

FIG. 1

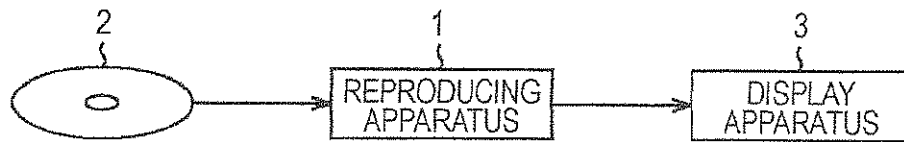


FIG. 2

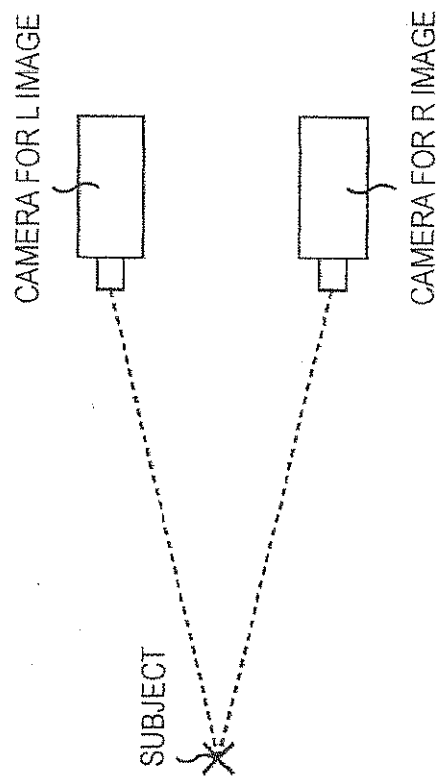


FIG. 3

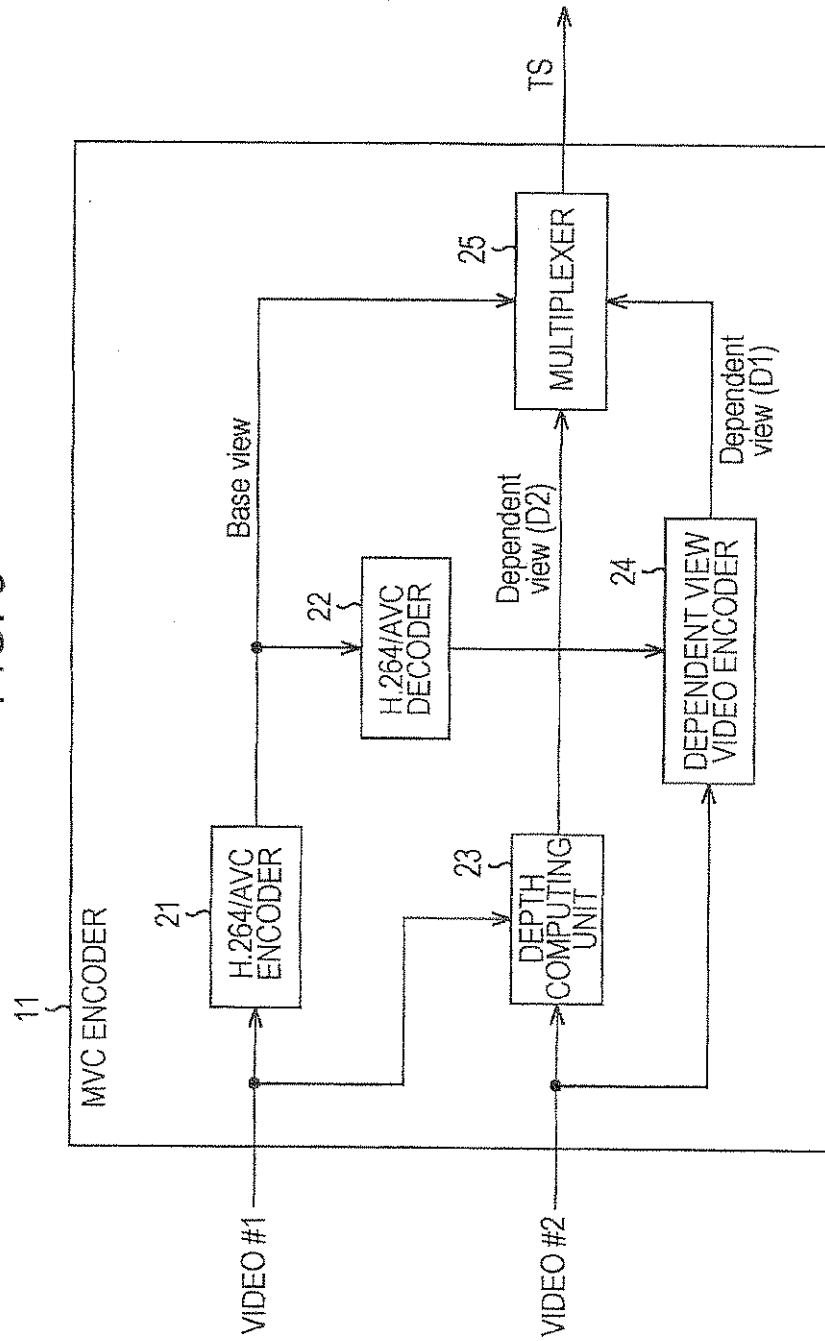


FIG. 4

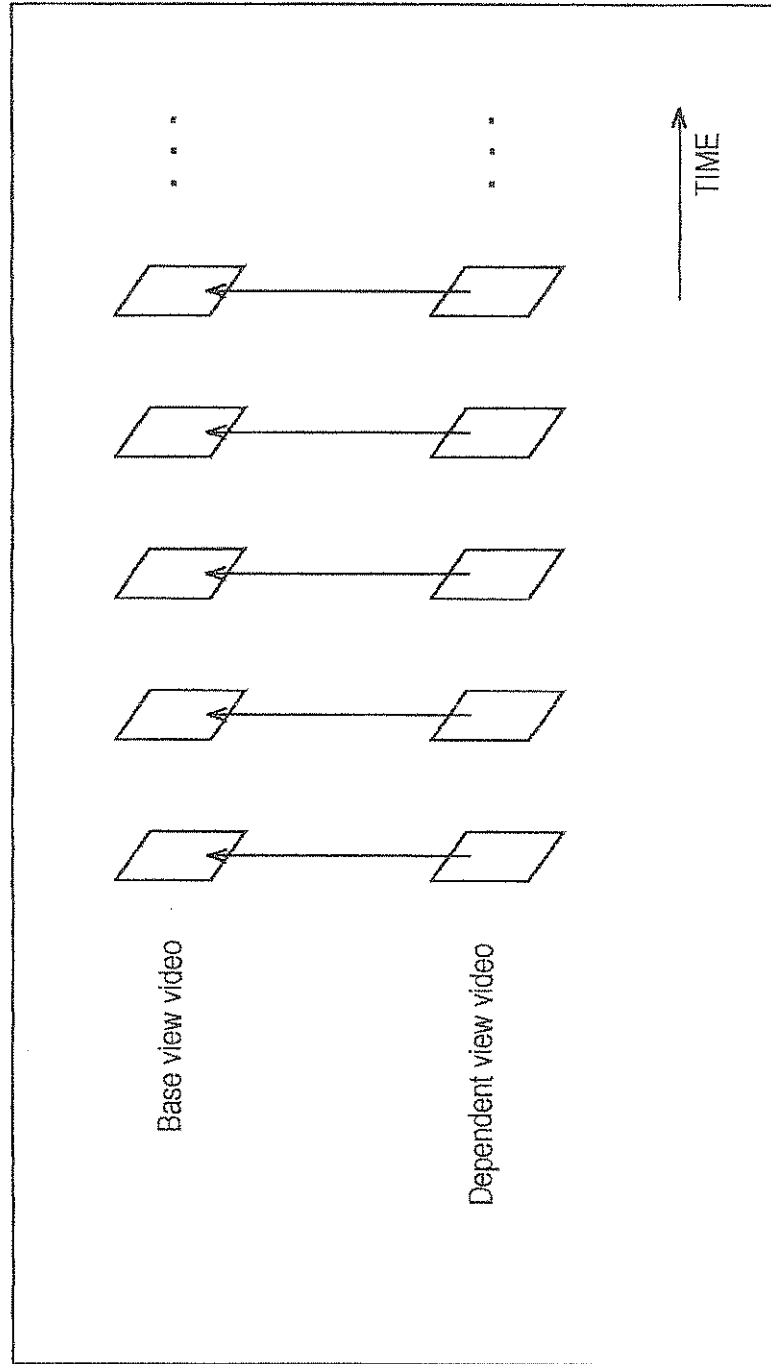


FIG. 5

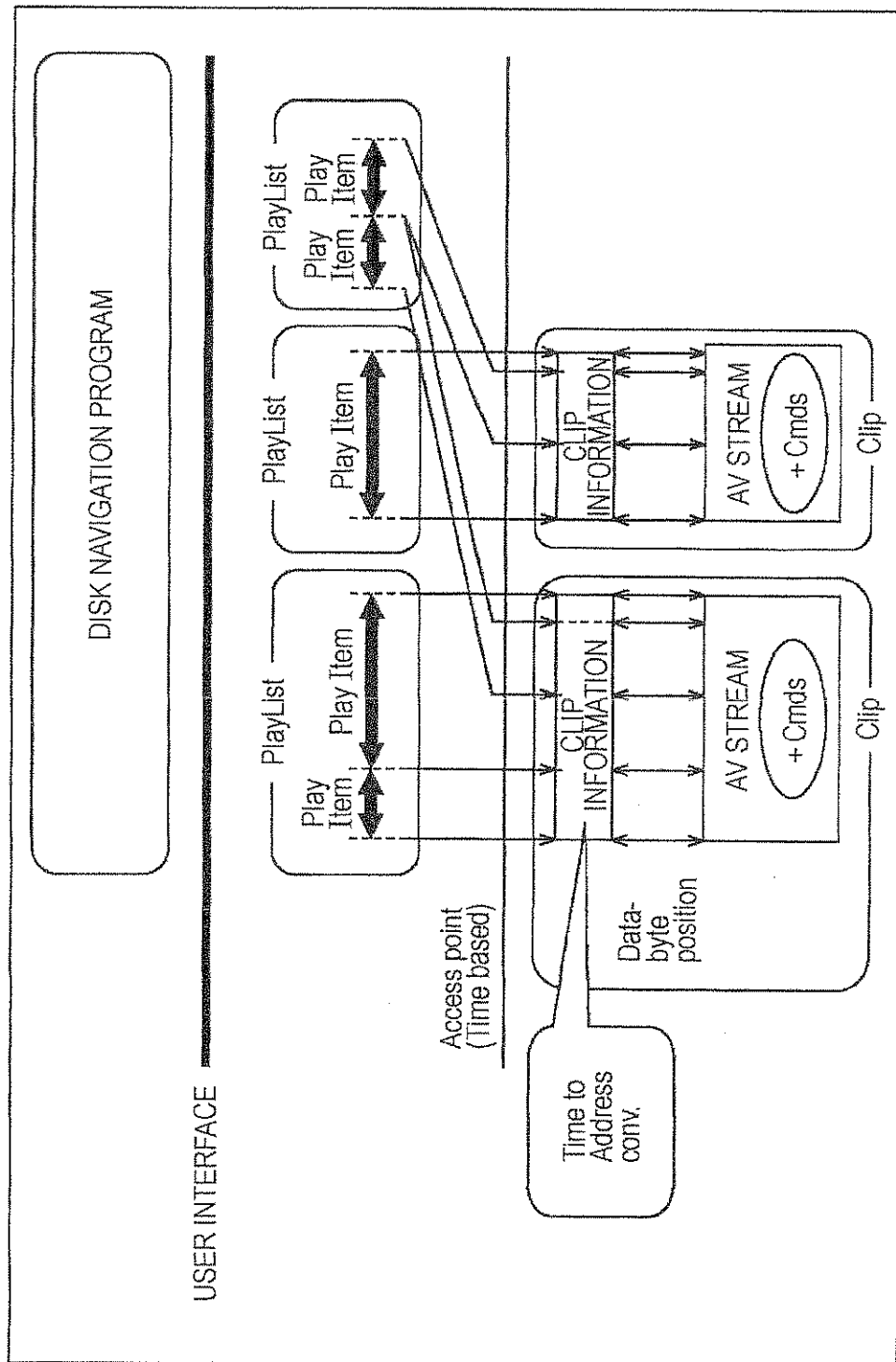


FIG. 6

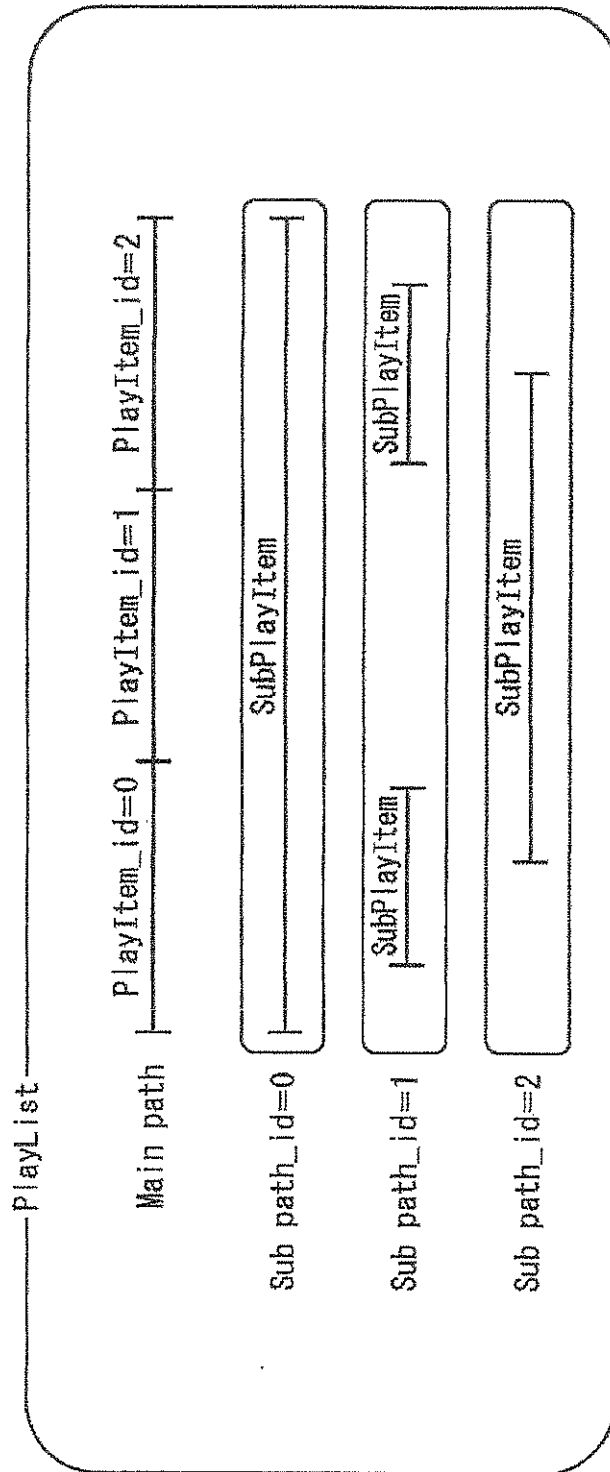


FIG. 7

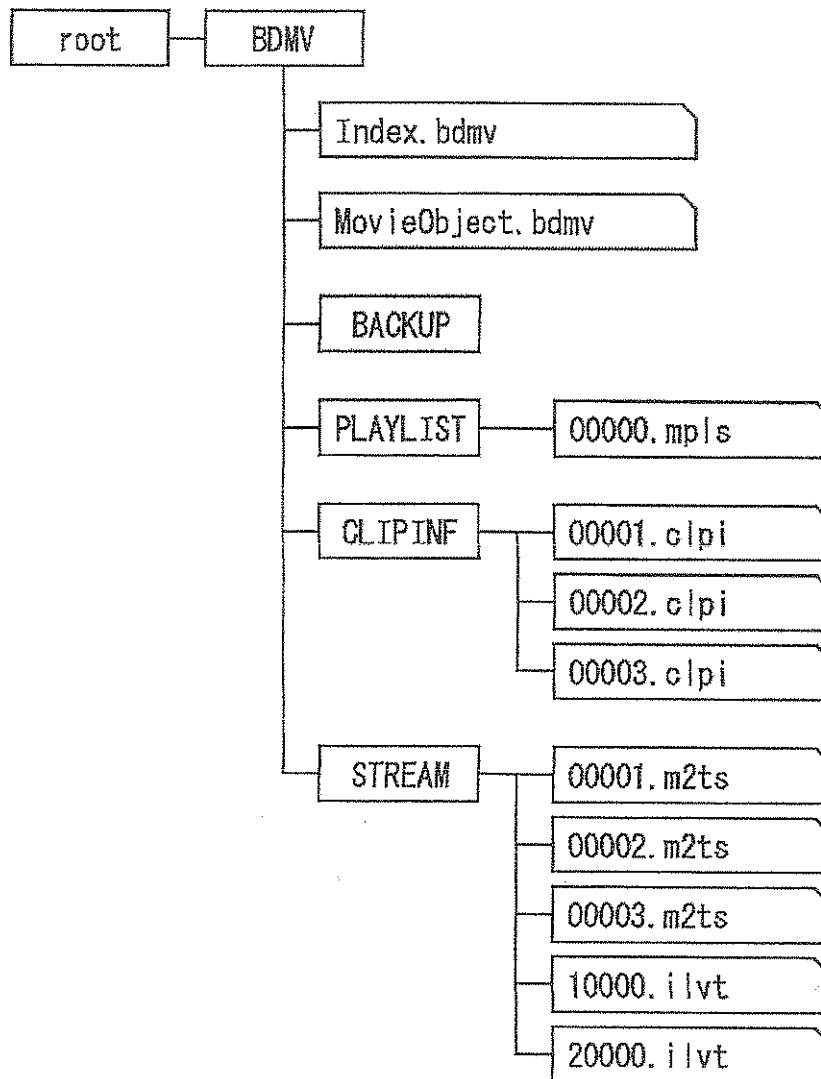


FIG. 8

## PlayList-Syntax

| Syntax                           | No. of bits | Mnemonic |
|----------------------------------|-------------|----------|
| PlayList() {                     |             |          |
| length                           | 32          | uimsbf   |
| reserved_for_future_use          | 16          | bslbf    |
| number_of_PlayItems              | 16          | uimsbf   |
| number_of_SubPaths               | 16          | uimsbf   |
| for (PlayItem_id=0;              |             |          |
| PlayItem_id<number_of_PlayItems; |             |          |
| PlayItem_id++) {                 |             |          |
| PlayItem()                       |             |          |
| }                                |             |          |
| for (SubPath_id= 0;              |             |          |
| SubPath_id<number_of_SubPaths;   |             |          |
| SubPath_id++) {                  |             |          |
| SubPath()                        |             |          |
| }                                |             |          |
| }                                |             |          |

FIG. 9

| SubPath-Syntax                               |  | No. of bits | Mnemonic |
|----------------------------------------------|--|-------------|----------|
| Syntax                                       |  |             |          |
| SubPath() {                                  |  |             |          |
| length                                       |  | 32          | uimsbf   |
| reserved_for_future_use                      |  | 8           | bslbf    |
| SubPath_type                                 |  | 8           | uimsbf   |
| reserved_for_future_use                      |  | 15          | uimsbf   |
| is_repeat_SubPath                            |  | 1           | bslbf    |
| reserved_for_future_use                      |  | 8           | bslbf    |
| number_of_SubPlayItems                       |  | 8           | uimsbf   |
| for (i=0; i < number_of_SubPlayItems; i++) { |  |             |          |
| SubPlayItem(i)                               |  |             |          |
| }                                            |  |             |          |
| }                                            |  |             |          |

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FIG. 10

| SubPath_type |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SubPath      | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 0            | reserved                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1            | reserved                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2            | Out-of-mux and Audio presentation path of the Browsable slideshow<br>(The audio presentation path using the SubPath is not synchronized with the main path using PlayItems in the PlayList.)                                                                                                                                                                                                                                                                                  |
| 3            | Out-of-mux and Interactive graphics presentation menu<br>(The interactive graphics menu using the SubPath is not synchronized with the main path using PlayItems in the PlayList.)                                                                                                                                                                                                                                                                                            |
| 4            | Out-of-mux and Text subtitle presentation path<br>(The text subtitle presentation path using the SubPath is synchronized with the main path using PlayItems in the PlayList.)                                                                                                                                                                                                                                                                                                 |
| 5            | Out-of-mux and 2nd Audio Presentation path<br>(The 2nd Audio Presentation path using the SubPath is synchronized with the main path using PlayItems in the PlayList.)                                                                                                                                                                                                                                                                                                         |
| 6            | Out-of-mux and 2nd Video Presentation path<br>(The 2nd Video Presentation path using the SubPath is synchronized with the main path using PlayItems in the PlayList.)                                                                                                                                                                                                                                                                                                         |
| 7            | Out-of-mux and AV synchronized type of one or more elementary streams path (Primary audio/PG/IG/Secondary audio path.)<br>Out-of-mux and AV synchronized type of Picture-in-Picture presentation path which contains one or more elementary stream paths.<br>(The elementary streams used by the path are multiplexed in a separate Clip from other Clip used by PlayItem.<br>The path using the SubPath is synchronized with the main path using PlayItems in the PlayList.) |
| 8            | Out-of mux MPEG-4 MVC Dependent video stream for 3D application path from Disc<br>(The elementary stream used by the path are multiplexed in a separate Clip from Clip used by the associated PlayItem. The path using the SubPath is synchronized with the main path using PlayItems in the PlayList)                                                                                                                                                                        |
| 9            | In-mux MPEG-4 MVC Dependent video stream for 3D application path from Disc<br>(The elementary streams used by the path are multiplexed in the same Clip used by the associate PlayItem. The path using the SubPath is synchronized with the main path using PlayItems in the PlayList.)                                                                                                                                                                                       |
| 10           | Out-of mux MPEG-4 MVC Dependent video stream for 3D application path from Local Storage<br>(The elementary stream used by the path are multiplexed in a separate Clip from Clip used by the associated PlayItem. The path using the SubPath is synchronized with the main path using PlayItems in the PlayList)                                                                                                                                                               |
| 11           | In-mux MPEG-4 MVC Dependent video stream for 3D application path from Local Storage<br>(The elementary streams used by the path are multiplexed in the same Clip used by the associate PlayItem. The path using the SubPath is synchronized with the main path using PlayItems in the PlayList.)                                                                                                                                                                              |
| 12-255       | reserved                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

FIG. 11

| SubPlayItem()-Syntax                                             |  |             |          |
|------------------------------------------------------------------|--|-------------|----------|
| Syntax                                                           |  | No. of bits | Mnemonic |
| SubPlayItem() {                                                  |  |             |          |
| length                                                           |  | 16          | uimbsf   |
| Clip_Information_file_name[0] //subclip_entry_id=0               |  | 8*5         | bslbf    |
| Clip_codec_identifier[0]                                         |  | 8*4         | bslbf    |
| reserved_for_future_use                                          |  | 31          | bslbf    |
| is_multi_Clip_entries                                            |  | 1           | bslbf    |
| ref_to_STC_id[0]                                                 |  | 8           | uimbsf   |
| SubPlayItem_IN_time                                              |  | 32          | uimbsf   |
| SubPlayItem_OUT_time                                             |  | 32          | uimbsf   |
| sync_PlayItem_id                                                 |  | 16          | uimbsf   |
| sync_start_PTS_of_PlayItem                                       |  | 32          | uimbsf   |
| if(is_multi_Clip_entries==1b) {                                  |  |             |          |
| reserved_for_future_use                                          |  | 8           | bslbf    |
| num_of_Clip_entries                                              |  | 8           | uimbsf   |
| for (subclip_entry_id=1; //Note:Entries after subclip_entry_id=0 |  |             |          |
| subclip_entry_id<num_of_Clip_entries; subclip_entry_id++) {      |  |             |          |
| Clip_Information_file_name[subclip_entry_id]                     |  | 8*5         | bslbf    |
| Clip_codec_identifier[subclip_entry_id]                          |  | 8*4         | bslbf    |
| ref_to_STC_id[subclip_entry_id]                                  |  | 8           | uimbsf   |
| reserved_for_future_use                                          |  | 8           | bslbf    |
| }                                                                |  |             |          |
| }                                                                |  |             |          |
| }                                                                |  |             |          |

FIG. 12

## PlayItem-Syntax

| Syntax                                            | No. of bits | Mnemonic |
|---------------------------------------------------|-------------|----------|
| PlayItem() {                                      |             |          |
| length                                            | 16          | uimsbf   |
| Clip_Information_file_name[0]                     | 8*5         | bslbf    |
| Clip_codec_identiflier[0]                         | 8*4         | bslbf    |
| reserved_for_future_use                           | 11          | bslbf    |
| is_multi_angle                                    | 1           | bslbf    |
| connection_condition                              | 4           | uimsbf   |
| ref_to_STC_id[0]                                  | 8           | uimsbf   |
| IN_time                                           | 32          | uimsbf   |
| OUT_time                                          | 32          | uimsbf   |
| UO_mask_table()                                   |             |          |
| PlayItem_random_access_mode                       | 8           | uimsbf   |
| still_mode                                        | 8           | uimsbf   |
| if(still_mode==0x1) {                             |             |          |
| still_time                                        | 16          | uimsbf   |
| }else{                                            |             |          |
| reserved                                          | 16          | bslbf    |
| }                                                 |             |          |
| if(is_multi_angle==1b) {                          |             |          |
| number_of_angles                                  | 8           | uimsbf   |
| reserved_for_future_use                           | 7           | bslbf    |
| is_seamless_angle_change                          | 1           | uimsbf   |
| for(angle_id = 1; //Note: angles after angle_id=1 |             |          |
| angle_id<number_of_angles; angle_id++) {          |             |          |
| Clip_Information_file_name[angle_id]              | 8*5         | bslbf    |
| Clip_codec_identiflier[angle_id]                  | 8*4         | bslbf    |
| ref_to_STC_id[angle_id]                           | 8           | uimsbf   |
| reserved_for_future_use                           | 16          | bslbf    |
| }                                                 |             |          |
| }                                                 |             |          |
| STN_table()                                       |             |          |
| }                                                 |             |          |

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FIG. 13

STN\_table()

| Syntax                                                    | No. of bits | Mnemonic |
|-----------------------------------------------------------|-------------|----------|
| STN_table() [                                             |             |          |
| length                                                    | 16          | uimsbf   |
| reserved_for_future_use                                   | 16          | bslbf    |
| number_of_video_stream_entries                            | 8           | uimsbf   |
| number_of_audio_stream_entries                            | 8           | uimsbf   |
| number_of_audio_stream2_entries                           | 8           | uimsbf   |
| number_of_PG_textST_stream_entries                        | 8           | uimsbf   |
| number_of_IG_stream_entries                               | 8           | uimsbf   |
| reserved_for_future_use                                   | 64          | bslbf    |
| for (video_stream_id=0;                                   |             |          |
| video_stream_id < number_of_video_stream_entries;         |             |          |
| video_stream_id++) {                                      |             |          |
| stream_entry()                                            |             |          |
| stream_attribute()                                        |             |          |
| }                                                         |             |          |
| for (audio_stream_id=0;                                   |             |          |
| audio_stream_id < number_of_audio_stream_entries;         |             |          |
| audio_stream_id++) {                                      |             |          |
| stream_entry()                                            |             |          |
| stream_attributes()                                       |             |          |
| }                                                         |             |          |
| for (audio_stream_id2=0;                                  |             |          |
| audio_stream_id2 < number_of_audio_stream2_entries;       |             |          |
| audio_stream_id2++) {                                     |             |          |
| stream_entry()                                            |             |          |
| stream_attributes()                                       |             |          |
| }                                                         |             |          |
| for (PG_textST_stream_id=0;                               |             |          |
| PG_textST_stream_id < number_of_PG_textST_stream_entries; |             |          |
| PG_textST_stream_id++) {                                  |             |          |
| stream_entry()                                            |             |          |
| stream_attribute()                                        |             |          |
| }                                                         |             |          |
| for (IG_stream_id=0;                                      |             |          |
| IG_stream_id < number_of_IG_stream_entries;               |             |          |
| IG_stream_id++) {                                         |             |          |
| stream_entry()                                            |             |          |
| stream_attribute()                                        |             |          |
| }                                                         |             |          |
| ]                                                         |             |          |

FIG. 14

| application_type | meaning                                                  | Stream Input                                                                                                          |
|------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 0                | reserved                                                 |                                                                                                                       |
| 1                | TS for Movie applications                                | These type of Clip AV stream files may be provided from either Disc or Local storage                                  |
| 2                | TS for Time based slide show                             |                                                                                                                       |
| 3                | TS for a main-path of Browsable slide show               |                                                                                                                       |
| 4                | TS for a sub-path of Browsable slide show                |                                                                                                                       |
| 5                | TS for a sub-path of Interactive graphics menu           |                                                                                                                       |
| 6                | TS for a sub-path of Text subtitle                       |                                                                                                                       |
| 7                | TS for a sub-path of one or more elementary streams path | This type of Clip AV stream file may be provided only from Local storage, shall not provided from Disc                |
| 8                | TS for a sub-path of 3D application                      | The TS shall contain only the Dependent view video stream at one time, and shall not contain other elementary streams |
| 9-255            | reserved                                                 |                                                                                                                       |

FIG. 15

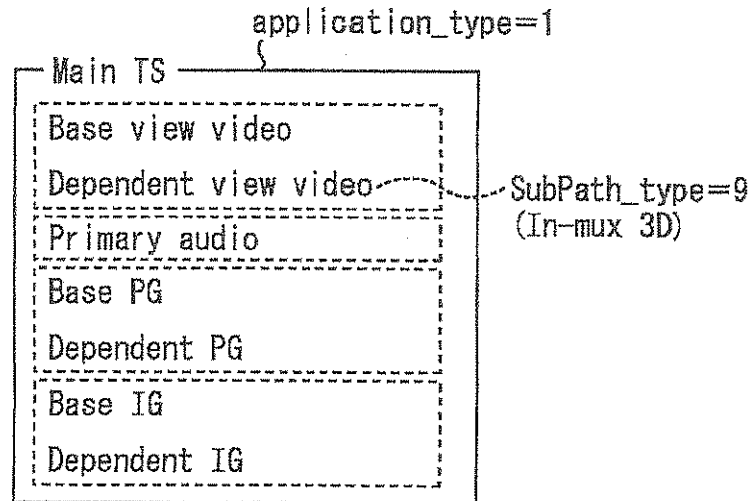


FIG. 16

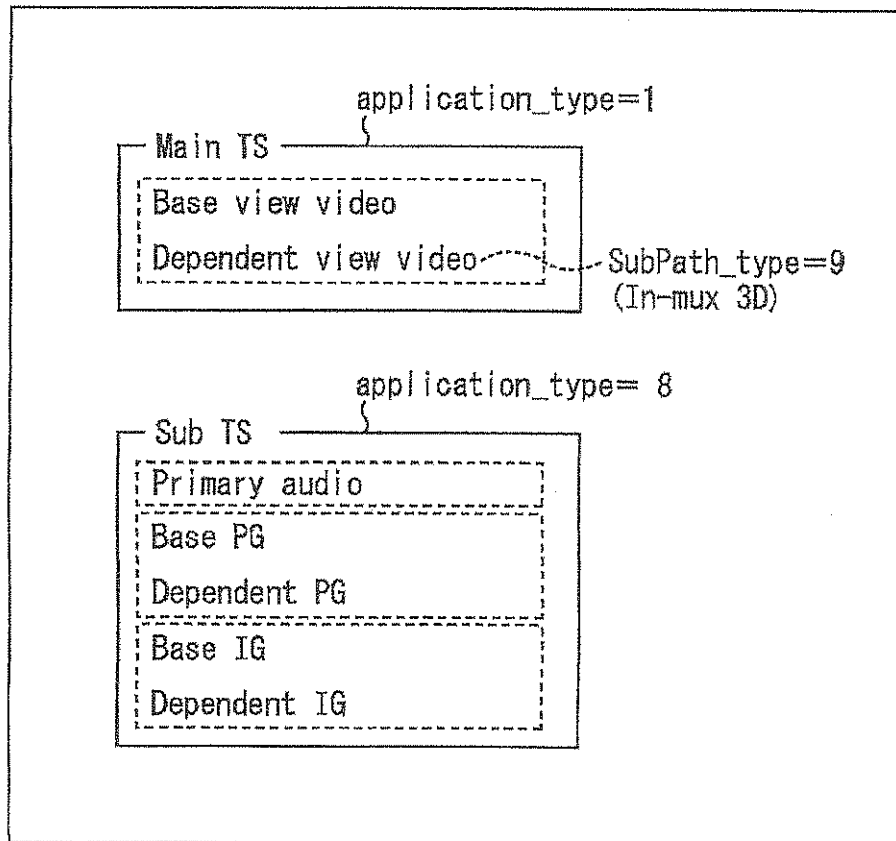


FIG. 17

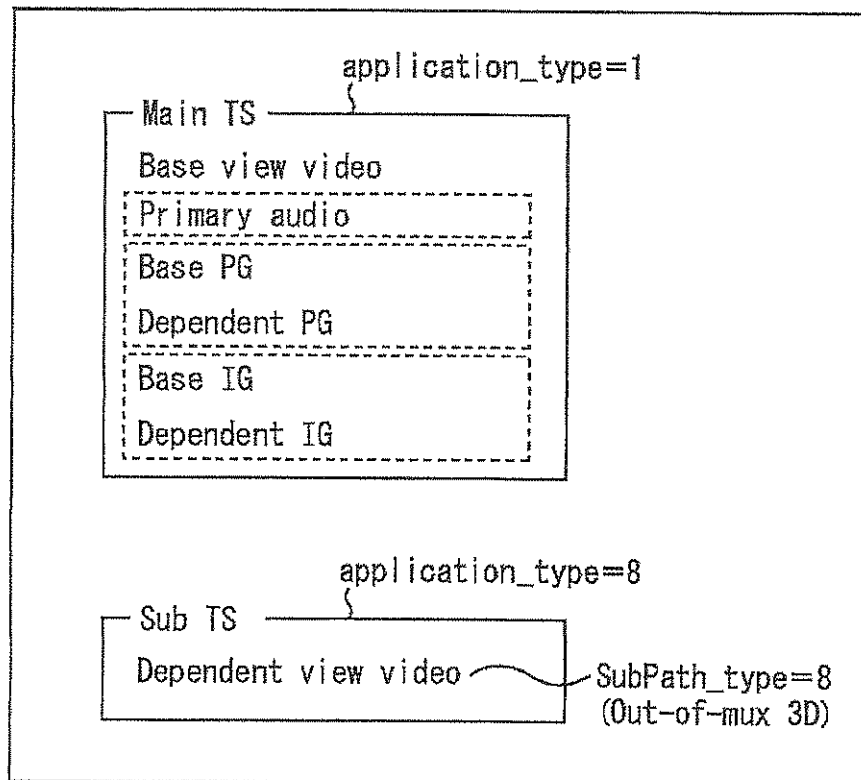


FIG. 18

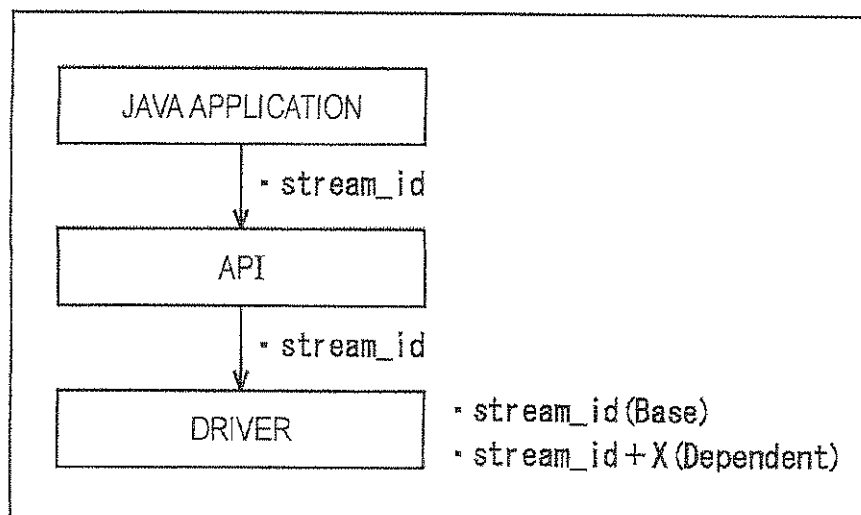


FIG. 19

| Syntax                      | No. of bits | Mnemonic |
|-----------------------------|-------------|----------|
| xxxxx.mpls {                |             |          |
| type_indicator              | 8*4         | bslbf    |
| version_number              | 8*4         | bslbf    |
| PlayList_start_address      | 32          | uimsbf   |
| PlayListMark_start_address  | 32          | uimsbf   |
| ExtensionData_start_address | 32          | uimsbf   |
| reserved_for_future_use     | 160         | bslbf    |
| AppInfoPlayList()           |             |          |
| for (i=0; i<N1; i++) {      |             |          |
| padding_word                | 16          | bslbf    |
| }                           |             |          |
| PlayList()                  |             |          |
| for (i=0; i<N2; i++) {      |             |          |
| padding_word                | 16          | bslbf    |
| }                           |             |          |
| PlayListMark()              |             |          |
| for (i=0; i<N3; i++) {      |             |          |
| padding_word                | 16          | bslbf    |
| }                           |             |          |
| ExtensionData()             |             |          |
| for (i=0; i<N4; i++) {      |             |          |
| padding_word                | 16          | bslbf    |
| }                           |             |          |
| }                           |             |          |

FIG. 20

|                                        |     |  |
|----------------------------------------|-----|--|
| xxxxx.mp[s{                            |     |  |
| ... snip ...                           |     |  |
| 3D_PL_type                             | 2   |  |
| if (3D_PL_type==0[b  3D_PL_type==10) { |     |  |
| view_type                              | 1   |  |
| reserved_for_future_use                | 157 |  |
| else {                                 |     |  |
| reserved_for_future_use                | 158 |  |
| }                                      |     |  |
| ... snip ...                           |     |  |
| }                                      |     |  |

FIG. 21

| 3D_PL_type | Meaning          |
|------------|------------------|
| 00         | 2D PlayList      |
| 01         | 3D B-D1 PlayList |
| 10         | 3D B-D2 PlayList |

FIG. 22

| view_type<br>(is_L_Base_view_flag) | Meaning                          |
|------------------------------------|----------------------------------|
| 0                                  | L view<br>or 2D AVC video stream |
| 1                                  | R view                           |

FIG. 23

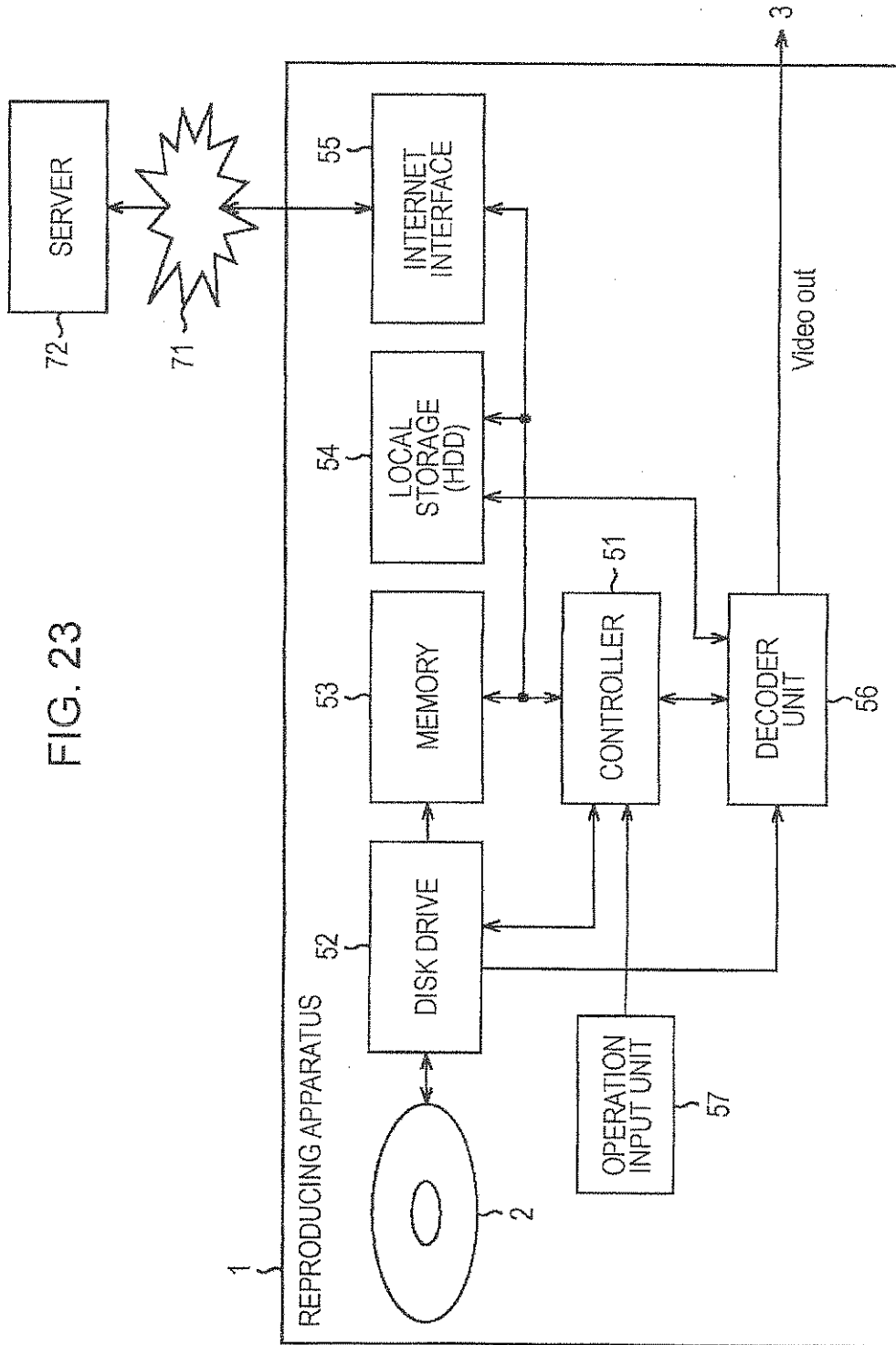


FIG. 24

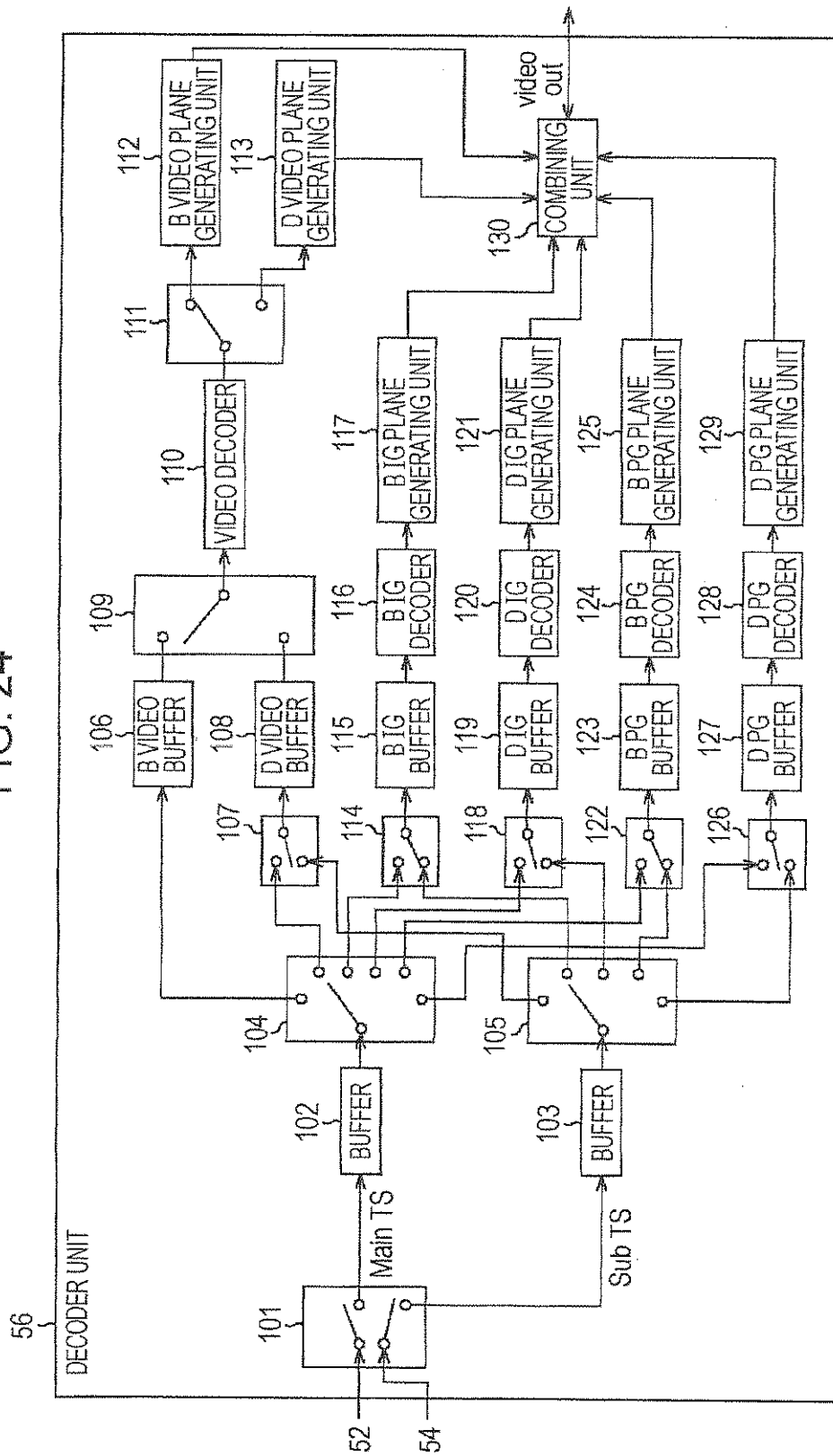


FIG. 25

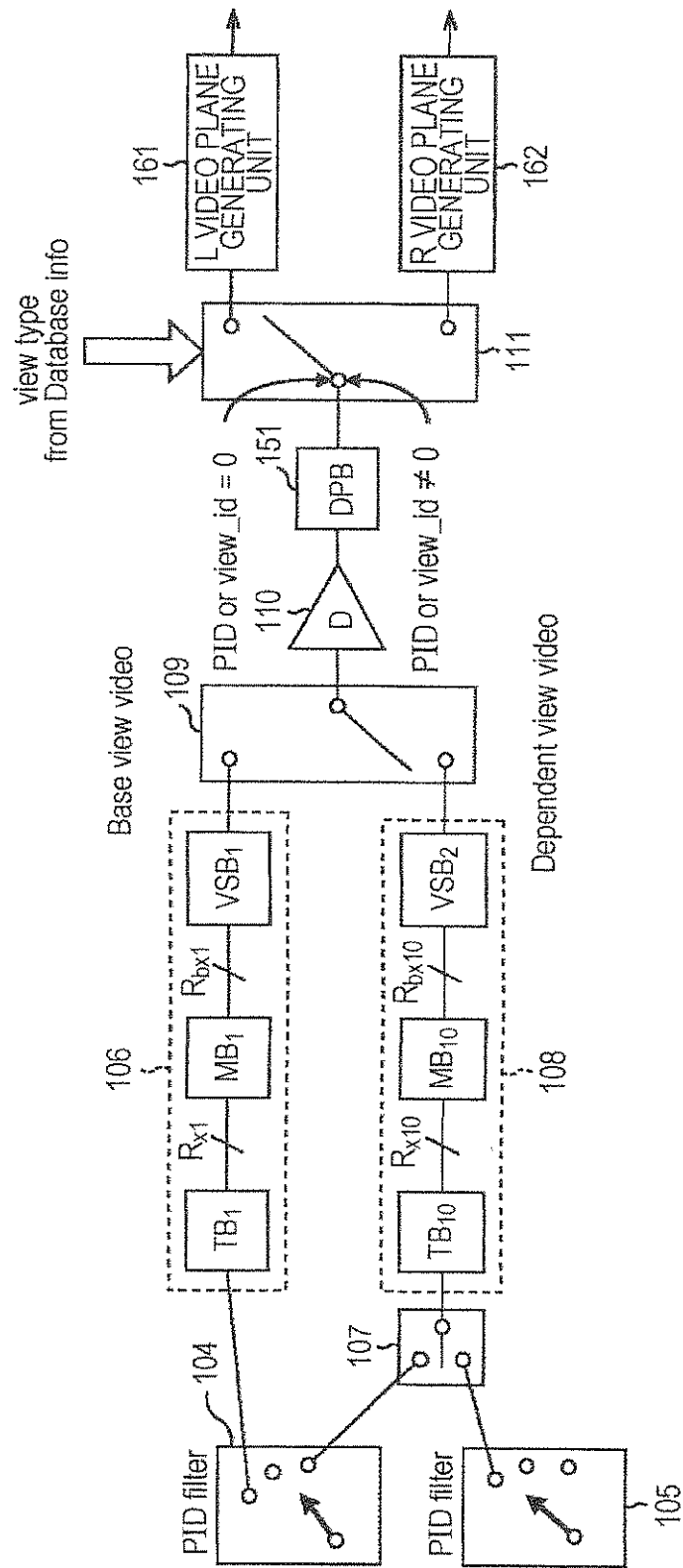


FIG. 26

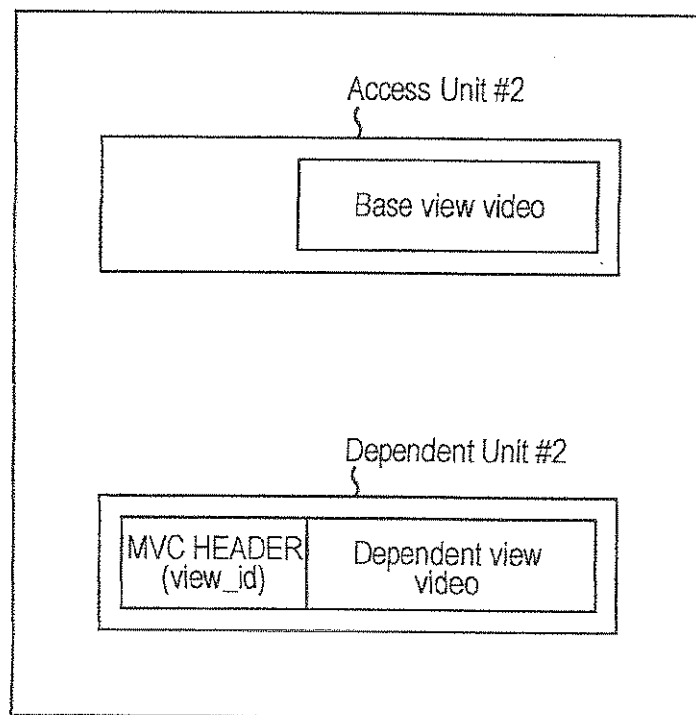


FIG. 27

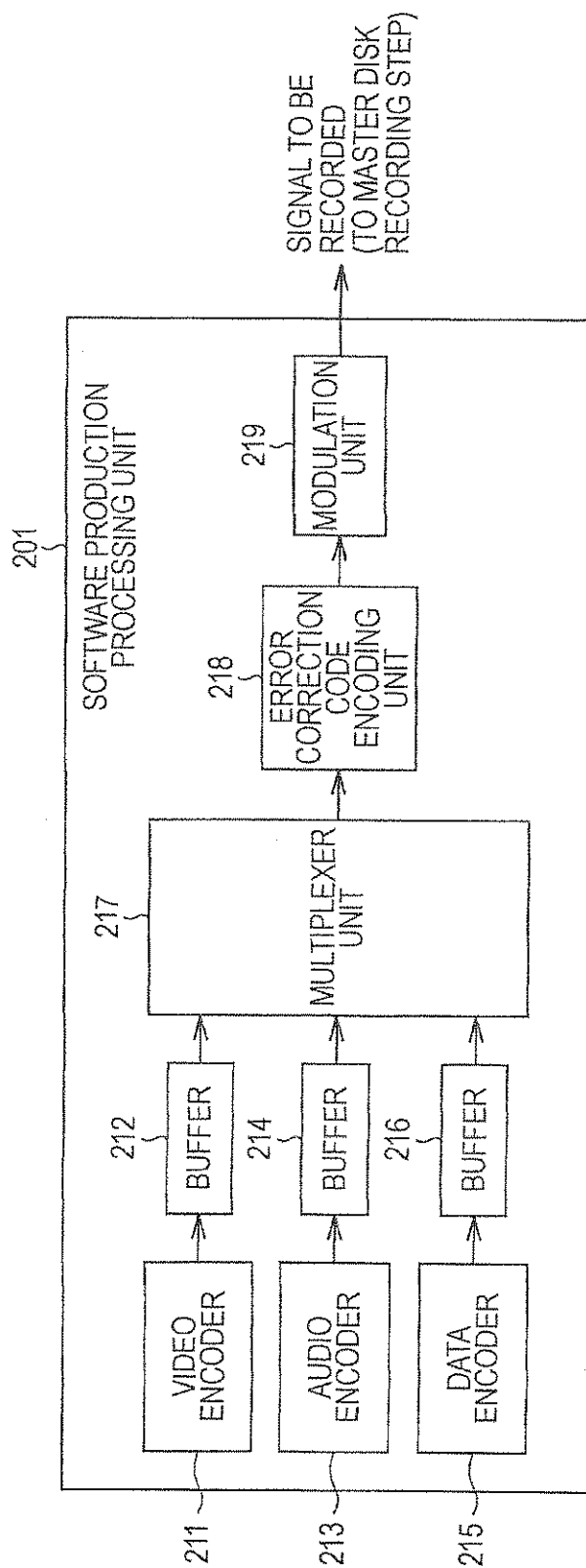


FIG. 28

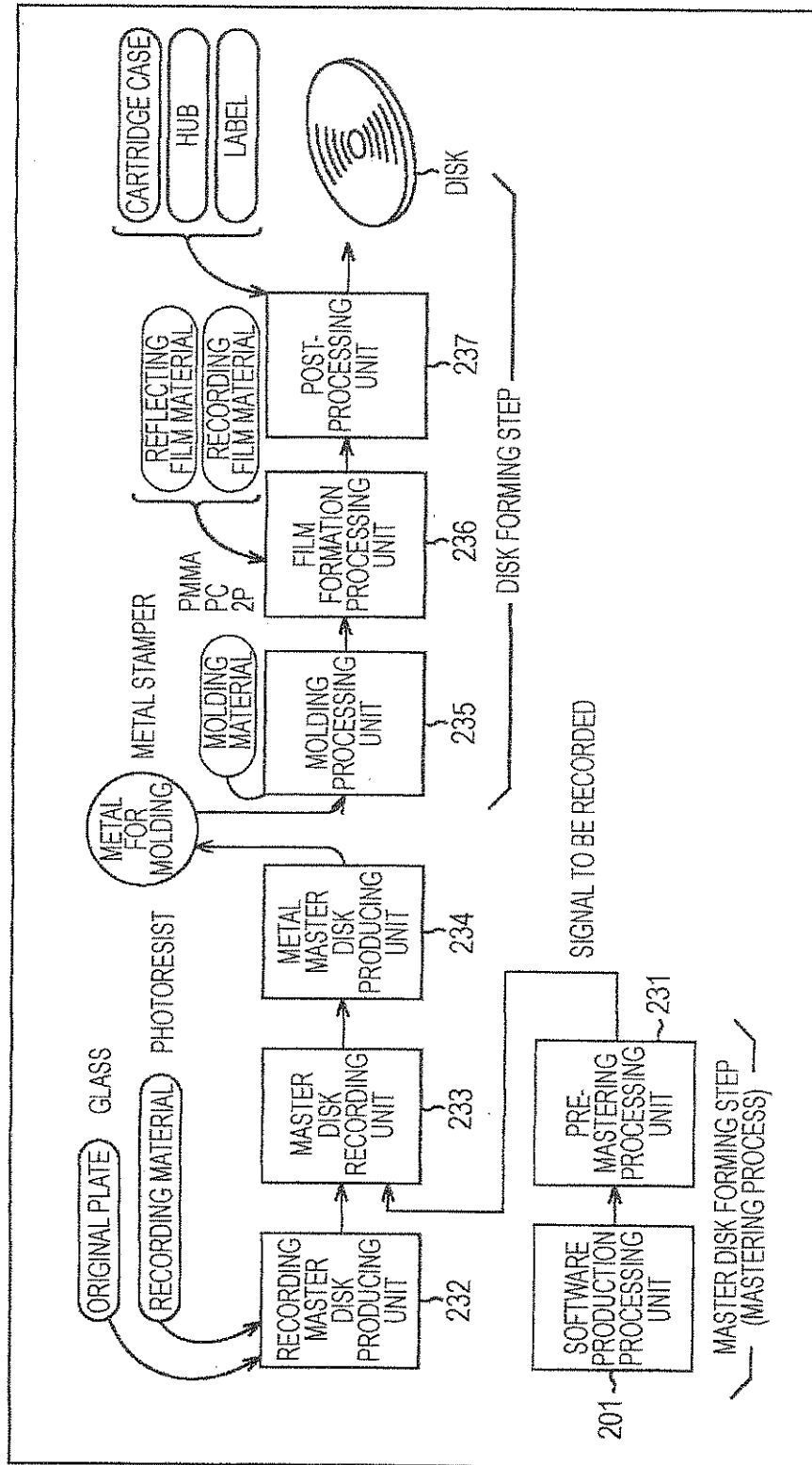


FIG. 29

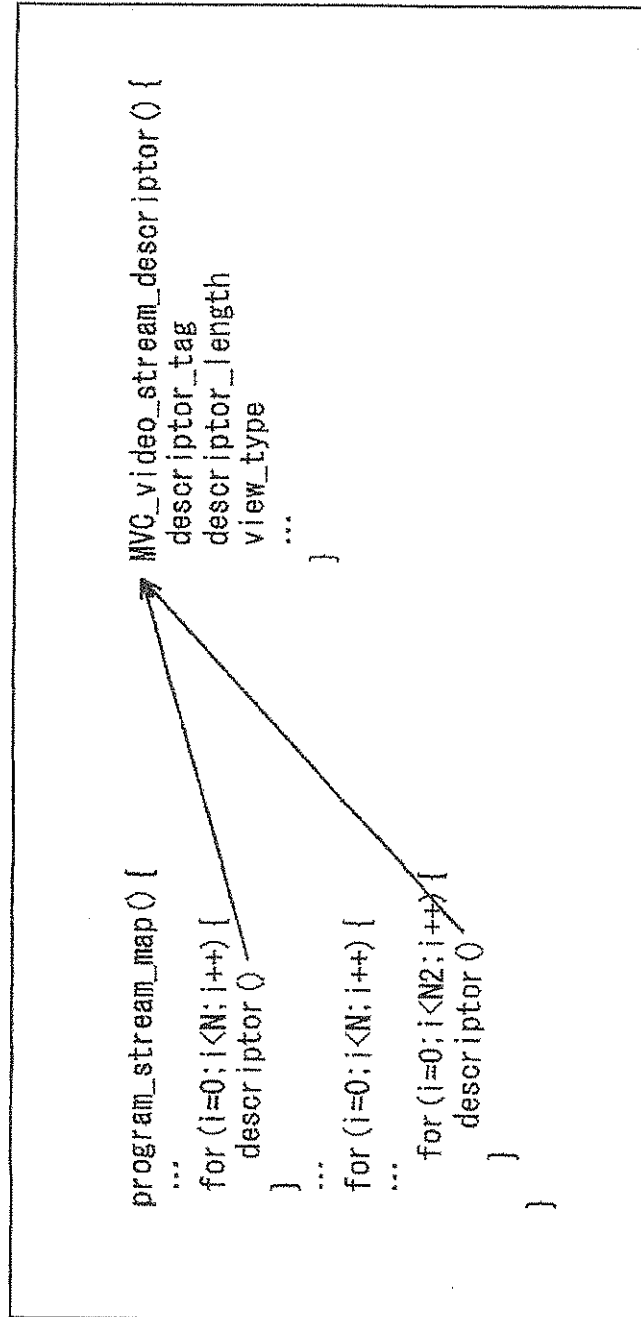


FIG. 30

```
sei_message() {  
    ...  
    else if (payloadType == 46) {  
        MVC_video_stream_info(payloadSize)  
    }  
}  
MVC_video_stream_info() {  
    ...  
    view_type  
    ...  
}
```

FIG. 31

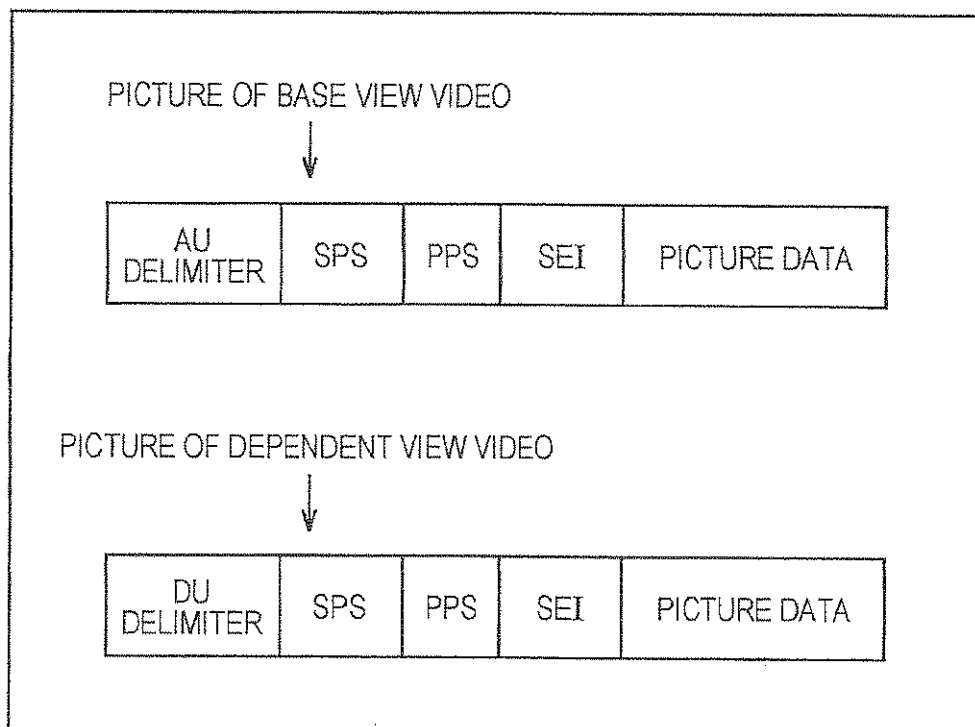


FIG. 32

