

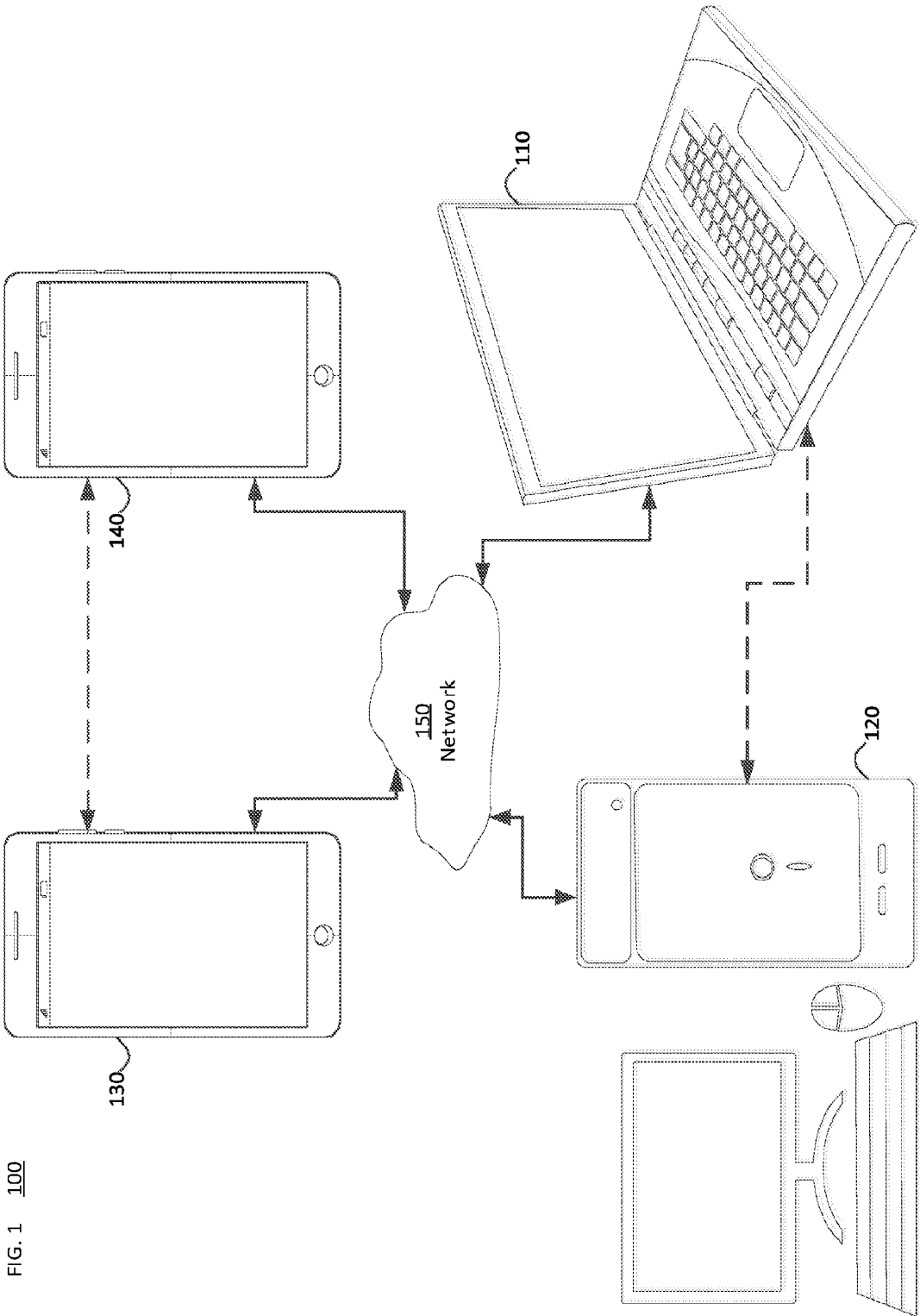


FIG. 1 100

FIG. 2 Streaming System 200

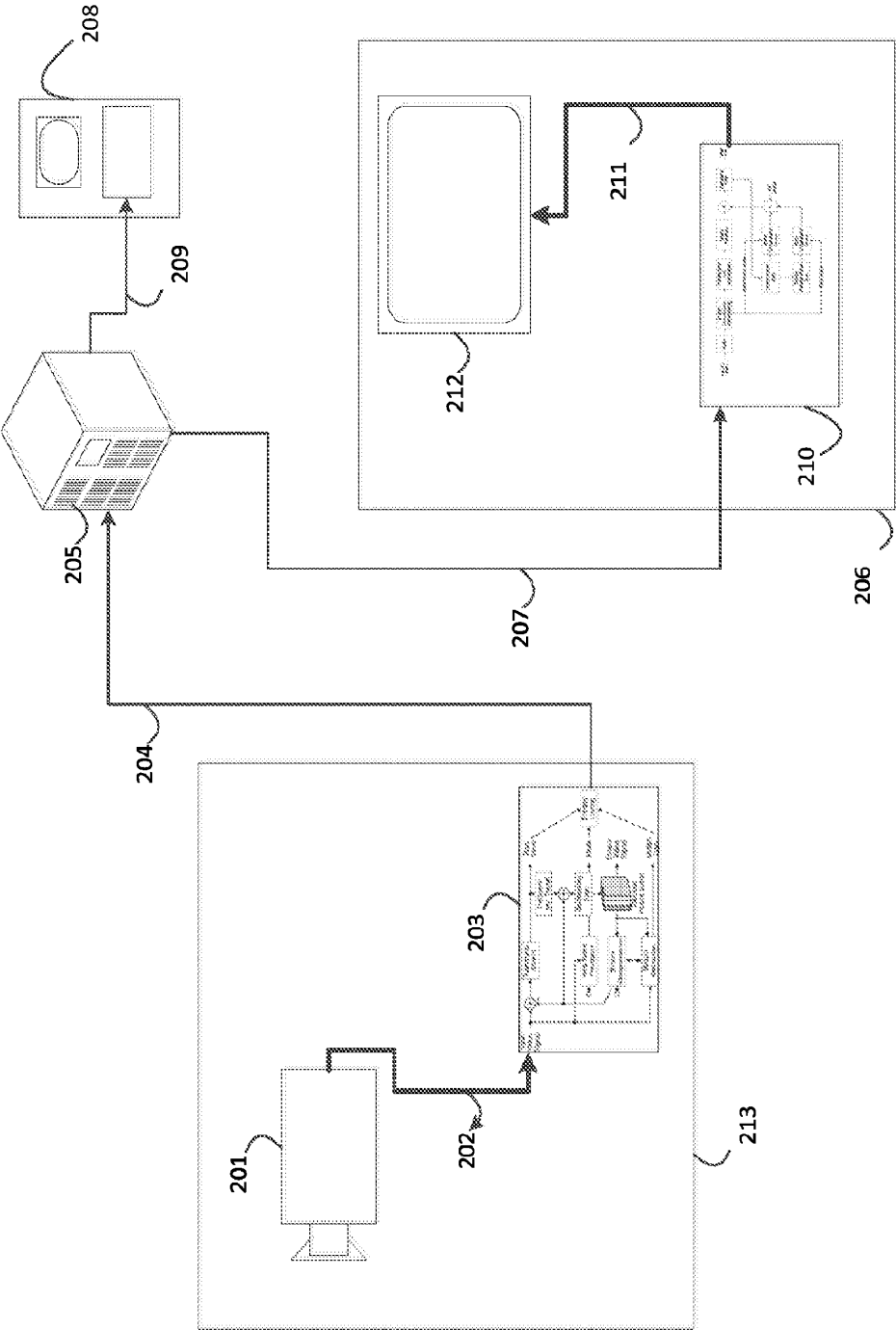


FIG. 3 Decoder 210

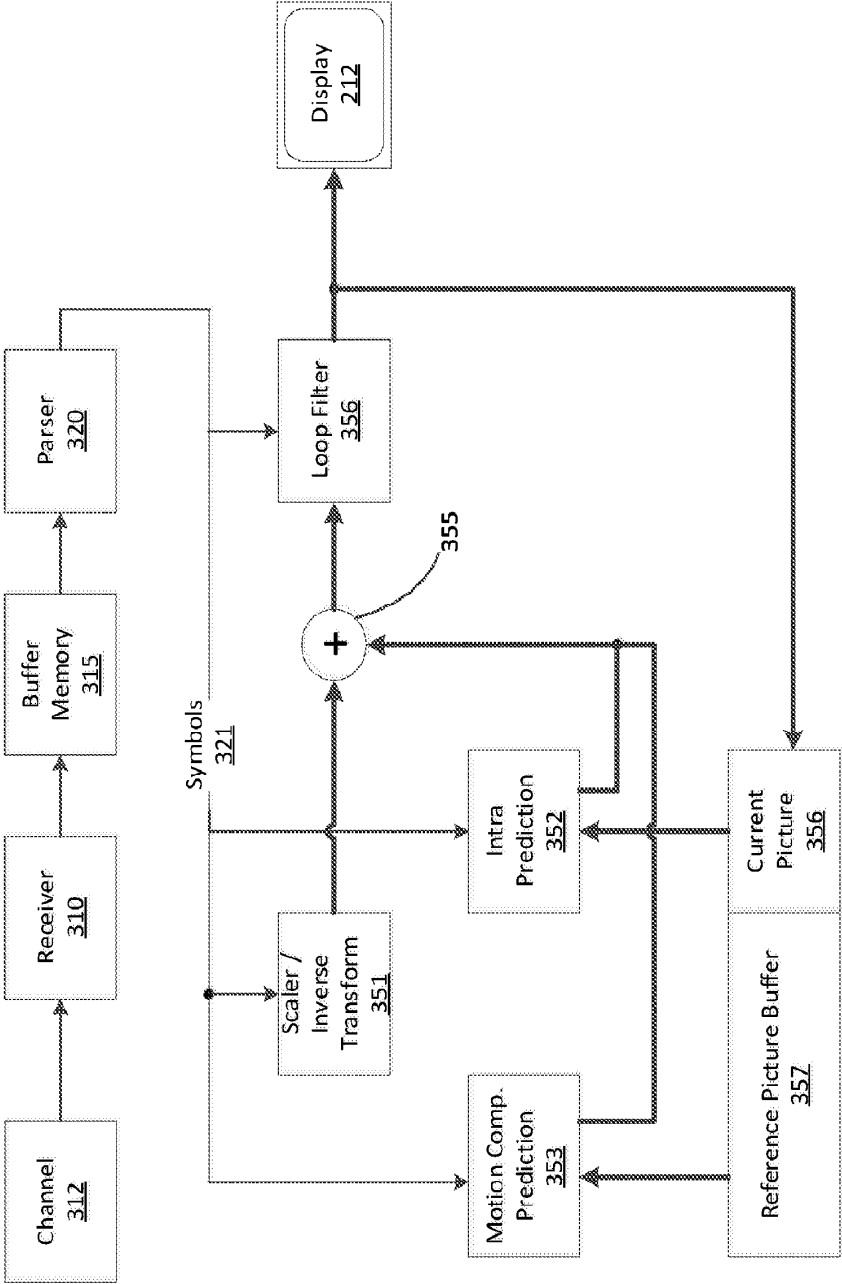
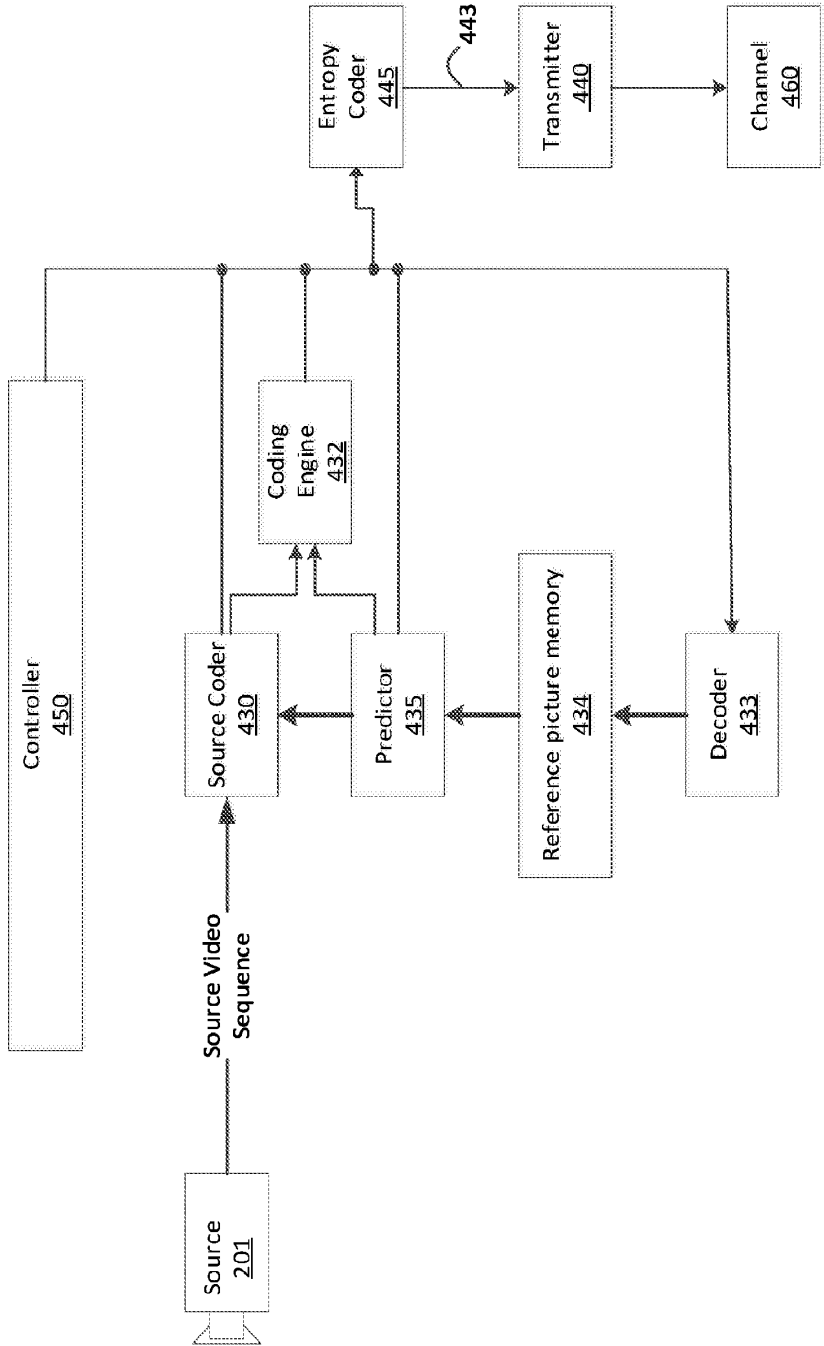
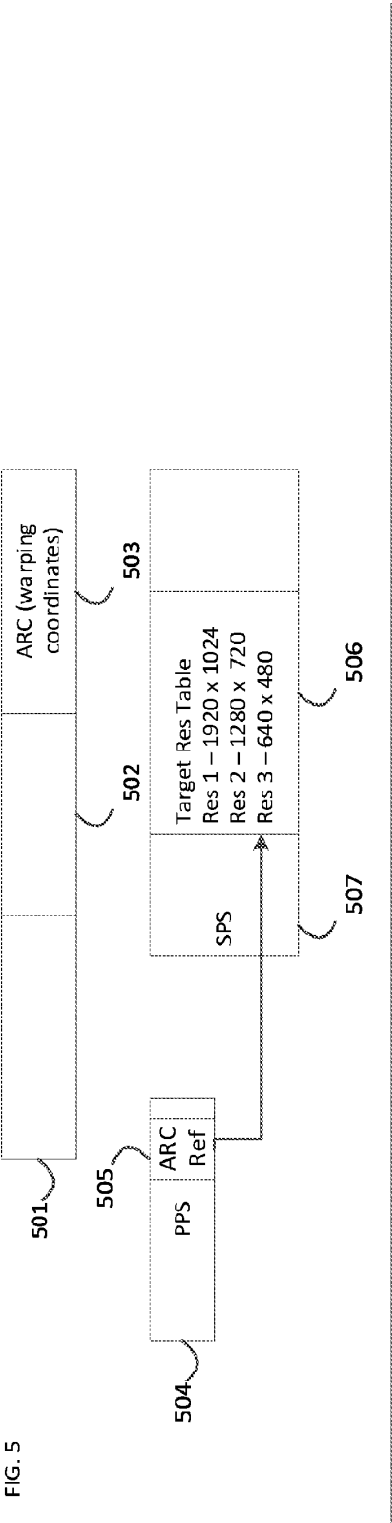
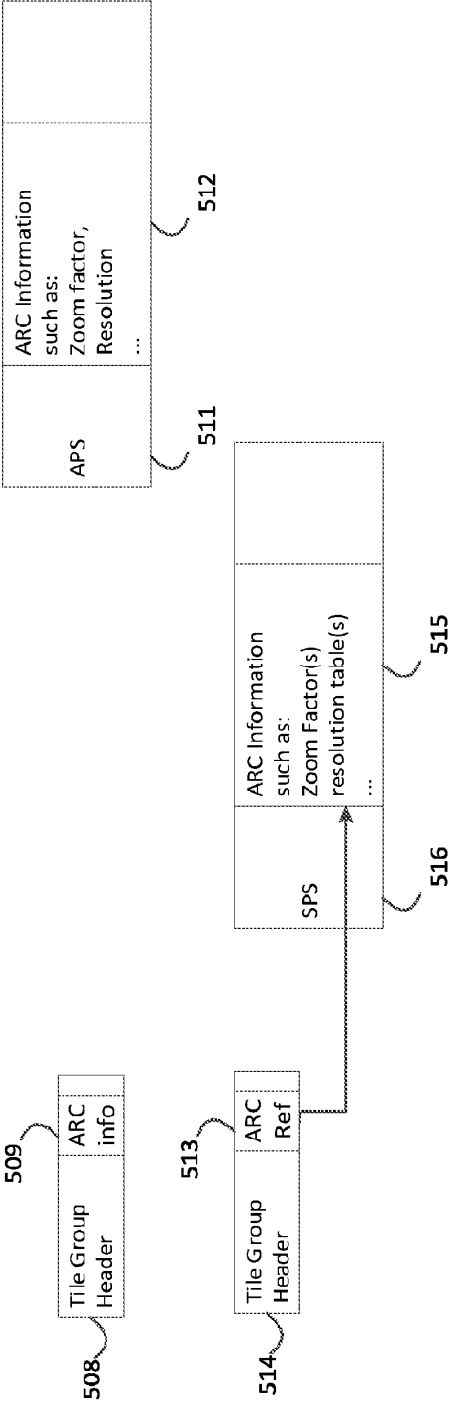


FIG. 4 Encoder 203





Disclosed Subject
Matter



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

Fig. 6

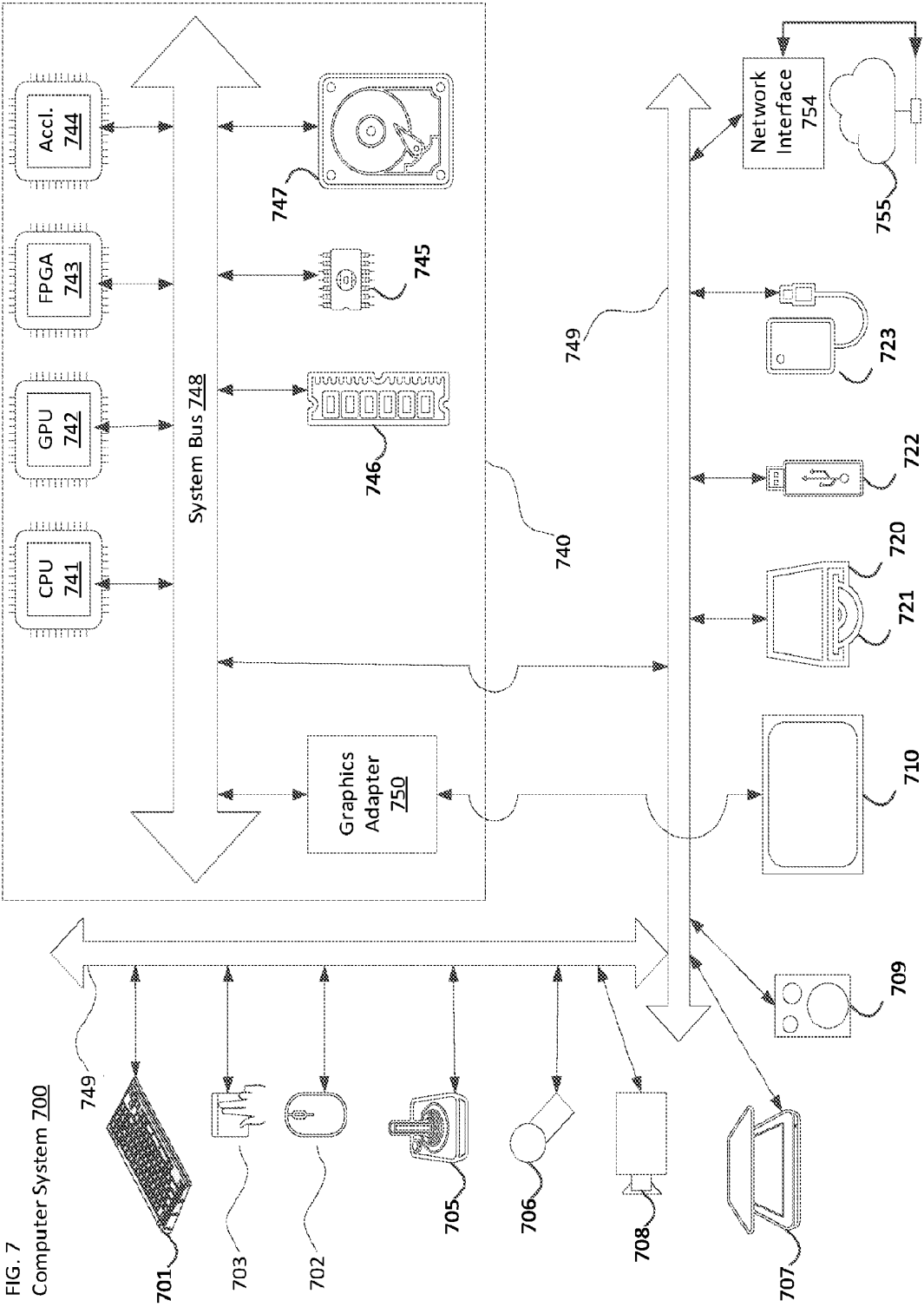


FIG. 7
Computer System 700

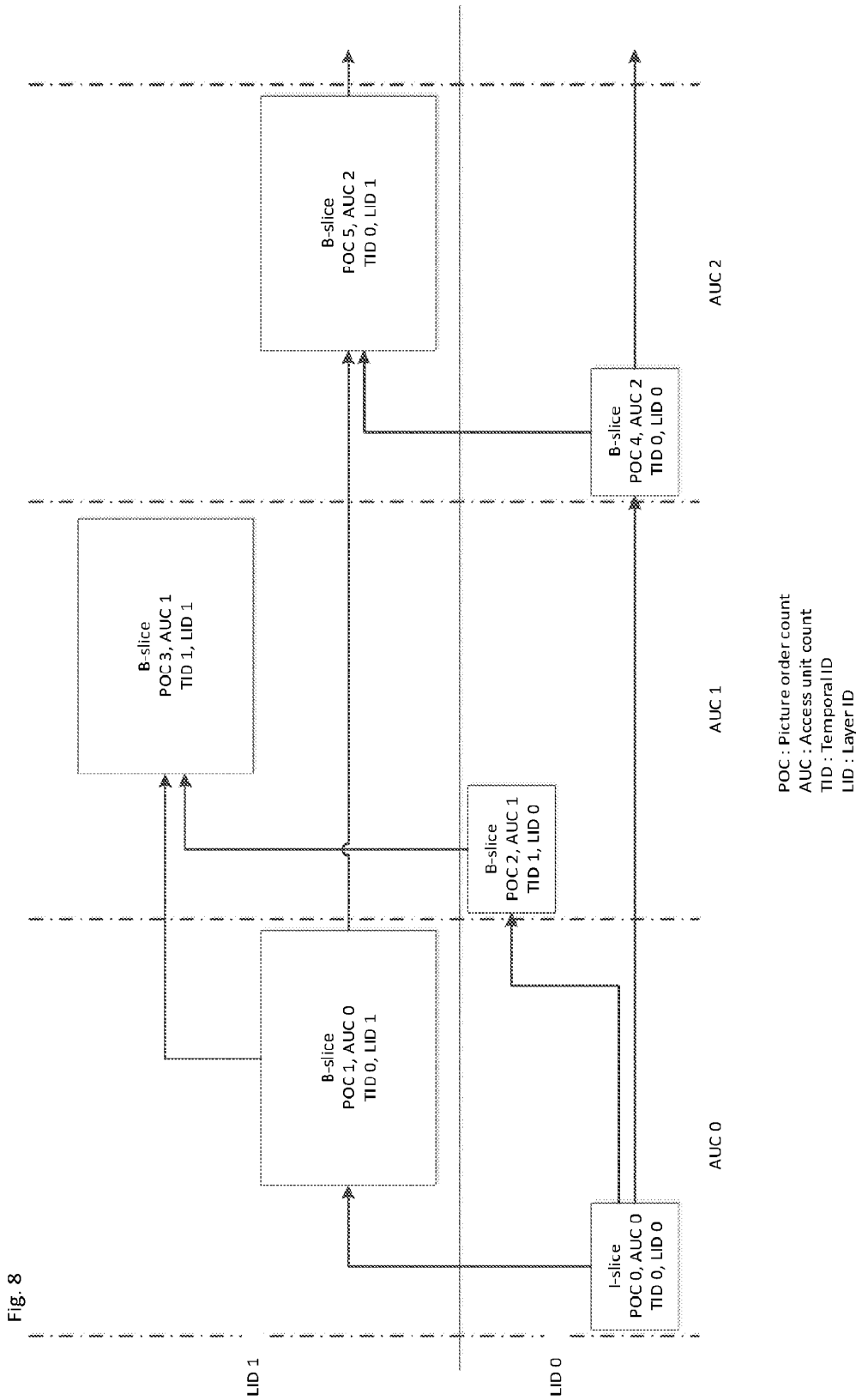


Fig. 9

	Descriptor
video_parameters_def_struct {	
xps_video_parameter_set_id	u(4)
xps_max_layers_minus1	u(8)
for(i = 0; i <= xps_max_layers_minus1; i++) {	
xps_included_layer_id[i]	u(7)
xps_reserved_zero_bit	u(1)
}	
xps_constraint_info_present_flag	u(1)
xps_constant_poc_cycle_per_an	u(1)
if(xps_constant_poc_cycle_per_an)	
xps_poc_cycle_an	u(8)
...	
}	
"	
slice_header() {	
slice_pic_parameter_set_id	ue(v)
if(rect_slice_flag NumBricksInPic > 1)	
slice_address	u(v)
if(rect_slice_flag && (single_brick_per_slice_flag))	
num_bricks_in_slice_minus1	u(v)
slice_type	ue(v)
if(NatUnitType == GRA_NUT)	
recovery_poc_cnr	se(v)
slice_pic_order_cnt_lsb	u(v)
...	
if(xps_constant_poc_cycle_per_an)	
slice_poc_cycle_an	u(8)
}	

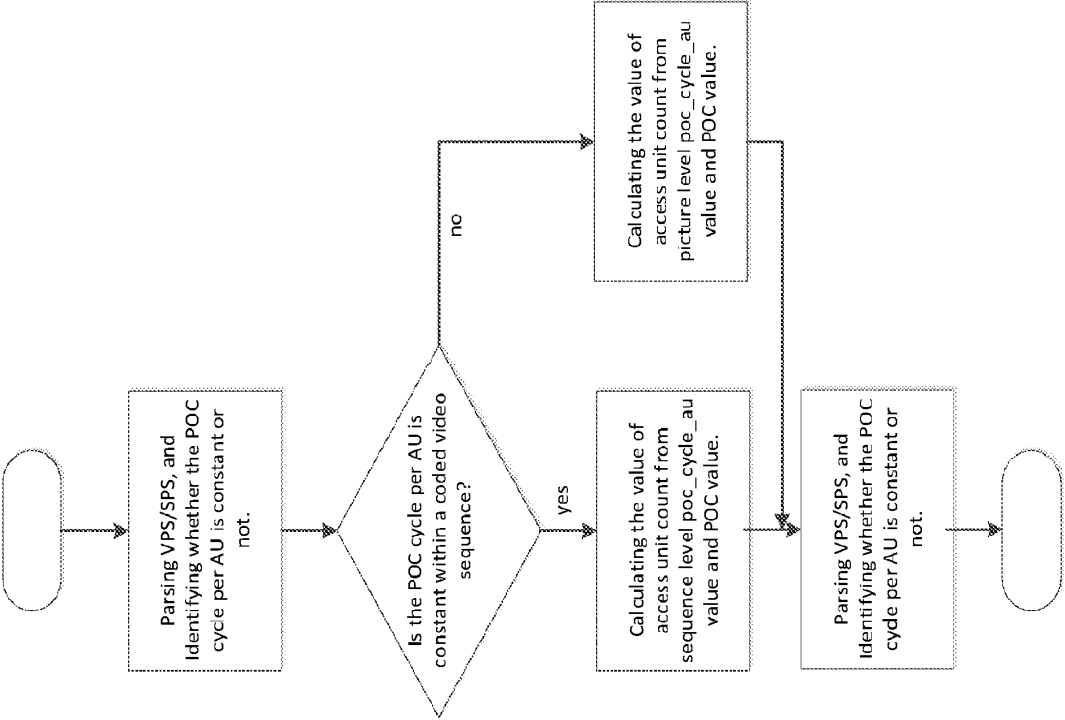


Fig. 10

FIG. 11

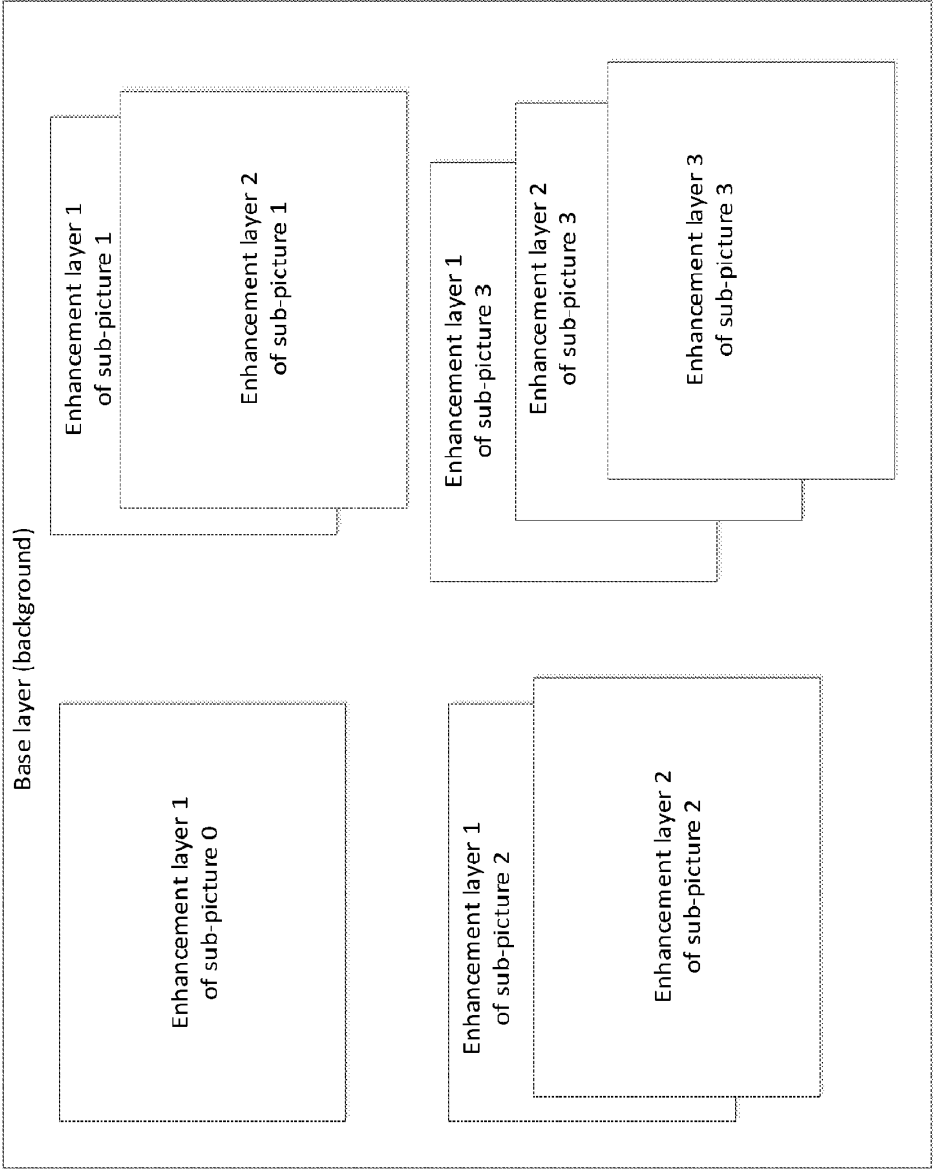
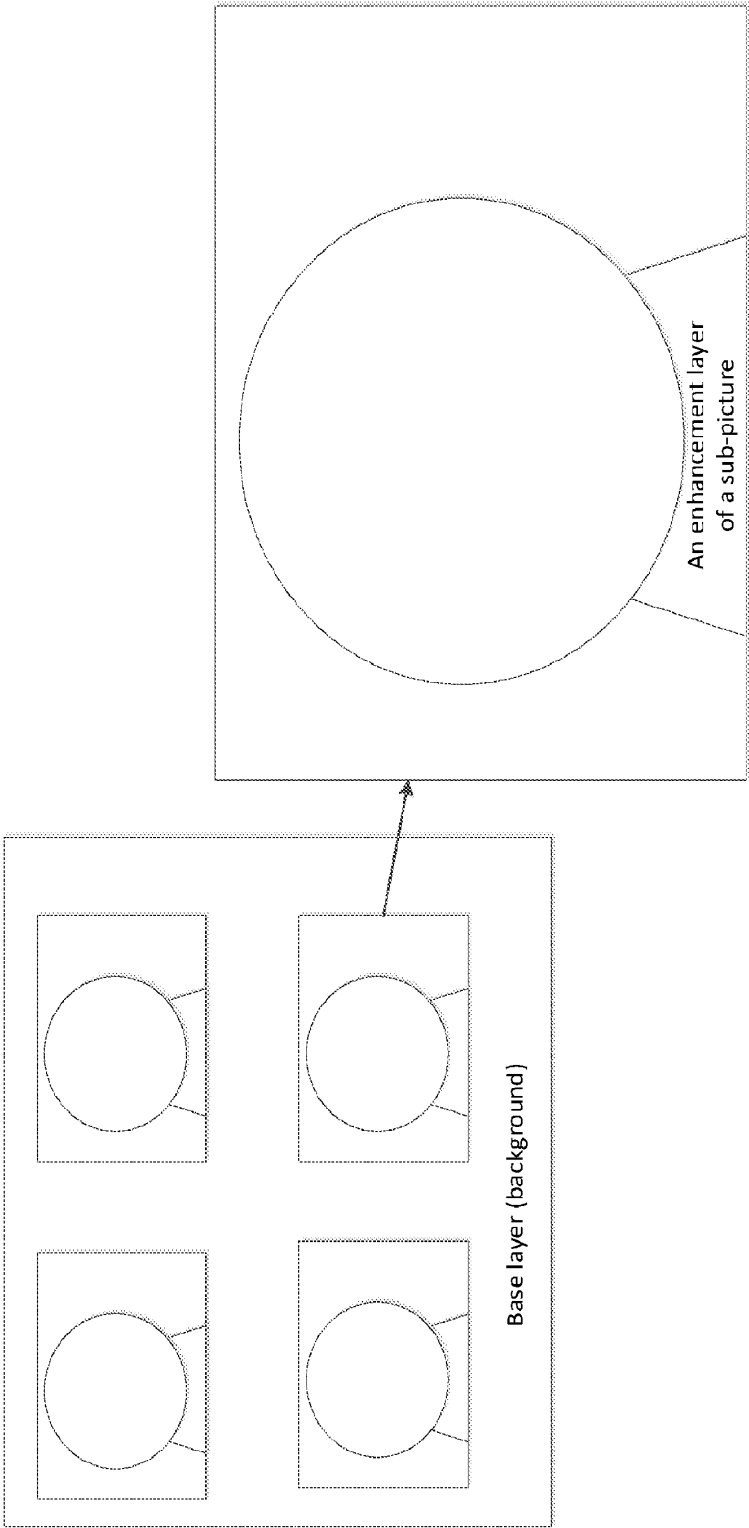


FIG. 12



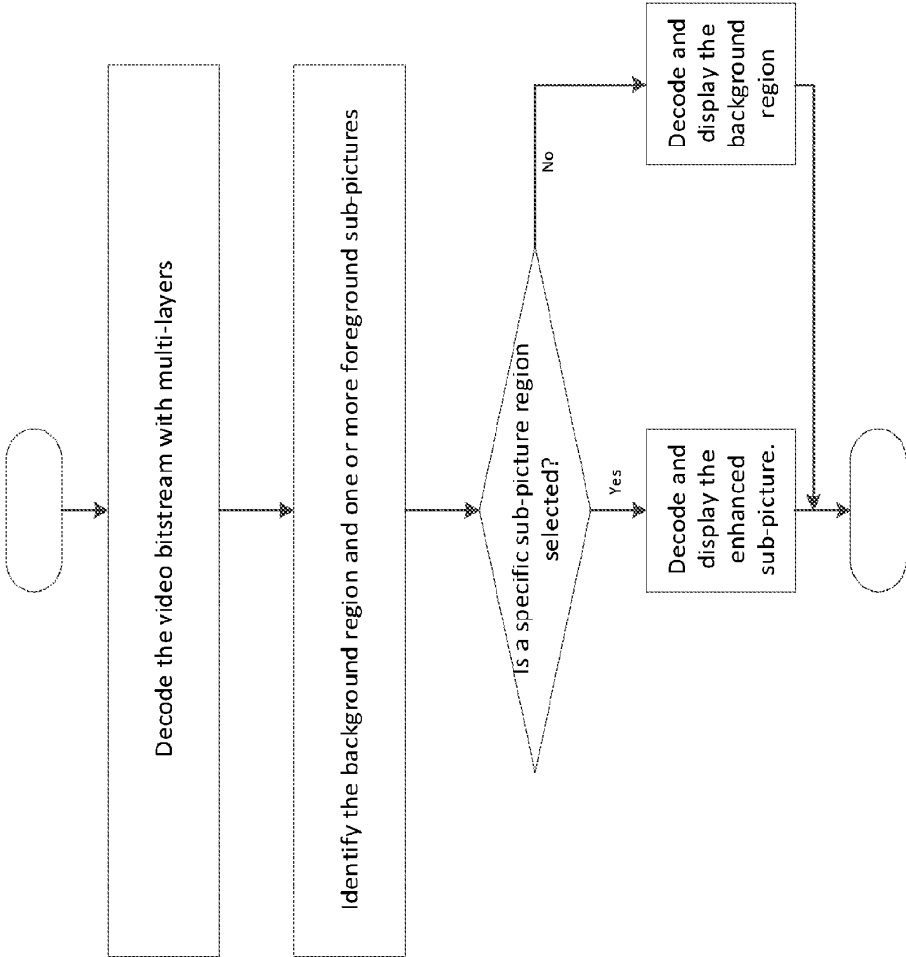


Fig. 13

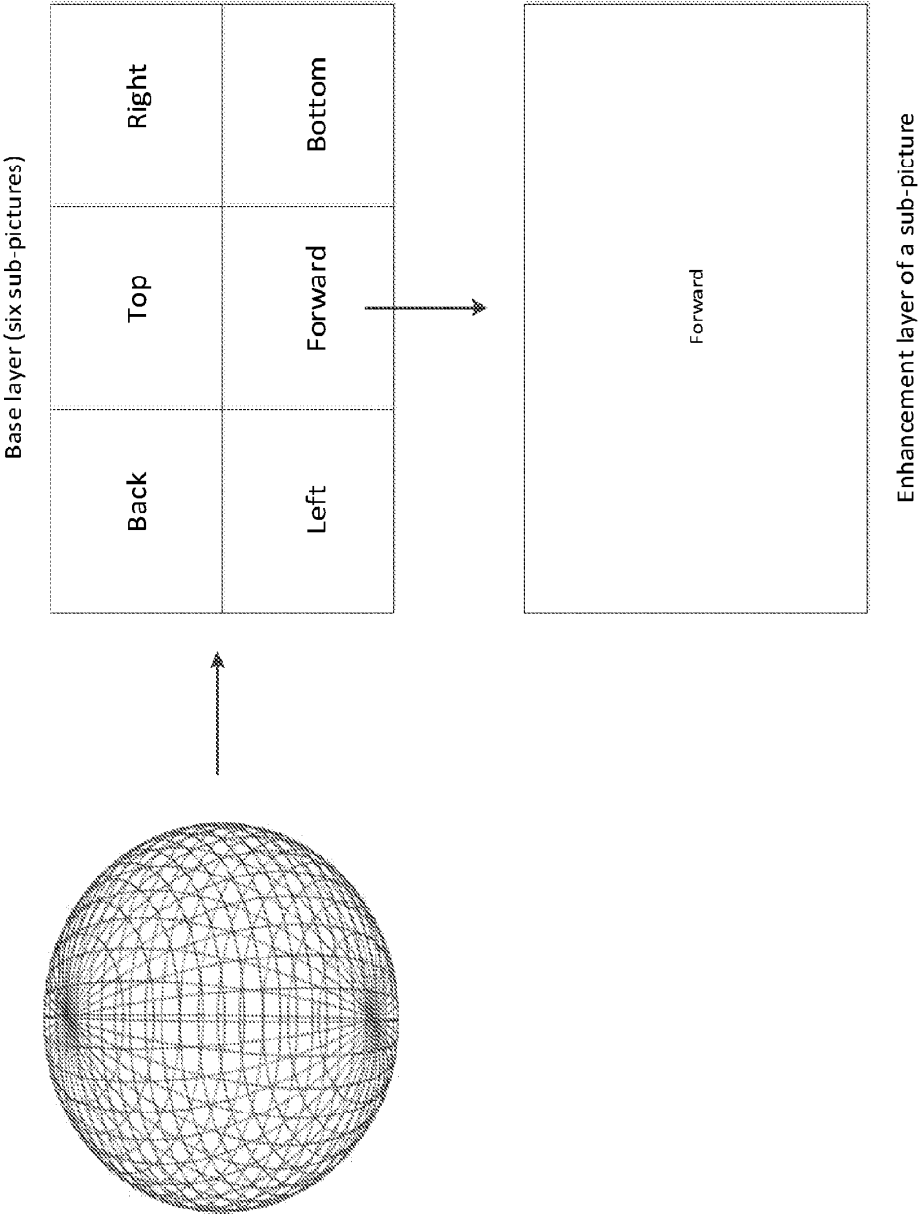


Fig. 14

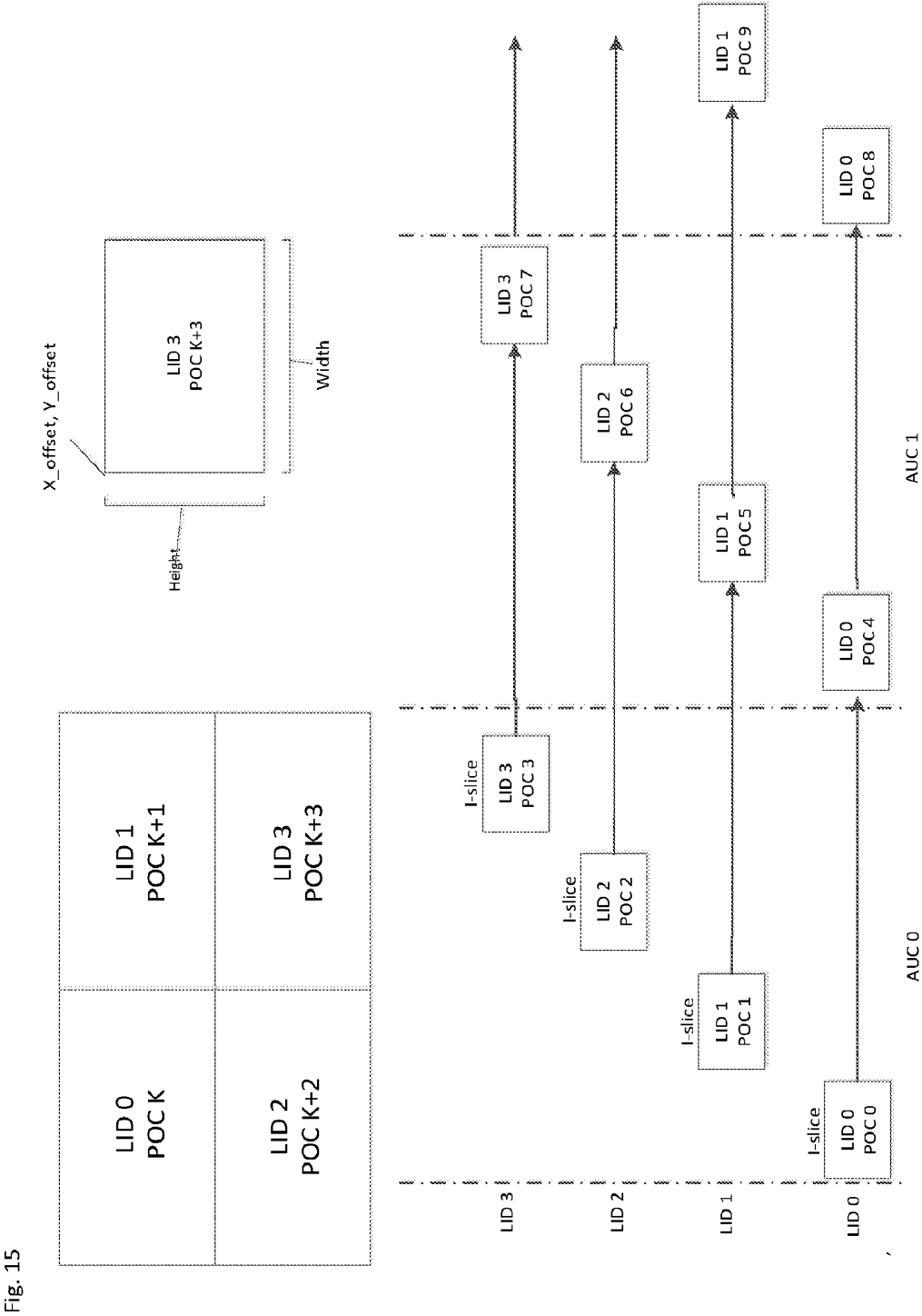


Fig. 16

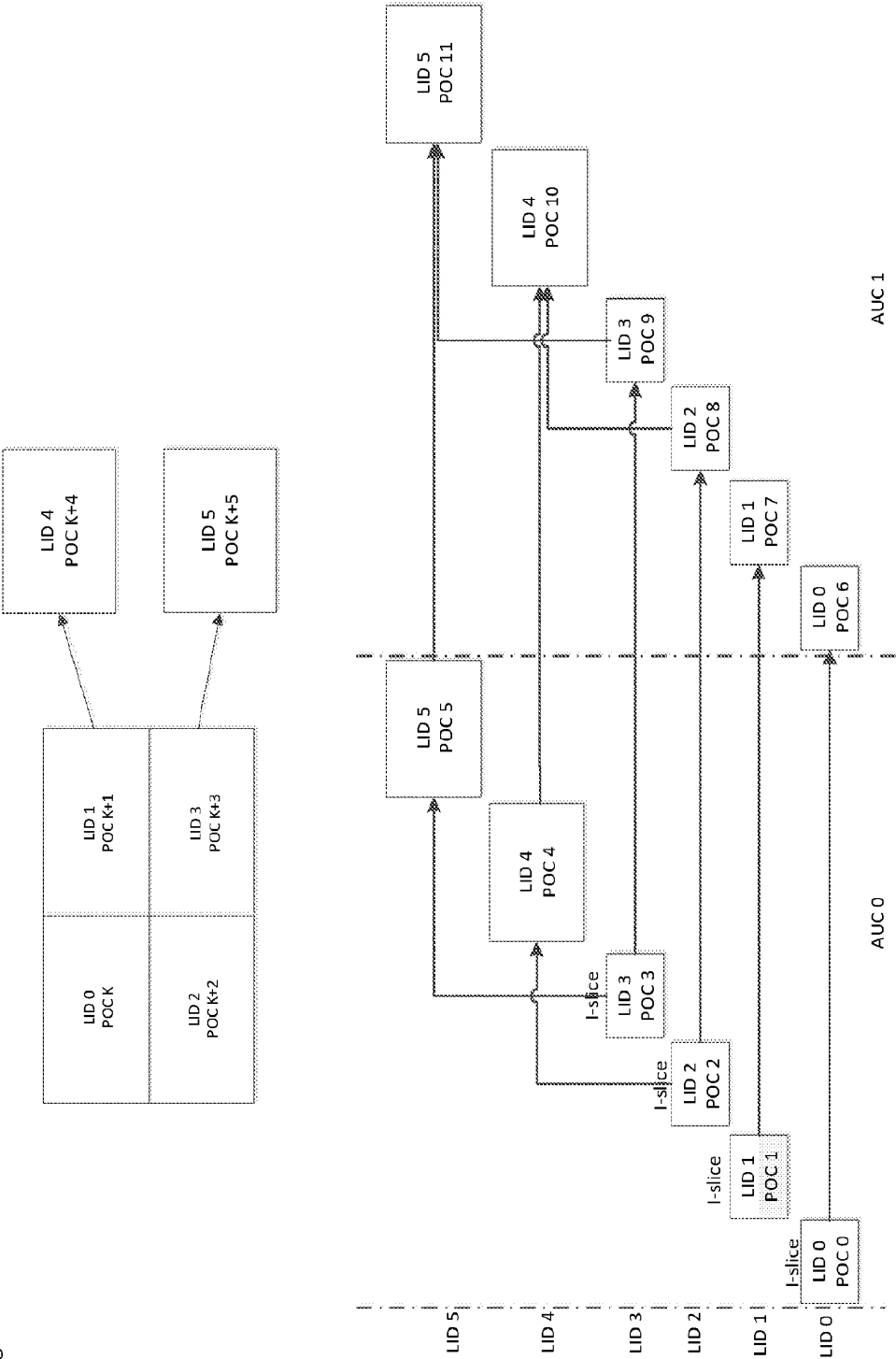


Fig. 17

	Descriptor
video_parameters_set_chop() {	
vps_video_parameter_set_id	u(4)
vps_max_layers_minus1	u(3)
for(i = 0; i <= vps_max_layers_minus1; i++) {	
vps_included_layer_id[i]	u(7)
vps_reserved_zero_bit	u(1)
}	
...	
vps_sub_picture_dividing_flag	u(1)
if(vps_sub_picture_dividing_flag) {	
vps_full_pic_width_in_luma_samples	u(1)
vps_full_pic_height_in_luma_samples	u(1)
}	
...	
}	
seq_parameter_set_rbsp() {	
sps_decoding_parameter_set_id	u(4)
sps_video_parameter_set_id	u(4)
vps_max_sub_layers_minus1	u(3)
...	
pic_width_in_luma_samples	u(1)
pic_height_in_luma_samples	u(1)
if(vps_sub_picture_dividing_flag) {	
pic_offset_x	u(1)
pic_offset_y	u(1)
}	
...	
}	

Fig. 18

sub_region_partitioning_info(payloadSize) { num_sub_region num_layers for(i = 0; i <= num_layers; i++) layer_id [i] for(i = 1; i < num_layers; i++) for(j = 0; j < i; j++) direct_dependency_flag [i] [j] for(i = 0; i < num_sub_region; i++) { num_layers_for_region [i] for(j = 0; j < num_layers_for_region [i]; j++) sub_region_layer_id [i] [j] sub_region_offset_x [i] sub_region_offset_y [i] sub_region_width [i] sub_region_height [i] } ... }	Descriptor
	u2(v) ²
	u2(v) ²
	²
	u2(v) ²
	²
	²
	u2(v) ²
	²
	²
	u2(v) ²
	²
	u2(v) ²
	u2(v) ²
	u2(v) ²
	u2(v) ²
	²
	²
	²

Fig. 19

	Descriptor
video_parameter_set_rbsp() {	
...	
vps_max_layers_minus1	u(6)
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++)	
for(j = 0; j < NumLayersInIdList[i]; j++) {	
output_layer_flag[i][j]	u(1)
profile_tier_level_idx[i][j]	u(v)
}	
...	
}	

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_ptl_signal_flag[i]	u(1)
for(j = 0; j < NumLayersInIdList[i]; j++) {	
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)
}	
}	
...	
}	

Fig. 21

video parameter set rsp() {	Descriptor
...	
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_fill[j]	ue(v)
for(k = 0; k < num_output_subpic_layer_fill[j]; k++)	
sub_pic_id_layer_fill[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)
}	
}	
...	
}	