

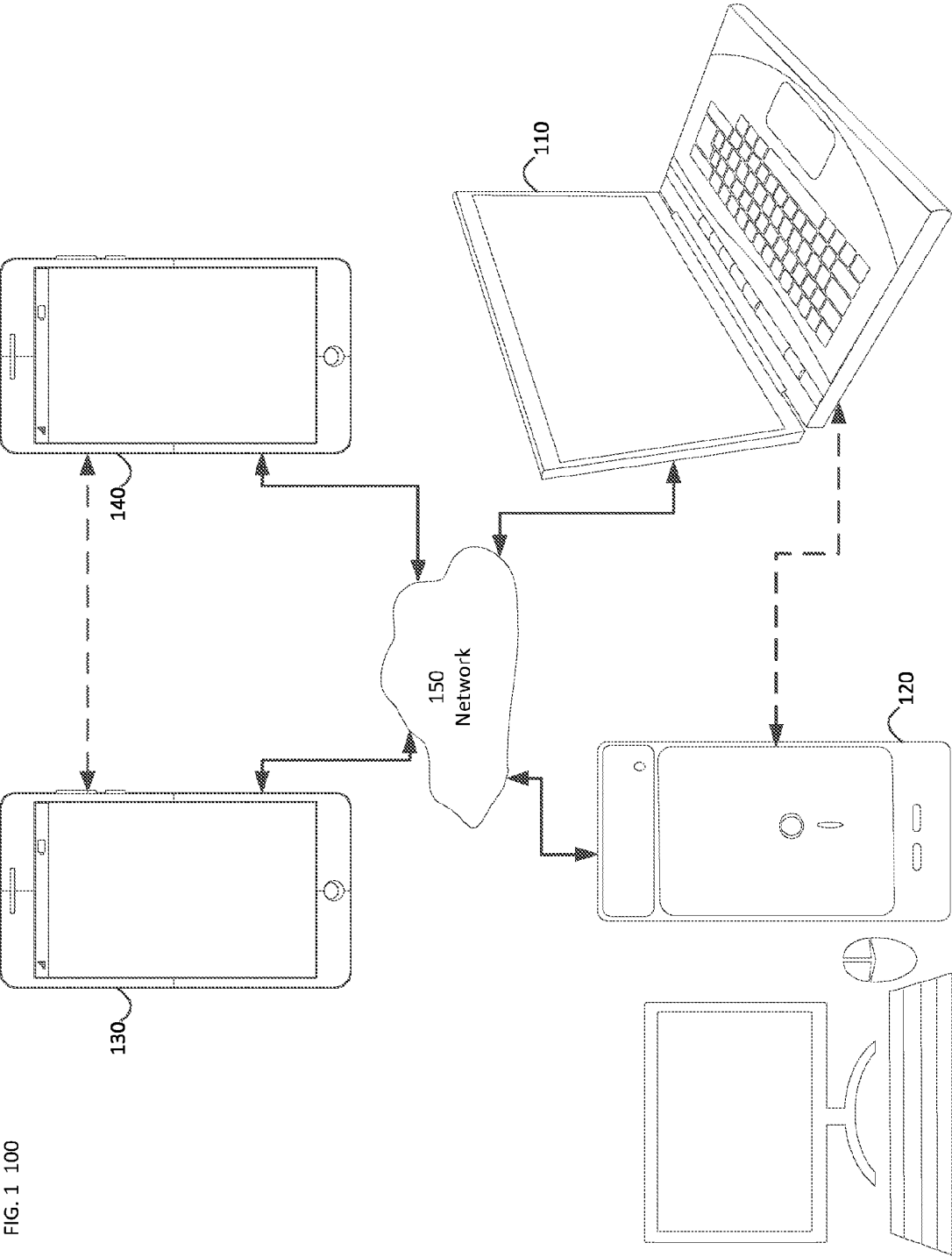


FIG. 1 100

FIG. 2

200

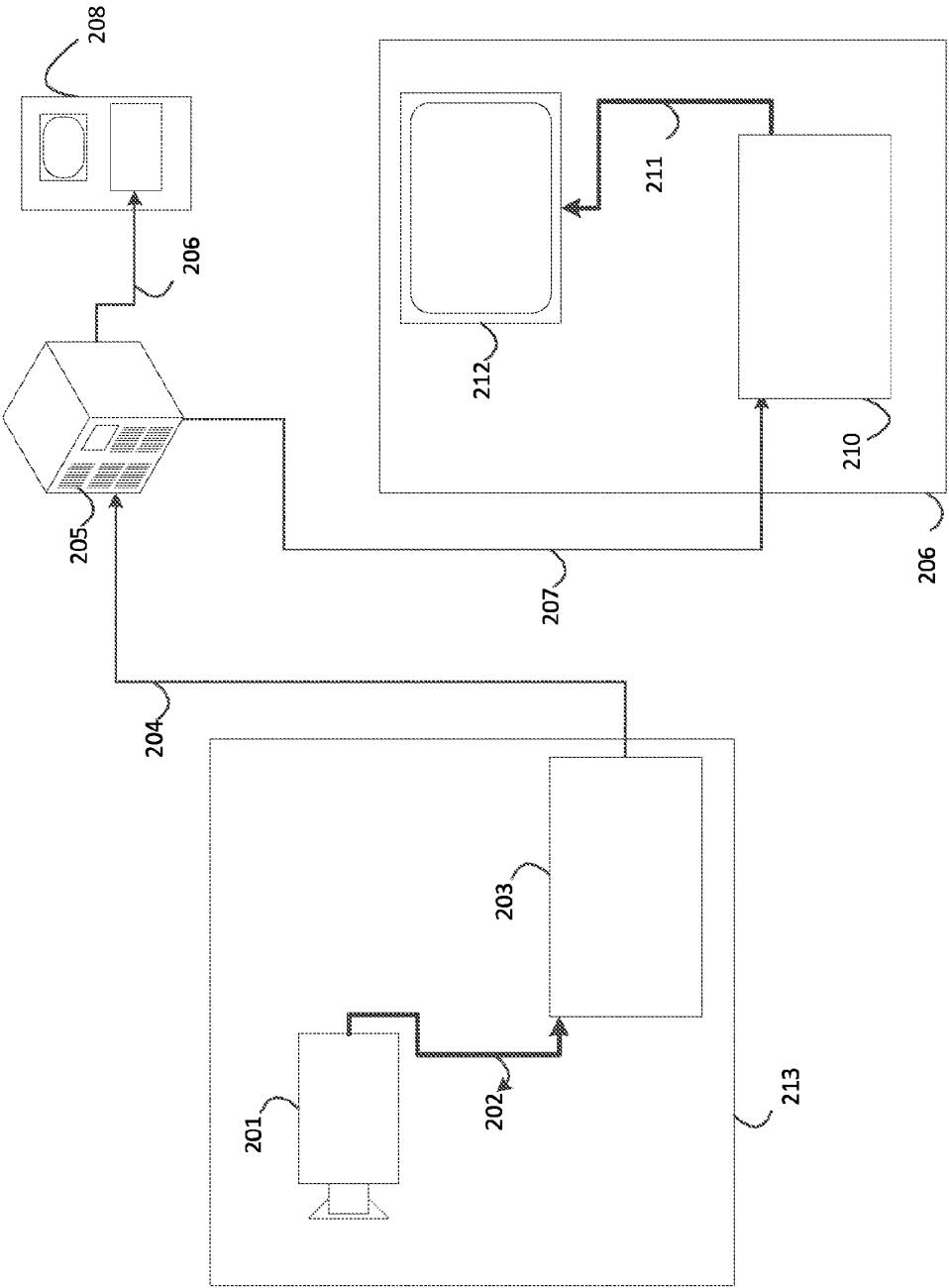


FIG. 3 Decoder 210

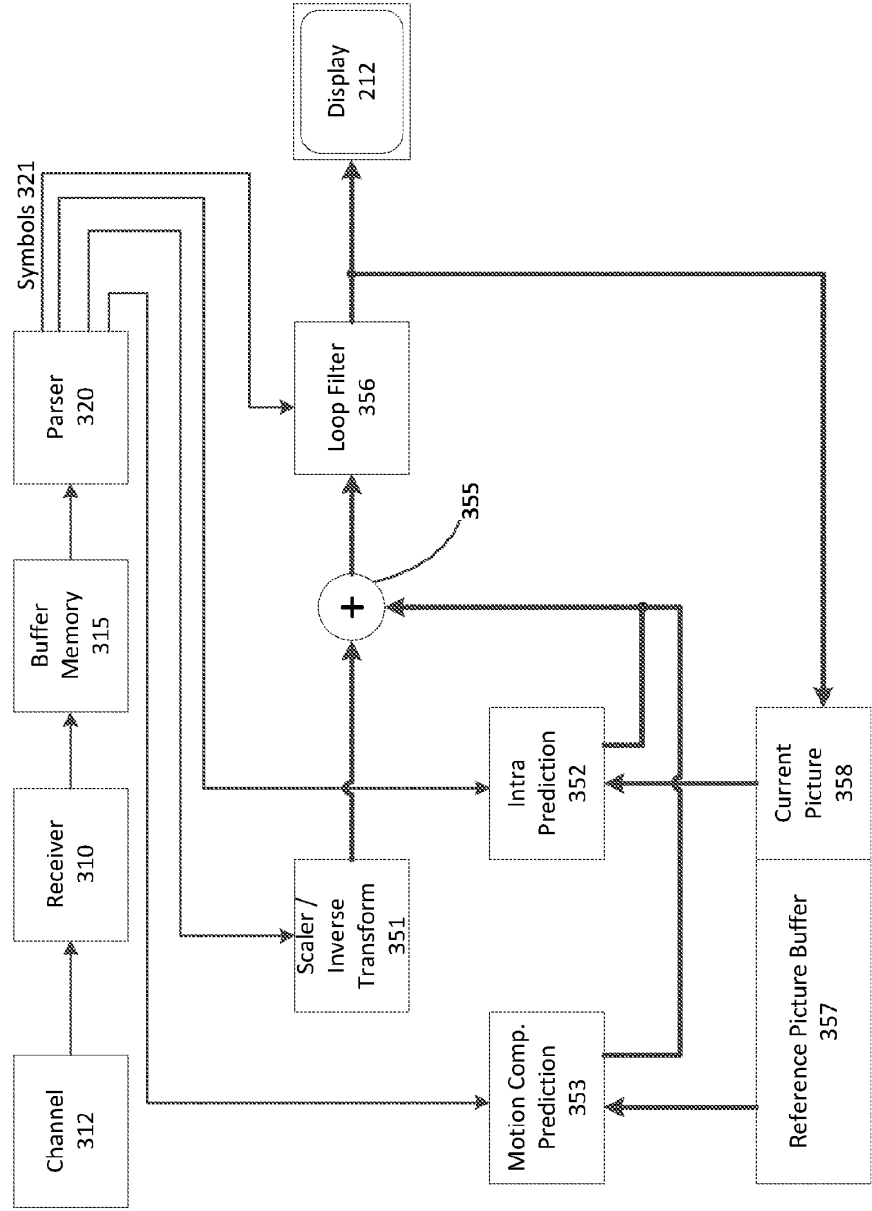
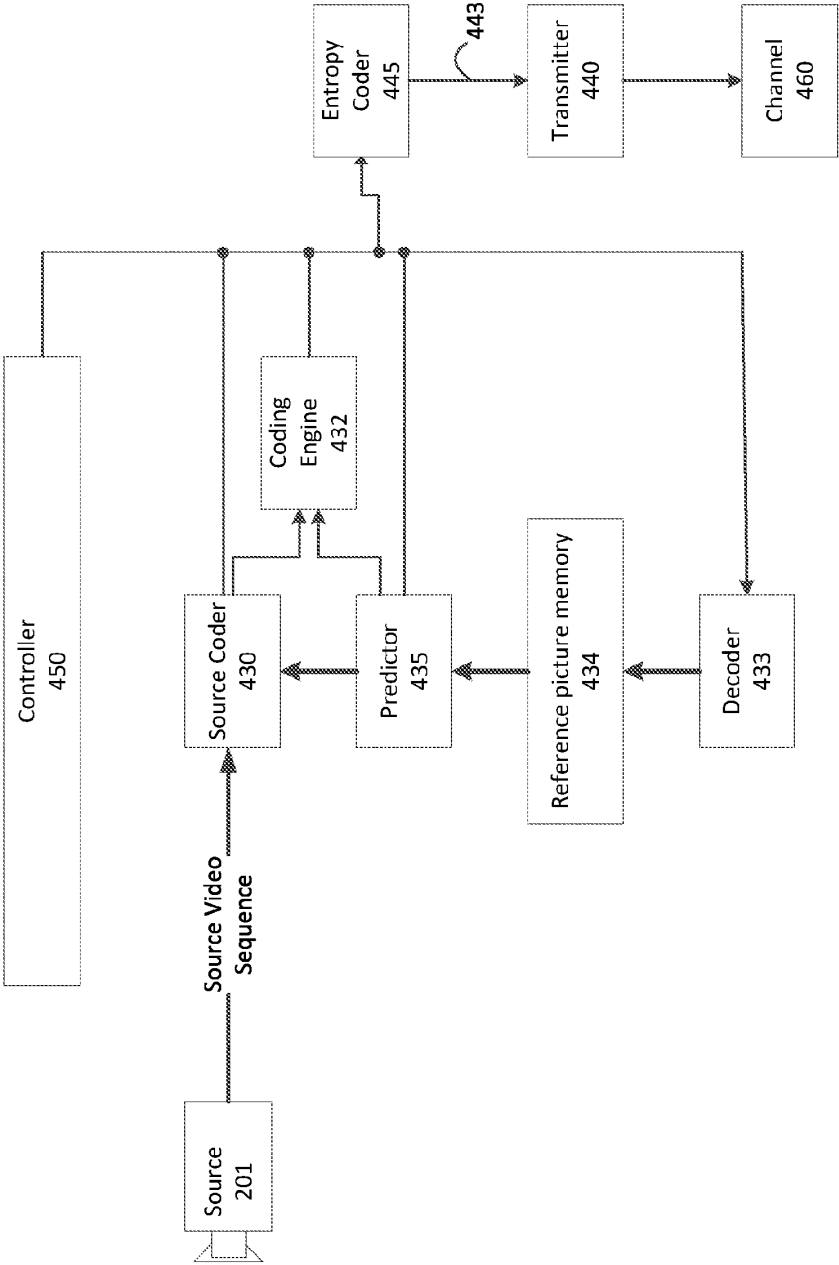


FIG. 4 Encoder 203



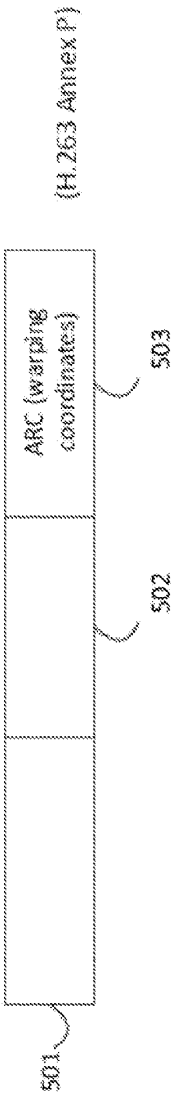


FIG. 5A

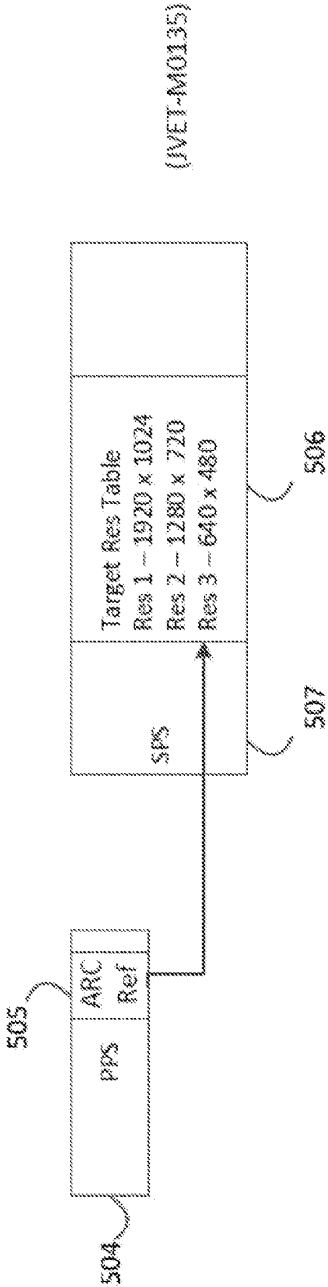


FIG. 5B

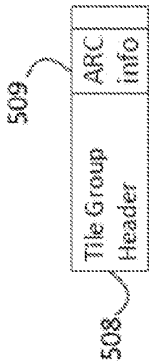


FIG. 5C

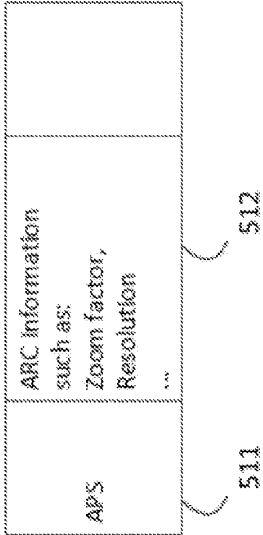


FIG. 5D

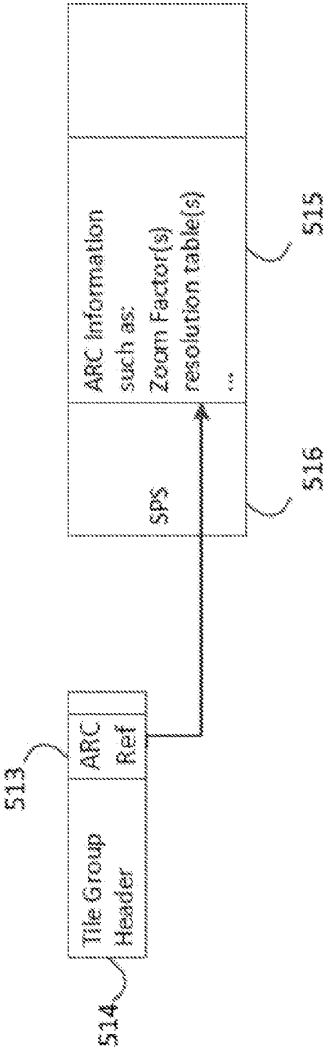


FIG. 5E

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

FIG. 6A

610	seq_parameter_set_flag() {	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. 6B

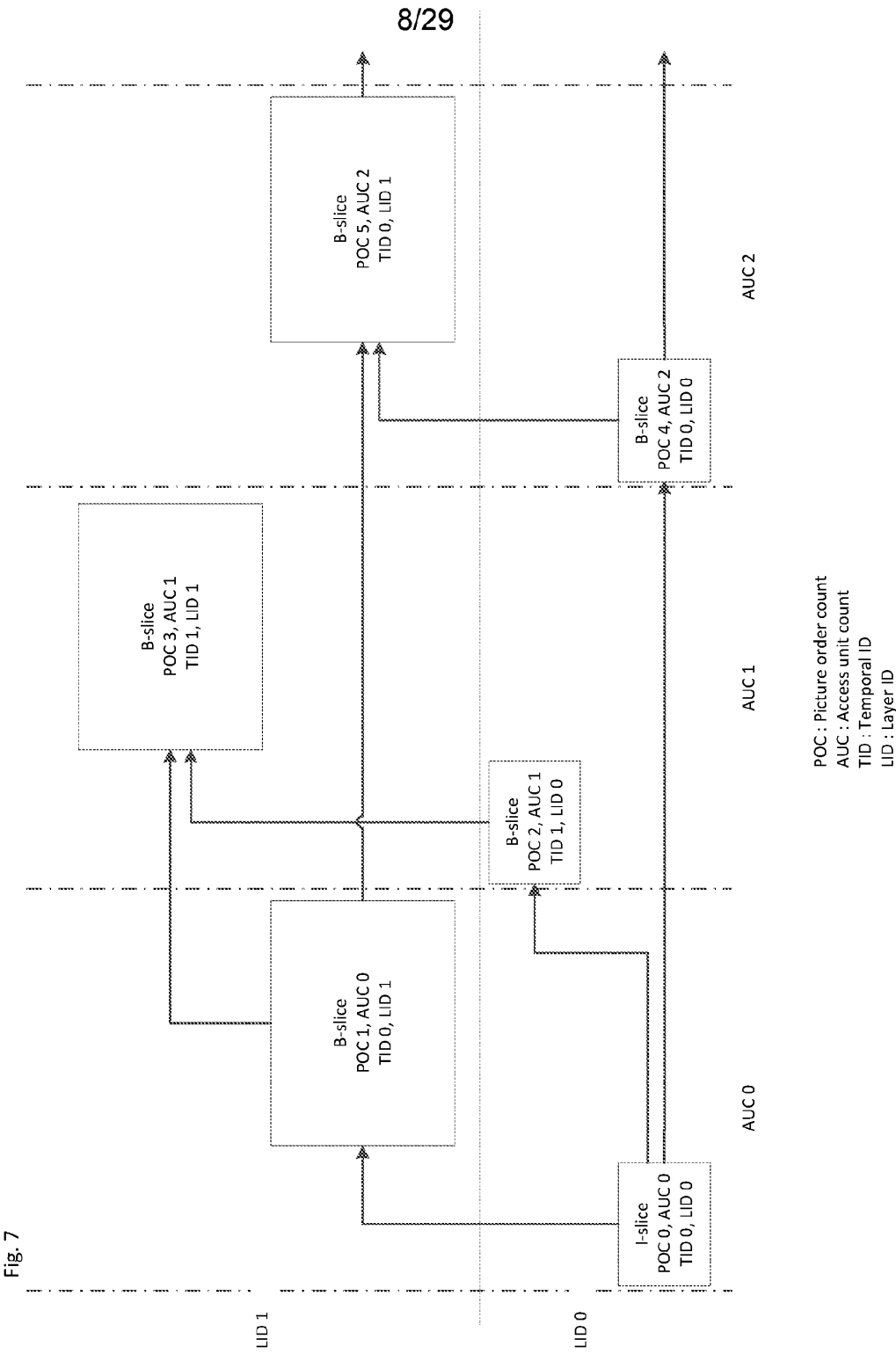


Fig. 8

video_parameter_set_rbsp() {	Descriptor
vps_video_parameter_set_id	u(4)
vps_max_layers_minus1	u(8)
for(i=0; i <= vps_max_layers_minus1; i++) {	
vps_included_layer_id[i]	u(7)
vps_reserved_zero_bit	u(1)
}	
vps_constraint_info_present_flag	u(1)
vps_constant_poc_cycle_per_au	u(1)
if(vps_constant_poc_cycle_per_au)	
vps_poc_cycle_au	u(8)
...	
}	

slice_header() {	Descriptor
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	ue(v)
slice_type	ue(v)
if(NalUnitType == GRA_NUT)	
recovery_poc_cnt	se(v)
slice_pic_order_cnt_lsb	u(v)
...	
if(!vps_constant_poc_cycle_per_au)	
slice_poc_cycle_au	u(8)
...	
}	

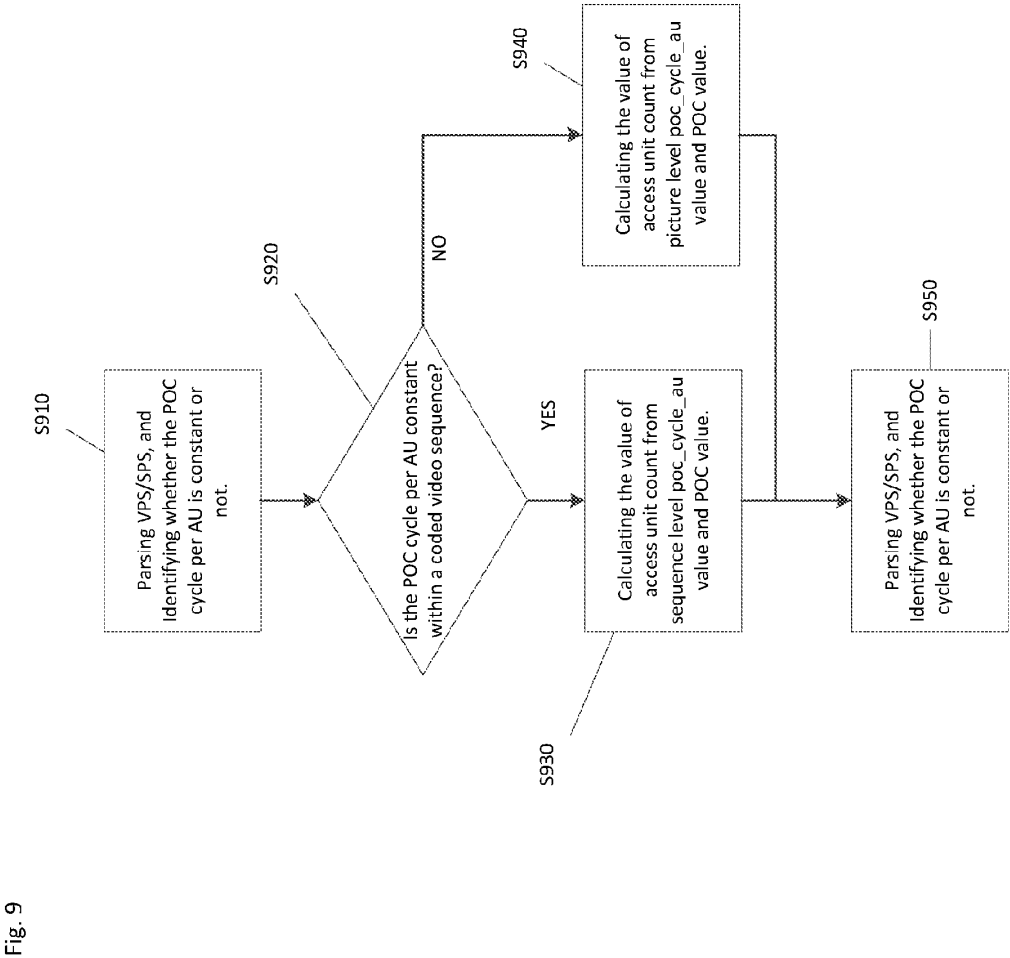
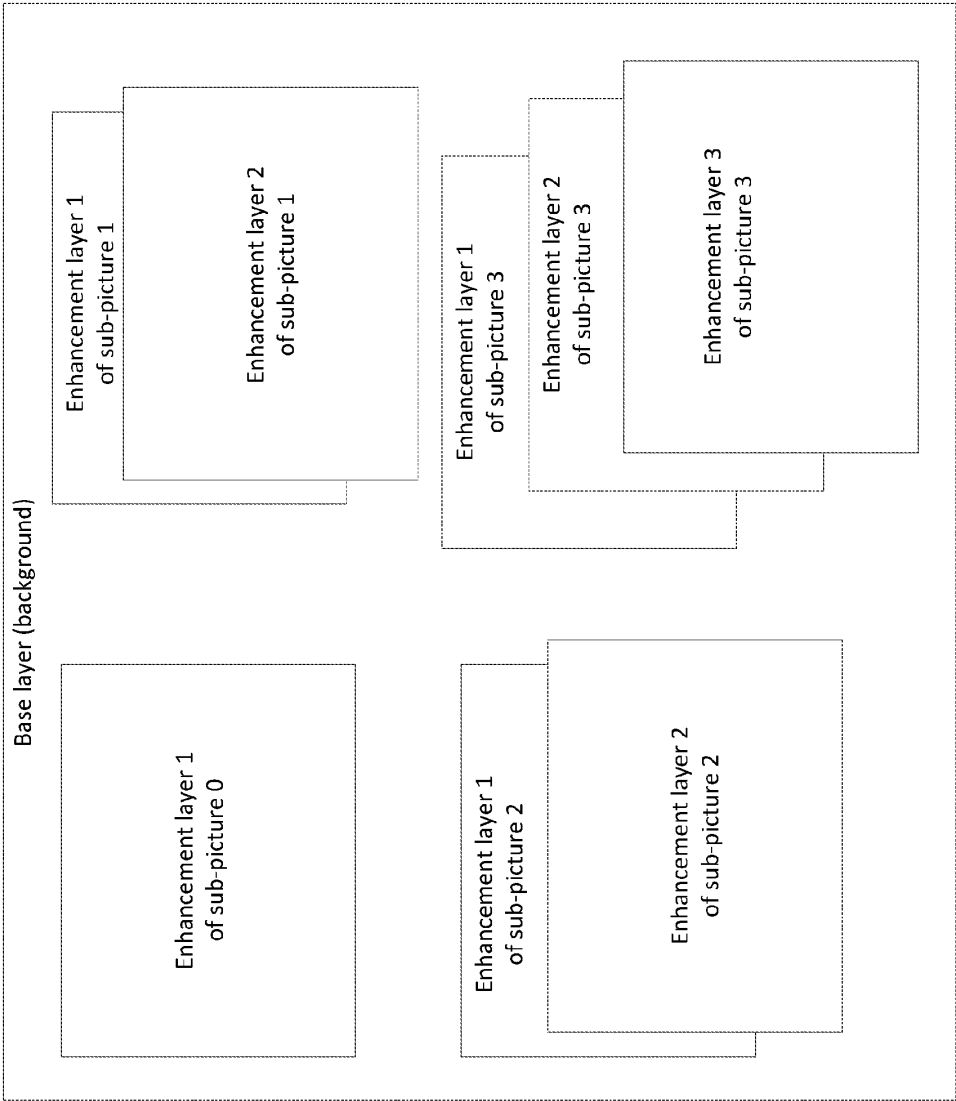


FIG. 10



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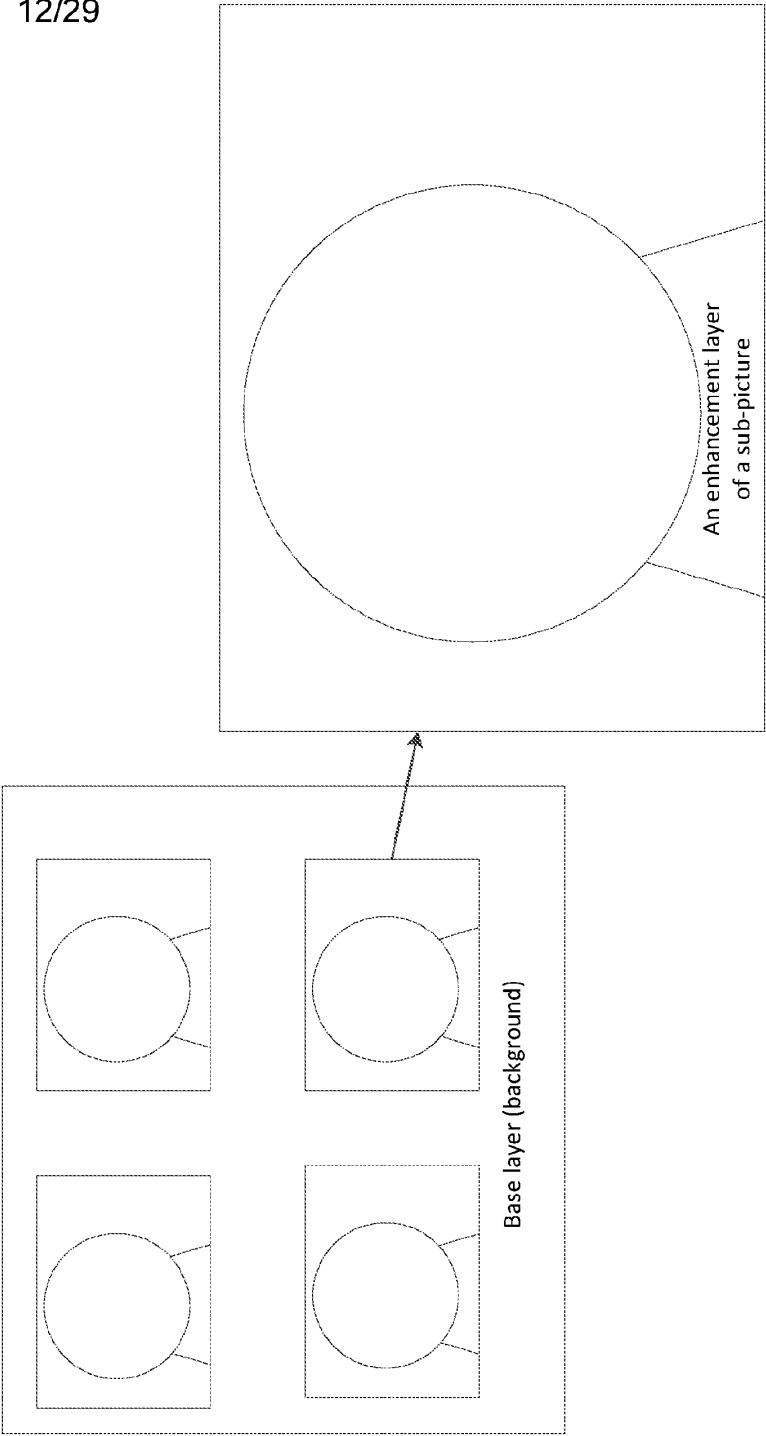
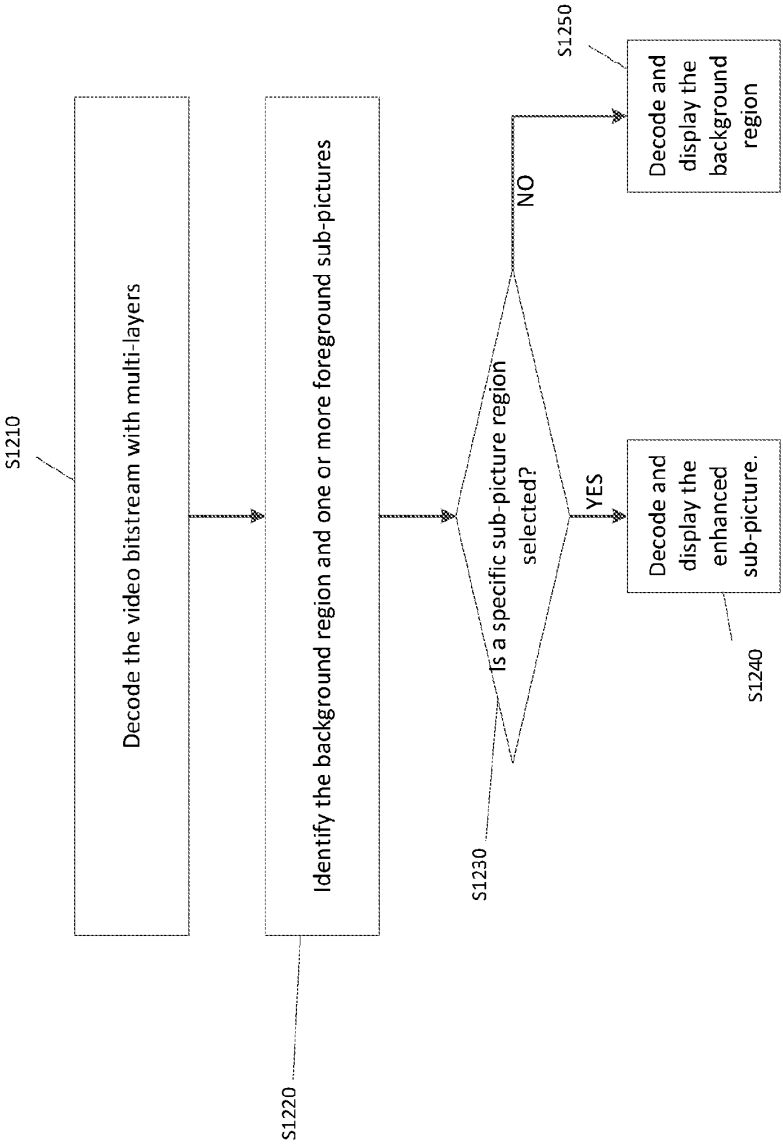


FIG. 11

Fig. 12



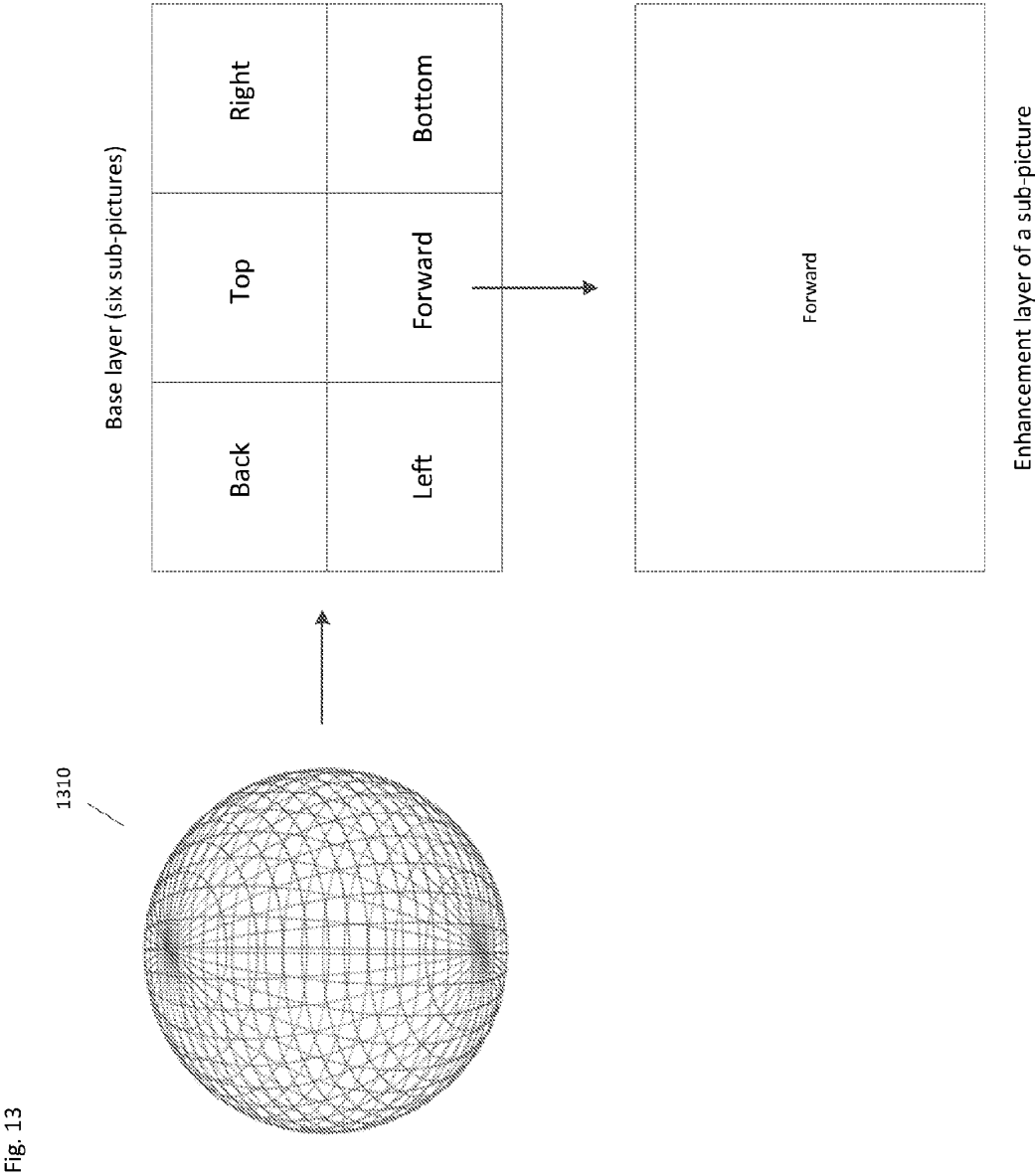
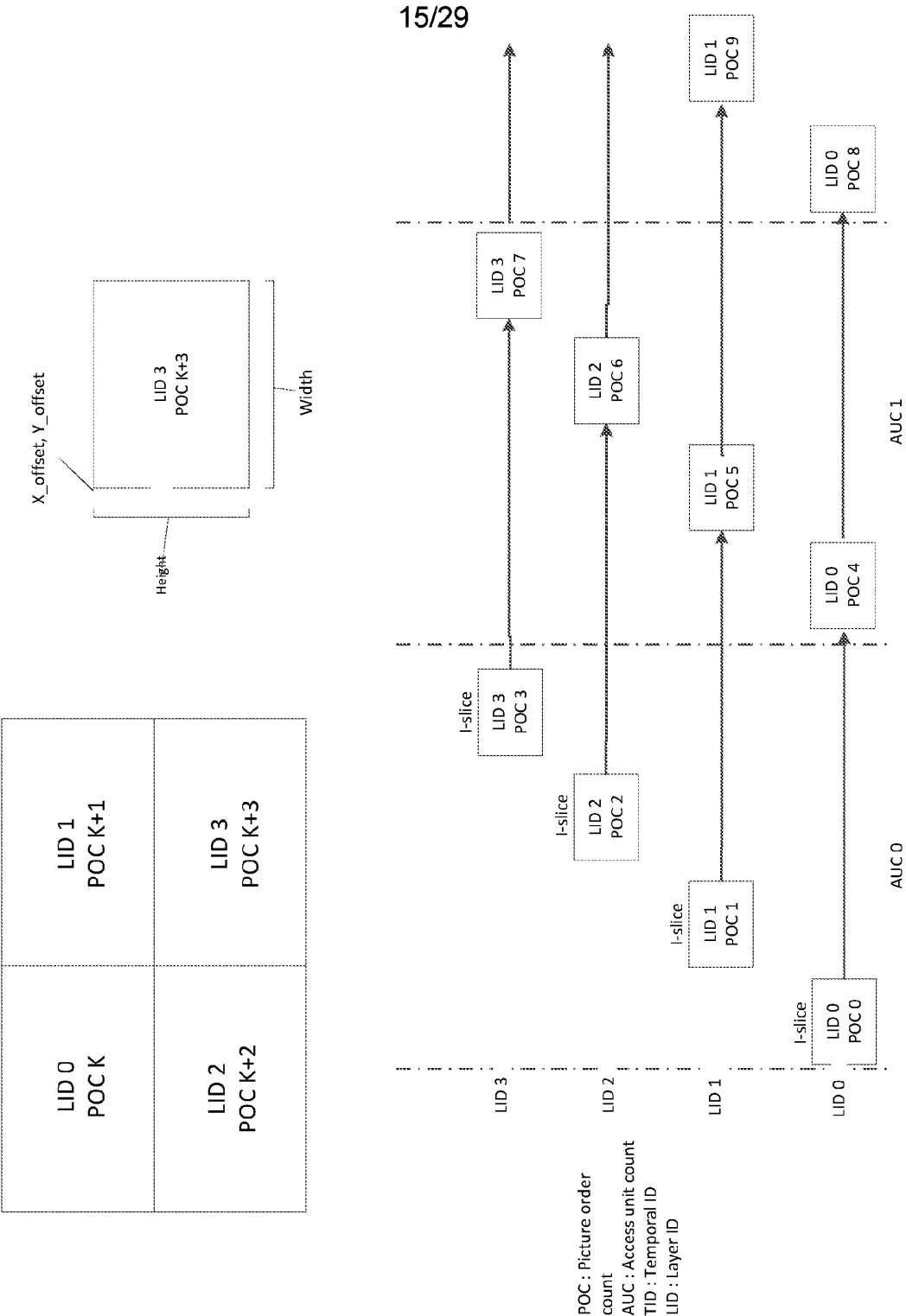


Fig. 14



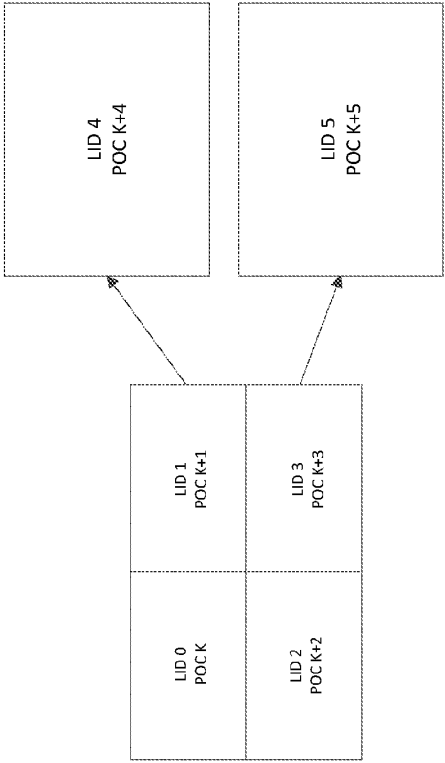
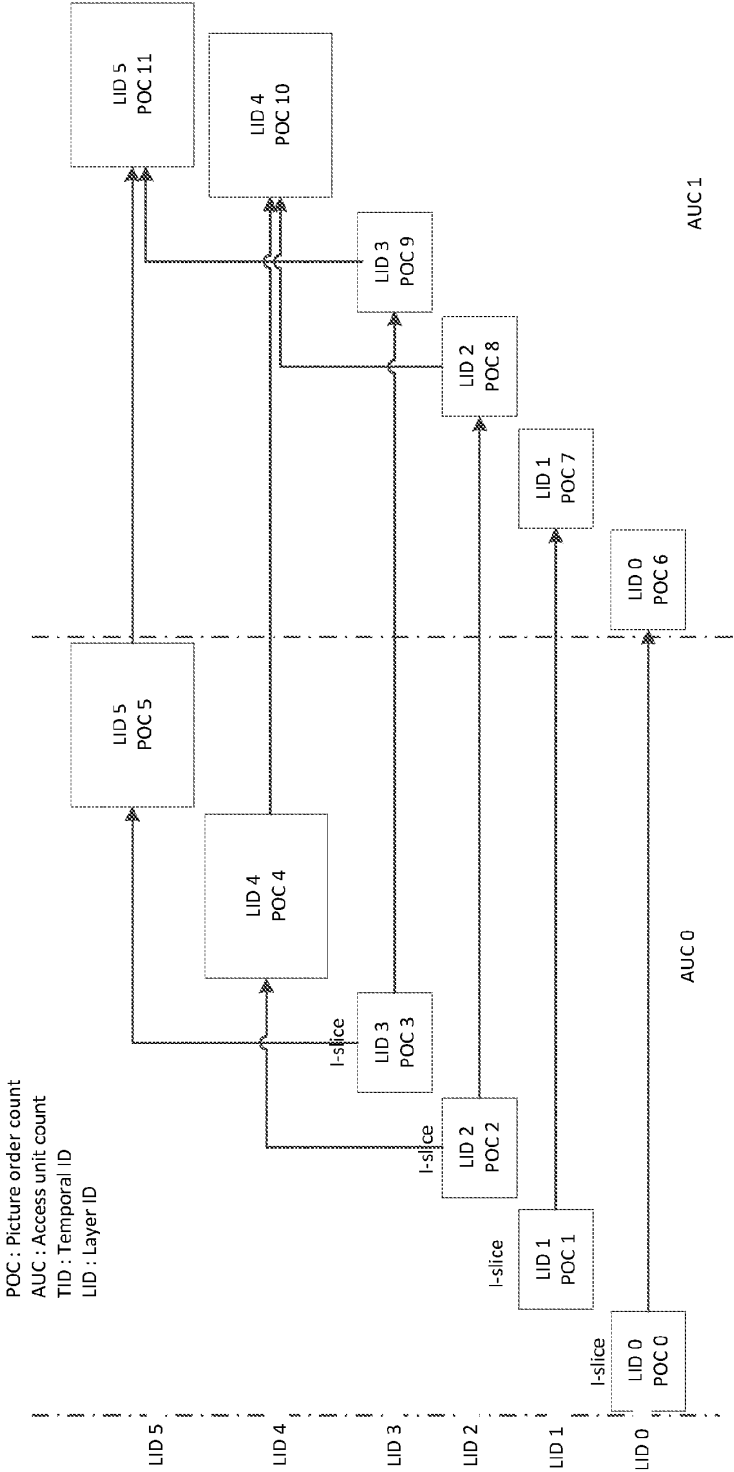


Fig. 15



video_parameter_set_rbsp() {	Descriptor
vps_video_parameter_set_id	u(4)
vps_max_layers_minu1	u(8)
for(i=0; i <= vps_max_layers_minu1; 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	ue(v)
vps_full_pic_height_in_luma_samples	ue(v)
}	
...	
}	

FIG. 16A

seq_parameter_set_rbsp() {	Descriptor
sps_decoding_parameter_set_id	u(4)
sps_video_parameter_set_id	u(4)
sps_max_sub_layers_minu1	u(3)
...	
pic_width_in_luma_samples	ue(v)
pic_height_in_luma_samples	ue(v)
if(vps_sub_picture_dividing_flag) {	
pic_offset_x	ue(v)
pic_offset_y	ue(v)
}	
...	
}	

FIG. 16B

Fig. 17

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

Fig. 18

	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. 19

	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 < NumLayersInList[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_ids[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)
}	
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_pdl_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_pdl_signal_flag[i])	
profile_tier_level_idx[i][j]	u(v)
}	
}	
}	
}	
...	
}	

video_parameter_set_tbsp() {	Descriptor
vps_video_parameter_set_id	u(4)
vps_max_layers_minus1	u(6)
vps_max_sublayers_minus1	u(3)
if(vps_max_layers_minus1 > 0 && vps_max_sublayers_minus1 > 0)	
vps_all_layers_same_num_sublayers_flag	u(1)
if(vps_max_layers_minus1 > 0)	
vps_all_independent_layers_flag	u(1)
for(i = 0; i <= vps_max_layers_minus1; i++) {	
vps_layer_id[i]	u(6)
if(i > 0 && !vps_all_independent_layers_flag) {	
vps_independent_layer_flag[i]	u(1)
if(!vps_independent_layer_flag[i]) {	
for(i = 0; i < i; i++)	
vps_direct_ref_layer_flag[i][j]	u(1)
max_tid_ref_present_flag[i]	u(1)
if(max_tid_ref_present_flag[i])	
max_tid_ref_pics_plus1[i]	u(3)
}	
}	
}	
if(vps_max_layers_minus1 > 0) {	
if(vps_all_independent_layers_flag)	
each_layer_is_an_ols_flag	u(1)
if(each_layer_is_an_ols_flag) {	
if(!vps_all_independent_layers_flag)	
ols_mode_idc	u(2)
if(ols_mode_idc == 2) {	
num_output_layer_sets_minus1	u(8)
for(i = 1; i <= num_output_layer_sets_minus1; i++)	
for(j = 0; j <= vps_max_layers_minus1; j++)	
ols_output_layer_flag[i][j]	u(1)
}	
}	
}	
...	
}	
}	

Fig. 21

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video parameter set rbsp() {	Descriptor
vps video parameter set id	u(4)
vps max layers minus1	u(6)
vps max sublayers minus1	u(3)
if(vps max layers minus1 > 0 && vps max sublayers minus1 > 0)	
vps all layers same num sublayers flag	u(1)
if(vps max layers minus1 > 0)	
vps all independent layers flag	u(1)
for(i = 0; i <= vps max layers minus1; i++) {	
vps layer id[i]	u(6)
if(i > 0 && !vps all independent layers flag) {	
vps independent layer flag[i]	u(1)
if(!vps independent layer flag[i]) {	
for(j = 0; j < i; j++)	
vps direct ref layer flag[i][j]	u(1)
max tid ref present flag[i]	u(1)
if(max tid ref present flag[i])	
max tid il ref pics plus1[i]	u(3)
}	
}	
}	
}	
if(vps max layers minus1 > 0) {	
if(vps all independent layers flag)	
each layer is an ols flag	u(1)
if(!each layer is an ols flag) {	
if(!vps all independent layers flag)	
ols mode idc	u(2)
if(ols mode idc == 2 && vps max layers minus1 > 1) {	
num output layer sets minus1	u(8)
for(i = 1; i <= num output layer sets minus1; i++)	
for(j = 0; j <= vps max layers minus1; j++)	
ols output layer flag[i][j]	u(1)
}	
}	
}	
}	
...	
}	

Fig. 22

Fig. 23

	Descriptor
seq parameter set rbsp() {	
...	
sps_ref_pic_resampling_enabled_flag	u(1)
if(sps_ref_pic_resampling_enabled_flag)	
sps_res_change_in_clvs_allowed_flag	u(1)
...	
if(!sps_res_change_in_clvs_allowed_flag)	
sps_subpic_info_present_flag	u(1)
if(sps_subpic_info_present_flag) {	
...	
}	
...	
sps_virtual_boundaries_enabled_flag	u(1)
if(sps_virtual_boundaries_enabled_flag) {	
if(!sps_res_change_in_clvs_allowed_flag)	
sps_virtual_boundaries_present_flag	u(1)
if(sps_virtual_boundaries_present_flag) {	
...	
}	
}	
...	
}	

Fig. 24

	Descriptor
pic_parameter_set_rbsp() {	
...	
pps_res_change_in_clvs_allowed_flag	u(1)
if(pps_res_change_in_clvs_allowed_flag) {	
pps_pic_width_in_luma_samples	ue(v)
pps_pic_height_in_luma_samples	ue(v)
}	
...	
}	

FIG. 25A 2500A

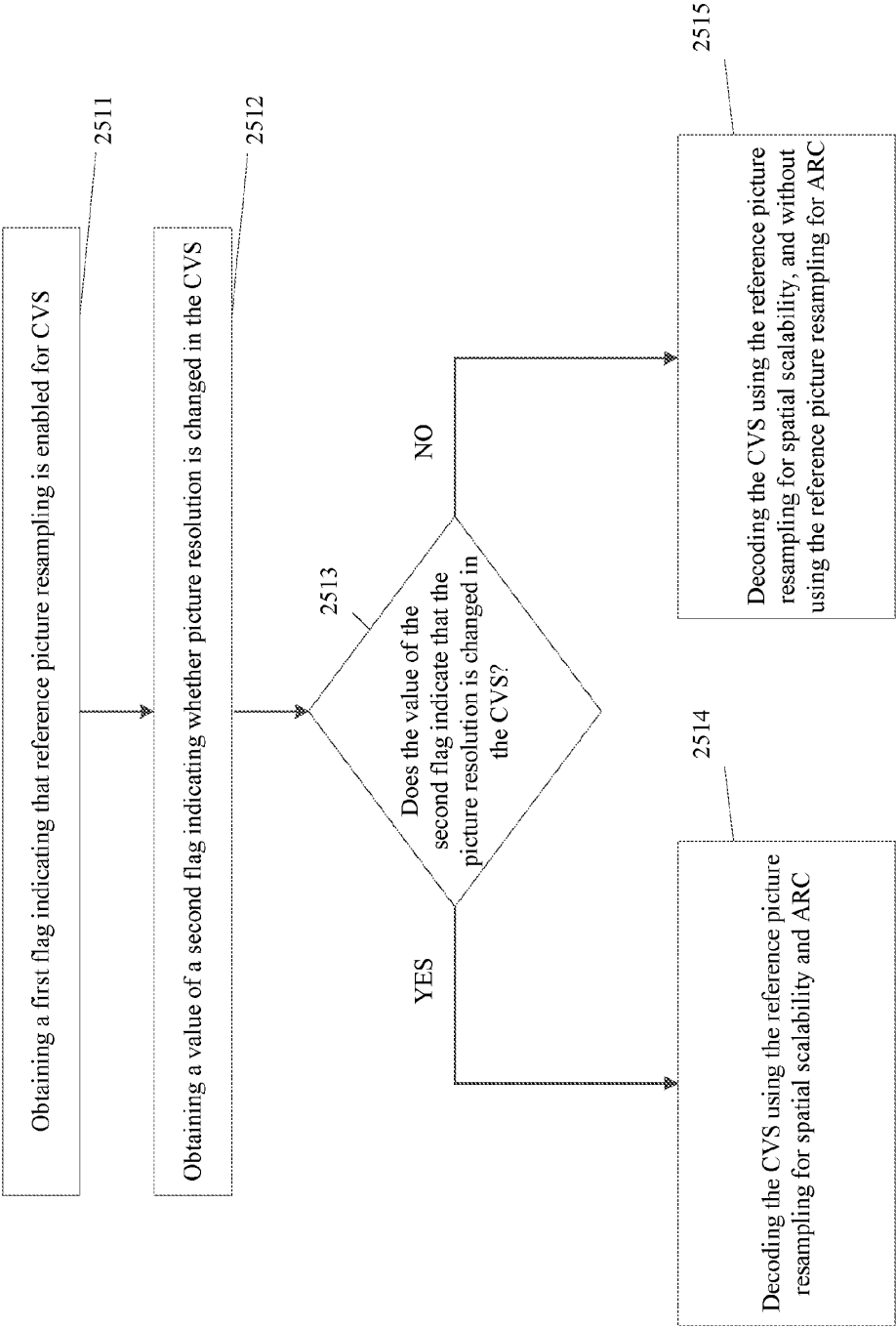


FIG. 25B 2500B

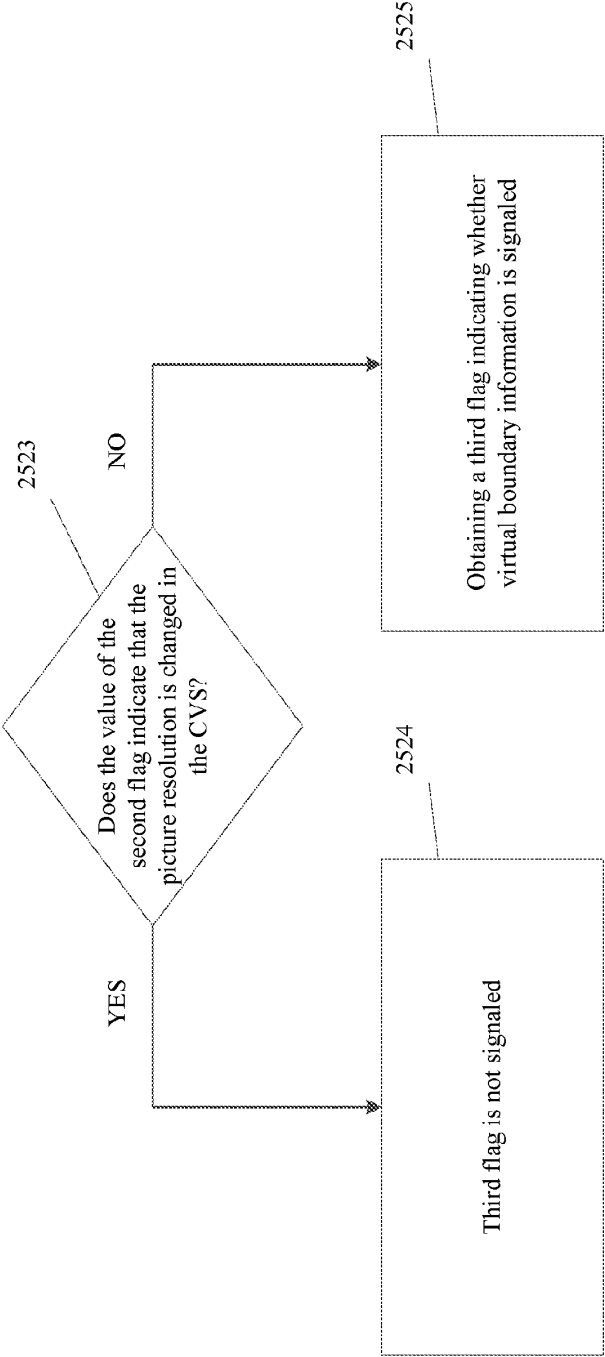


FIG. 25C 2500C

