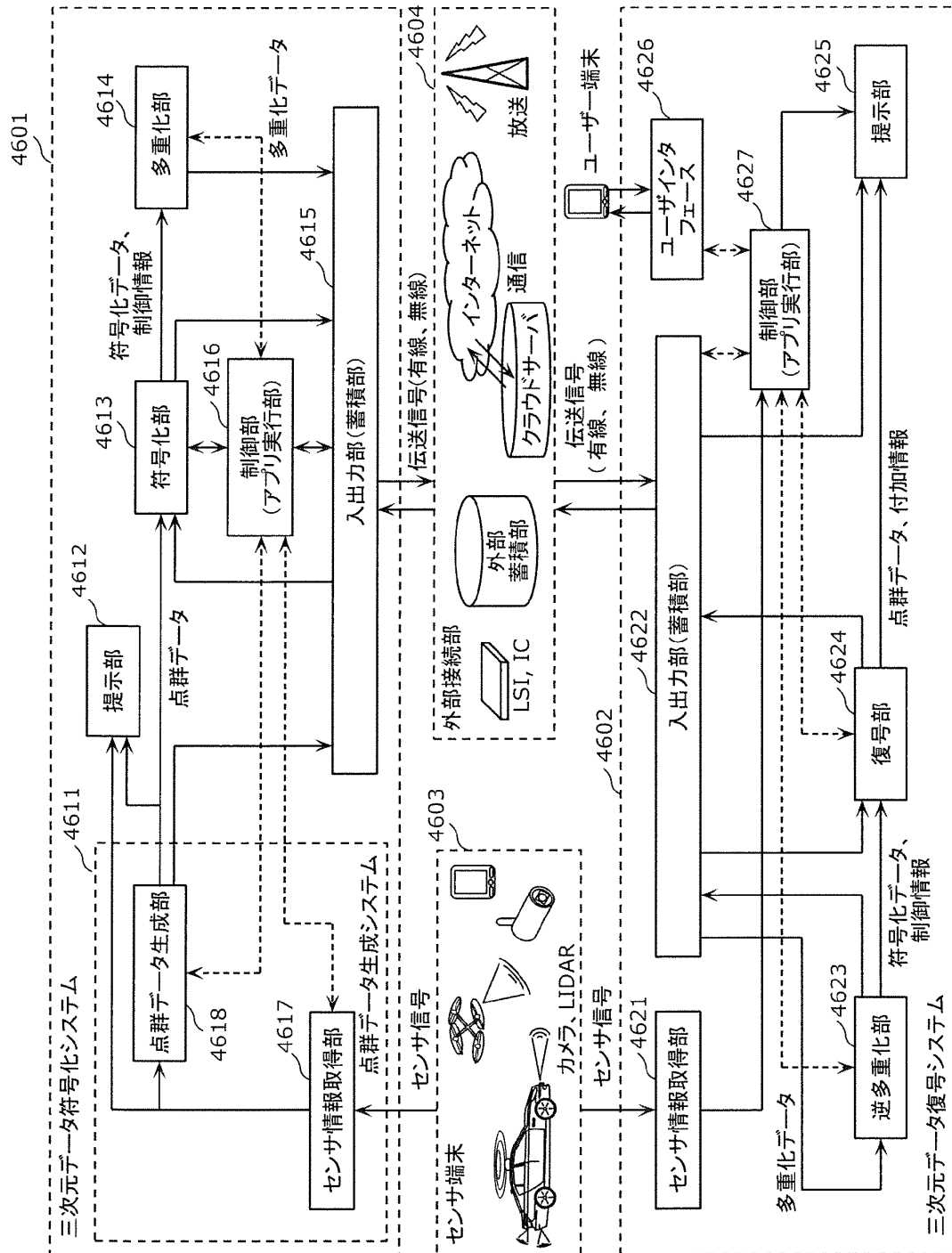
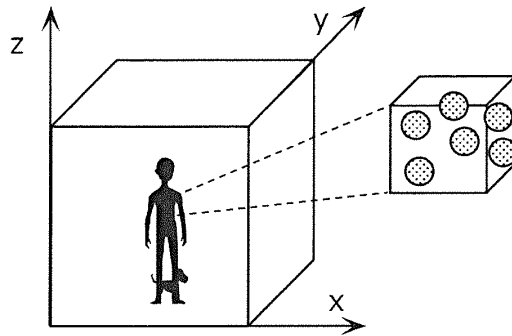


[図1]



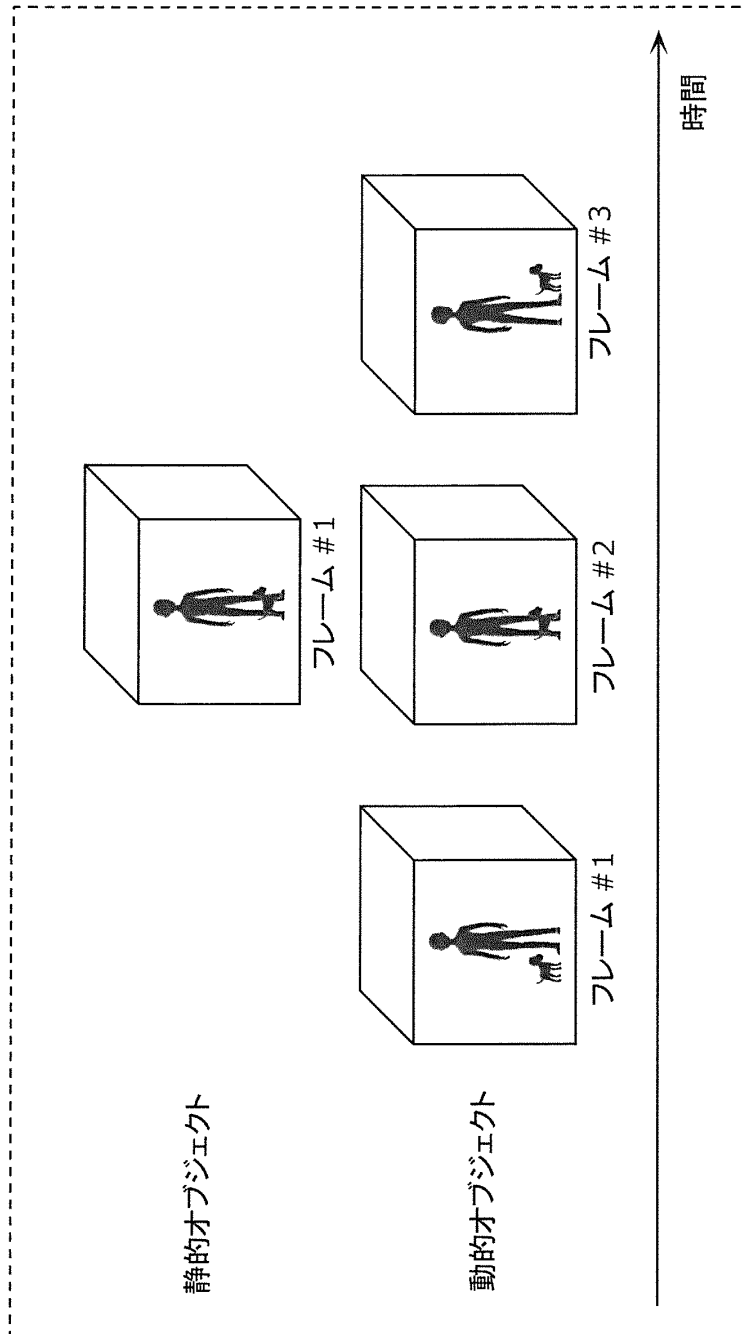
[図2]



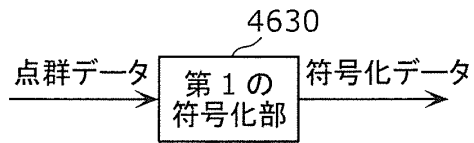
[図3]

	位置情報	属性情報
n=1	$G(1) = (x_1, y_1, z_1)$	$A(1) = (R_1, G_1, B_1)$
n=2	$G(2) = (x_2, y_2, z_2)$	$A(2) = (R_2, G_2, B_2)$
⋮	⋮	⋮
n=N	$G(N) = (x_N, y_N, z_N)$	$A(N) = (R_N, G_N, B_N)$

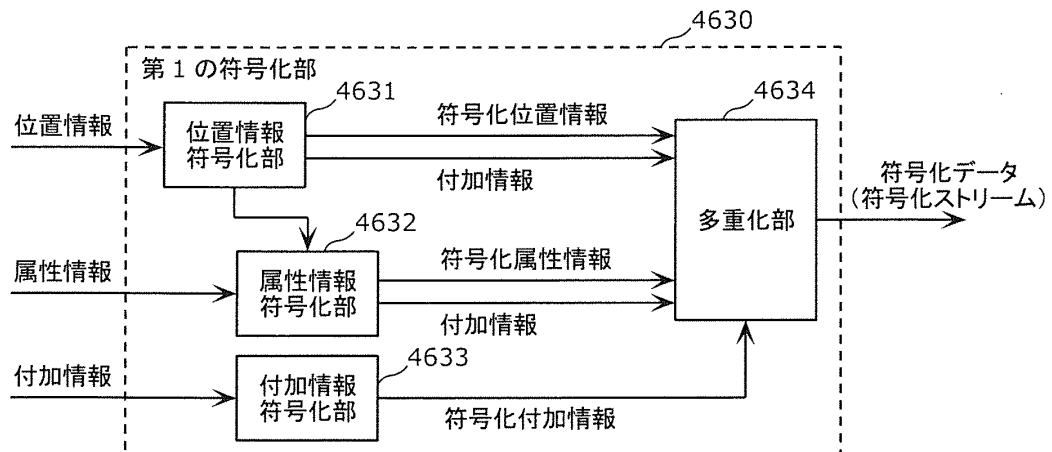
[図4]



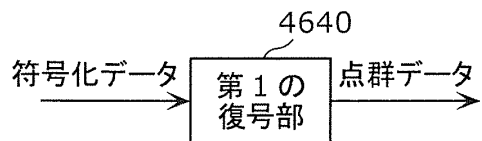
[図5]



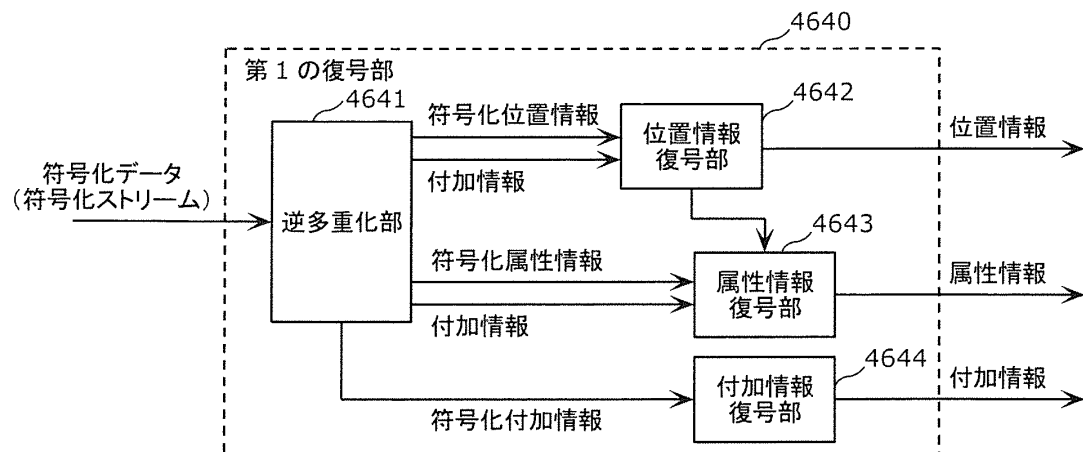
[図6]



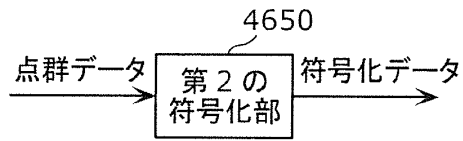
[図7]



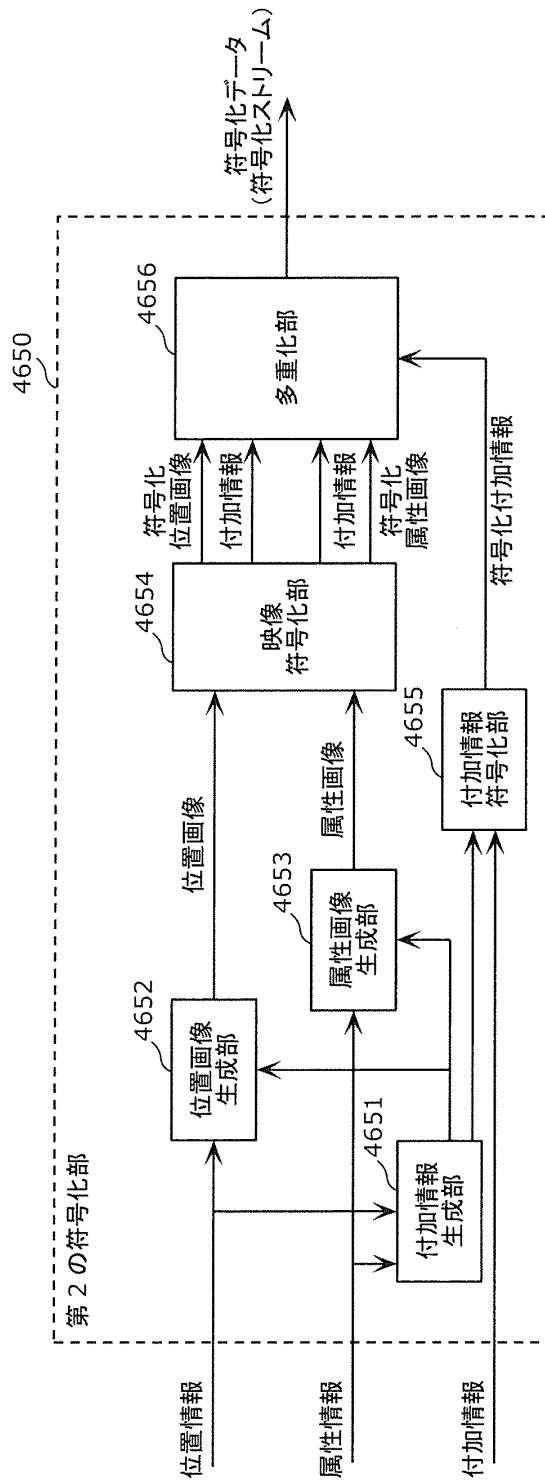
[図8]



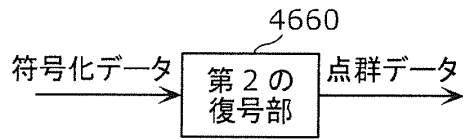
[図9]



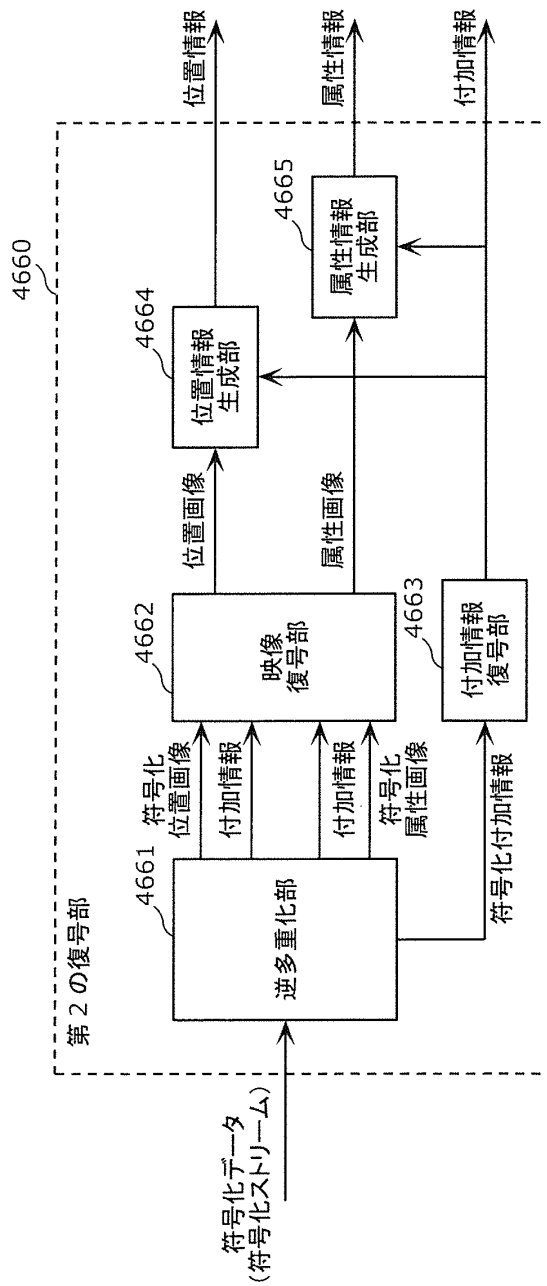
[図10]



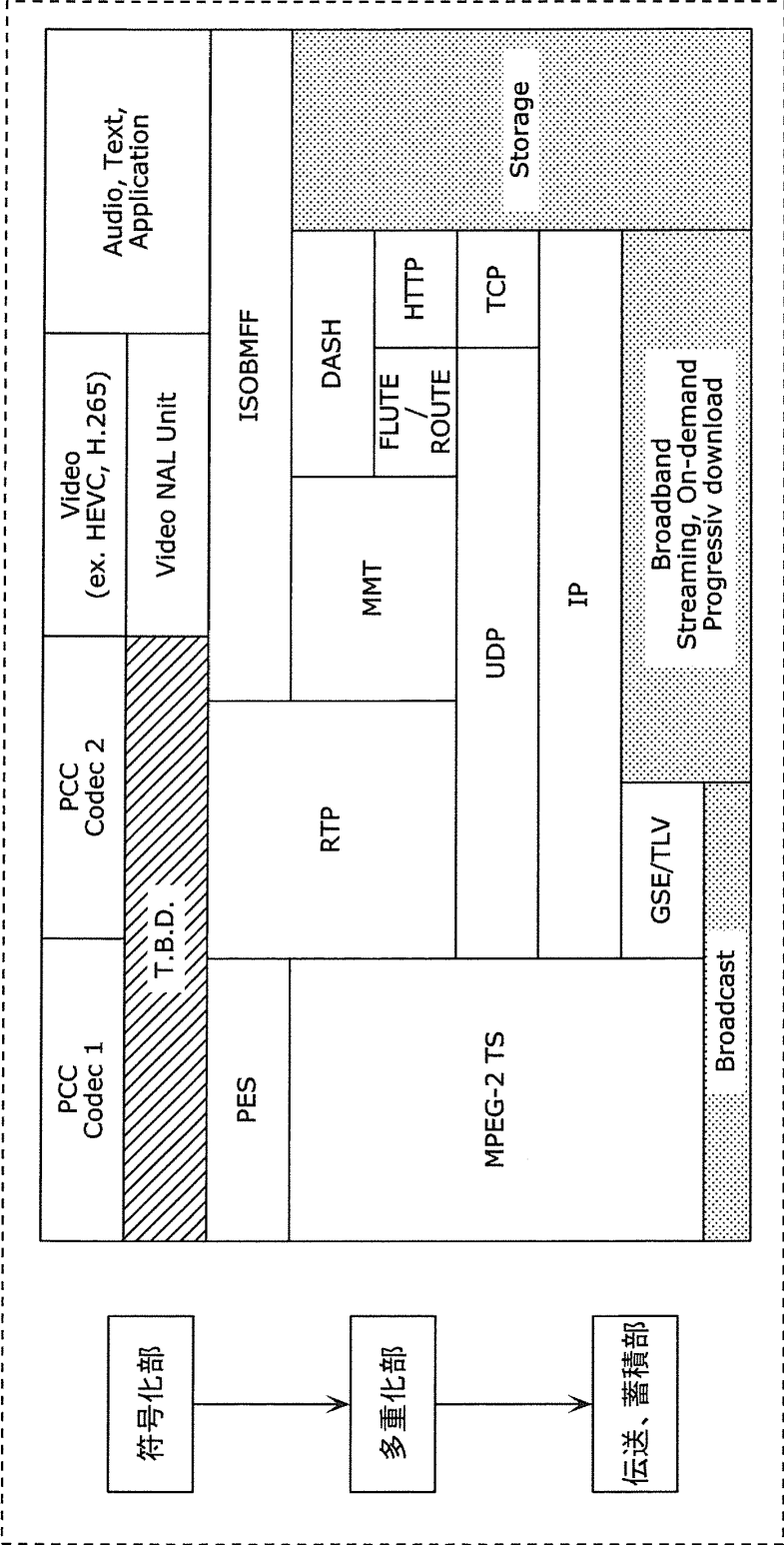
[図11]



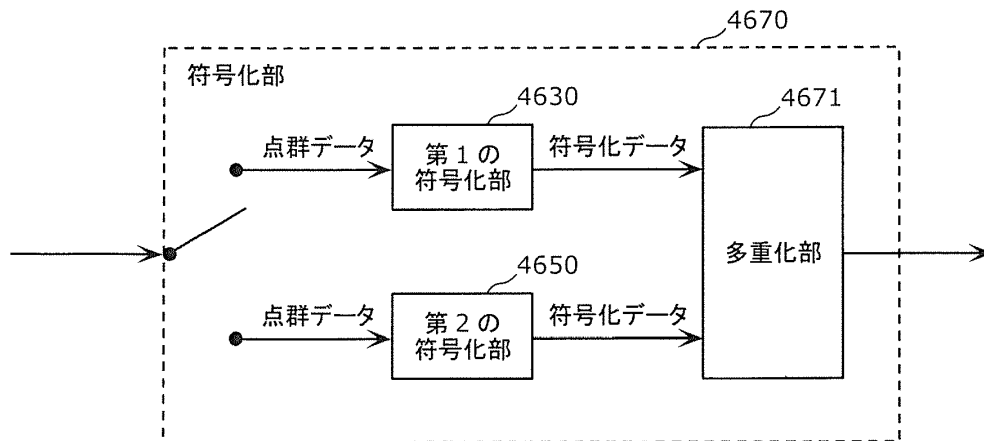
[図12]



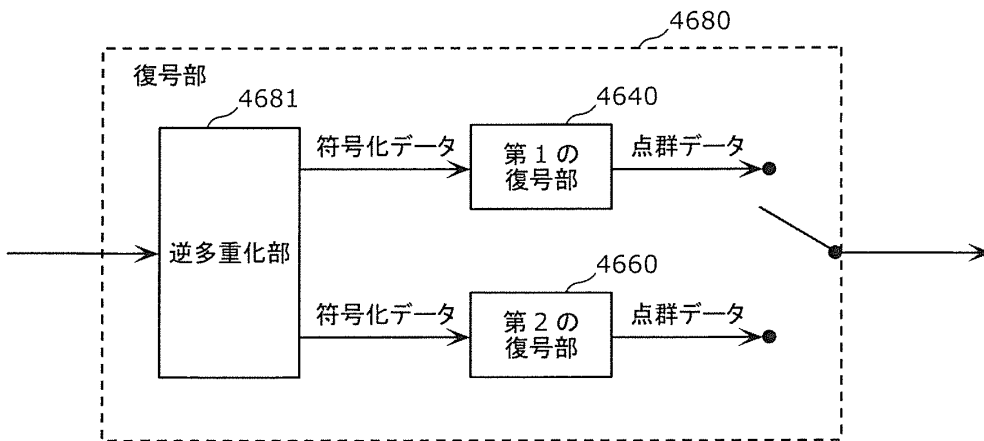
[図13]



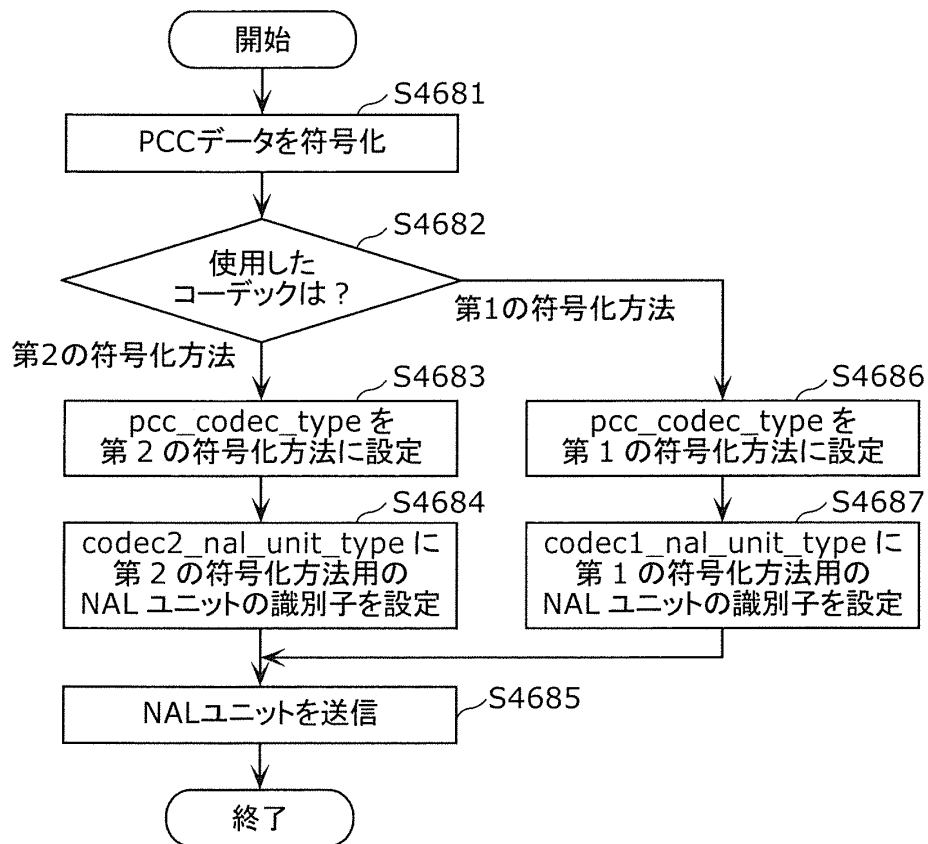
[図14]



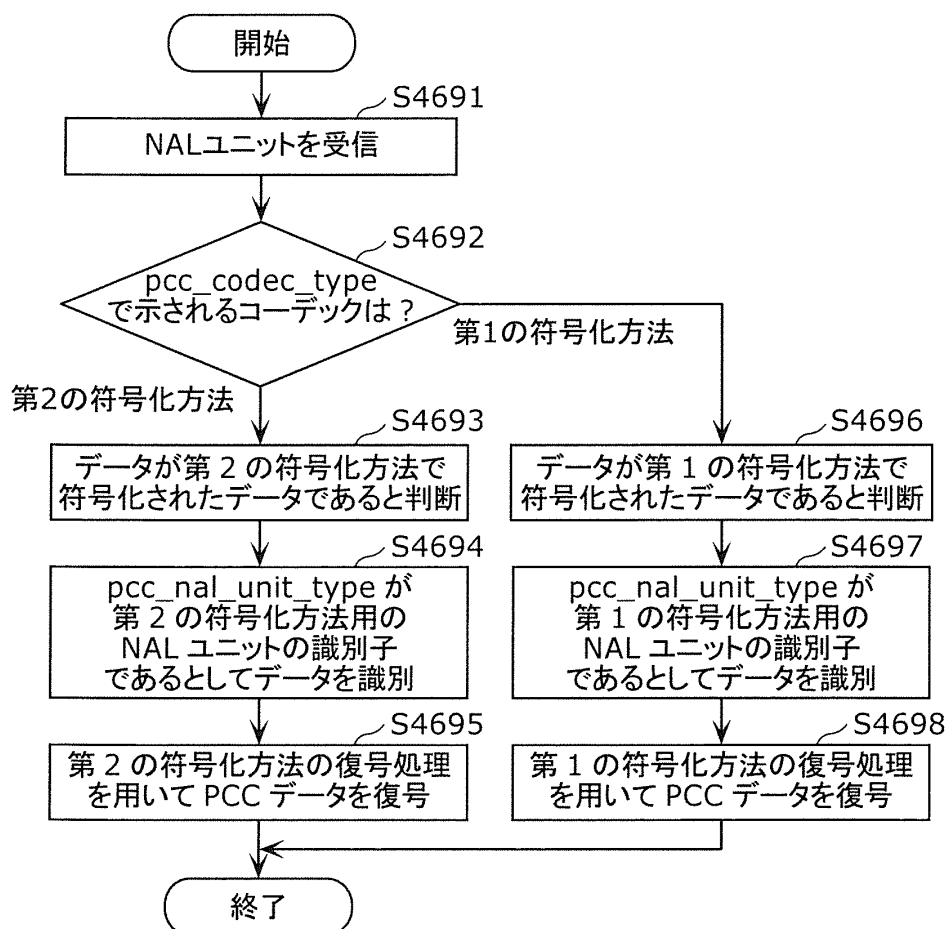
[図15]



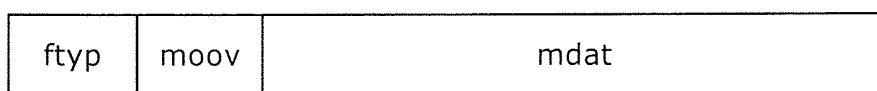
[図16]



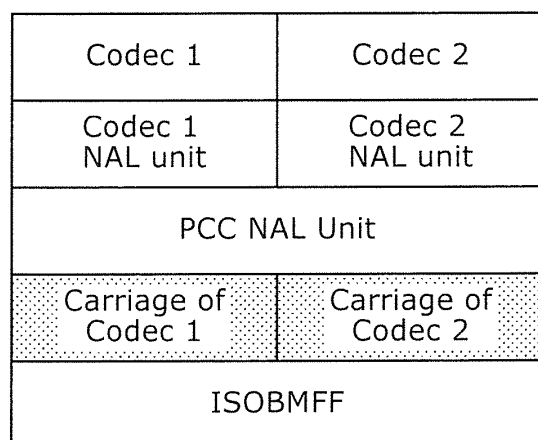
[図17]



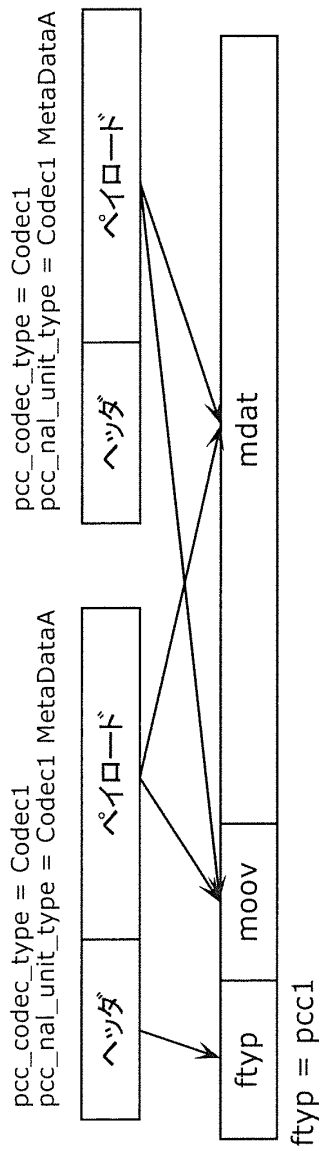
[図18]



[図19]

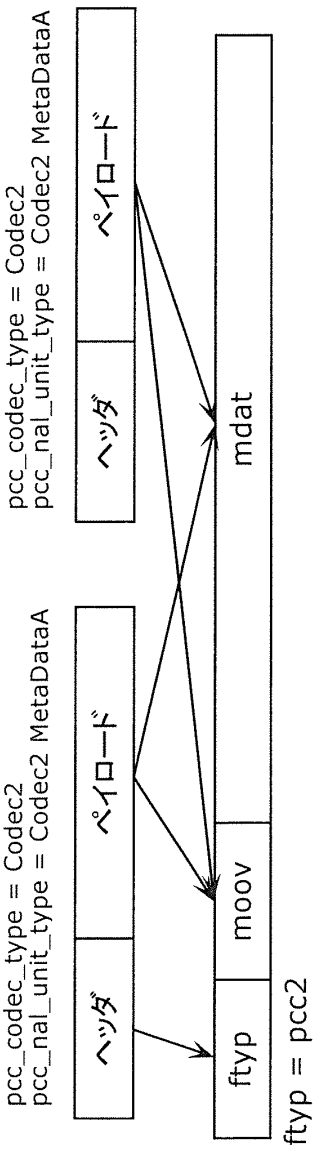


[図20]



共通の PCC NAL ユニット
ISO BMFF
(コーデック1の格納方法)

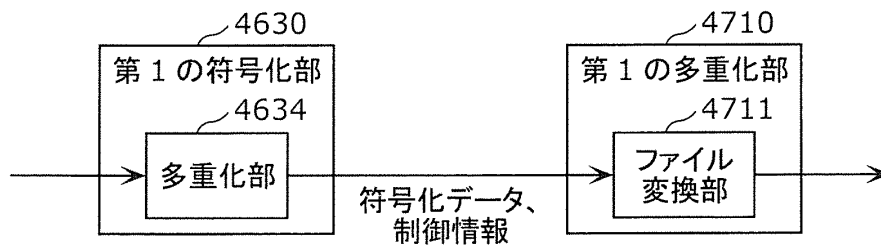
[図21]



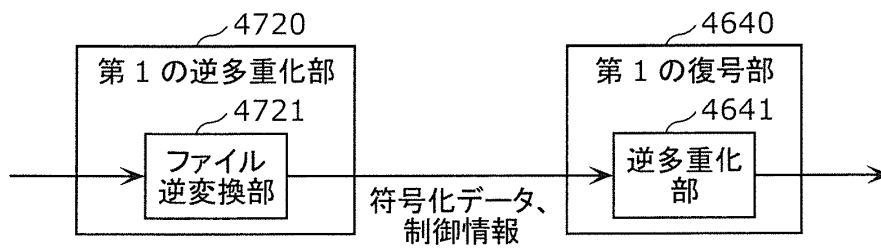
共通の PCC NAL ユニット

ISO BMFF
(コーデック 2 の格納方法)

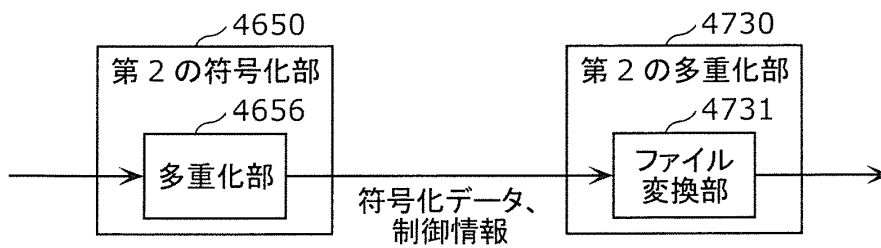
[図22]



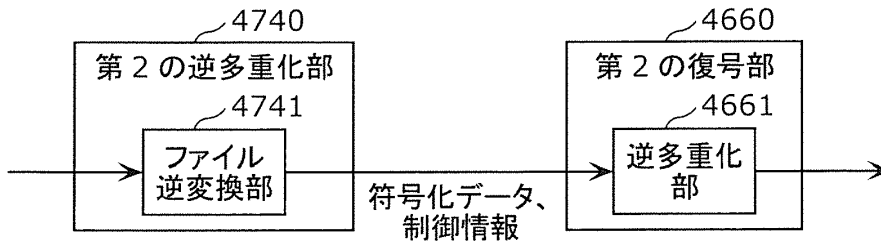
[図23]



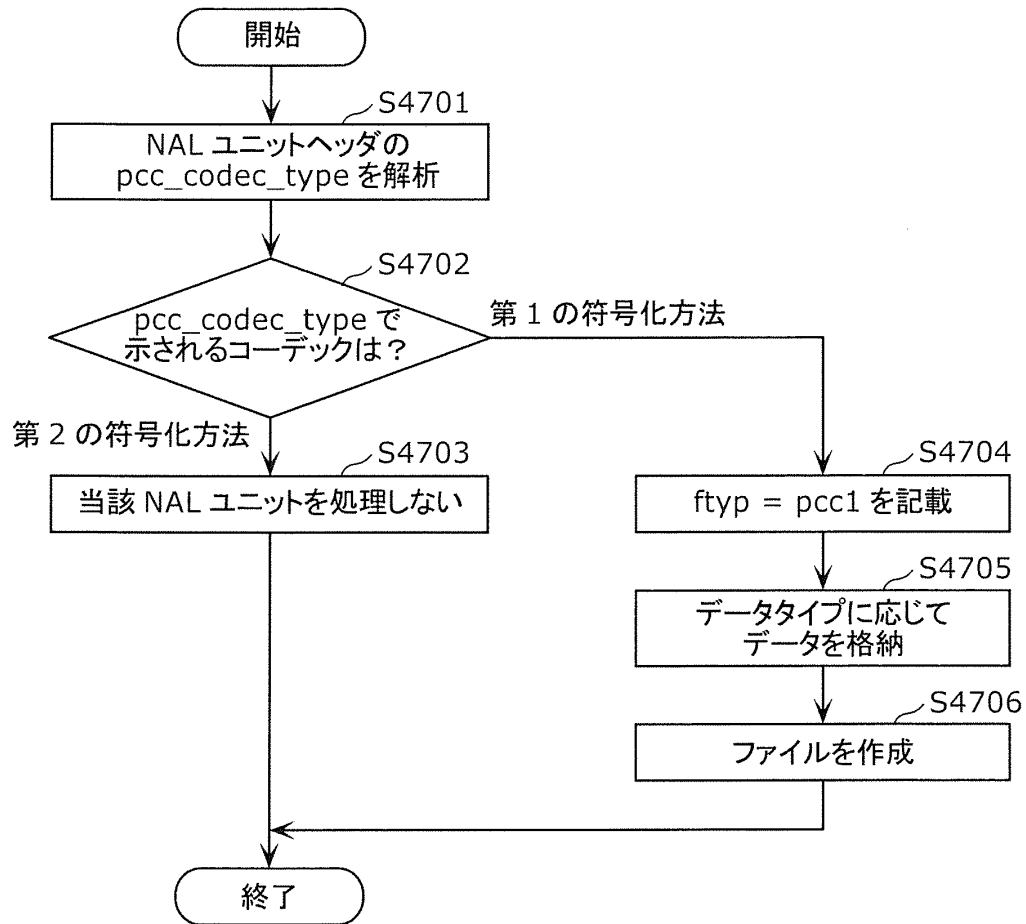
[図24]



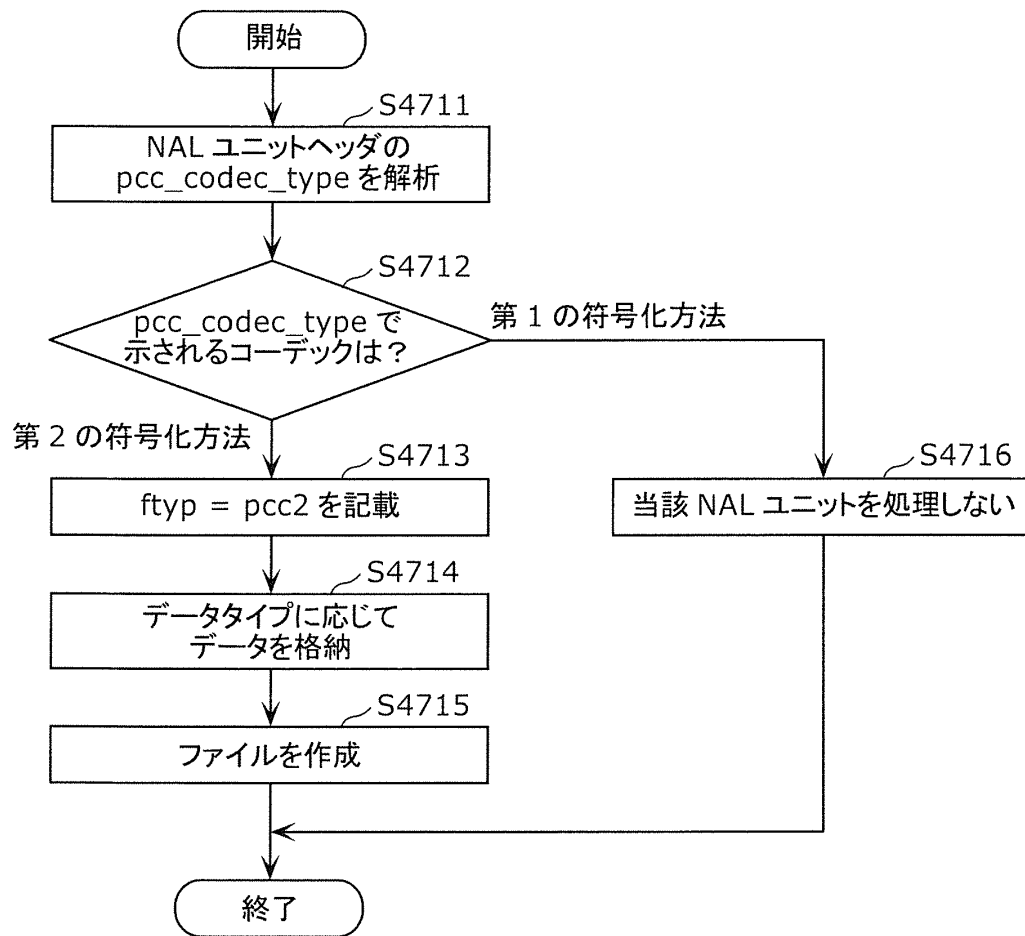
[図25]



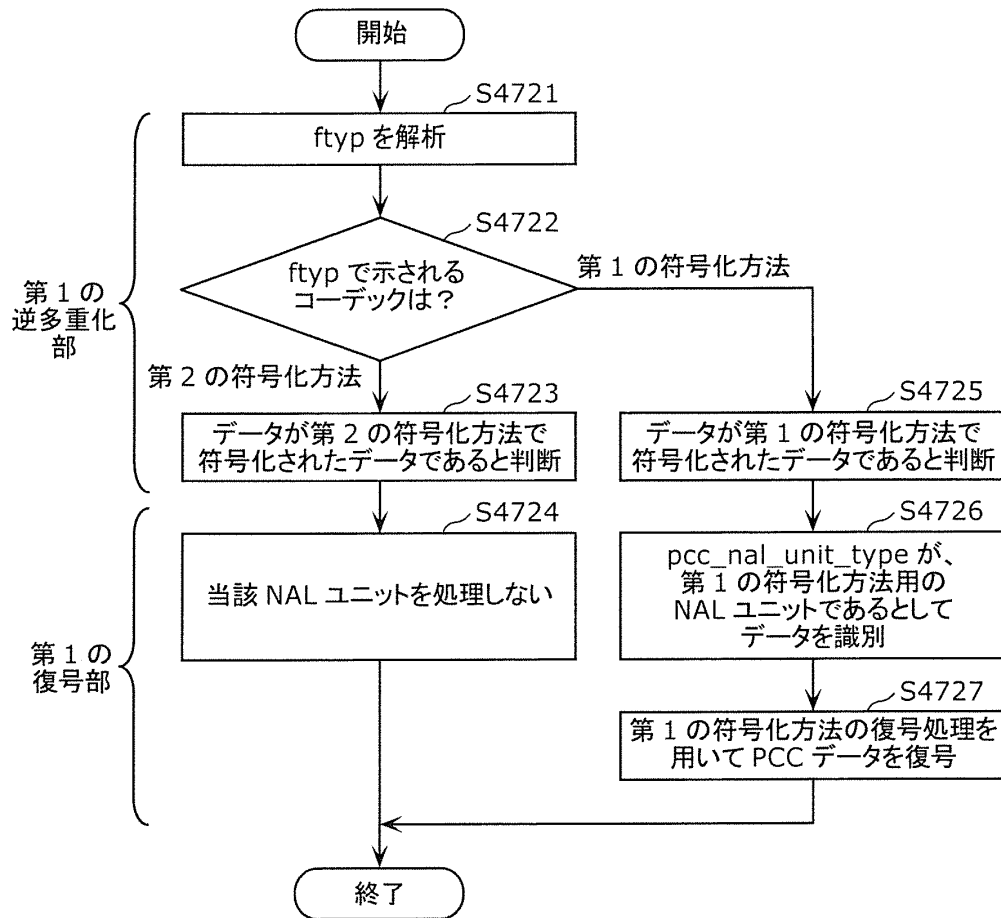
[図26]



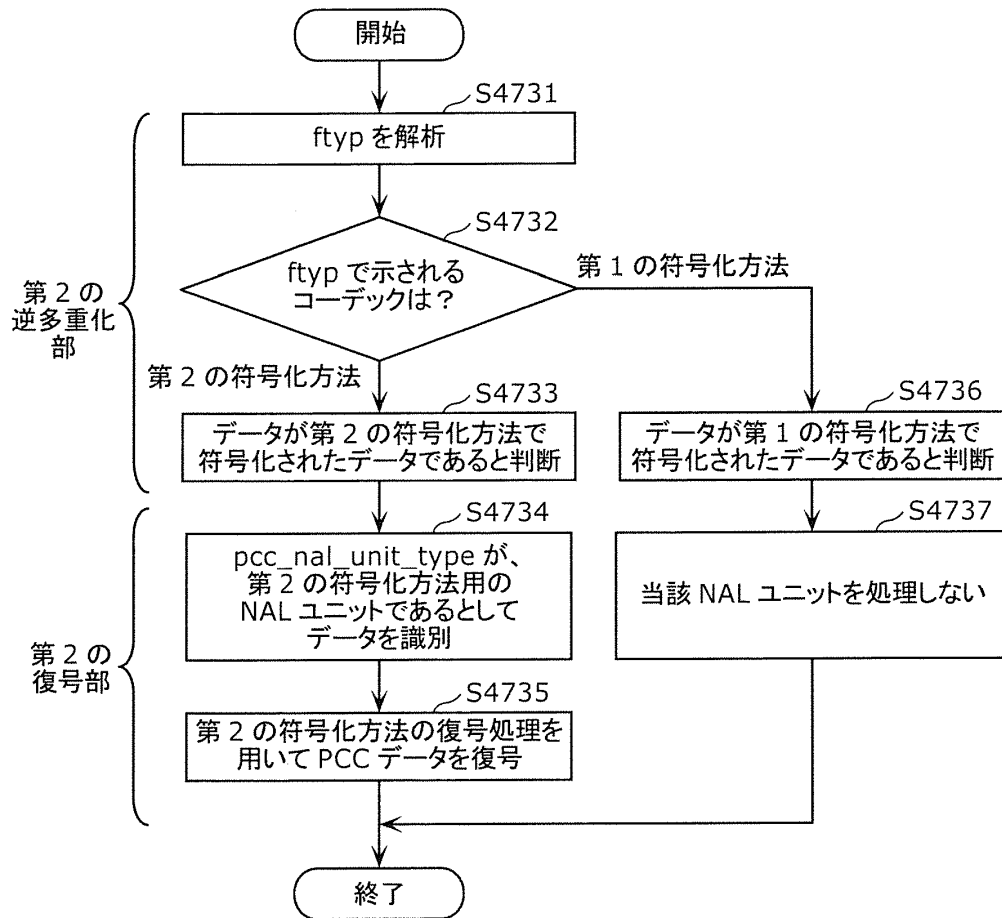
[図27]



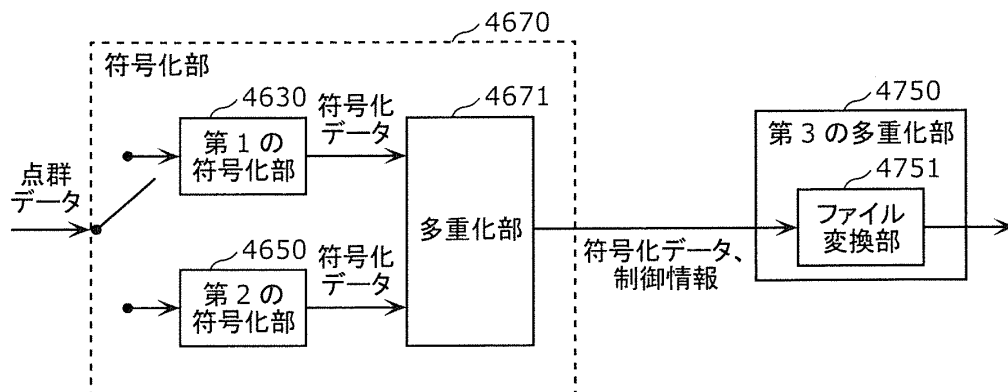
[図28]



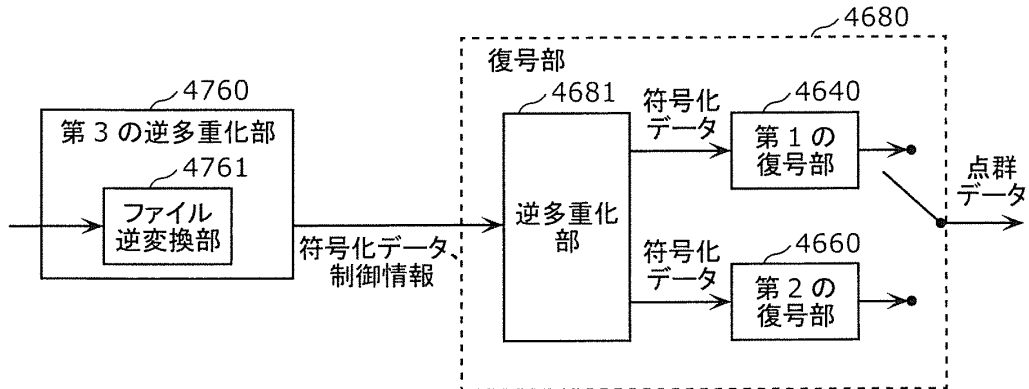
[図29]



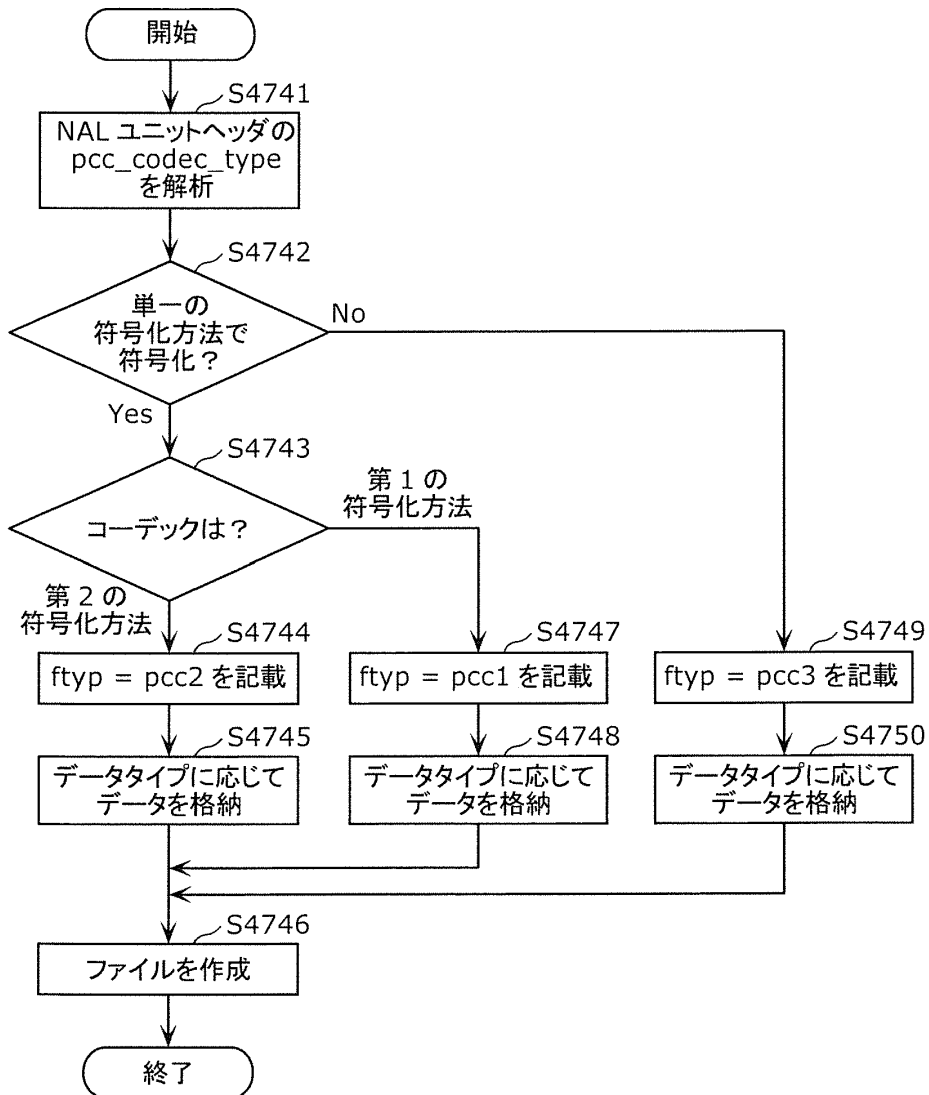
[図30]



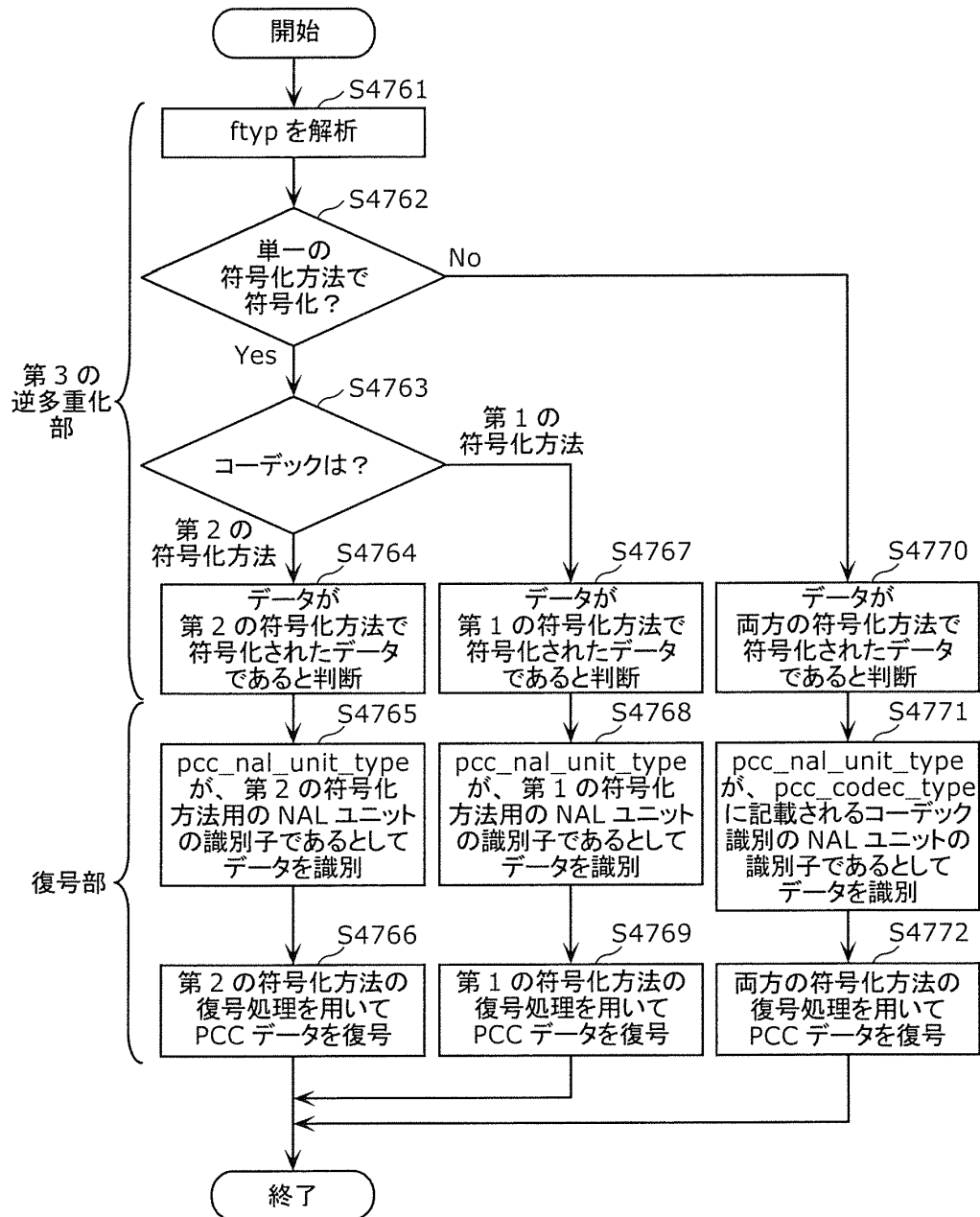
[図31]



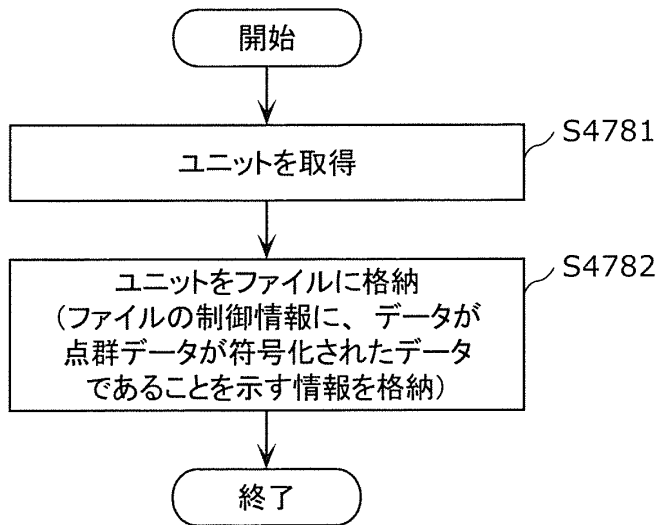
[図32]



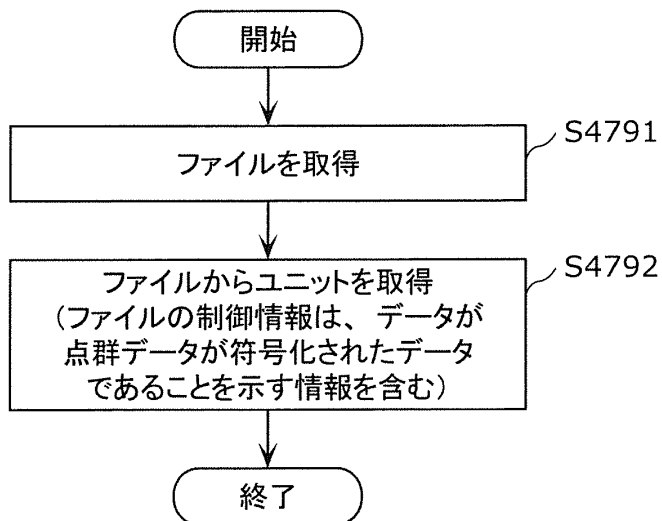
[図33]



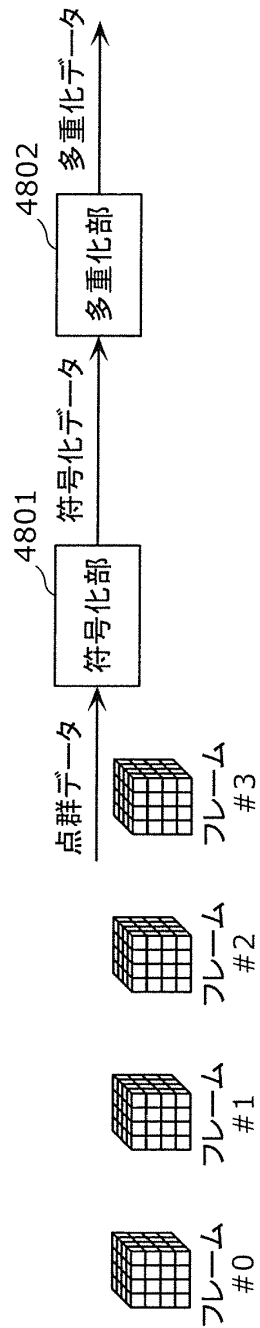
[図34]



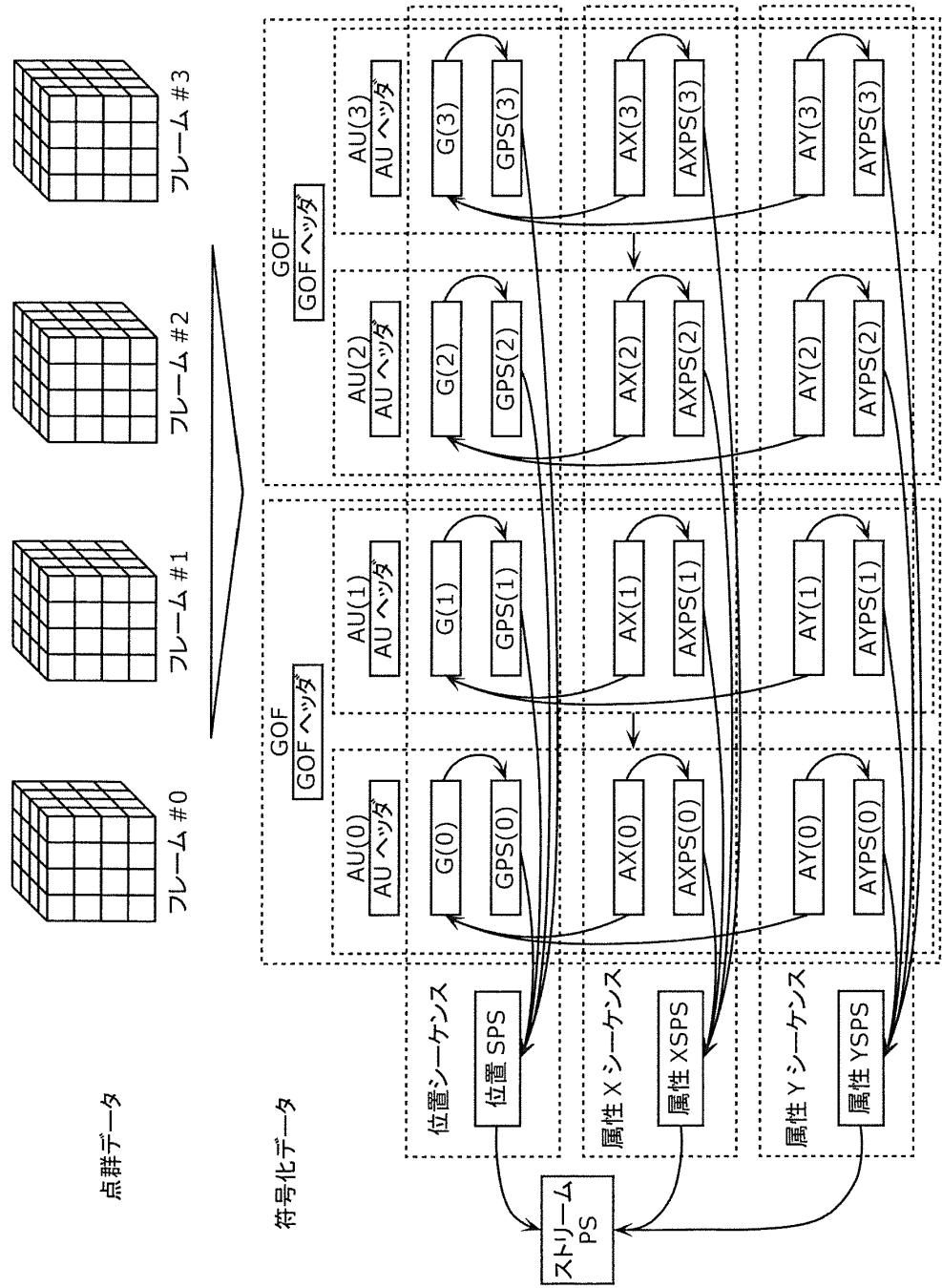
[図35]



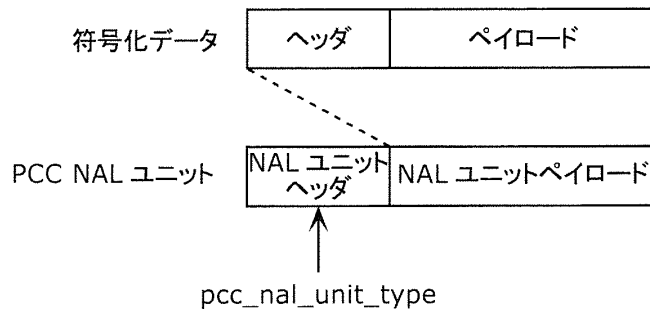
[図36]



[図37]



[図38]



[図39]

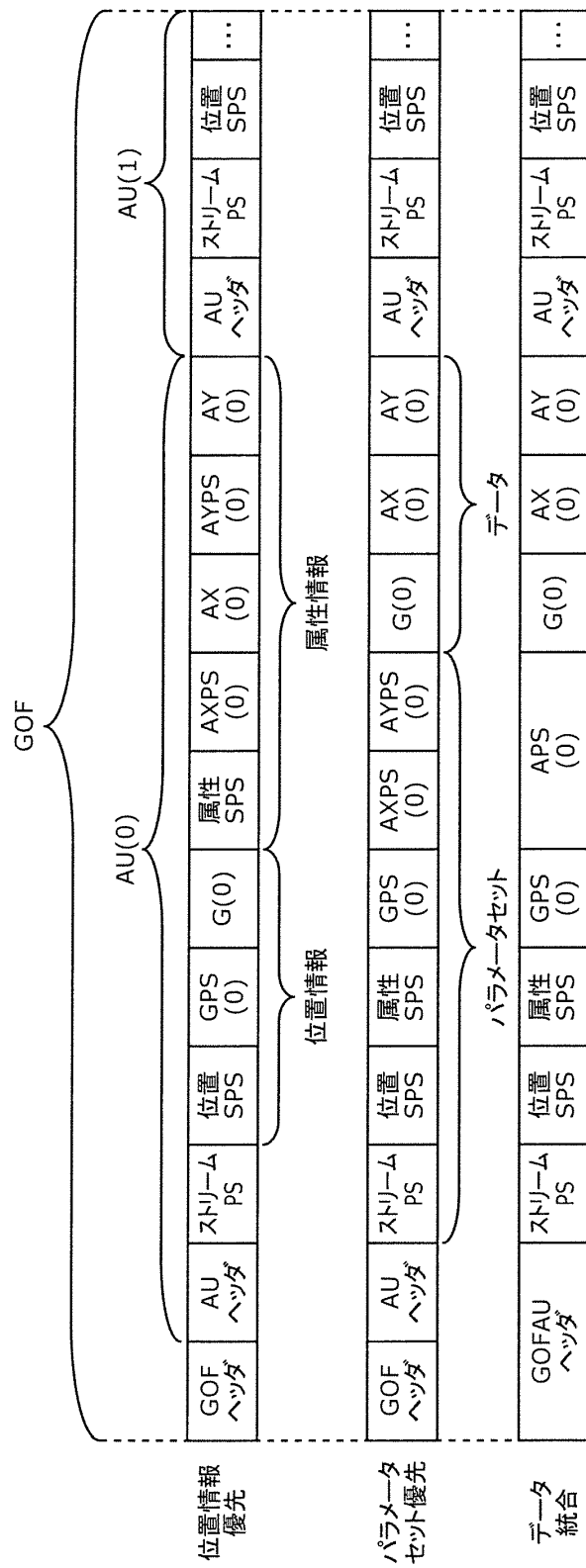
pcc_nal_unit_type のセマンティクスの例

(1) pcc_codec_type == Codec 1 の場合

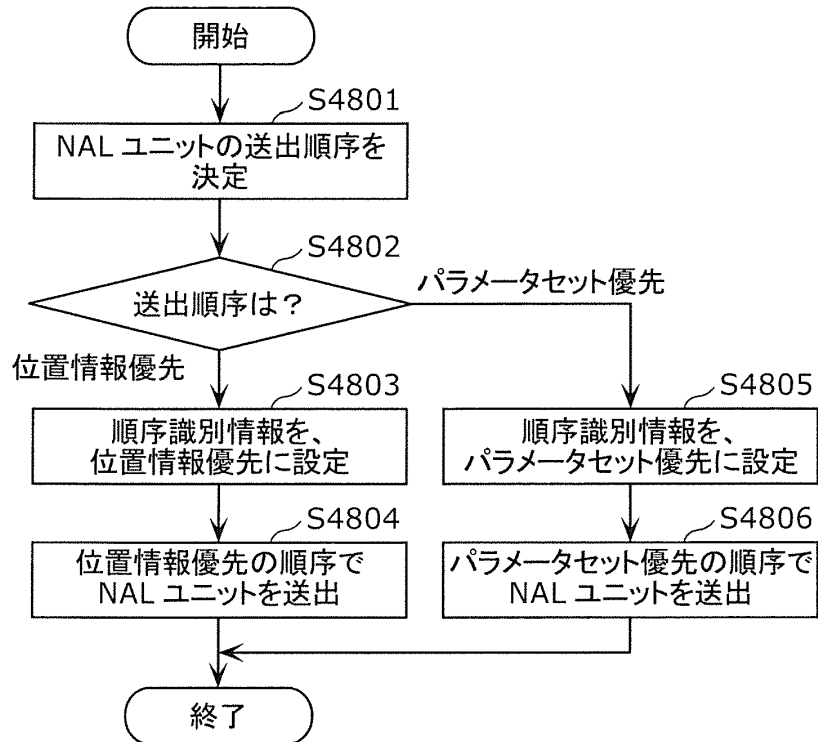
- 0:Codec1 Geometry
- 1:Codec1 AttributeX
- 2:Codec1 AttributeY
- 3:Codec1 Geom. PS
- 4:Codec1 AttrX. PS
- 5:Codec1 AttrX. PS
- 6:Codec1 Geometry Sequence PS
- 7:Codec1 AttributeX Sequence PS
- 8:Codec1 AttributeY Sequence PS
- 9:Codec1 AU Header
- 10:Codec1 GOF Header
- 11 ~ :Codec1 reserved for future use

(2)pcc_coded_type == Codec 2 の場合

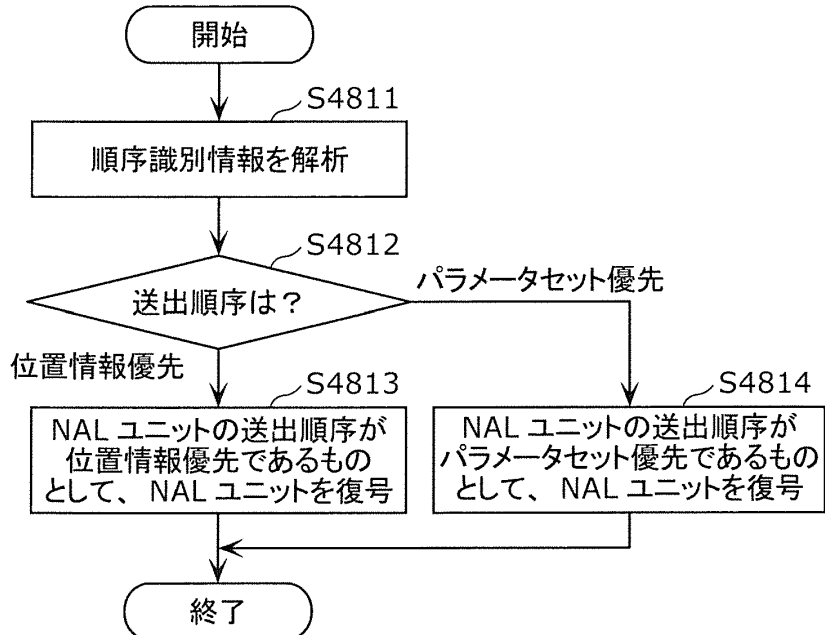
- 0:Codec2 DataA
- 1:Codec2 MetaDataA
- 2:Codec2 MetaDataB
- 3 ~ :Codec2 reserved for future use



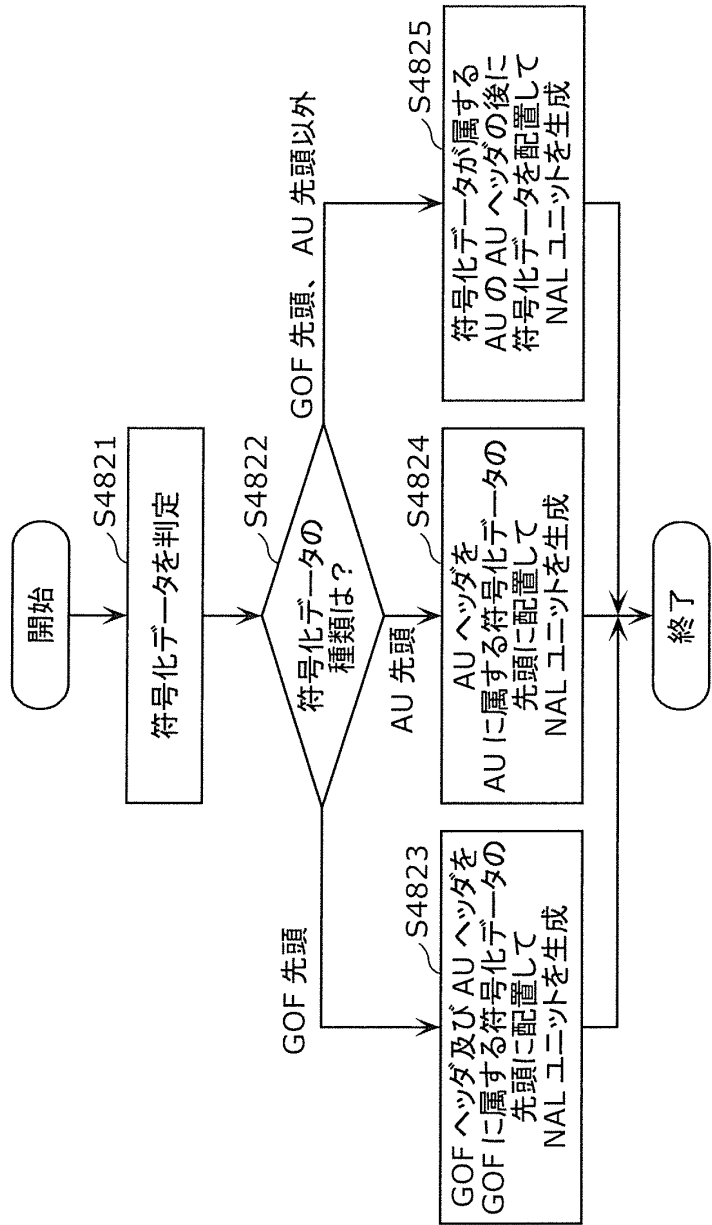
[図41]



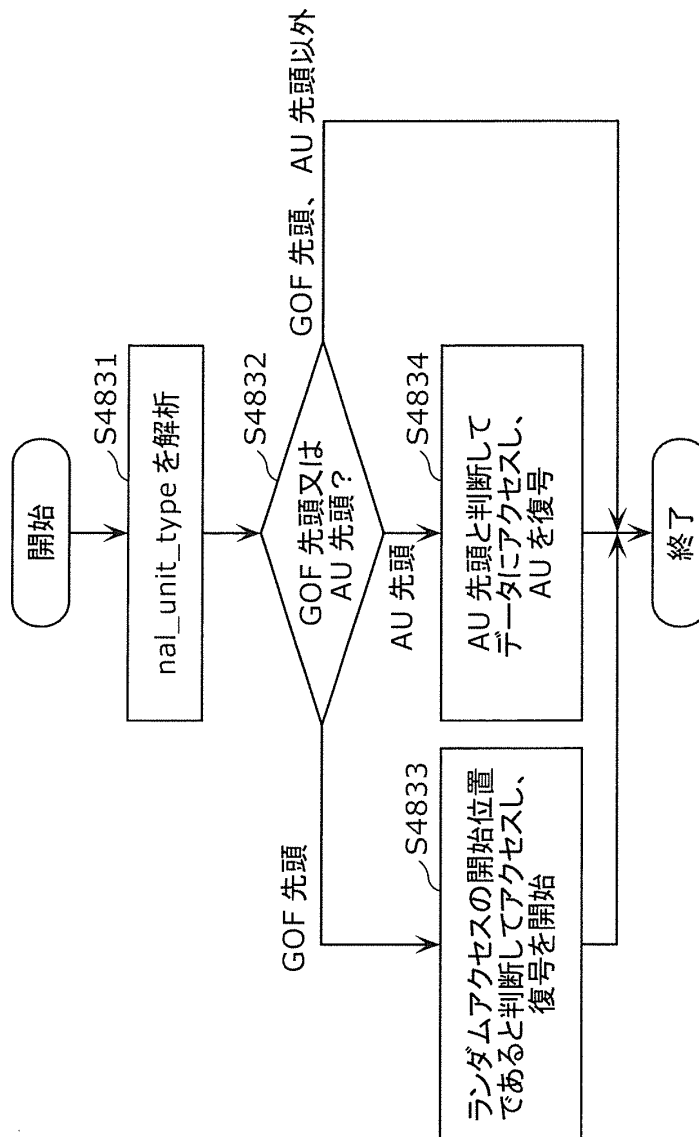
[図42]



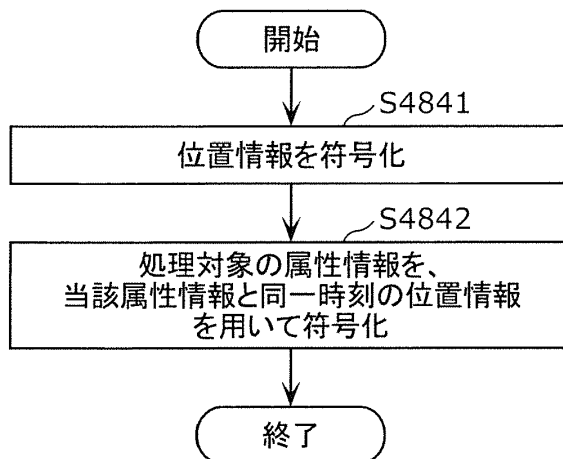
[図43]



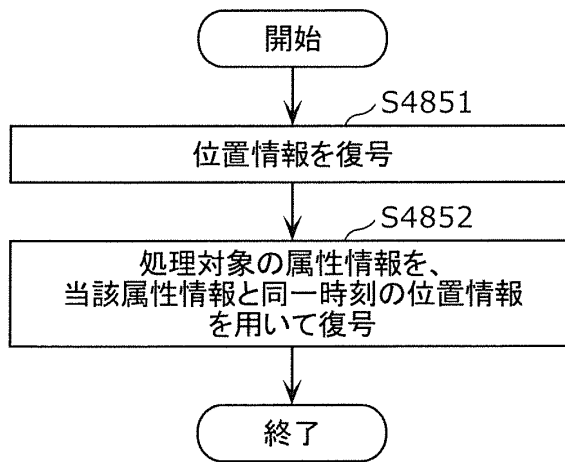
[図44]



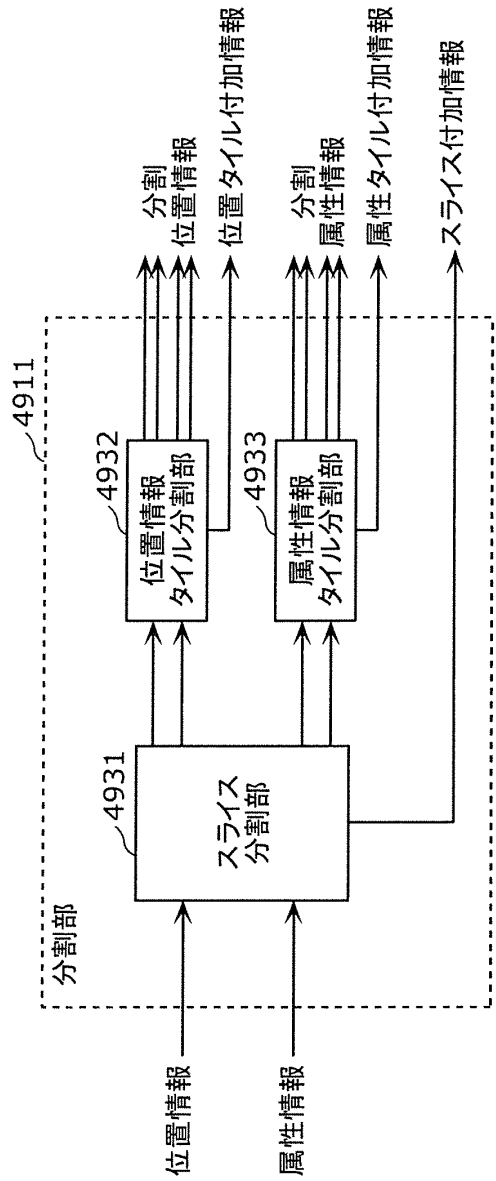
[図45]



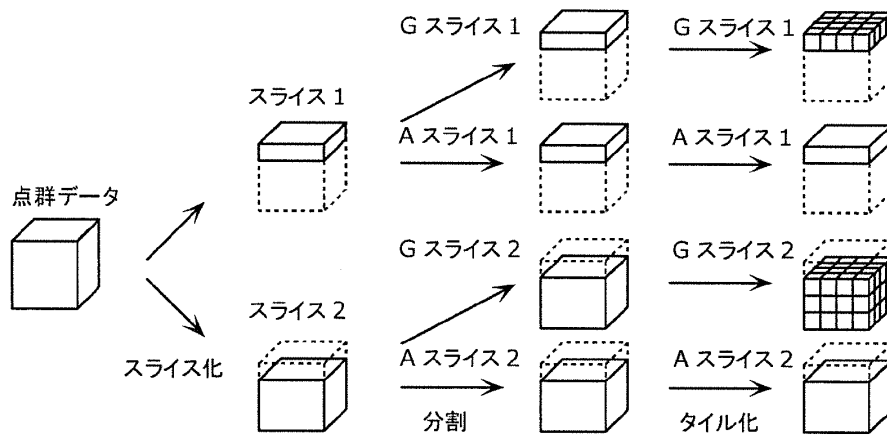
[図46]



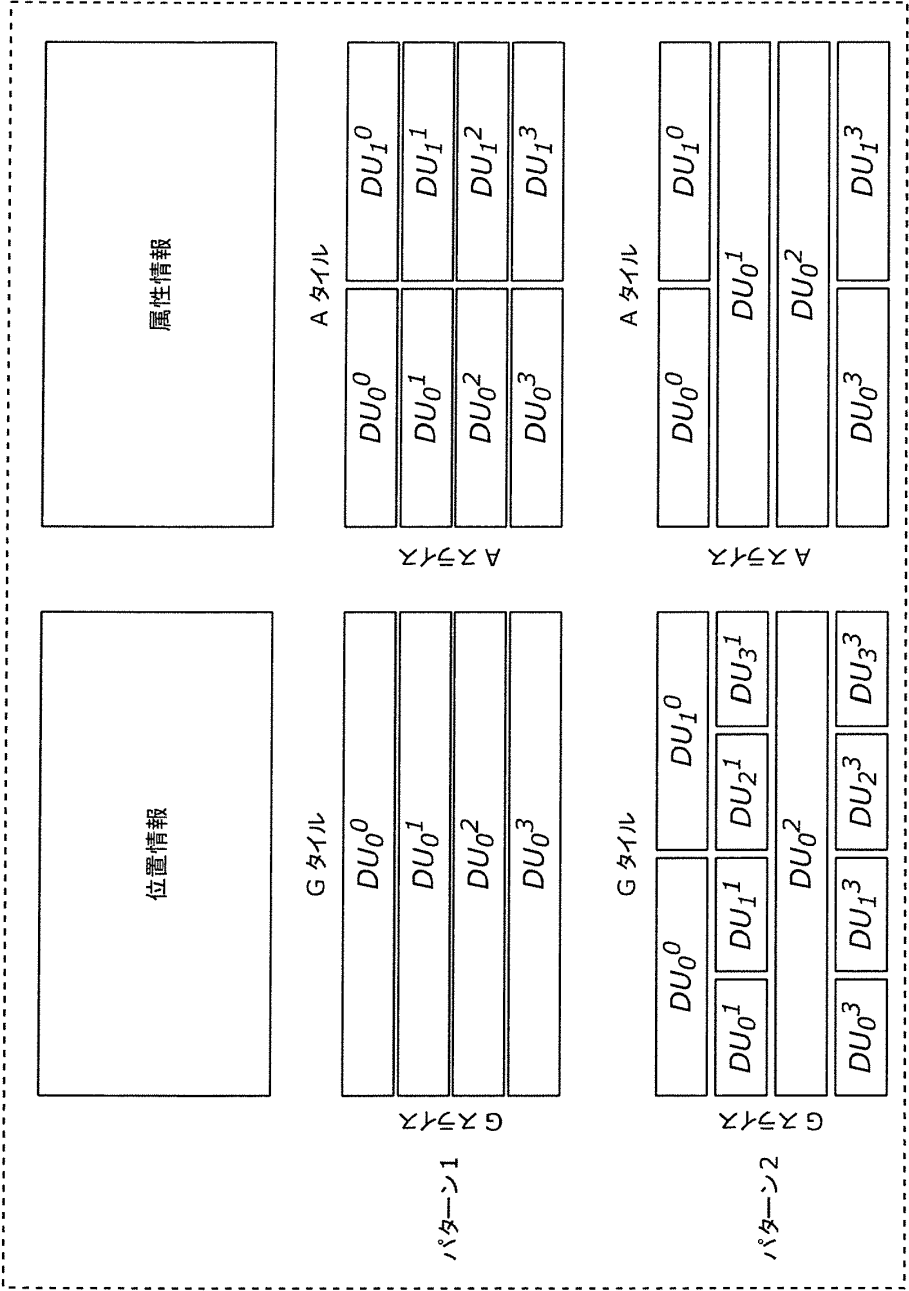
[図47]



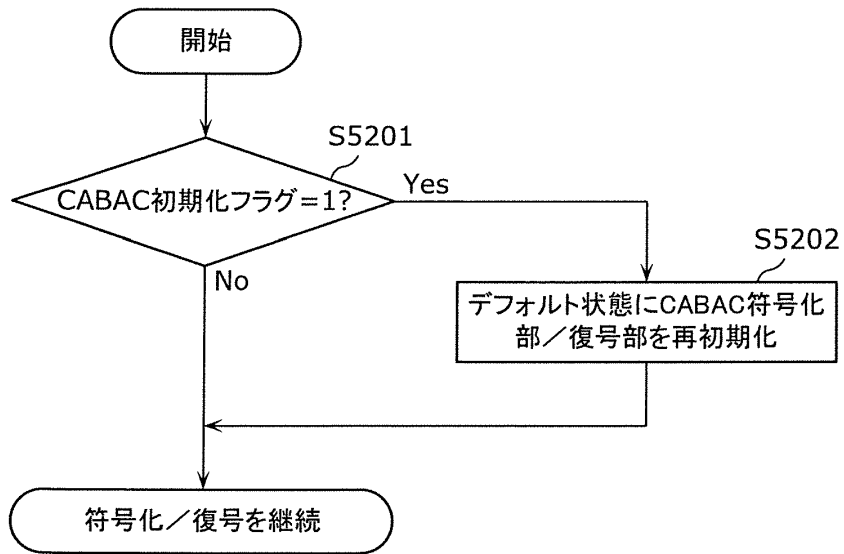
[図48]



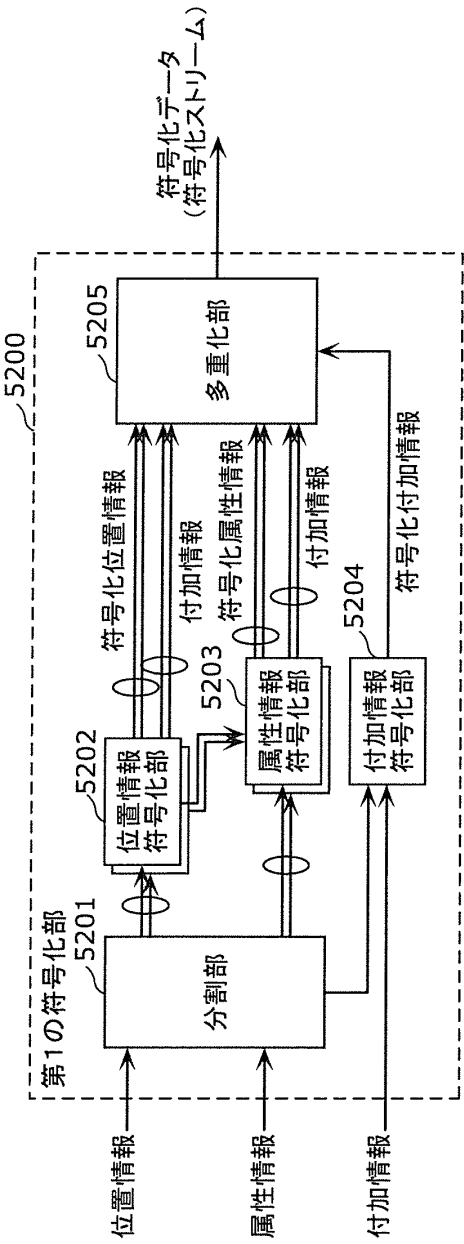
[図49]



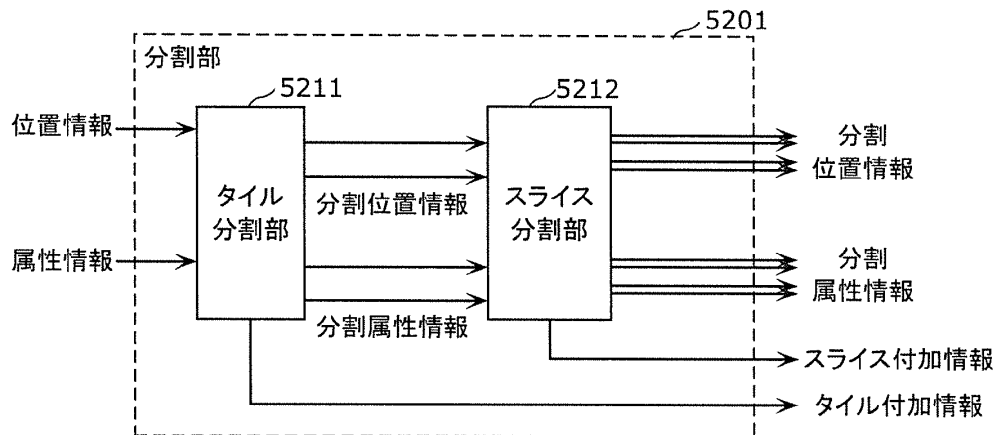
[図50]



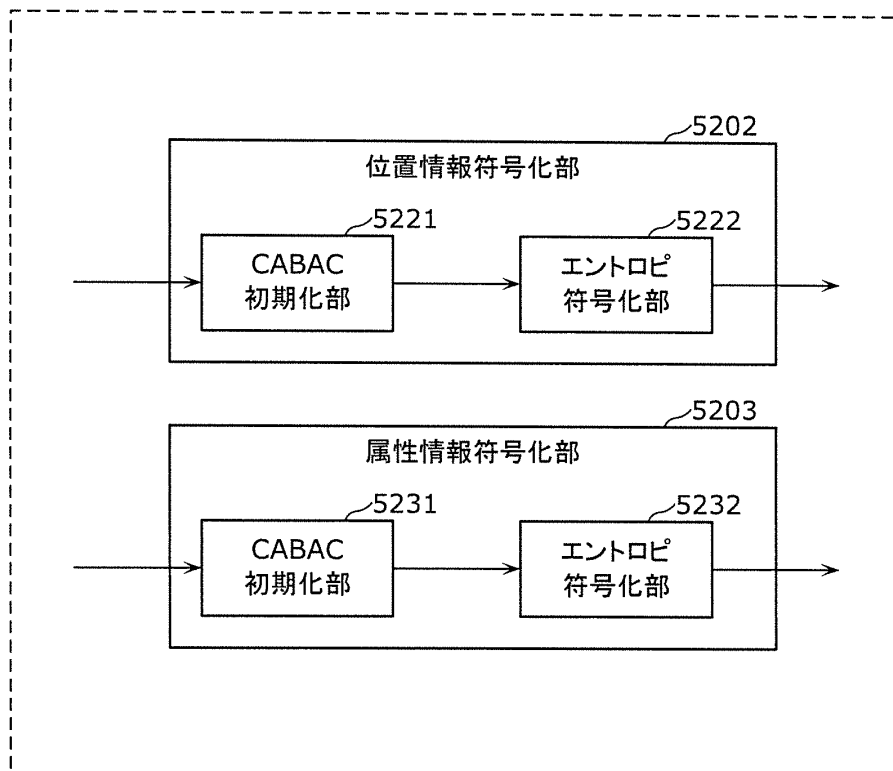
[図51]



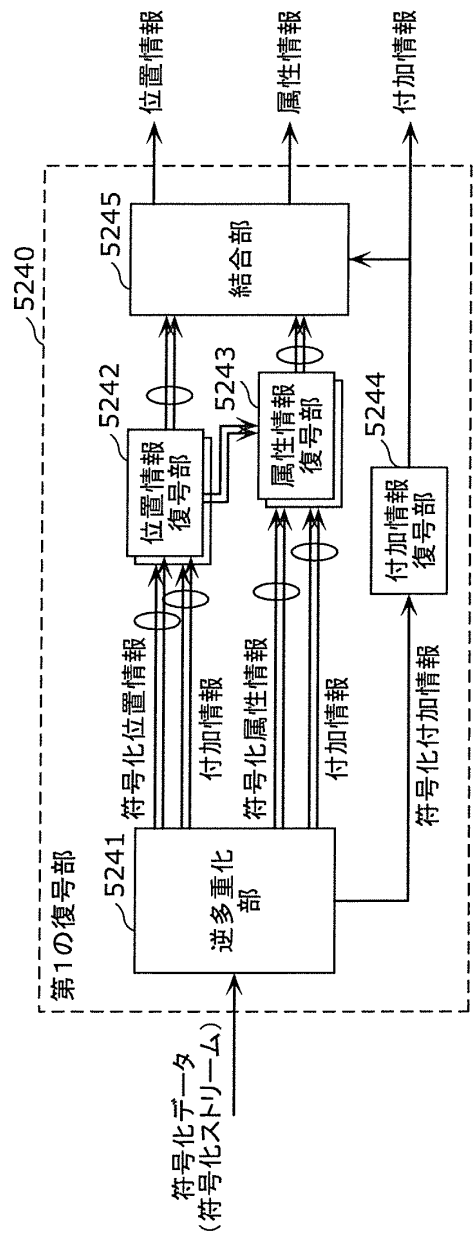
[図52]



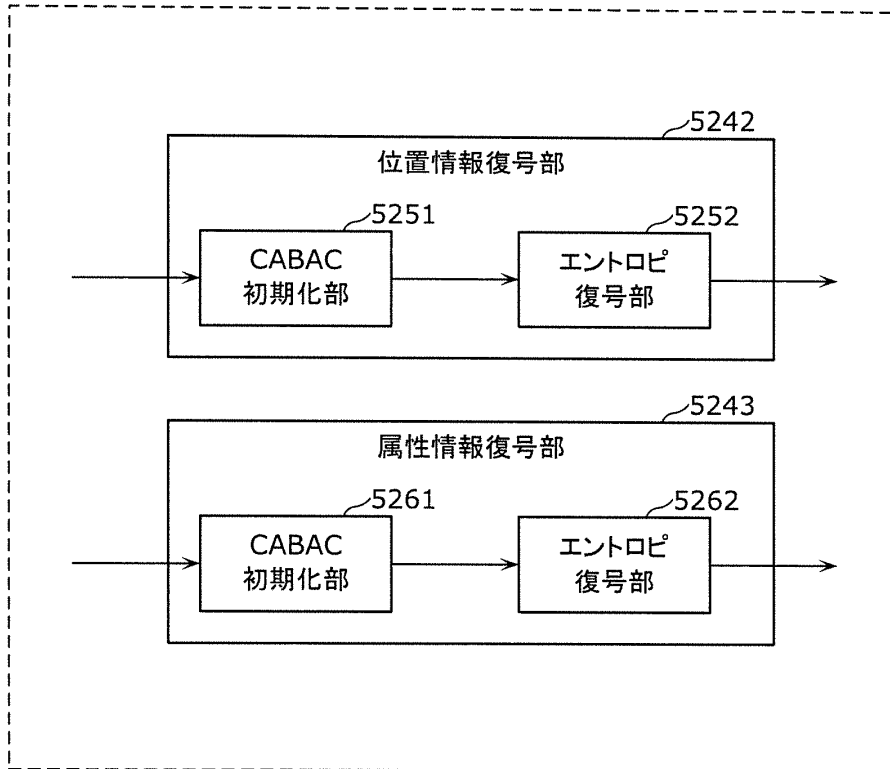
[図53]



[図54]



[図55]



[図56]

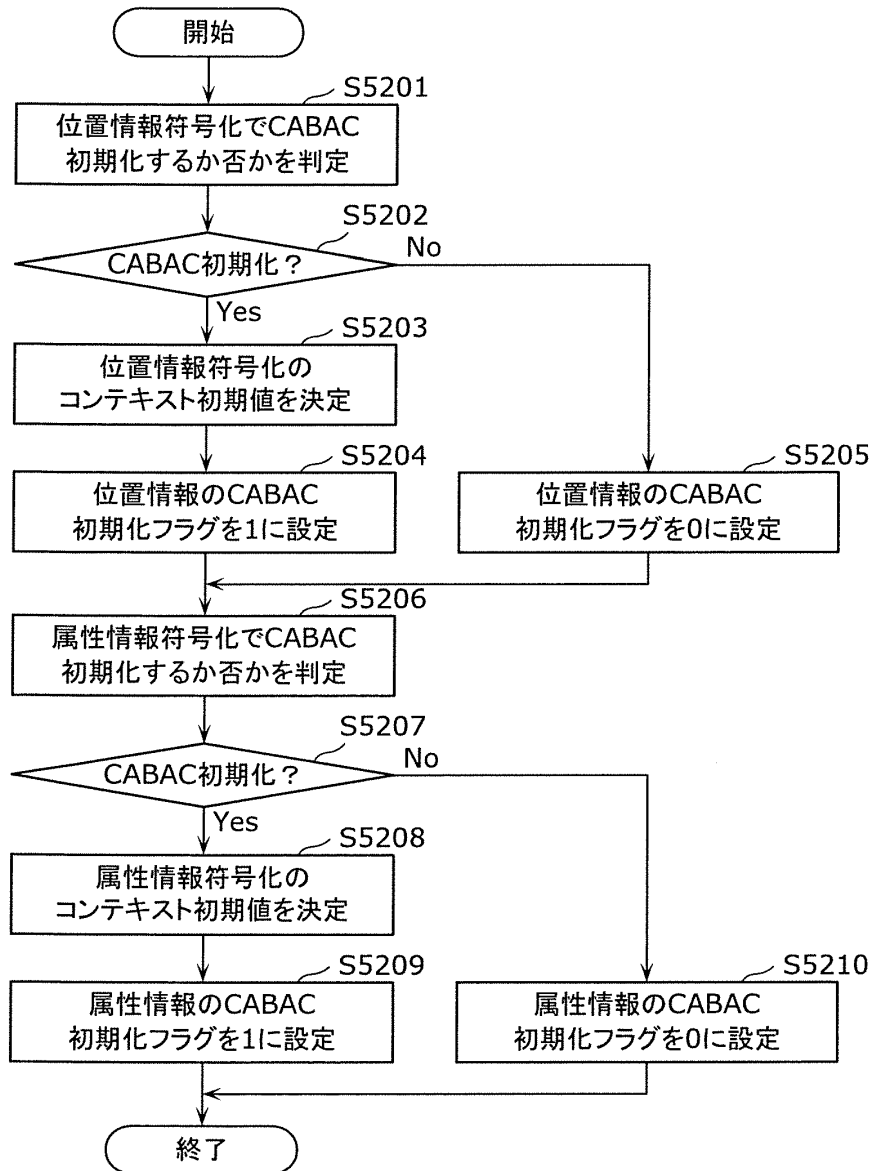


Figure 1 illustrates the structure of a Group of Frames (GOF) and an Access Unit (AU). The figure is divided into three parts: (a), (b), and (c).

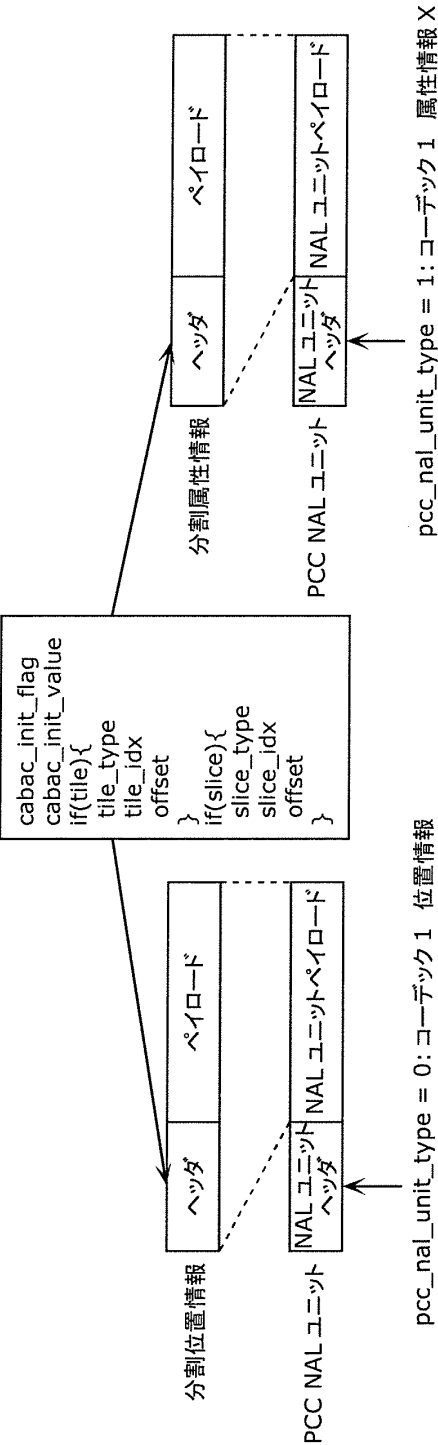
(a) GOF structure: The GOF is composed of AU(0) and AU(1). AU(0) contains the following fields: GOF Header, AU Header, PCC Stream PS, Geom. Seq. PS, Geom. PS(0), Geometry (0), Attr. Seq. PS, Attr. PS (0), AttributeX (0), PS (0), AttributeY (0), and PS (0). AU(1) contains the following fields: GOF Header, AU Header, PS, Geometry (1), AttributeX (1), and AttributeY (1). Arrows indicate the sequence of frames within each AU and the relationship between AUs.

(b) GOF structure: The GOF is composed of AU(0) and AU(2). AU(0) contains the following fields: GOF Header, AU Header, PCC Stream PS, Geom. Seq. PS, Geom. PS(0), Geometry (0), Attr. Seq. PS, Attr. PS (0), AttributeX (0), PS (0), AttributeY (0), and PS (0). AU(2) contains the following fields: AU Header and AU Header. Arrows indicate the sequence of frames within each AU and the relationship between AUs.

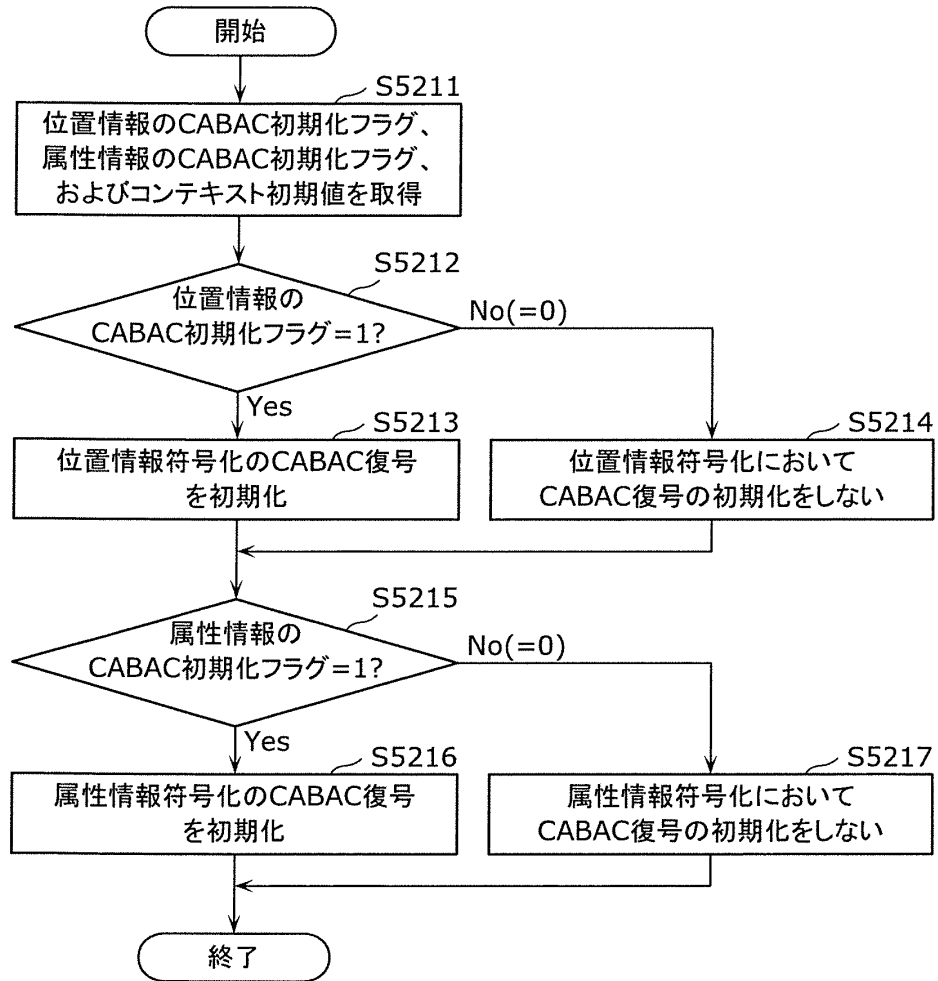
(c) AU structure: The AU is composed of A1, A2, A3, and A4. Each Ai contains the following fields: GOF Header, AU Header, PCC Stream PS, Geom. Seq. PS, Geom. PS(0), Geometry (0), Attr. Seq. PS, Attr. PS (0), AttributeX (0), PS (0), AttributeY (0), and PS (0). Arrows indicate the sequence of frames within each Ai and the relationship between Ais.

Legend: ↑ 初期化タイミングを示す矢印 (Arrow indicating initialization timing).

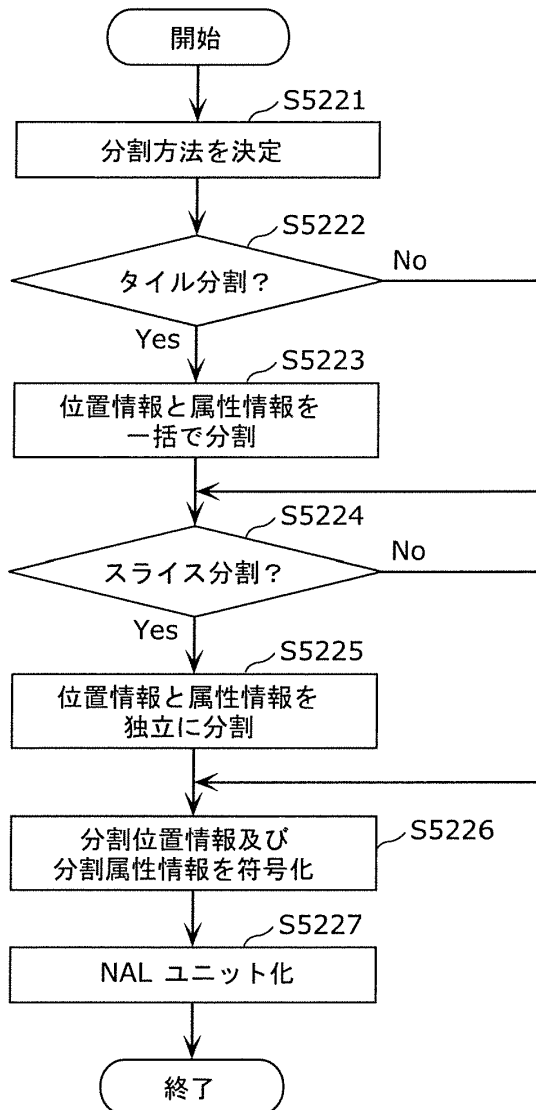
[図58]



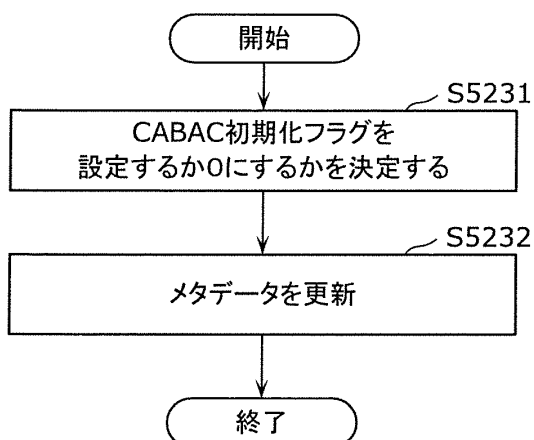
[図59]



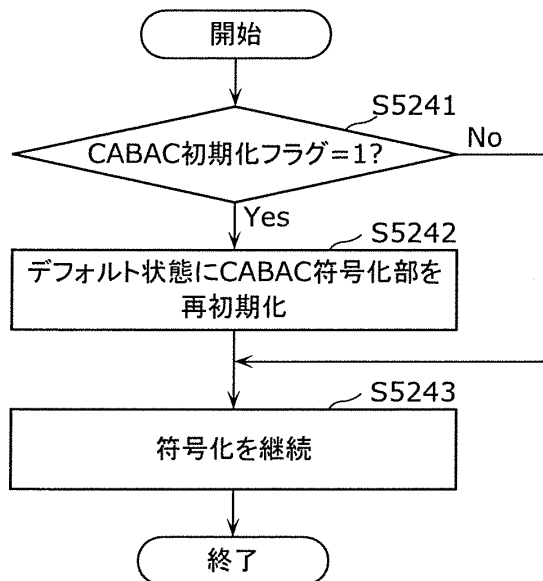
[図60]



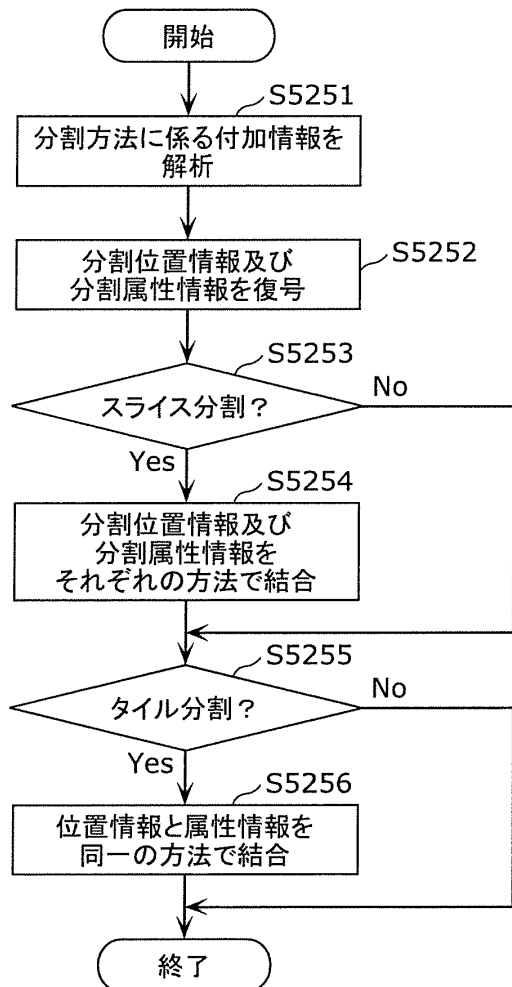
[図61]



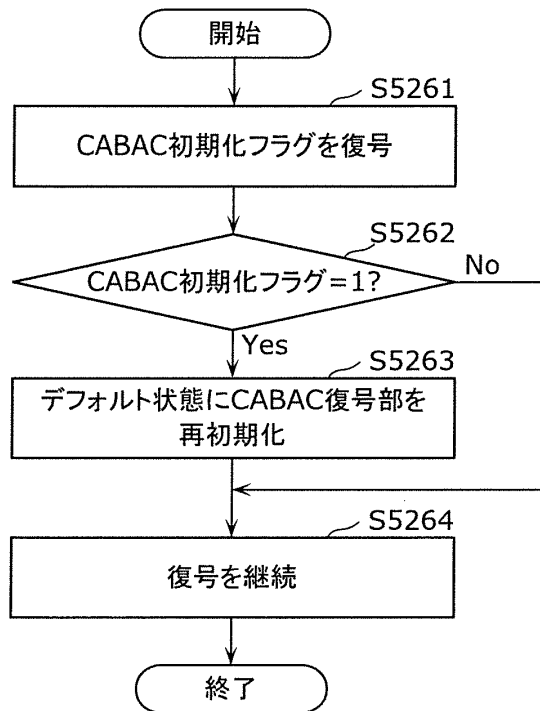
[図62]



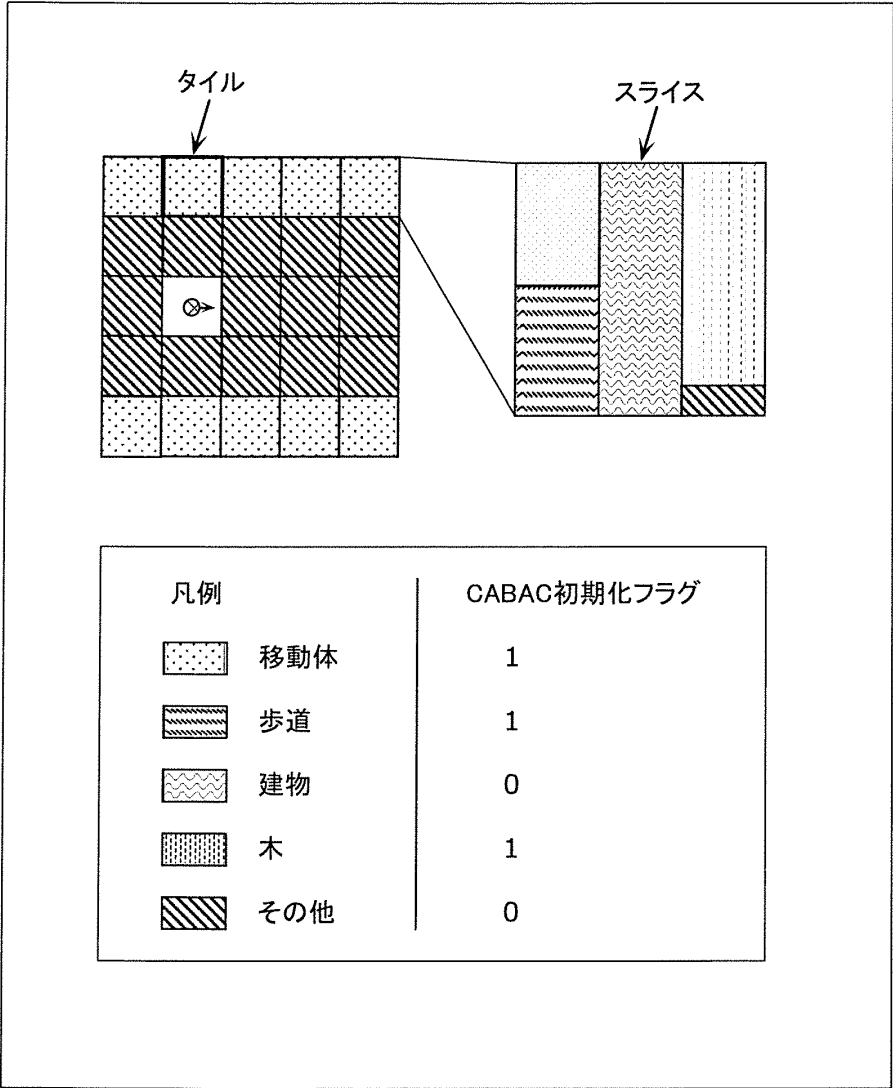
[図63]



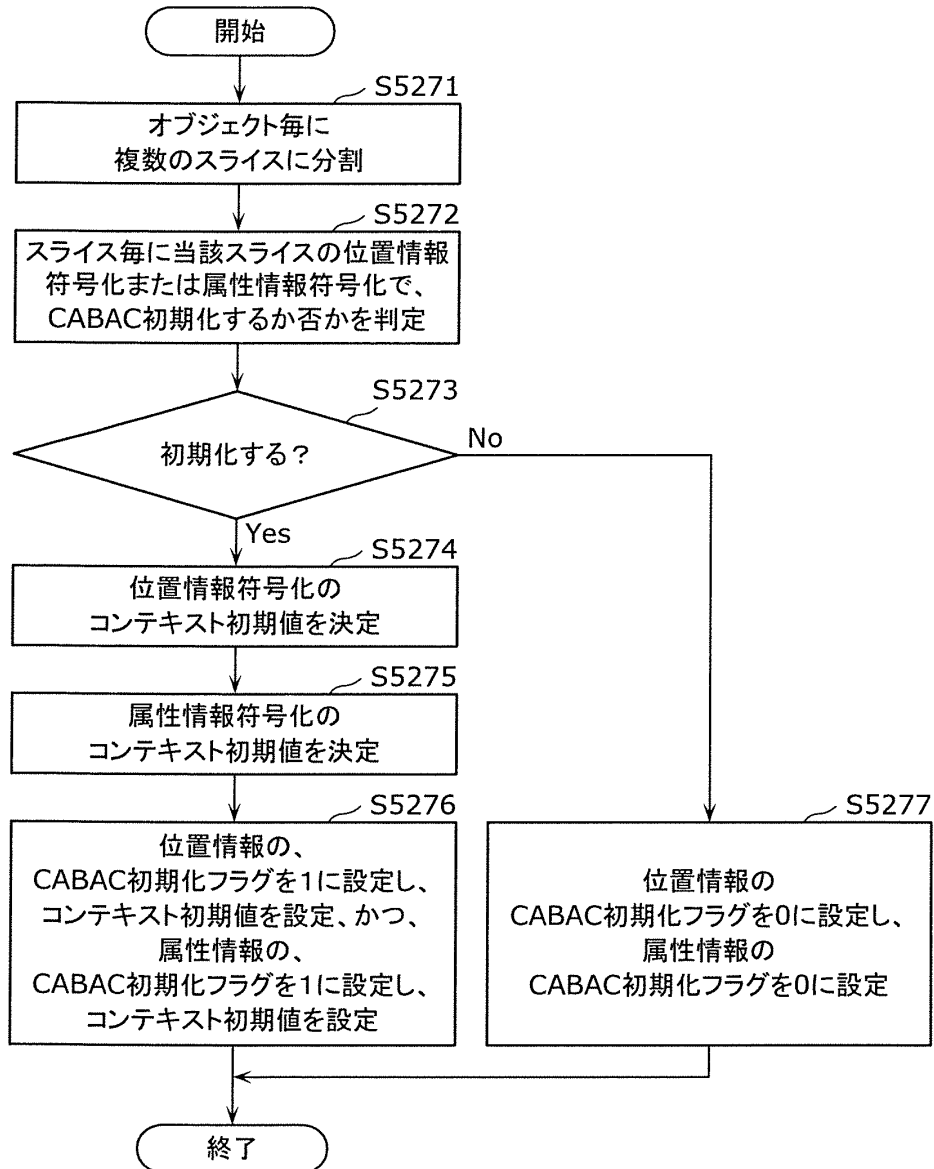
[図64]



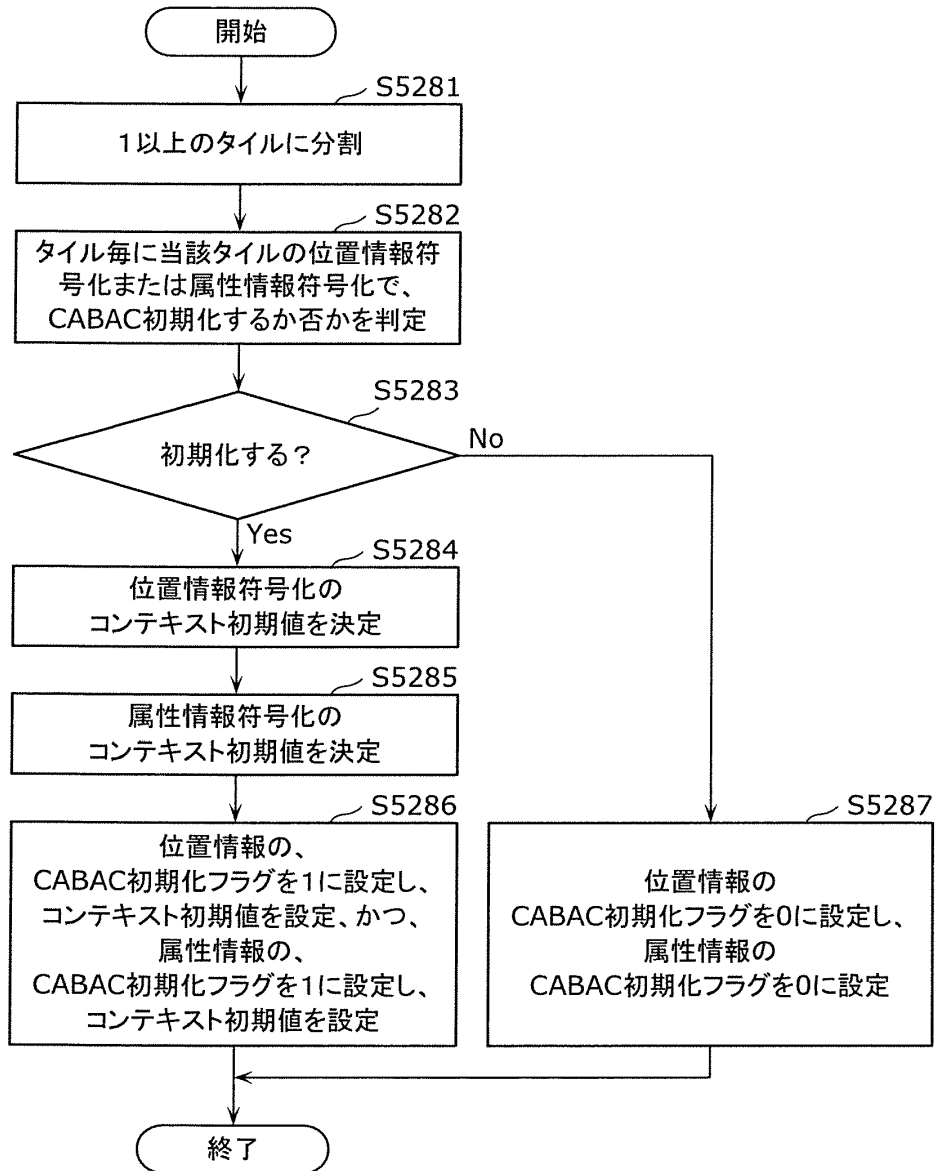
[図65]



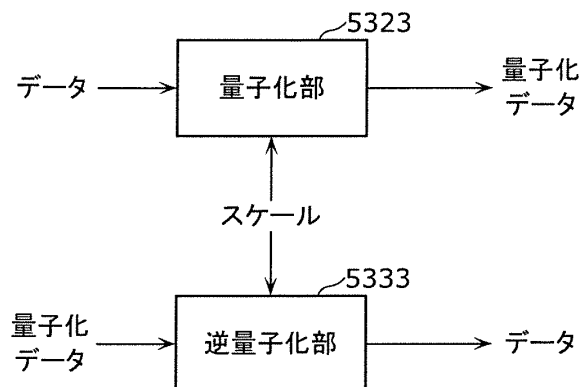
[図66]



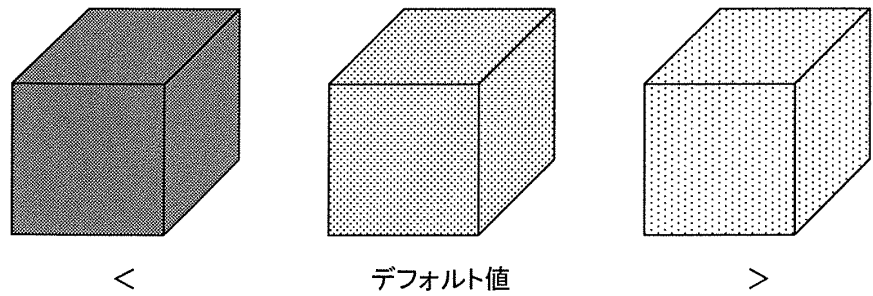
[図68]



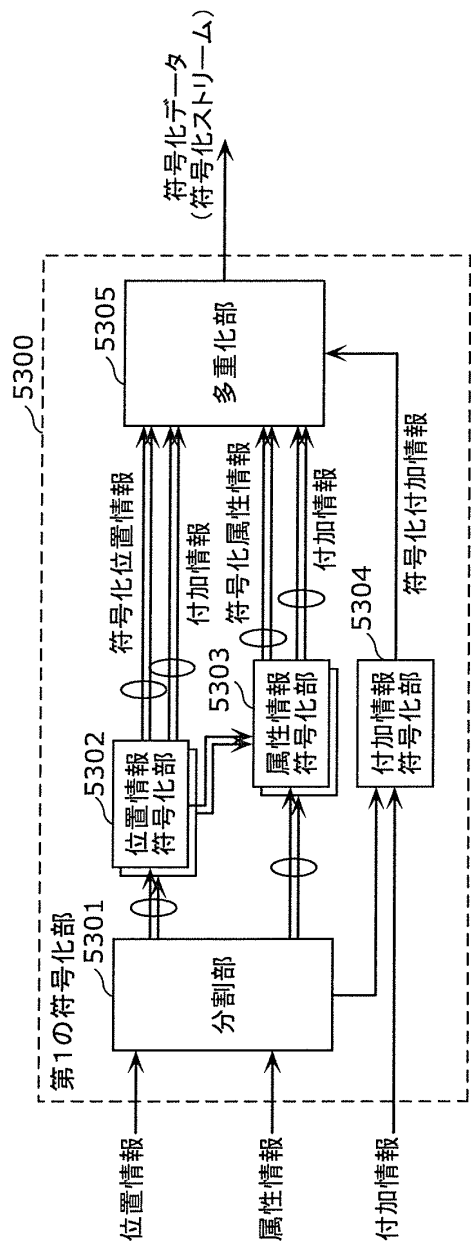
[図69]



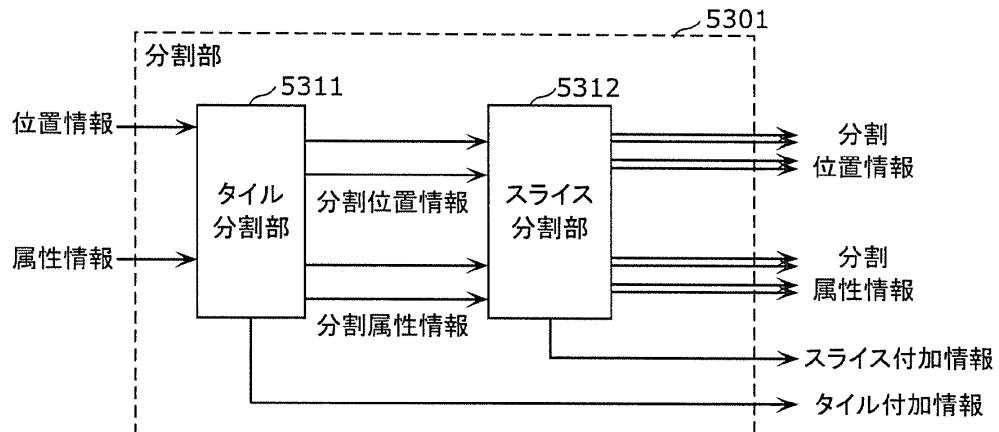
[図70]



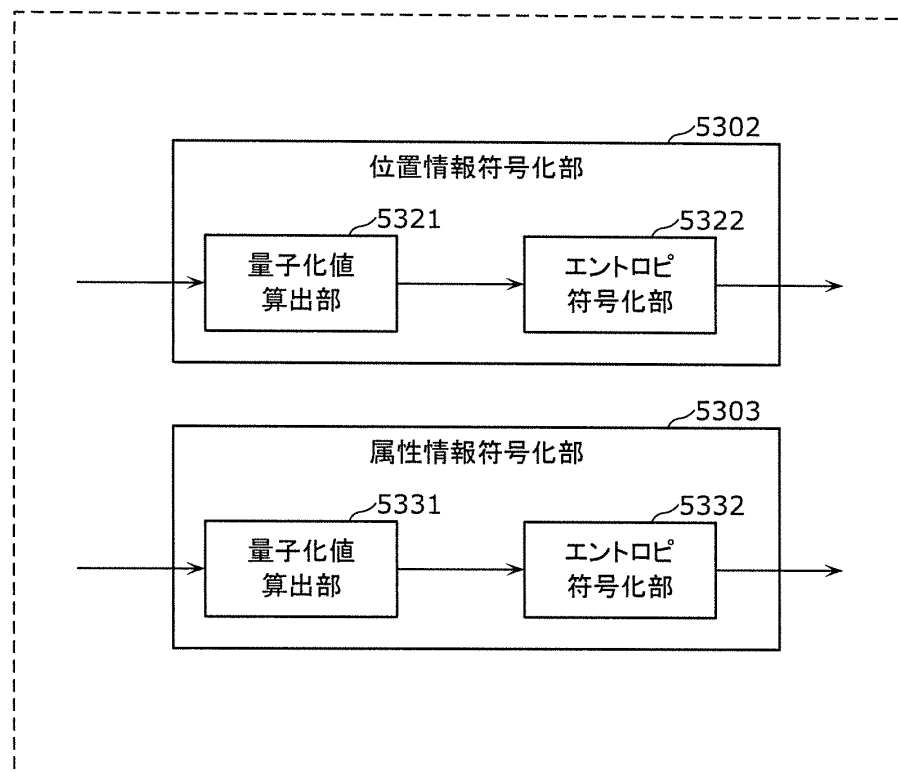
[図71]



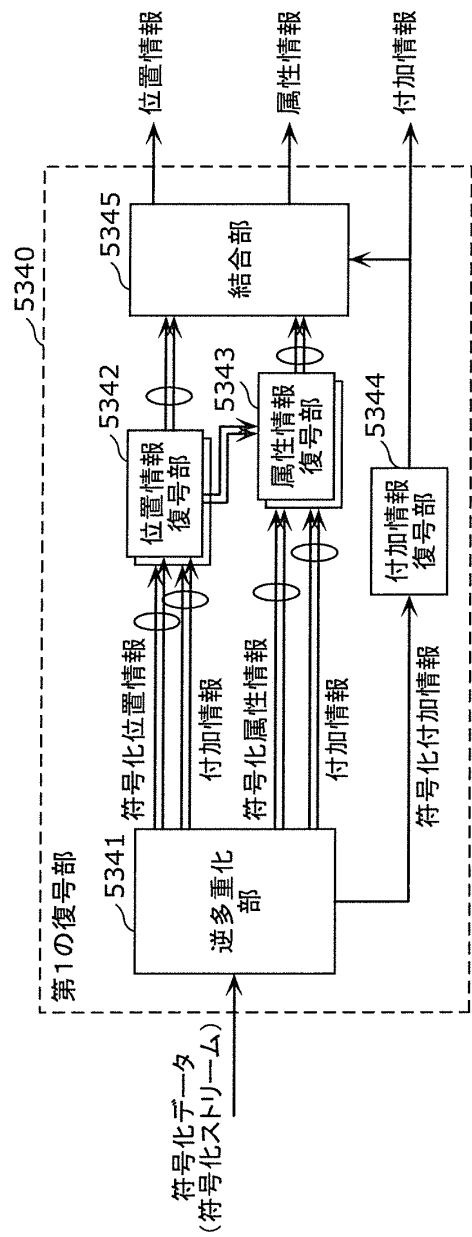
[図72]



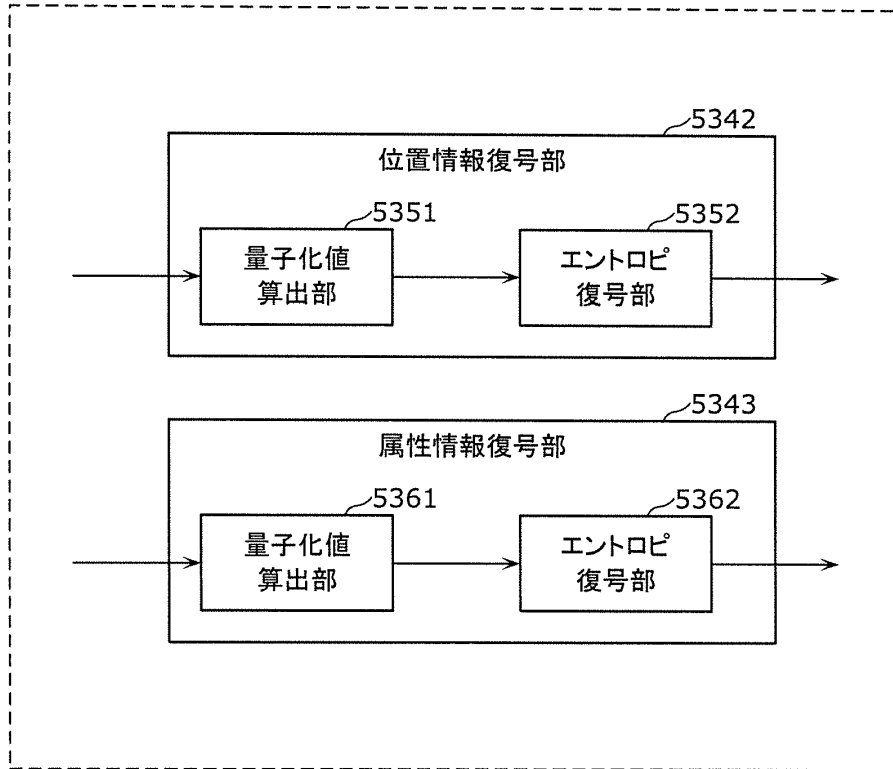
[図73]



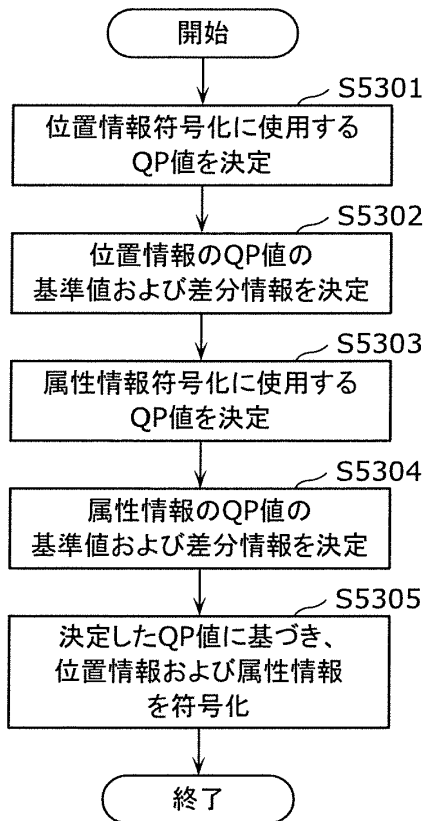
[図74]



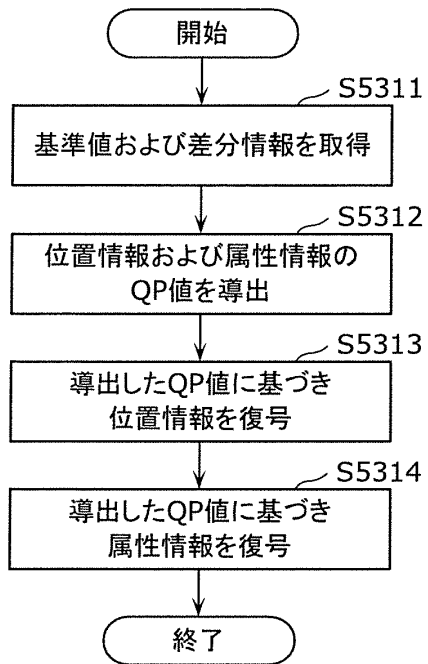
[図75]



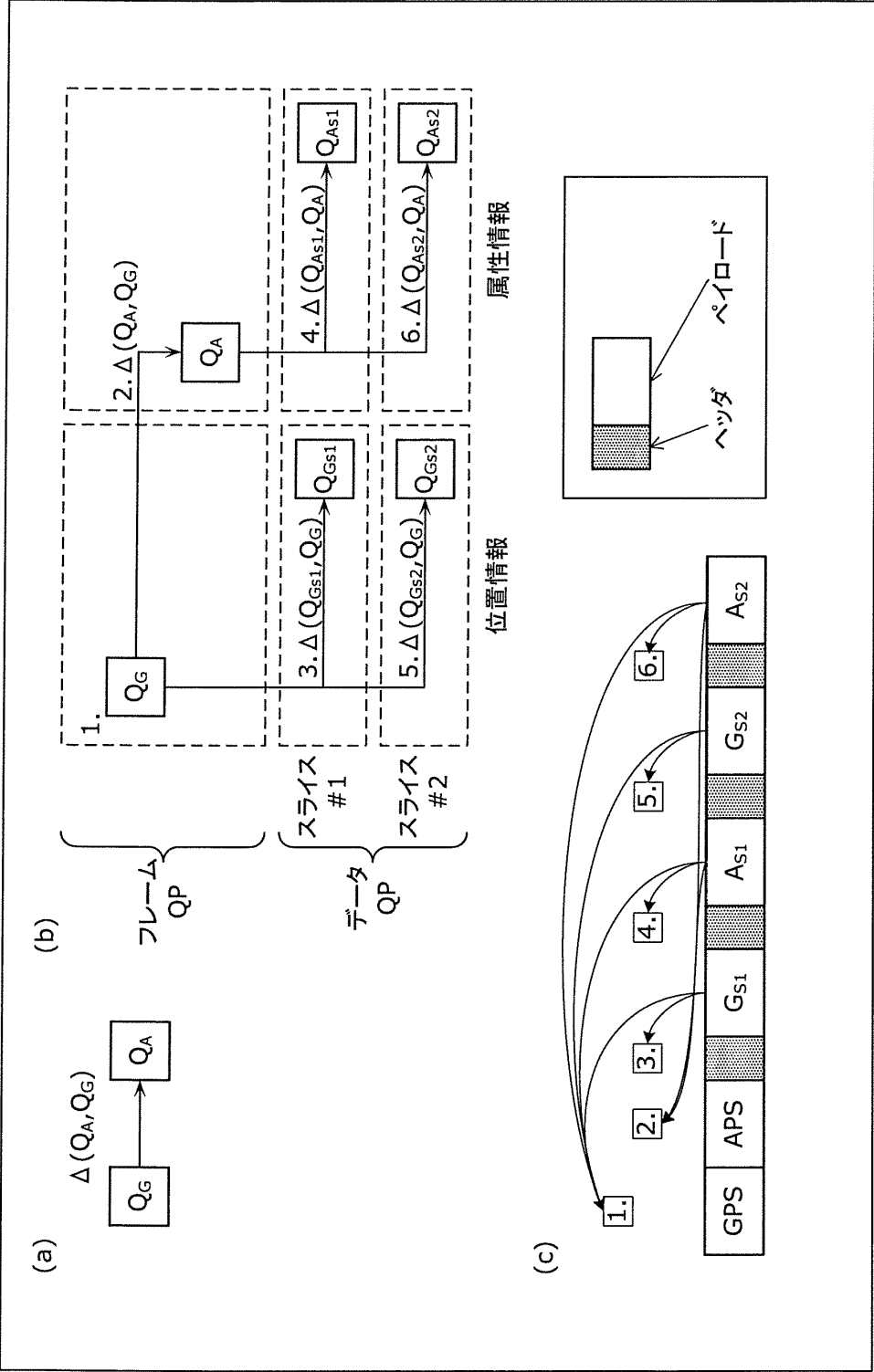
[図76]



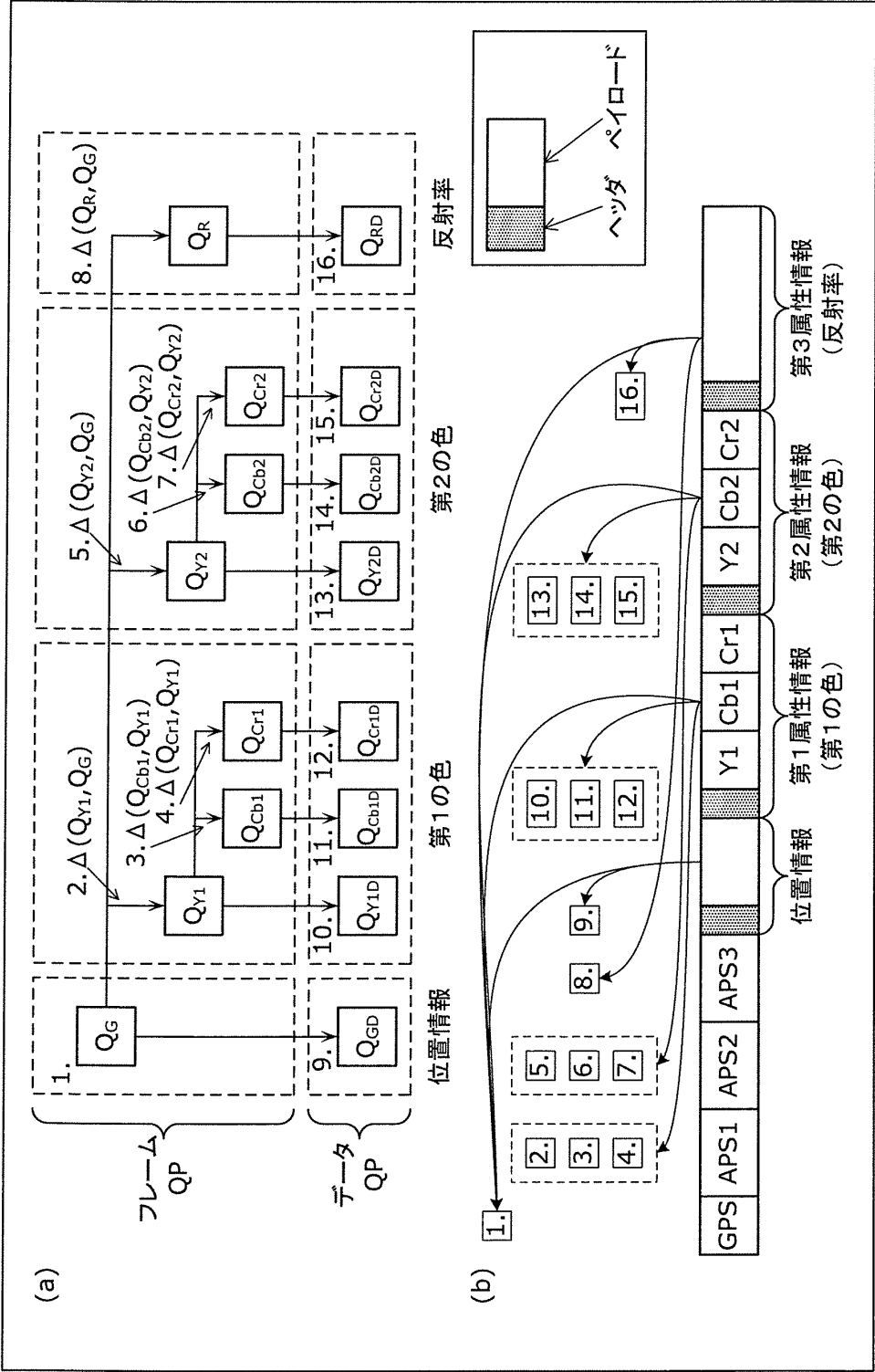
[図77]



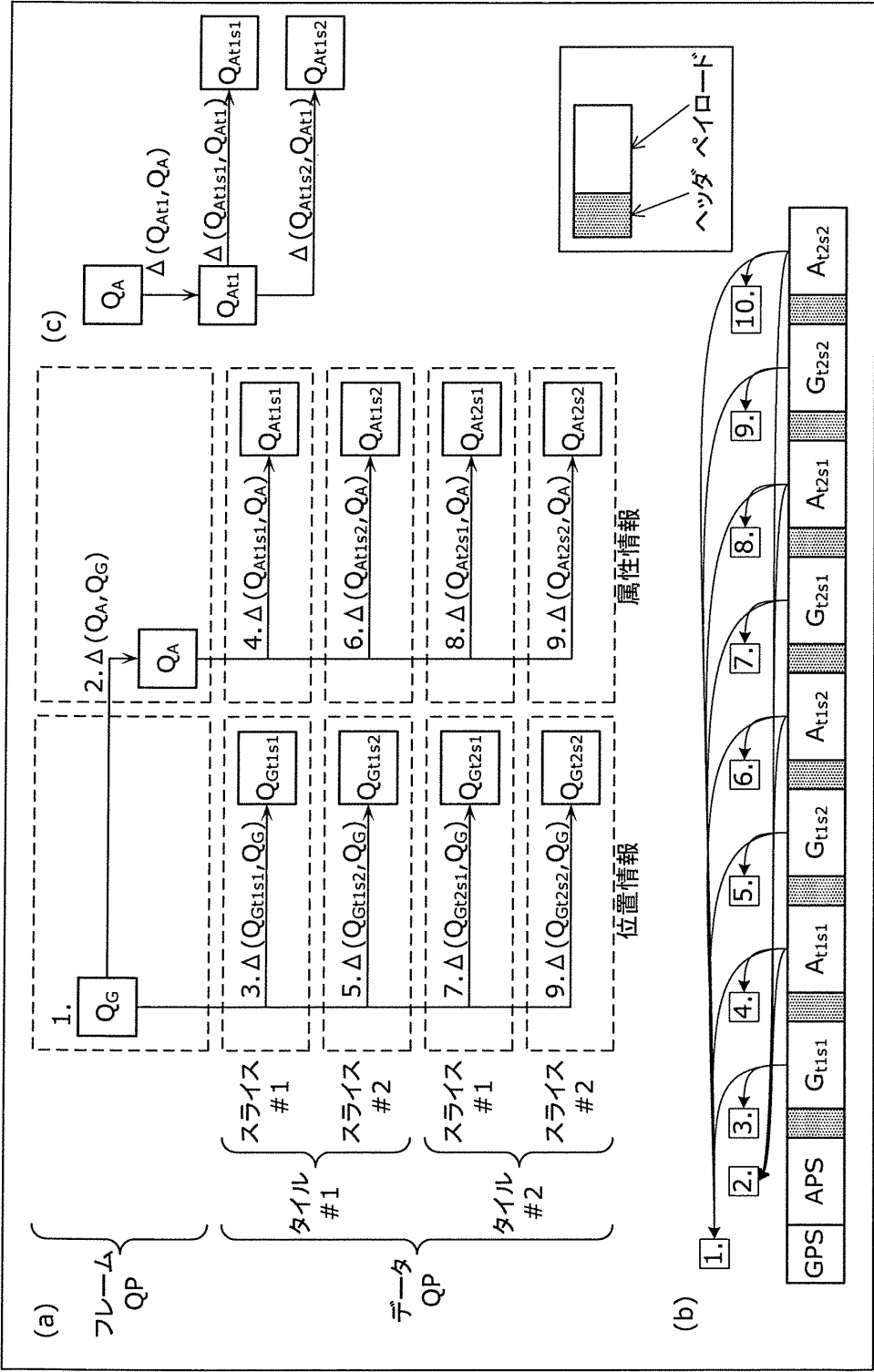
[図78]



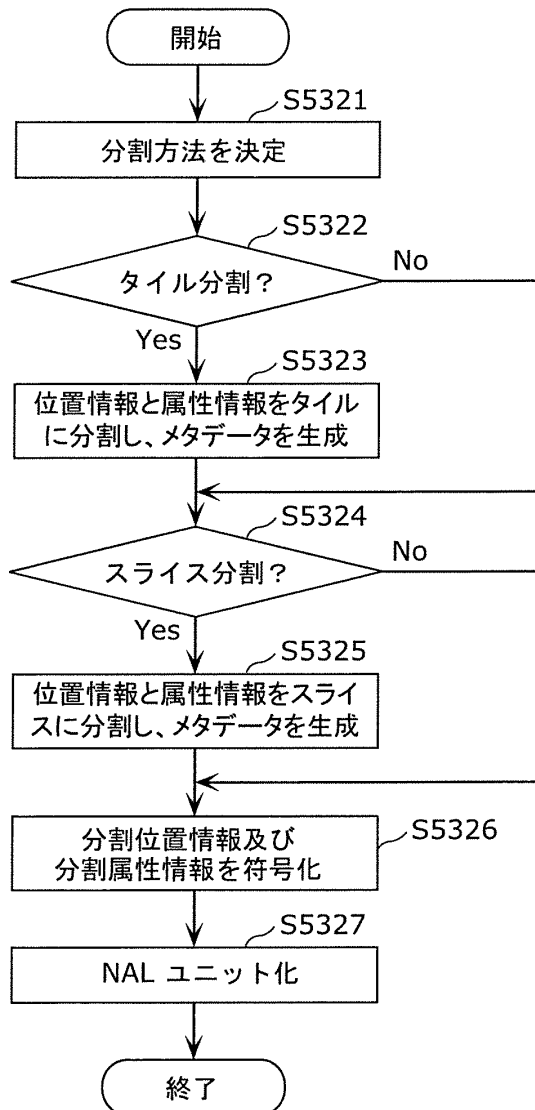
[図79]



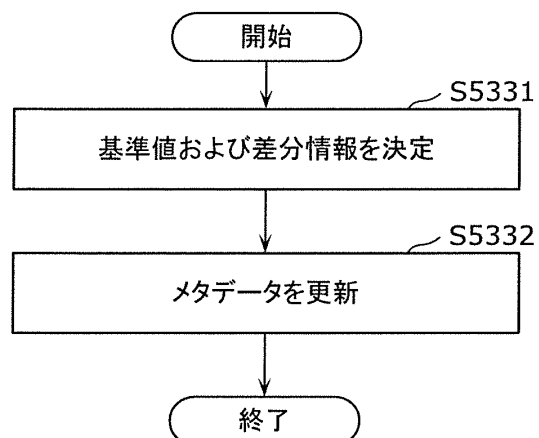
[図80]



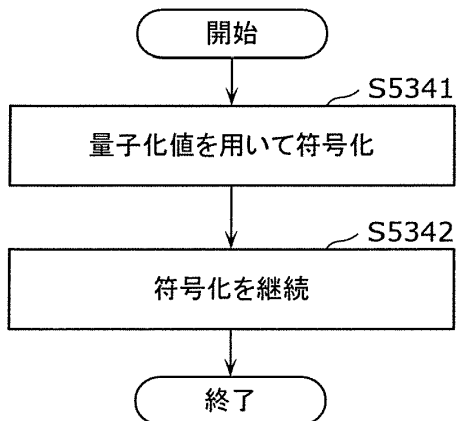
[図81]



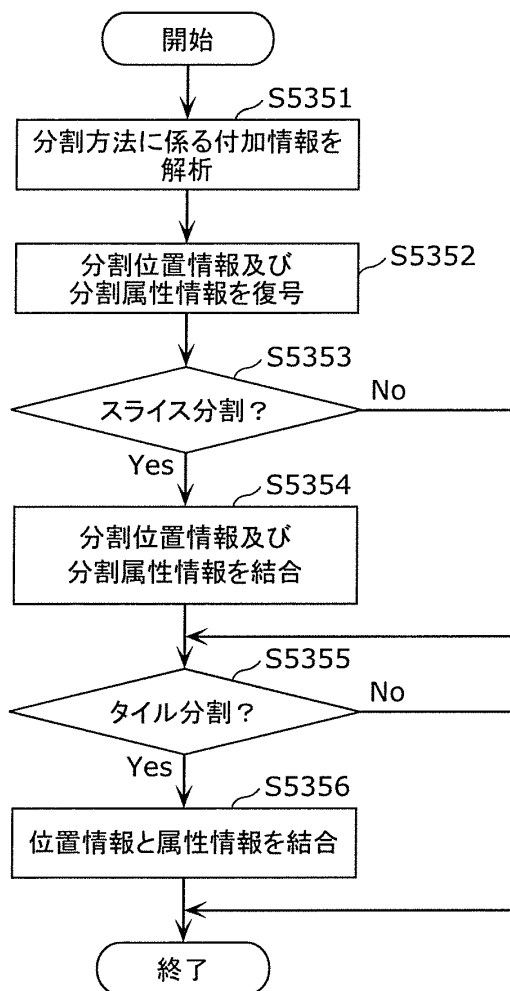
[図82]



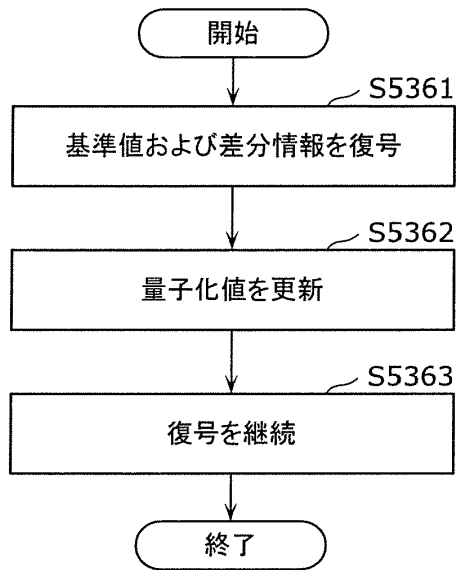
[図83]



[図84]



[図85]



[図86]

```
GPS(){  
  gps_idx ..PCC frame number  
  sps_idx  
  
  gps_information()  
  QP_value //default_value  
  
  tile_slice_num //0..no divide  
  for(tile_slice_num){  
    tile_idx  
    slice_idx  
    gps_slice_tile_information()  
  }  
}
```

[図87]

```

APS(){
  aps_idx ..PCC frame Number
  gps_idx ..PCC frame Number

  num_of_attribute
  for(num_of_attribute){
    attribute_type //color, reflectance
    aps_information()

    tile_slice_num //0..no divide
    for(tile_slice_num){
      tile_idx
      slice_idx
      QP_delta_Attribute_to_Geometry
      if(attribute_type==color){
        QP_delta_Cb_to_Y
        QP_delta_Cr_to_Y
      }
      aps_slice_tile_information()
    }
  }
}

```

[図88]

```

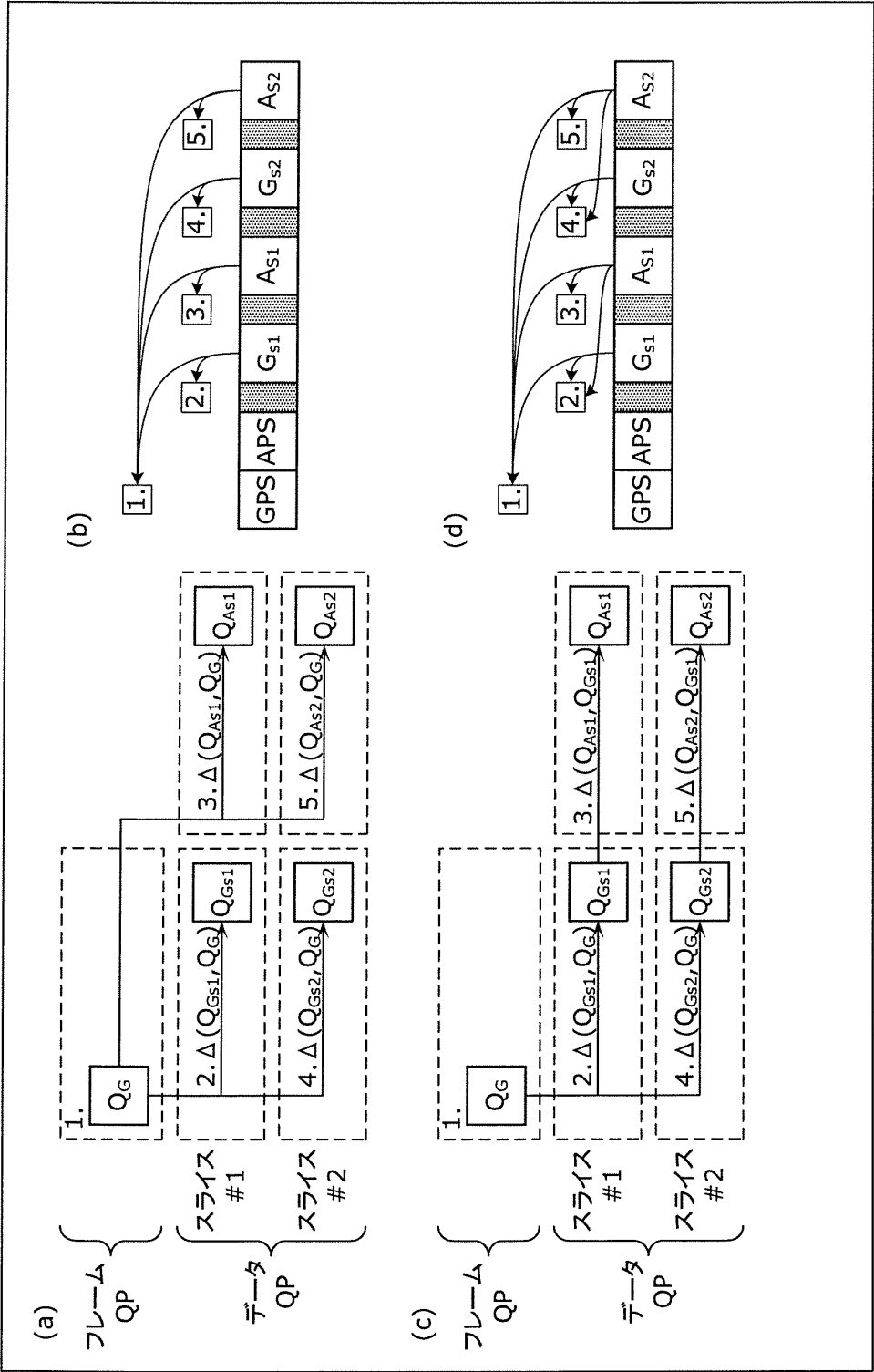
Geometry_header(){
  gps_idx
  offset
  QP_delta_data_to_frame
  if(tile){
    tile_type
    tile_idx
  }
  if(slice){
    slice_type
    slice_idx
  }
}

```

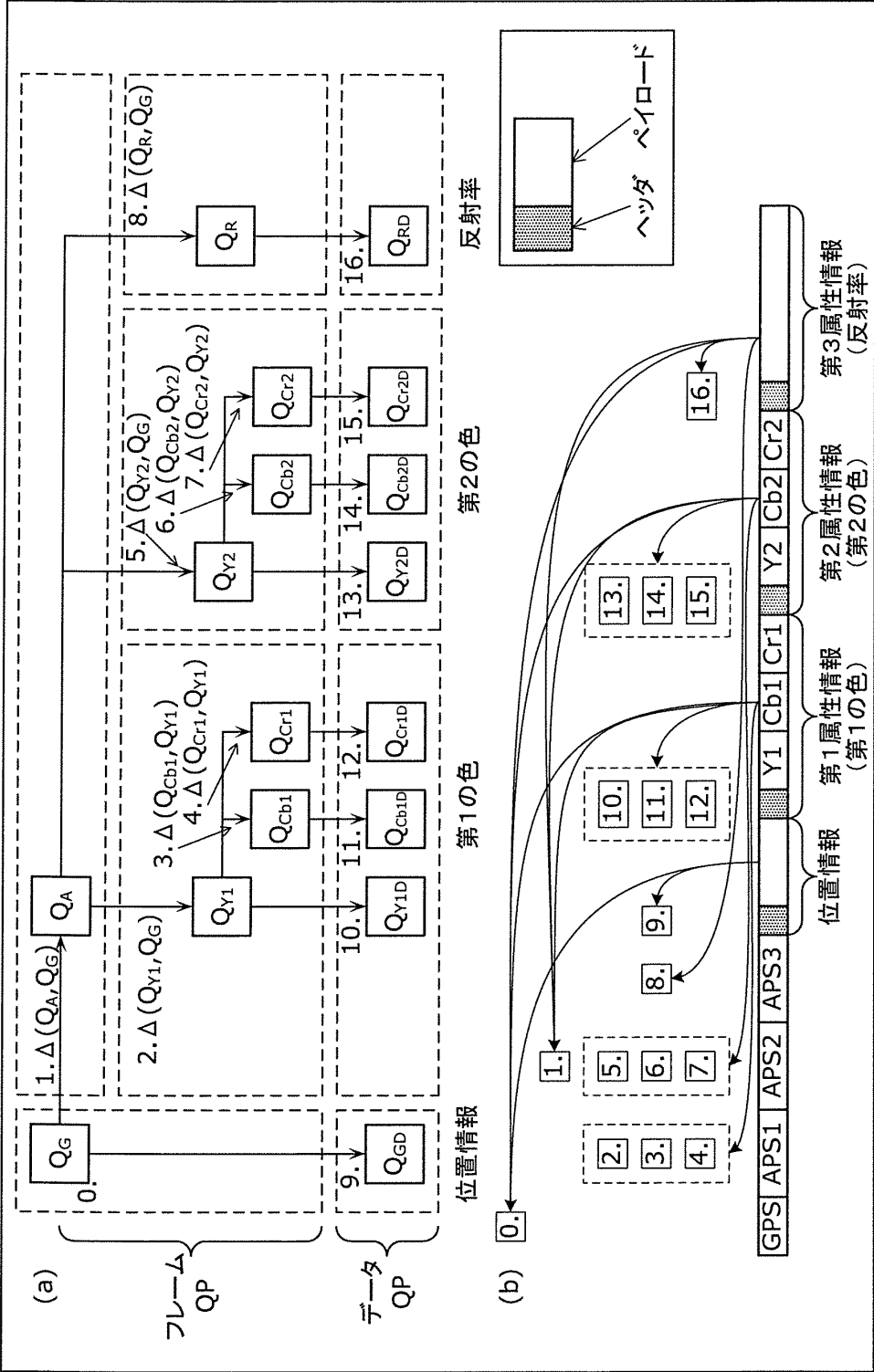
[図89]

```
Attribute_header(){  
    aps_idx  
    offset  
    attribute_type  
    QP_delta_data_to_frame  
    if(attribute_type==color){  
        QP_delta_Cb_to_frame  
        QP_delta_Cr_to_frame  
    }  
    if(tile){  
        tile_type  
        tile_idx  
    }  
    if(slice){  
        slice_type  
        slice_idx  
    }  
}
```

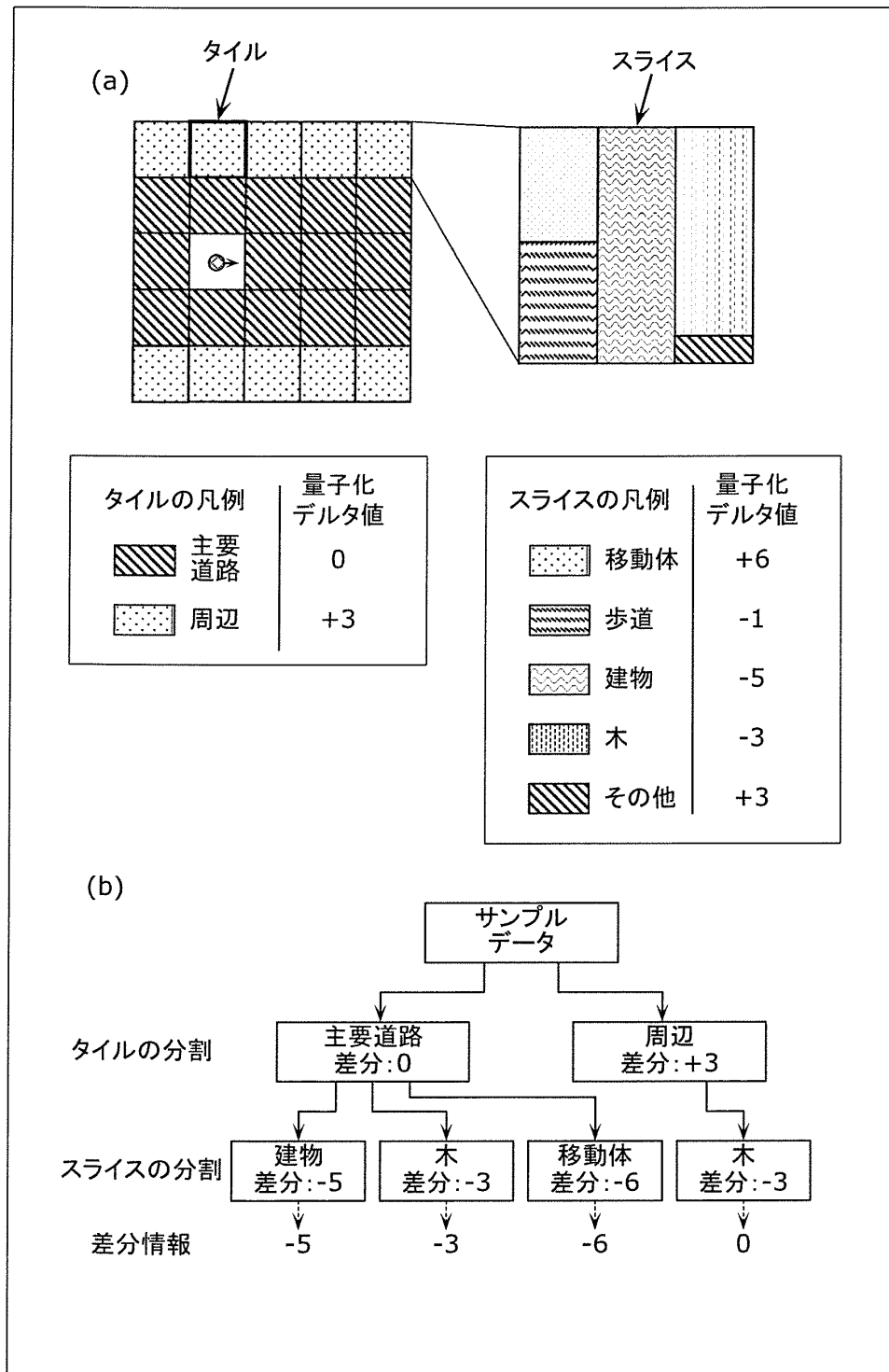

[図91]



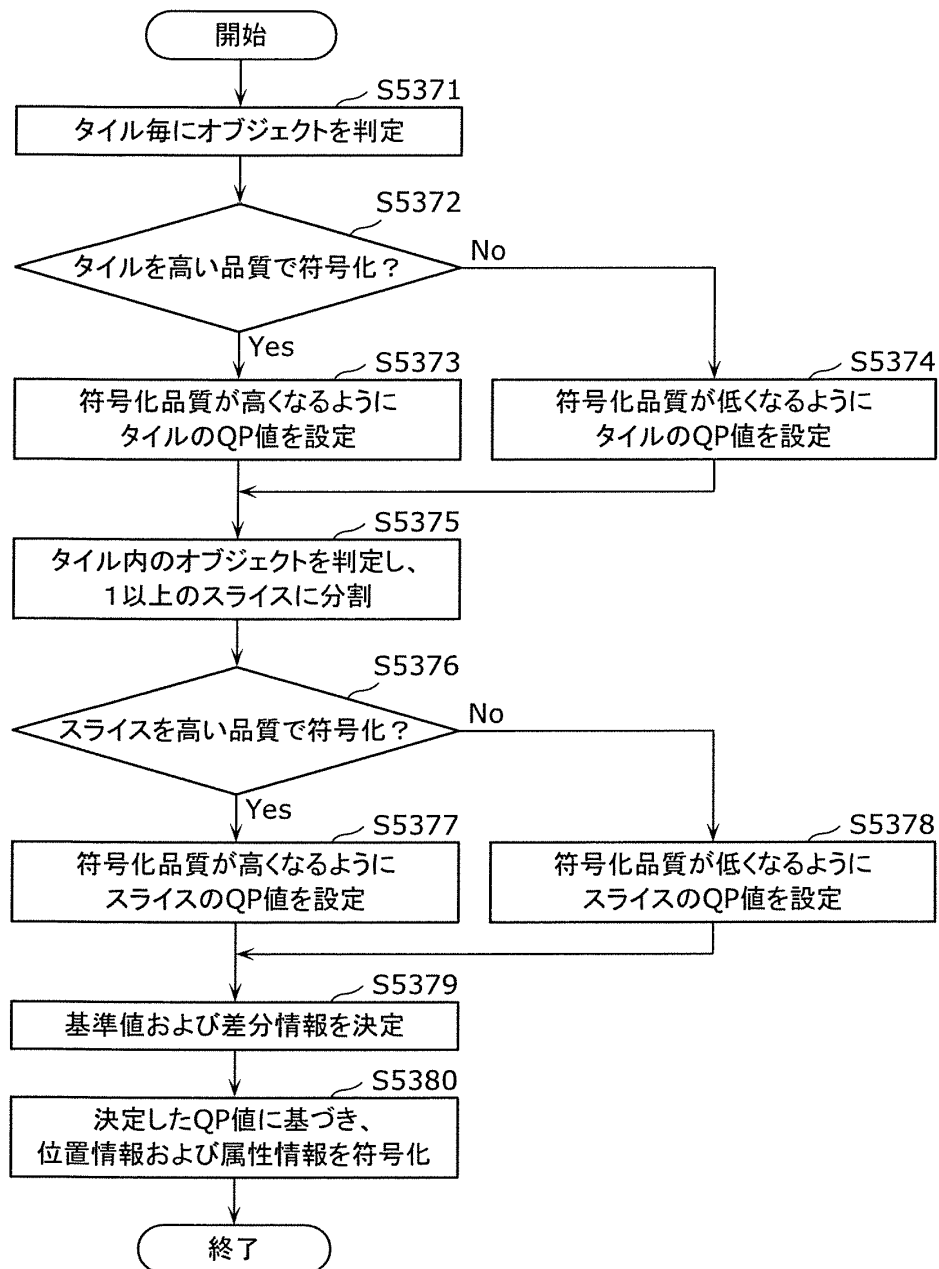
[図92]



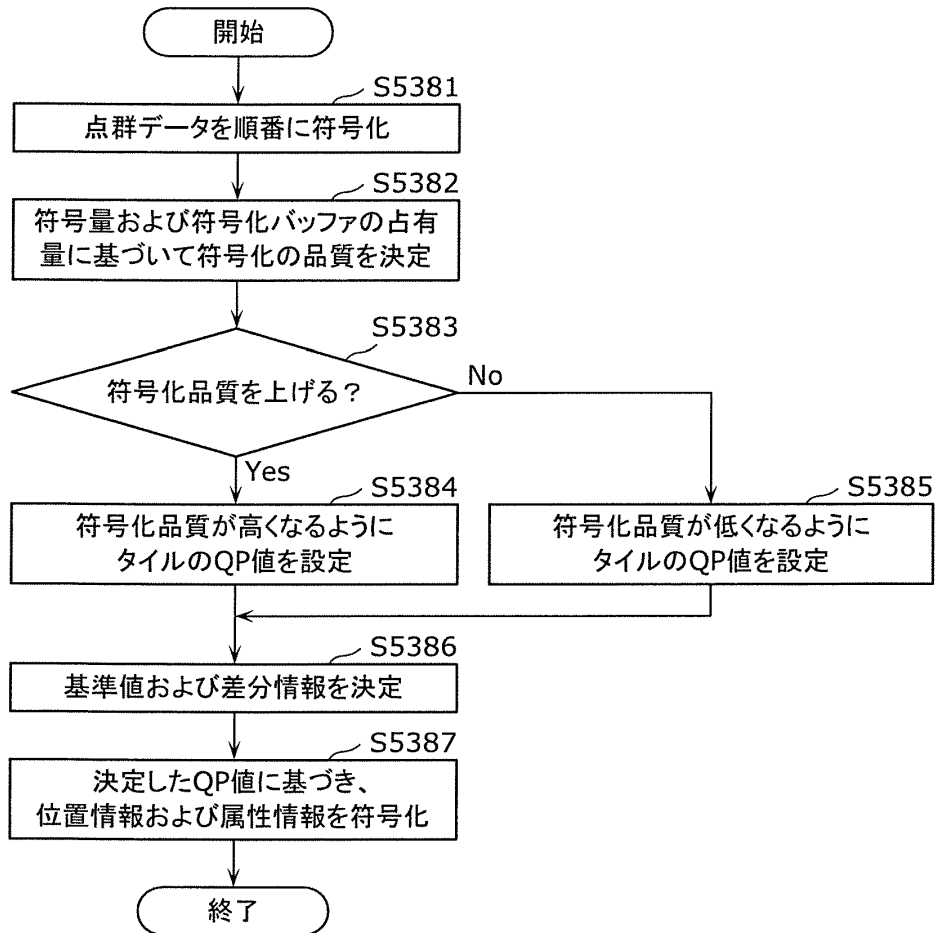
[図93]



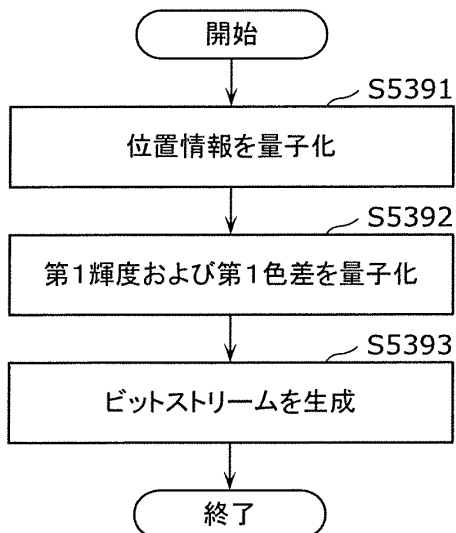
[図94]



[図95]



[図96]



[図97]

