

FIG. 1 (PRIOR ART)

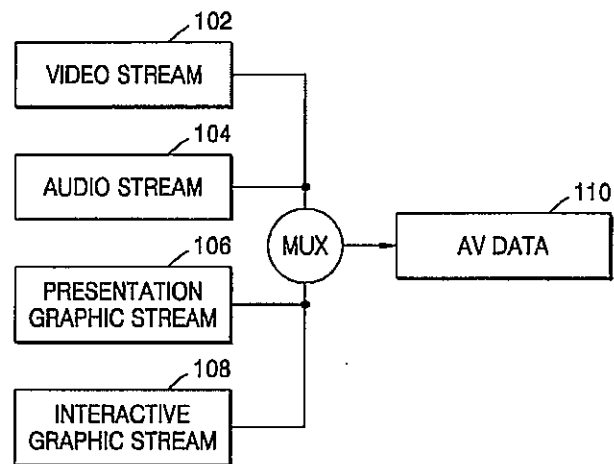


FIG. 2 (PRIOR ART)

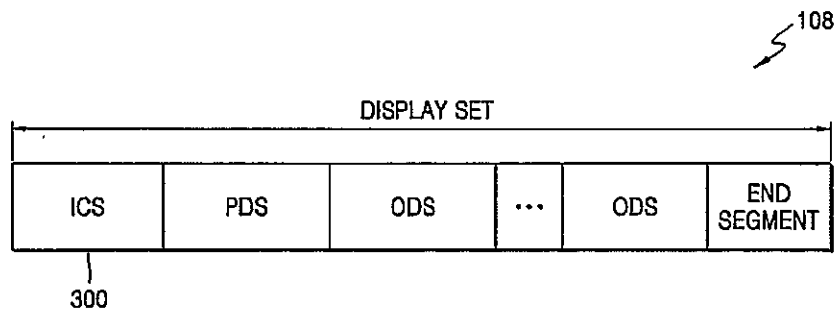


FIG. 3

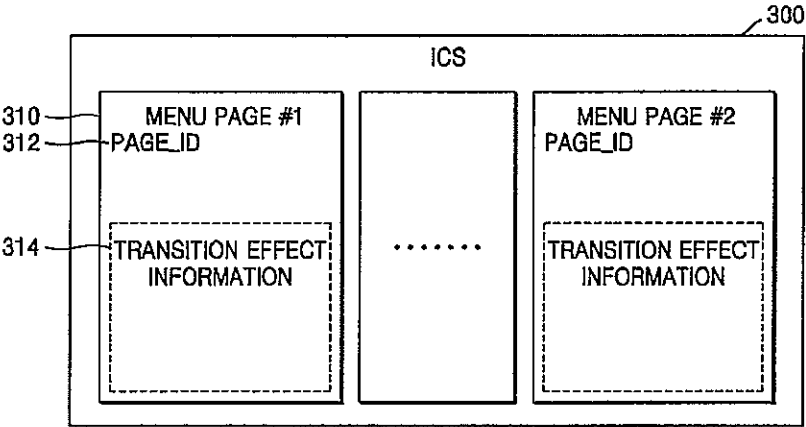


FIG. 4

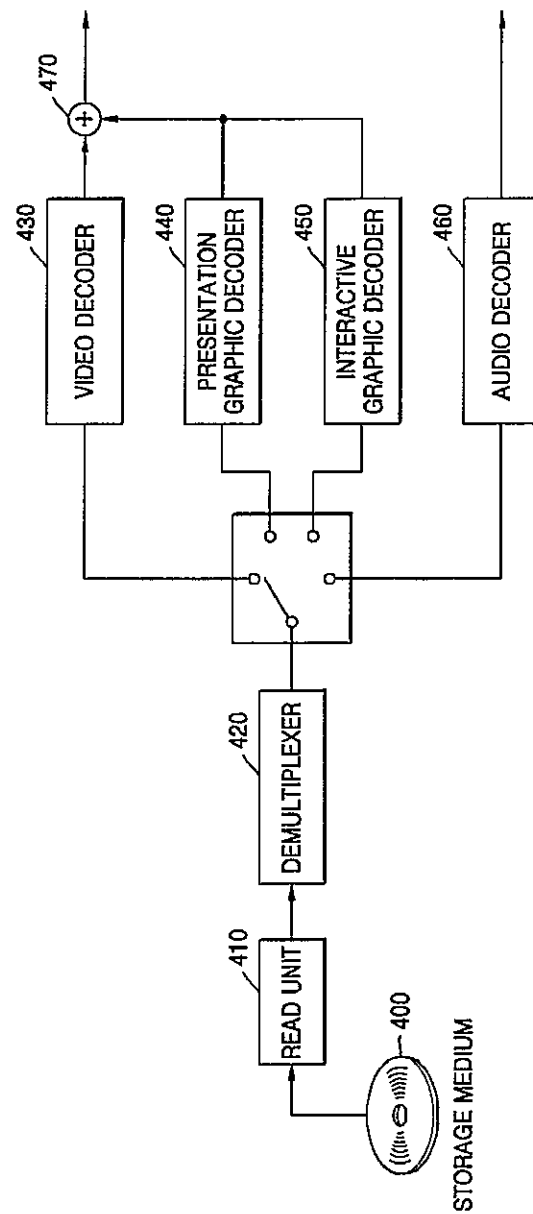


FIG. 5

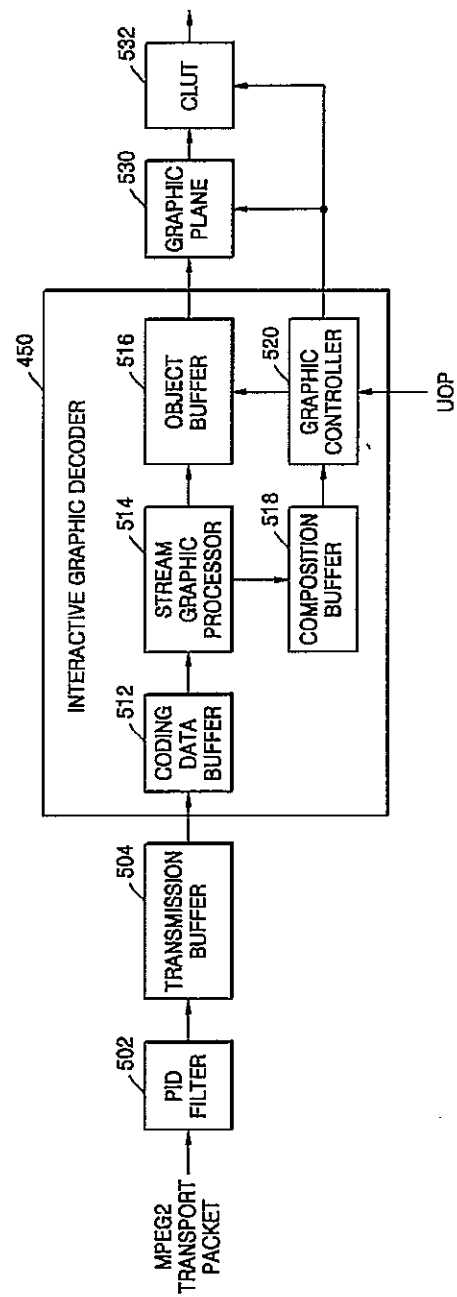


FIG. 6

300

```

interactive composition segment() {
    segment_type
    segment_length
    composition_number
    composition_state
    command_update_flag
    composition_time_out_pts
    UO_mask_table()
    animation_frame_rate_code
    default_selected_page_id
    while(processed_length < segment_length) {
610      page() {
        page_id
        selection_time_out_duration
        default_selected_button_number
        default_activated_button_number
        while(processed_length < segment_length) {
612          button() {
            button_number
            numerically_selectable_flag
            auto_action_flag
            button_horizontal_position
            button_vertical_position
            neighbor_info() {
                upper_button_number
                lower_button_number
                left_button_number
                right_button_number
            }
            normal_state_info() {
614              page_change_start_object_id_normal
616              page_change_end_object_id_normal
              start_object_id_normal
              end_object_id_normal
              repeat_object_id_normal
            }
            selected_state_info() {
                page_change_start_object_id_normal
                page_change_end_object_id_normal
                start_object_id_selected
                end_object_id_selected
                repeat_selected_flag
            }
            actioned_state_info() {
                start_object_id_activated
                end_object_id_activated
            }
            num_of_button_commands
            for(cmd_id=0;cmd_id<num_of_button_commands;cmd_id++) {
                button_command[cmd_id]
            } /*for*/
        } /*button*/
    } /*while*/
  } /*page*/
} /*while*/
} /*interactive composition segment*/

```

FIG. 7A

composition_state	EFFECT	REMARK
NORMAL CASE (NC)	DISPLAY UPDATE	CURRENT DISPLAY SET INCLUDES ONLY ELEMENTS CHANGED FROM PREVIOUS COMPOSITION INFORMATION
ACQUISITION POINT (AP)	DISPLAY REFRESH	CURRENT DISPLAY SET INCLUDES ALL ELEMENTS FOR DISPLAYING SUBSEQUENT COMPOSITION
EPOCH START (ES)	NEW DISPLAY	NEW EPOCH STARTS, AND CURRENT DISPLAYING SUBSEQUENT COMPOSITION

FIG. 7B

composition- update_flag	DEFINITION
0b	ALL BUTTON COMMANDS IN CURRENT ICS ARE EQUAL TO BUTTON COMMANDS IN PREVIOUS ICS
1b	BUTTON COMMANDS IN CURRENT ICS ARE CHANGED FROM BUTTON COMMANDS IN PREVIOUS ICS

FIG. 7C

numerically_selectable_flag	DEFINITION
0b	BUTTON CANNOT BE DIRECTLY SELECTED USING button_number OF BUTTON
1b	BUTTON CAN BE DIRECTLY SELECTED USING button_number OF BUTTON

FIG. 7D

auto_action_flag	DEFINITION
0b	BUTTON IS CHANGED TO selected_state MODE WHEN BUTTON IS SELECTED
1b	BUTTON IS CHANGED TO actioned_state MODE WITHOUT DISPLAYING SELECTED BUTTON IMAGE WHEN BUTTON IS SELECTED

FIG. 8

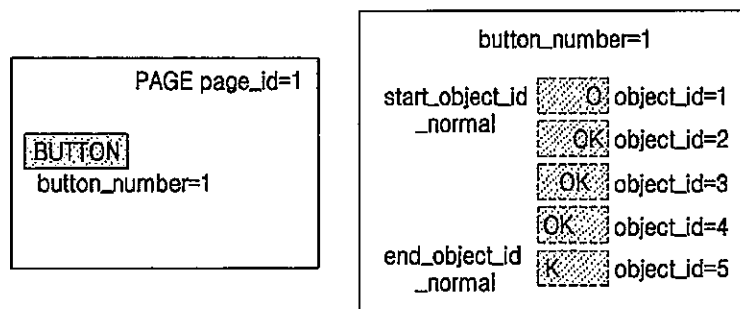


FIG. 9

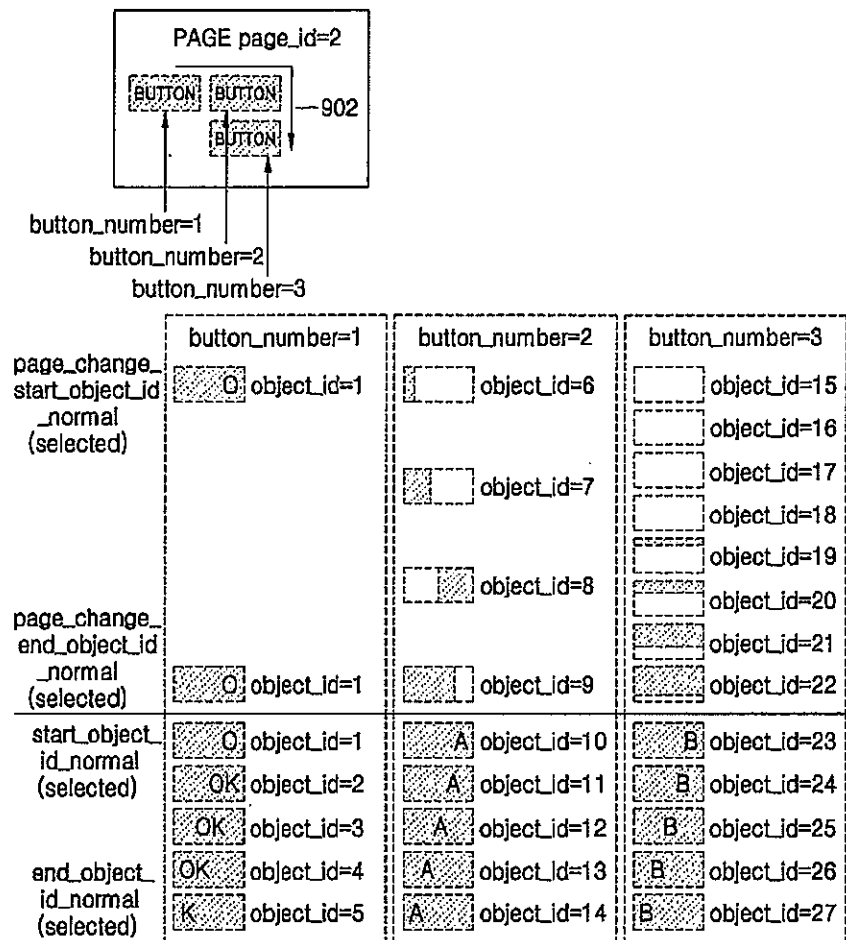


FIG. 10

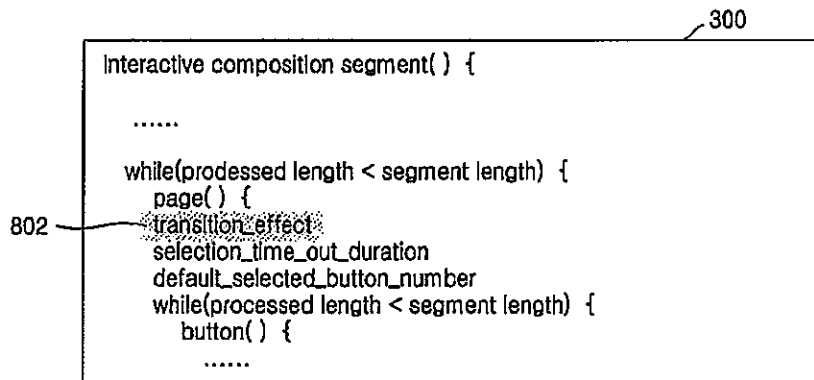


FIG. 11

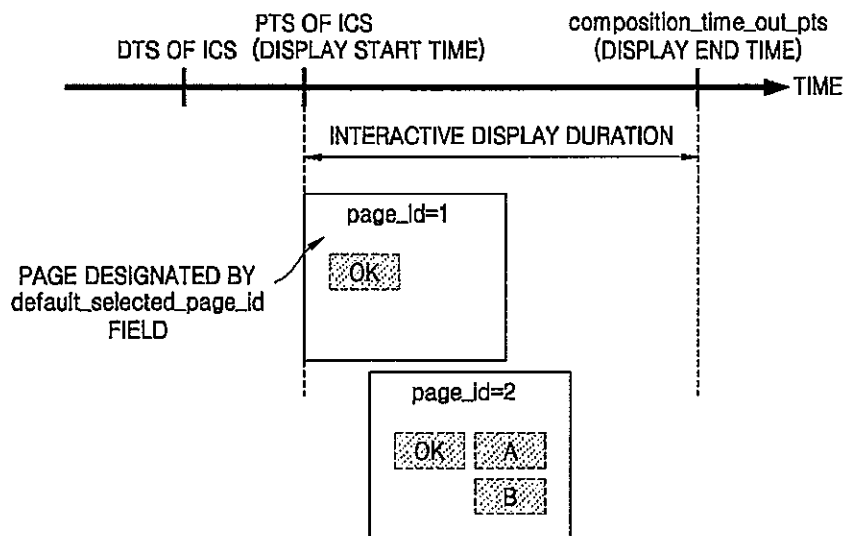


FIG. 12

300

```
interactive composition segment( ) {  
    .....  
    while(processed length < segment length) {  
        page( ) {  
            page_id  
            page_disappear_duration — 1202  
            selection_time_out_duration  
            default_selected_button_number  
            default_actioned_button_number  
            while(processed length < segment length) {  
                button( ) {  
                    .....  
                }  
            }  
        }  
    }  
}
```

FIG. 13

	Name	Meaning
0	Interactive Graphics	Interactive Graphics Stream Number
1	Audio	Audio Stream Number
2	Presentation Graphics	Presentation Graphics Stream Number
3	Angle	Angle Number
4	Title	Title Number
5	Chapter	Chapter Number
6	PlayList	PlayList Number
7	PlayItem	PlayItem Number
8	Presentation Time	Presentation Time in 90kHz
9	Timer	Navigation Timer
10	Selected Button	Button Number in Selected State
11	Selected Page	Page ID
12	-	-
13	Parental	Parental Level
14	Video Configuration	Player Configuration for Video
15	Audio Configuration	Player Configuration for Audio
16	Audio Language	Language Code for Audio
17	Subtitle Language	Language Cde for Presentation Graphics
18	Menu Language	Language Code for Menu Description
19	Interactive Graphics Language	Language Cde for Interactive Graphics
...	...	...

1302

FIG. 14

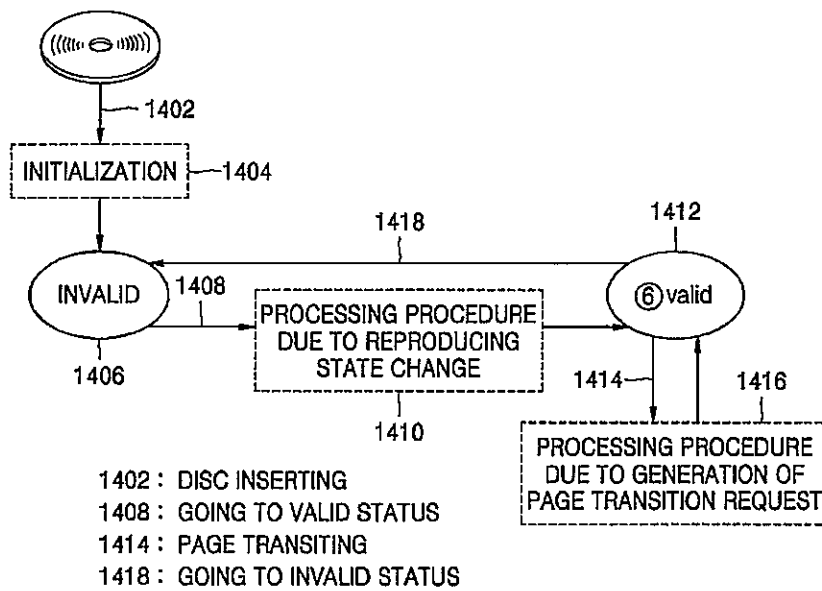


FIG. 15

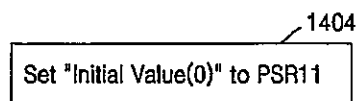


FIG. 16

1410

```
Get default_selected_page_id from Interactive Composition Segment —1602
Get the Page ID in Selected State from PSR11 —1604

if(default_selected_page_id is valid Page ID)
{
    Set default_selected_page_id to PSR11 —1606
}
else if (the value of PSR11 is valid Page ID)
{
    /* PSR11 is already set a valid page_id, this procedure do not change.*/—1608
}
else
{
    Set page_id of first entry in Interactive Composition Segment to PSR11—1610
}
```

FIG. 17

1416

```
/* change to page ID=X*/
if(X is valid Page ID)
{
    Set X to PSR11 —1702
}
else
{
    /* if page ID X is invalid, this procedure keeps current selected page ID*/—1704
}
```