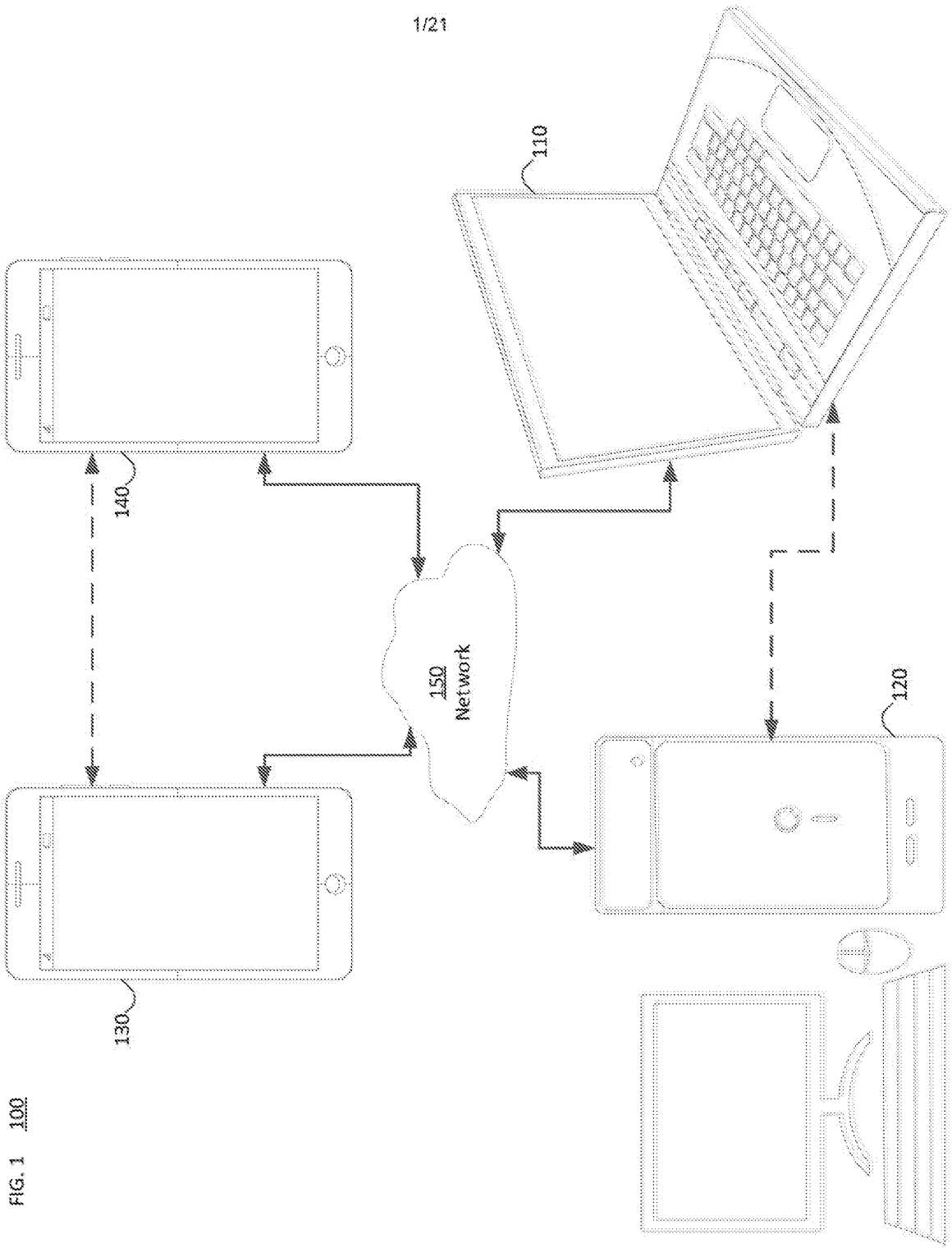


FIG. 1 100

FIG. 2 Streaming System 200

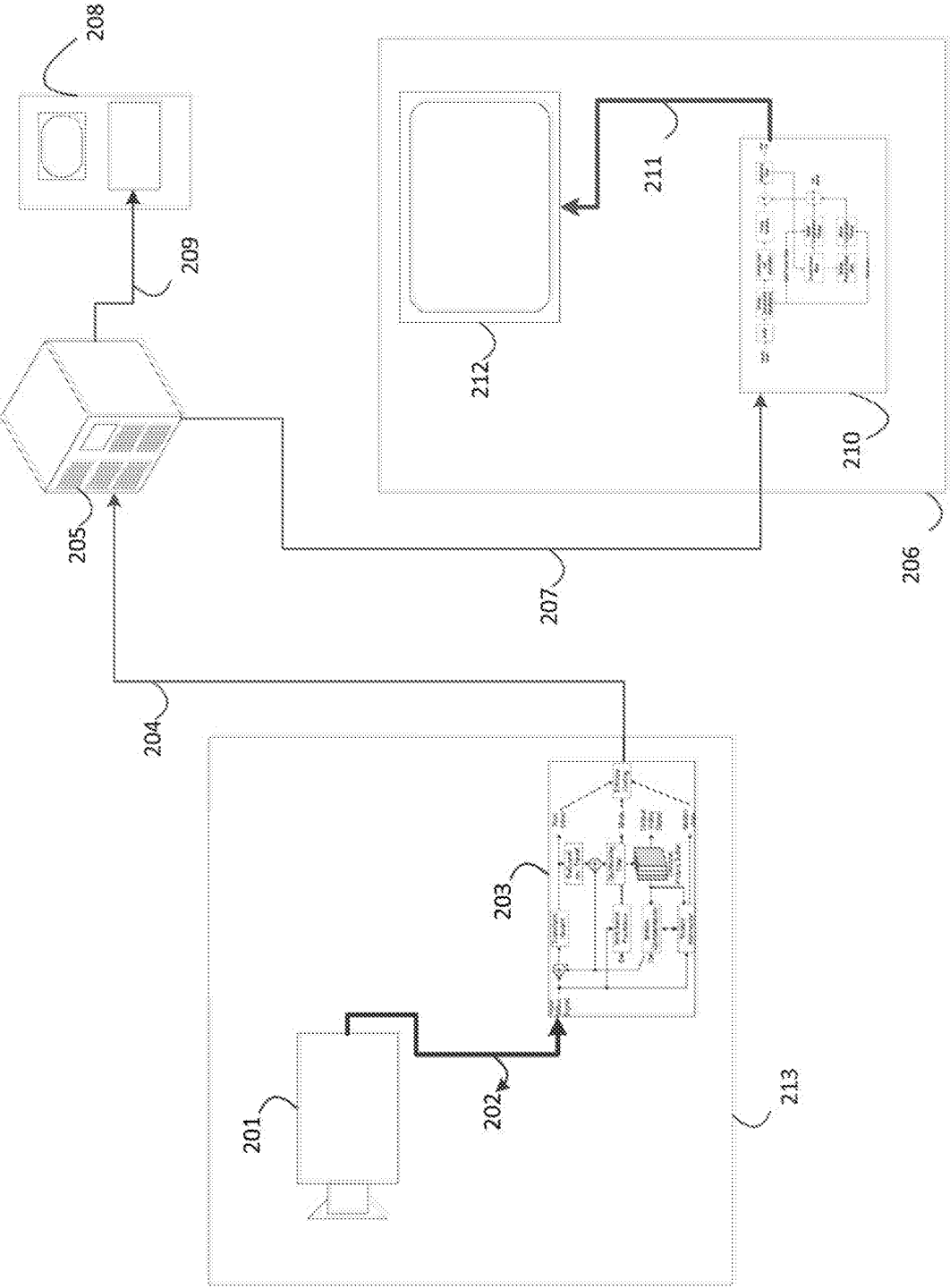


FIG. 3 Decoder 210

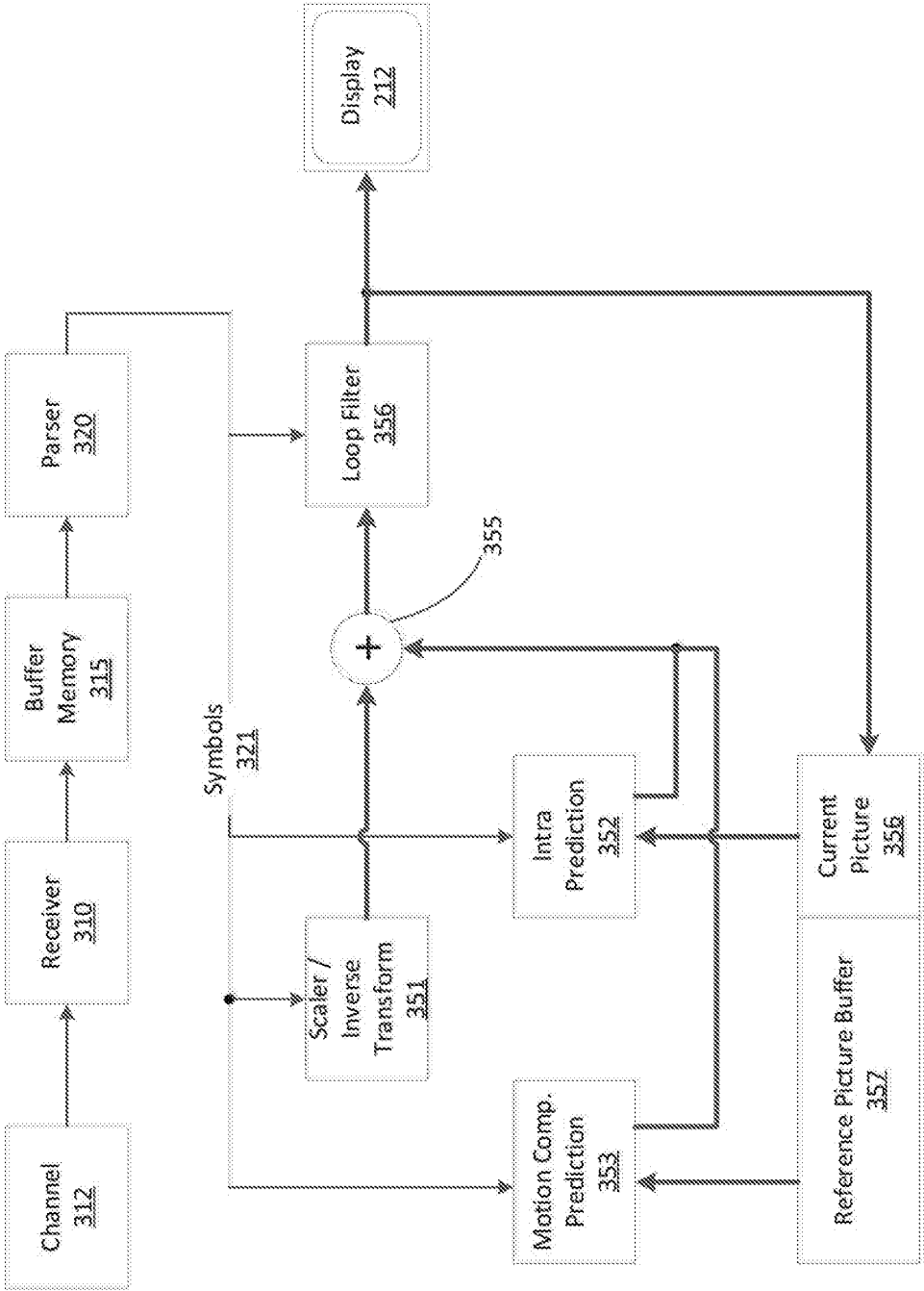
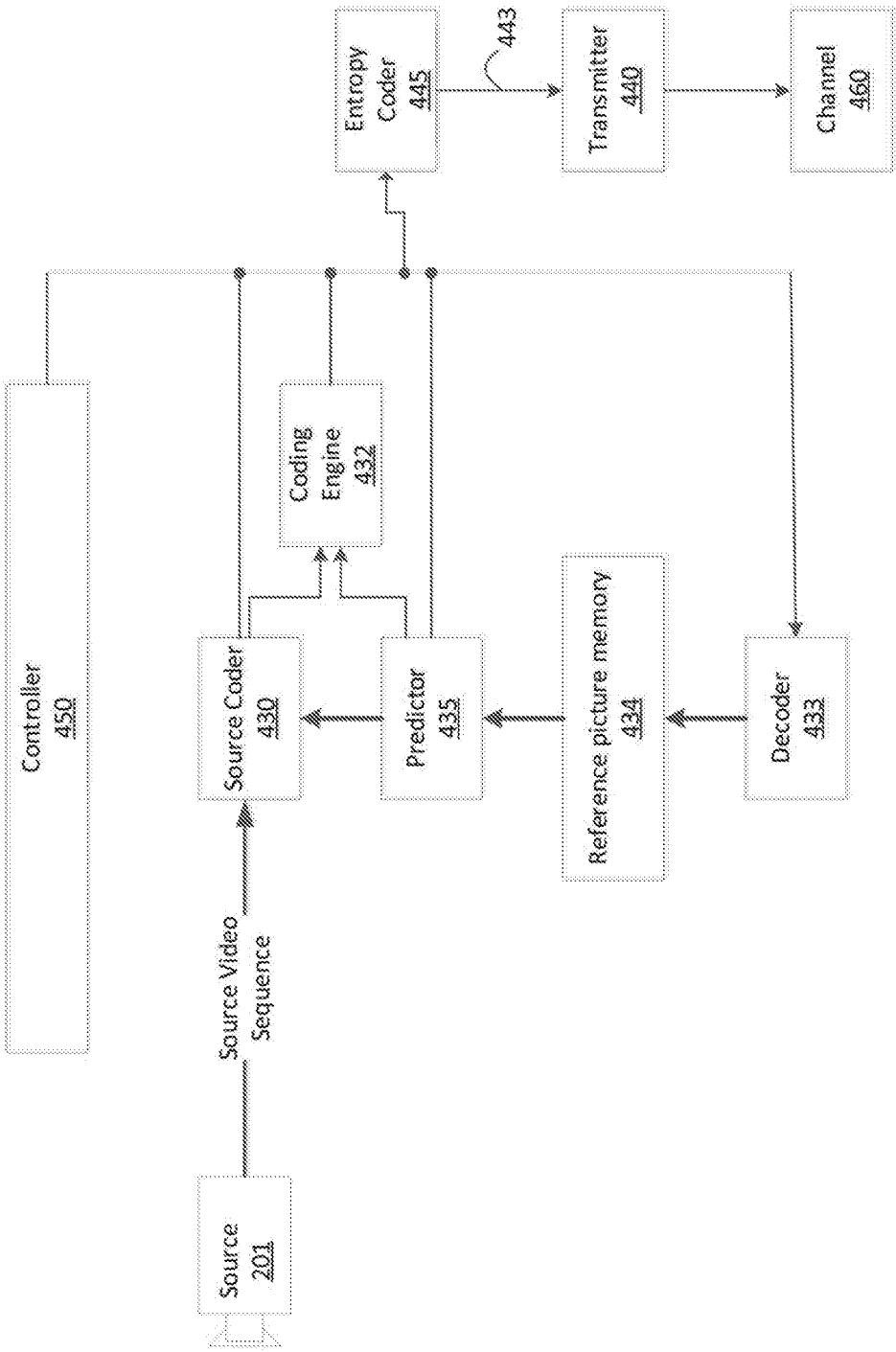
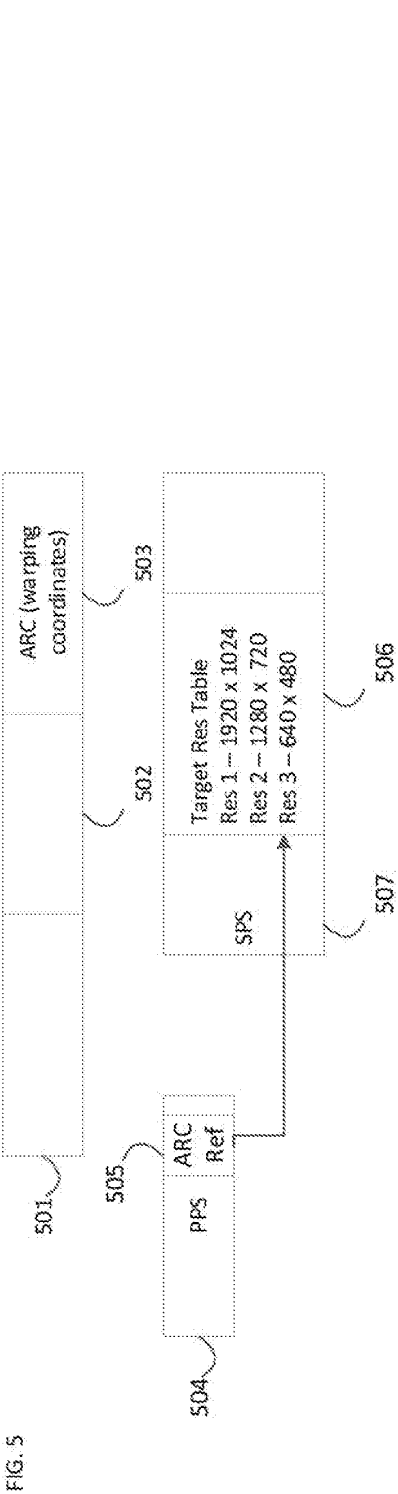


FIG. 4 Encoder 203





Disclosed Subject Matter

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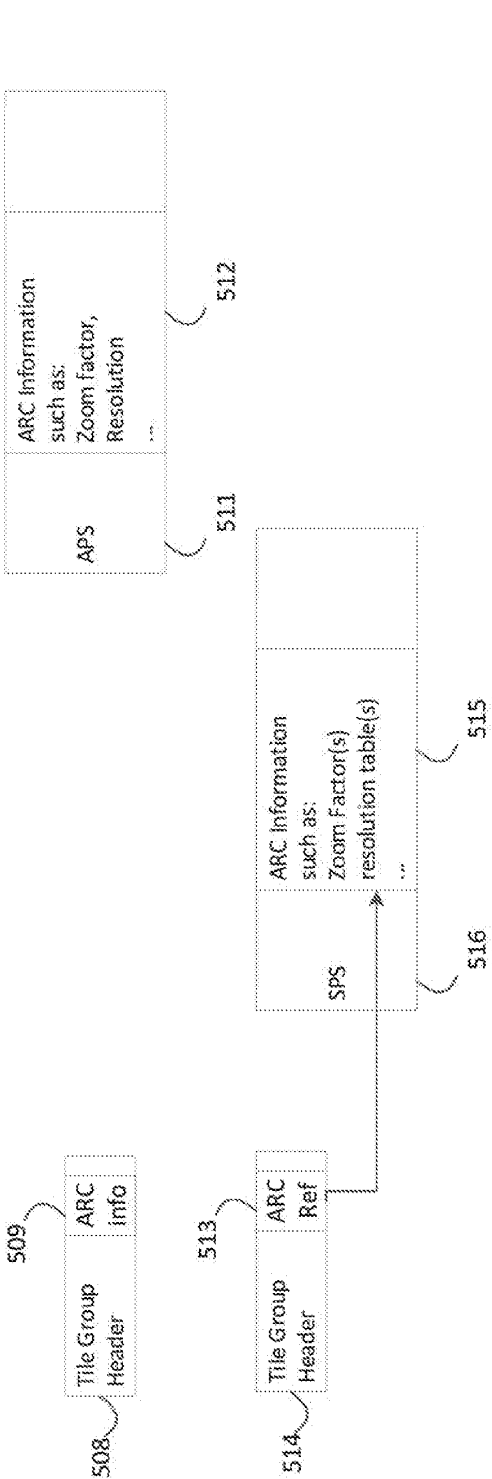
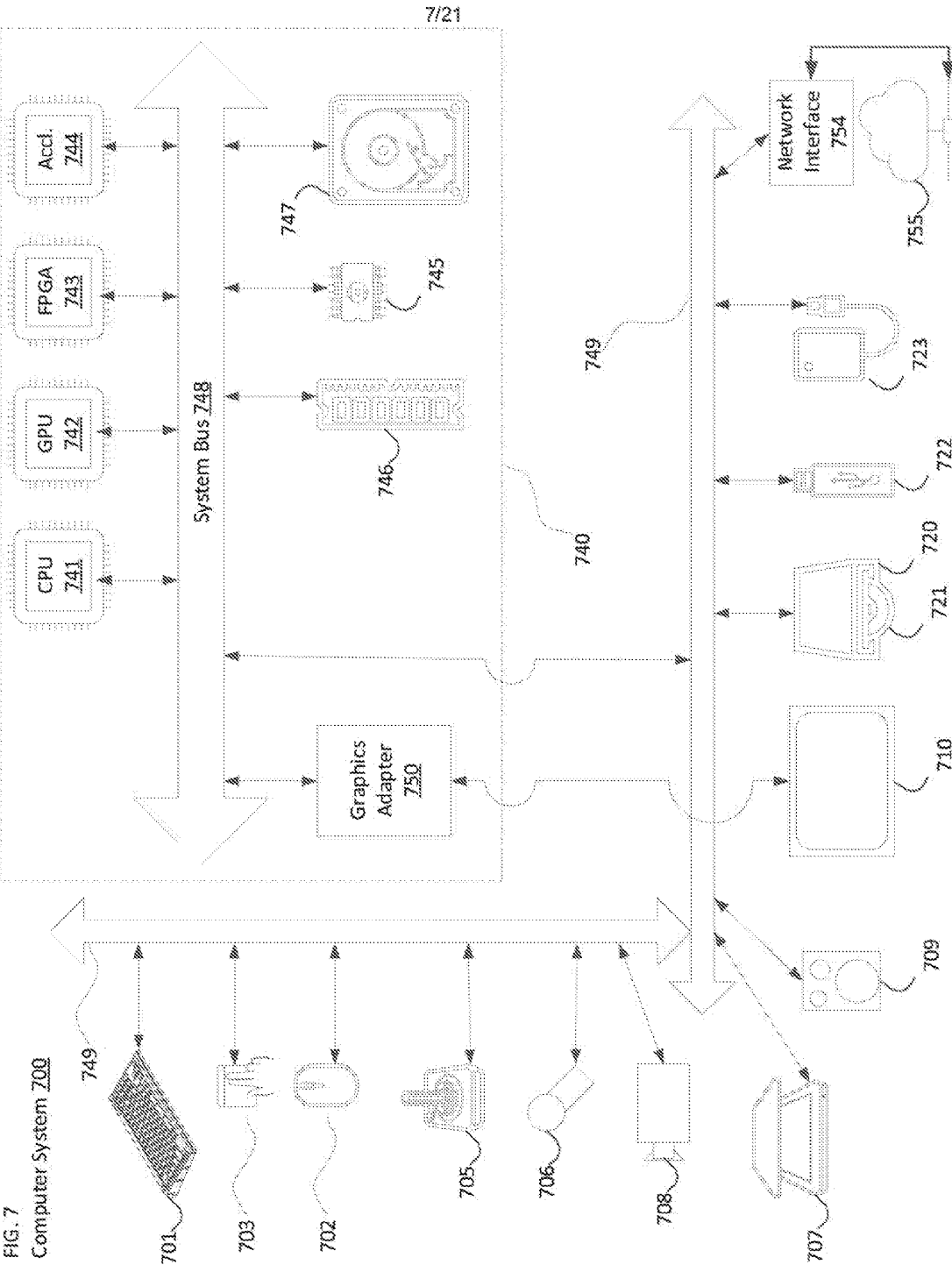


Fig. 6

601	tile_group_header() {		
	..		
603	if(adaptive_pic_resolution_change_flag) {		
602	dec_pic_size_idx		u(1)
	}		
	..		
	}		

610	seq_parameter_set_rbsp() {		Descriptor
	..		
611	adaptive_pic_resolution_change_flag		u(1)
612	if(adaptive_pic_resolution_change_flag) {		
	output_pic_width_in_luma_samples		ue(v)
613	output_pic_height_in_luma_samples		ue(v)
	reference_pic_size_present_flag		u(1)
614	if(reference_pic_size_present_flag)		
	{		
	reference_pic_width_in_luma_samples		ue(v)
615	reference_pic_height_in_luma_samples		ue(v)
	}		
	num_dec_pic_size_in_luma_samples_minus1		ue(v)
616	for(i = 0; i <= num_dec_pic_size_in_luma_samples_minus1; i++) {		
	dec_pic_width_in_luma_samples[i]		ue(v)
617	dec_pic_height_in_luma_samples[i]		ue(v)
	}		
	}		
	..		
	}		



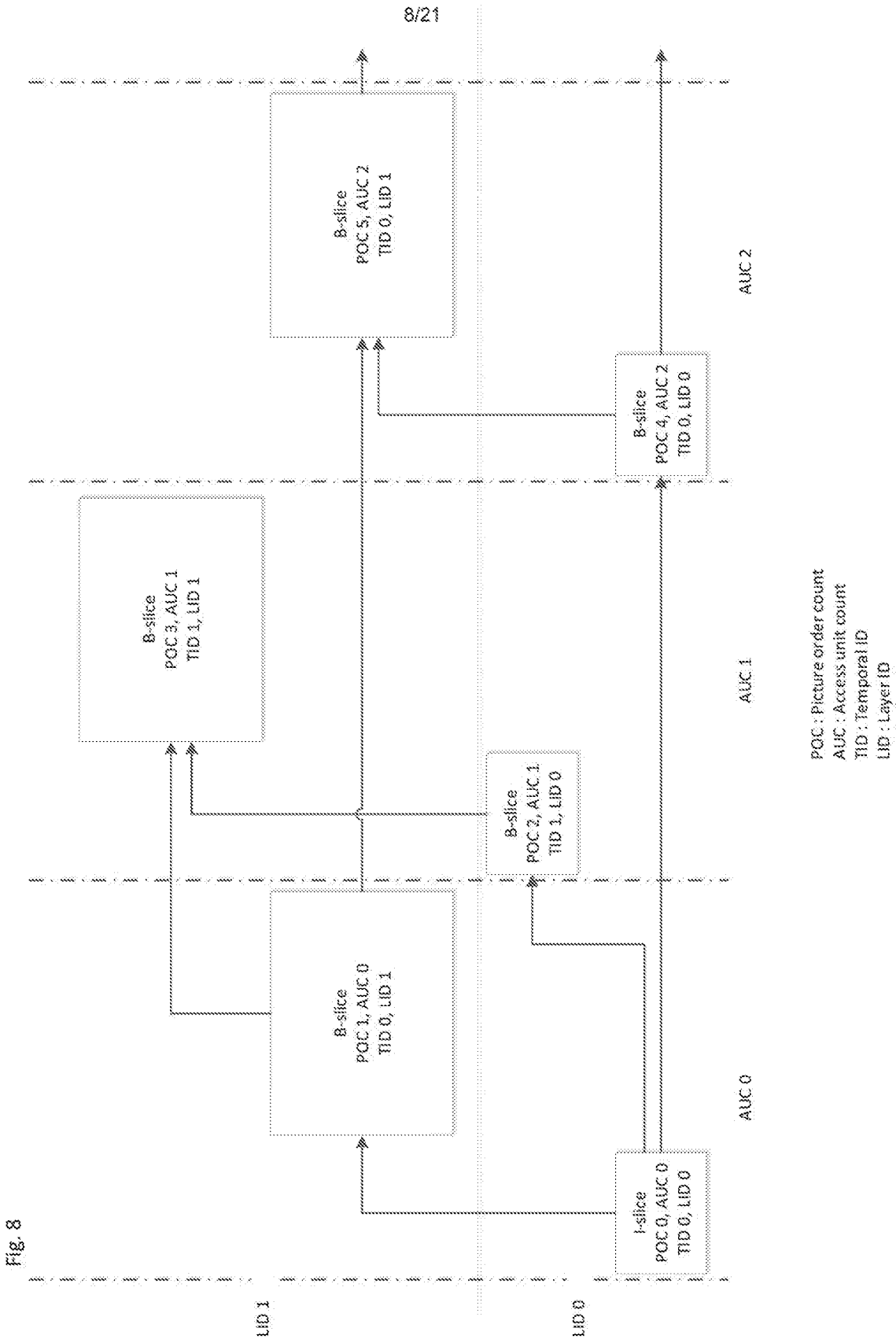


Fig. 9

	Descriptor ¹
video_parameter_set_flag() { ²	
vps_video_parameter_set_id ³	u(4) ²
vps_max_layers_minus1 ³	u(3) ²
for(i = 0; i <= vps_max_layers_minus1; i++) { ⁴	²
vps_included_layer_id[i] ⁵	u(7) ²
vps_reserved_zero_bit ⁶	u(1) ²
} ²	²
vps_constraint_info_present_flag ⁷	u(1) ²
vps_constant_poc_cycle_per_au ⁸	u(1) ²
if(vps_constant_poc_cycle_per_au) ⁹	²
vps_poc_cycle_au ¹⁰	u(3) ²
... ¹¹	²
} ²	²
¹	
slice_header() { ²	
slice_pic_parameter_set_id ³	ue(v) ²
if(rect_slice_flag == NumBricksInPic > 1) ⁴	²
slice_address ⁵	u(v) ²
if(!rect_slice_flag && !angle_brick_per_slice_flag) ⁶	²
num_bricks_in_slice_minus1 ⁷	ue(v) ²
slice_type ⁸	ue(v) ²
if(NalUnitType == GRA_NUT) ⁹	²
recovery_poc_cnt ¹⁰	ue(v) ²
slice_pic_order_cnt_lsb ¹¹	u(v) ²
... ¹²	²
if(vps_constant_poc_cycle_per_au) ¹³	²
slice_poc_cycle_au ¹⁴	u(3) ²
¹⁵	²
¹⁶	²
} ²	²

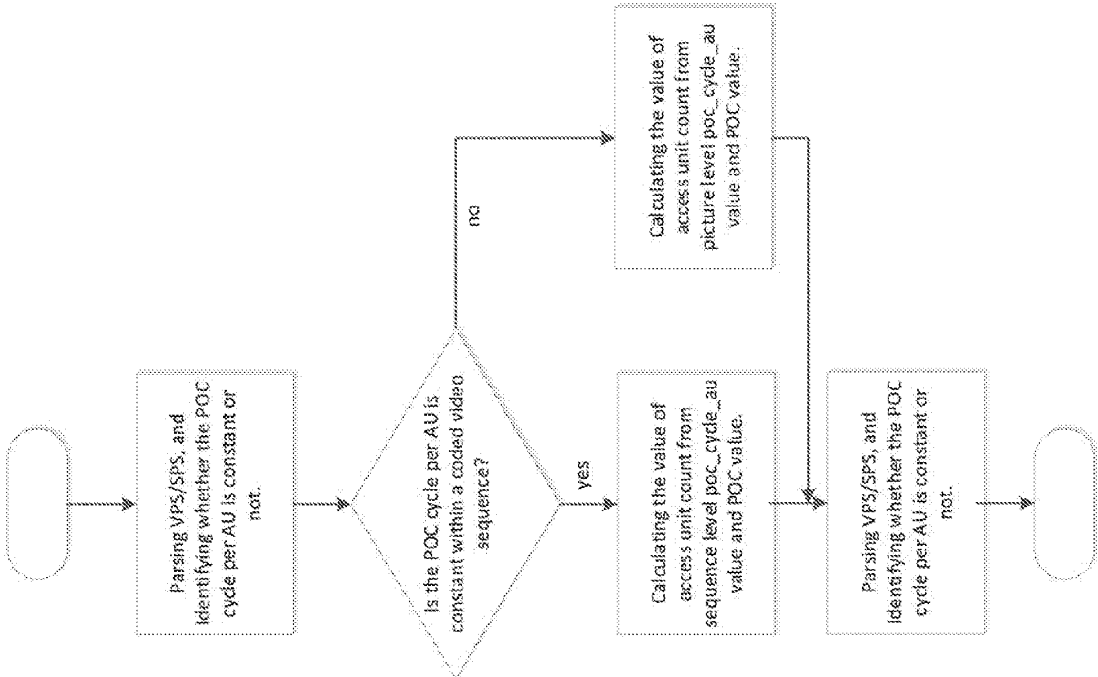


Fig. 10

FIG. 11

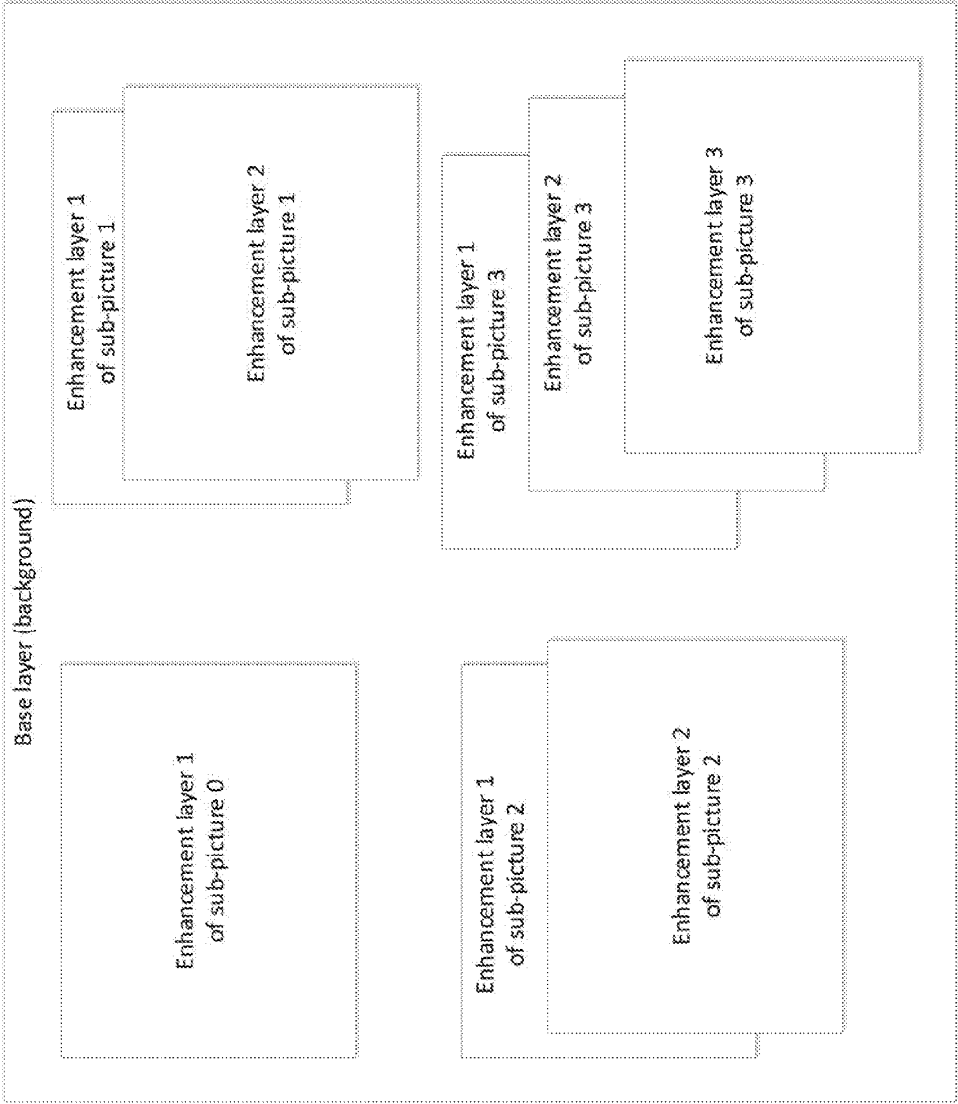


FIG. 12

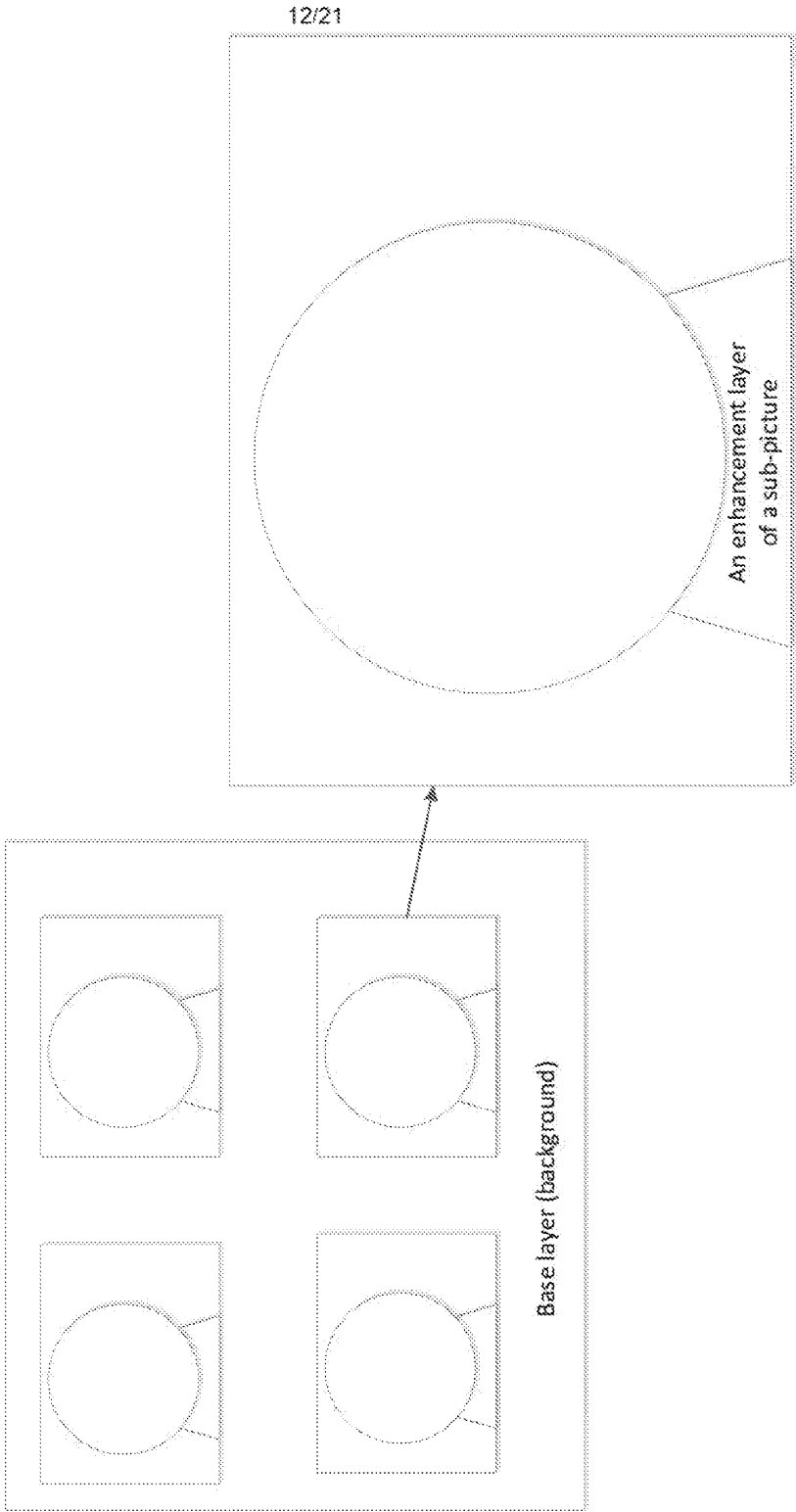
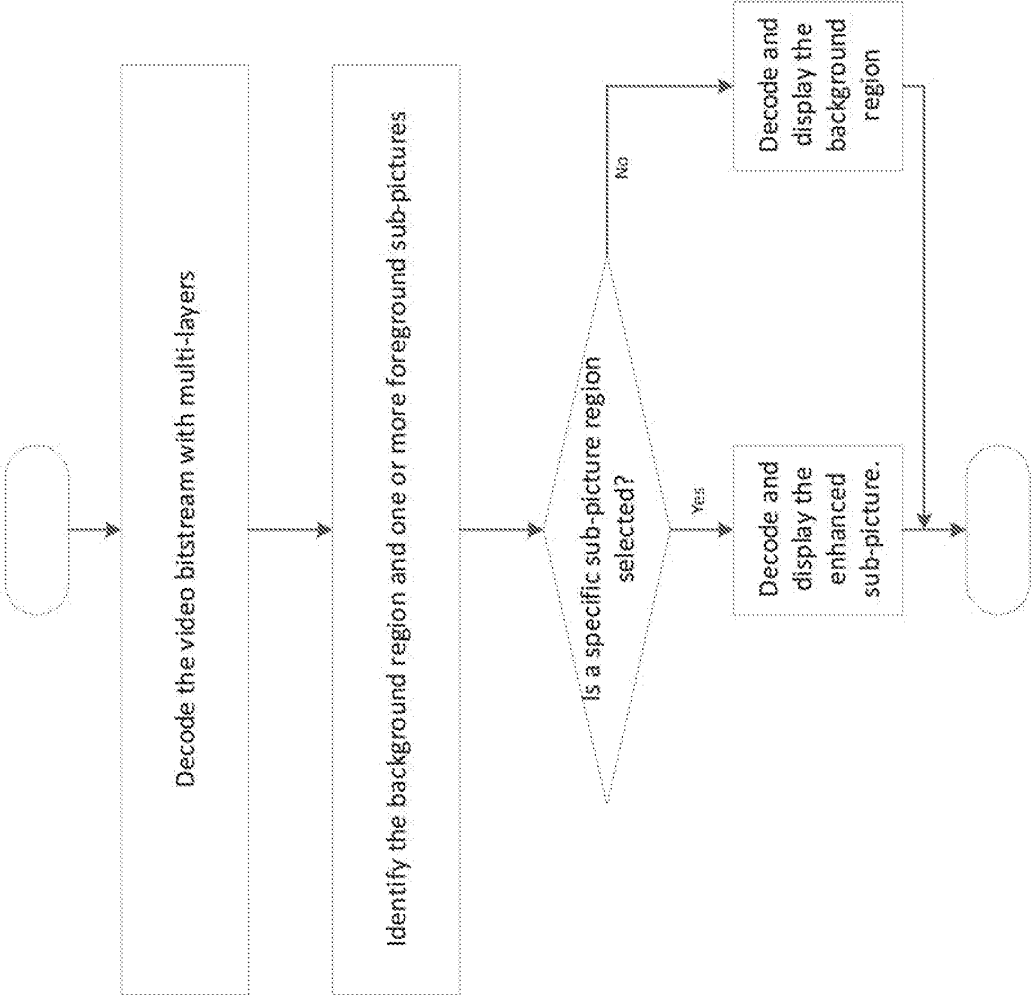


Fig. 13



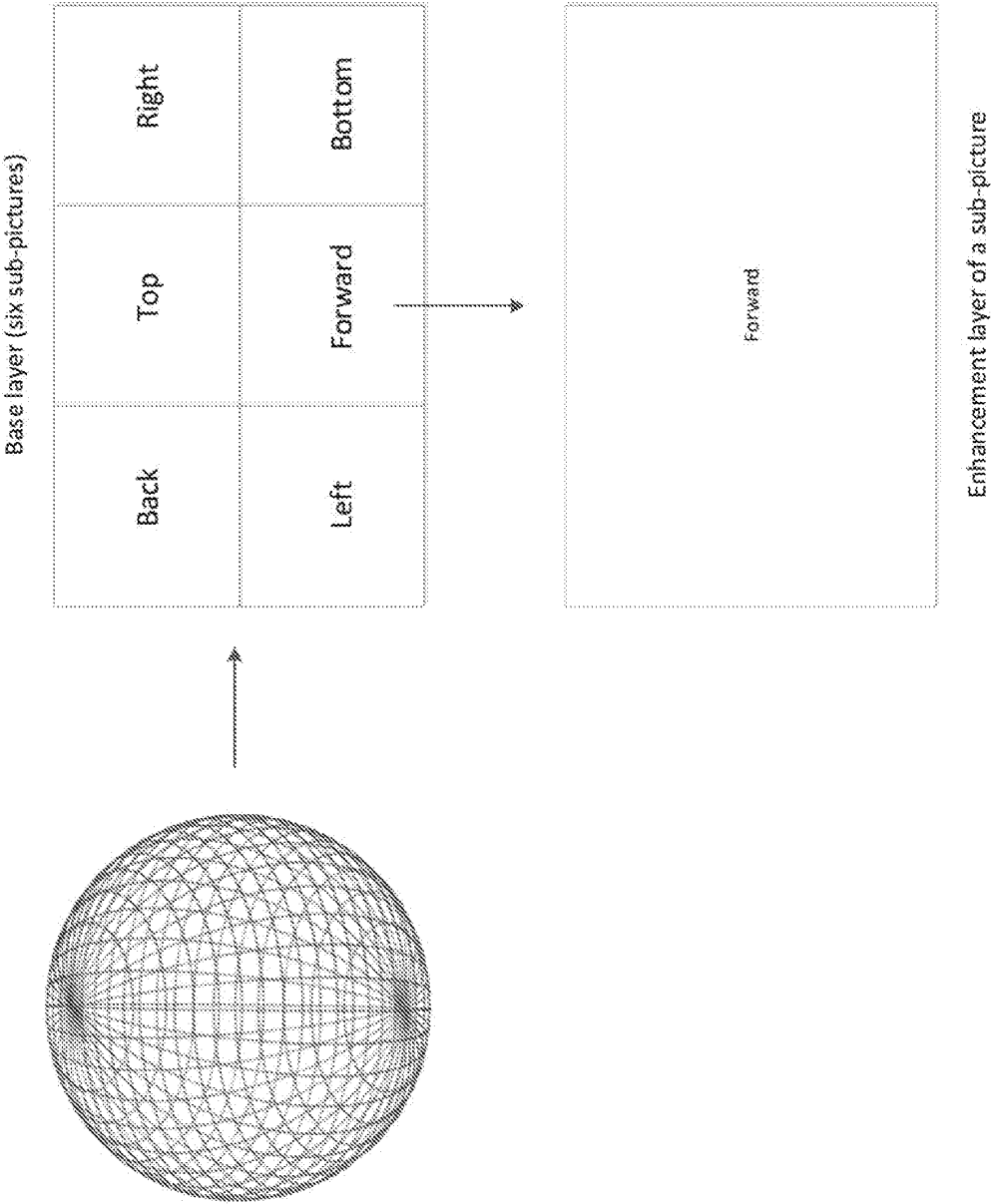


Fig. 14

Fig. 15

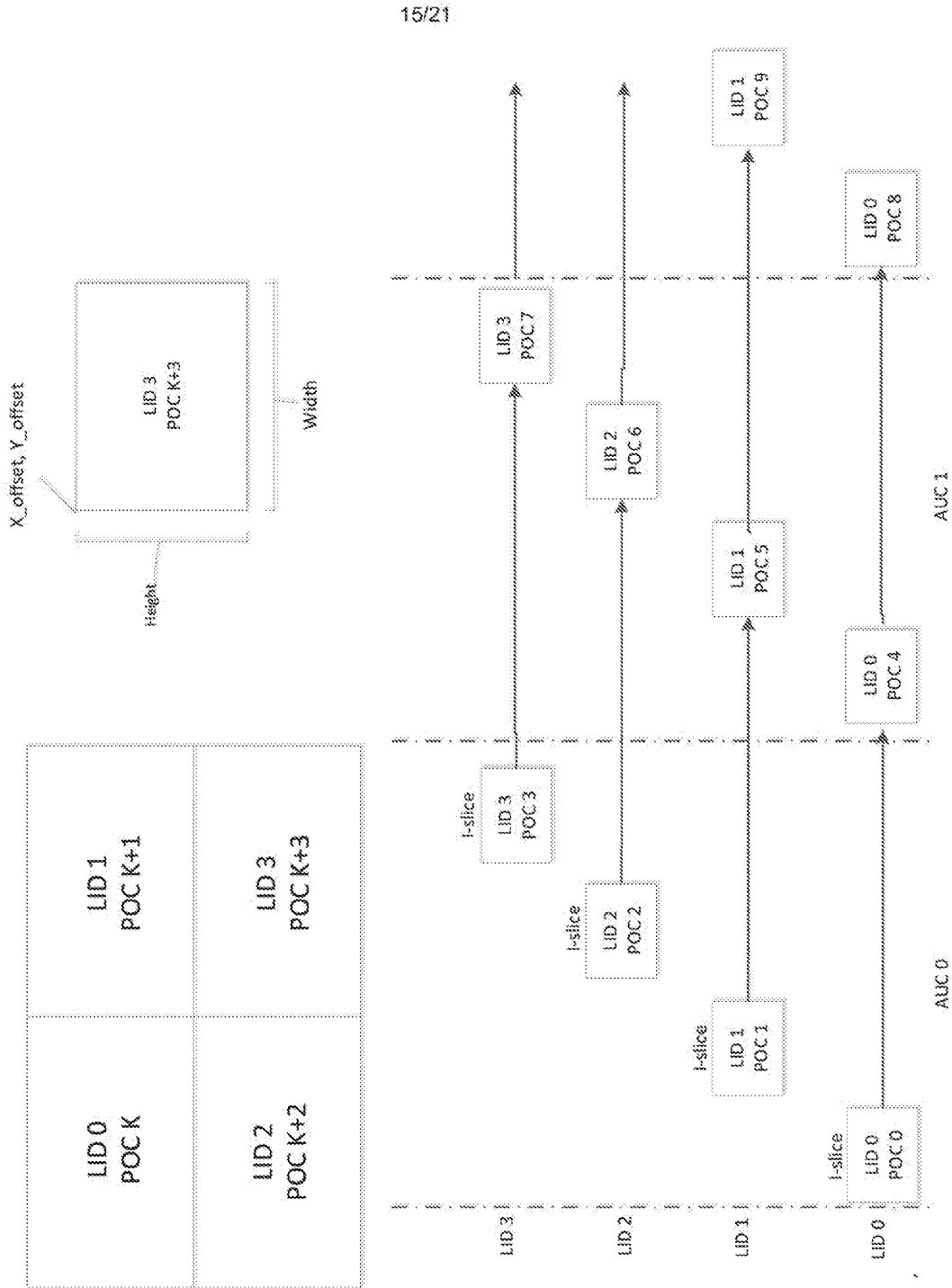


Fig. 16

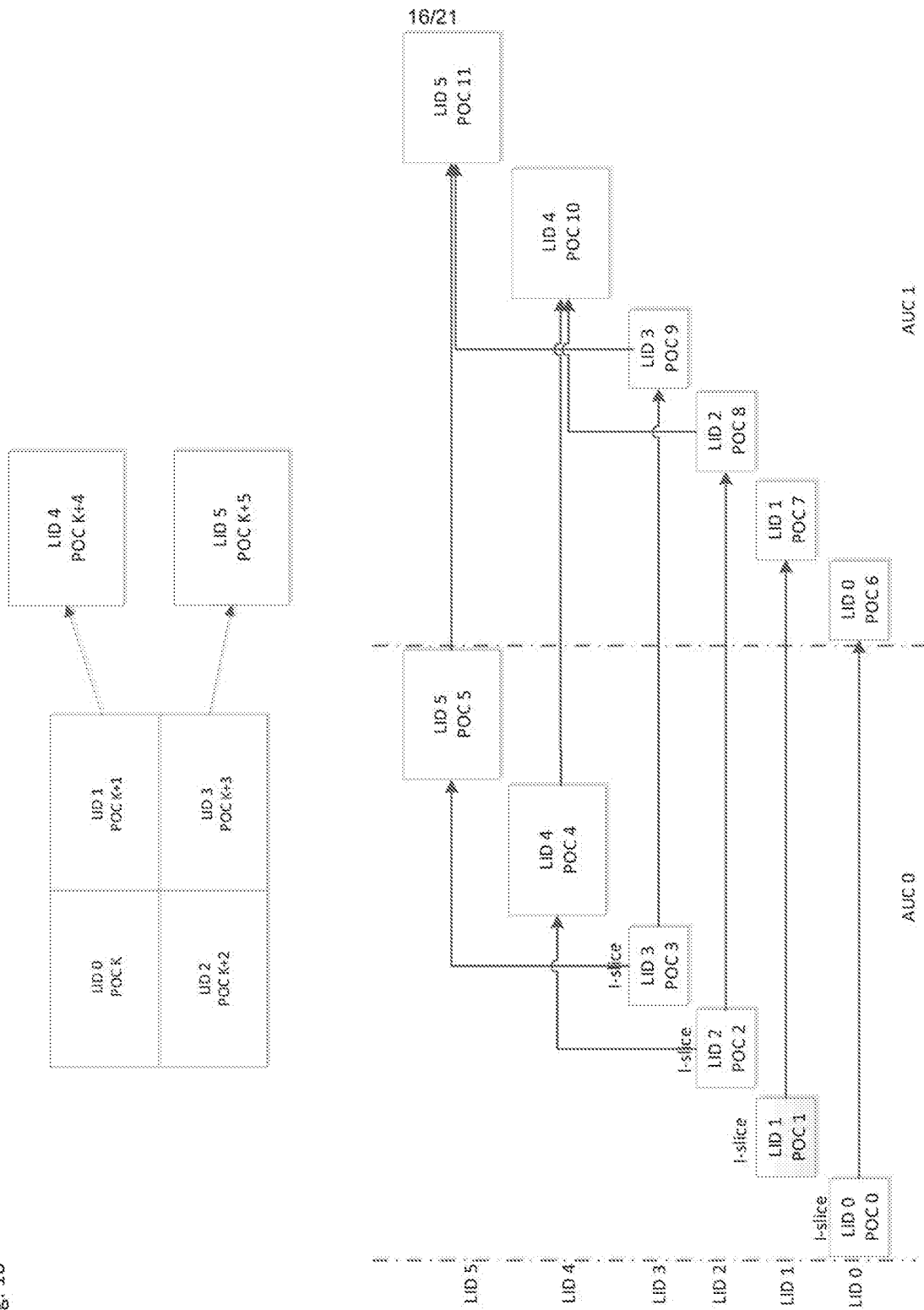


Fig. 17

	Descriptor
video_parameter_set_rbsp() { ^o	u(4) ^o
vps_video_parameter_set_id ^o	u(8) ^o
vps_max_layers_minus1 ^o	e ^o
for(i = 0; i <= vps_max_layers_minus1; i++) { ^o	
vps_included_layer_id[i] ^o	u(7) ^o
vps_reserved_zero_bit ^o	u(1) ^o
} ^o	e ^o
... ^o	e ^o
vps_sub_picture_dividing_flag ^o	u(1) ^o
if(vps_sub_picture_dividing_flag) { ^o	e ^o
vps_full_pic_width_in_luma_samples ^o	ue(v) ^o
vps_full_pic_height_in_luma_samples ^o	ue(v) ^o
} ^o	e ^o
... ^o	e ^o
} ^o	e ^o

	Descriptor
seq_parameter_set_rbsp() { ^o	u(4) ^o
vps_decoding_parameter_set_id ^o	u(4) ^o
vps_video_parameter_set_id ^o	u(3) ^o
vps_max_sub_layers_minus1 ^o	e ^o
... ^o	e ^o
pic_width_in_luma_samples ^o	ue(v) ^o
pic_height_in_luma_samples ^o	ue(v) ^o
if(vps_sub_picture_dividing_flag) { ^o	e ^o
pic_offset_x ^o	ue(v) ^o
pic_offset_y ^o	ue(v) ^o
} ^o	e ^o
... ^o	e ^o
} ^o	e ^o

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Descriptor	
sub_region_partitioning_info(payloadSize) { ²	
num_sub_region ²	ue(v) ²
num_layers ²	ue(v) ²
for(j = 0; j <= num_layers; i++) ²	e ²
layer_id[i] ²	ue(v) ²
for(i = 1; i < num_layers; i++) ²	e ²
for(j = 0; j < i; j++) ²	e ²
direct_dependency_flag[i][j] ²	u(1) ²
for(j = 0; j < num_sub_region; i++) { ²	e ²
num_layers_for_region[i] ²	ue(v) ²
for(i = 0; i < num_layers_for_region[i]; i++) ²	e ²
sub_region_layer_id[i][j] ²	ue(v) ²
sub_region_offset_x[i] ²	ue(v) ²
sub_region_offset_y[i] ²	ue(v) ²
sub_region_width[i] ²	ue(v) ²
sub_region_height[i] ²	ue(v) ²
} ²	e ²
... ²	e ²
} ²	e ²

Fig. 18

Fig. 20

	Descriptor
video_parameter_set_rbsp() {	
...	
vps_max_layers_minus1	u(6)
if(vps_max_layers_minus1 > 0) {	
num_output_layer_sets	ue(v)
num_profile_tier_level	ue(v)
}	
for(i = 0; i < num_profile_tier_level; i++)	
profile_tier_level[vps_max_sub_layers_minus1]	
for(i = 0; i < num_output_layer_sets; i++) {	
vps_output_layers_mode[i]	u(2)
vps_pfl_signal_flag[i]	u(1)
for(j = 0; j < NumLayersInList(i); j++) {	
if(vps_output_layers_mode[i] == 2)	
output_layer_flag[i][j]	u(1)
if(vps_pfl_signal_flag[i])	
profile_tier_level_idx[i][j]	u(v)
}	
}	
...	
}	

Fig. 21

	Descriptor
video_parameter_set_rbsp() {	
...	
vps_max_layers_minus1	u(6)
if(vps_max_layers_minus1 > 0) {	
num_output_layer_sets	ue(v)
num_profile_tier_level	ue(v)
}	
max_subpics_minus1	u(8)
for(i = 0; i < max_subpics_minus1; i++) {	
sub_pic_id[i]	u(8)
}	
for(i = 0; i < num_profile_tier_level; i++)	
profile_tier_level[vps_max_sub_layers_minus1]	
for(i = 0; i < num_output_layer_sets; i++) {	
vps_output_layers_mode[i]	u(2)
vps_ptl_signal_flag[i]	u(1)
for(j = 0; j < NumLayersInIdList(i); j++) {	
num_output_subpic_layer[i][j]	ue(v)
for(k = 0; k < num_output_subpic_layer[i][j]; k++)	
sub_pic_id_layer[i][j][k]	u(8)
if(vps_output_layers_mode[i] == 2)	
output_layer_flag[i][j]	u(1)
if vps_ptl_signal_flag[i])	
profile_tier_level_idx[i][j]	u(v)
}	
}	
...	
}	