FIG. 1

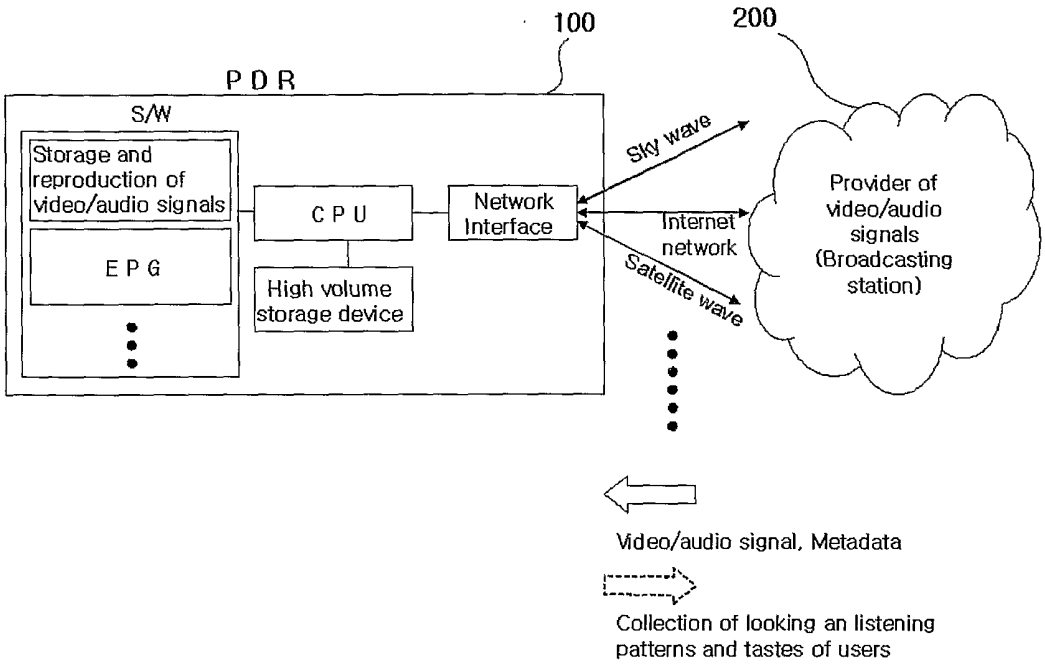

100
200
PDR
S/W
Storage and reproduction of video/audio signals
EPG
CPU
Network Interface
High volume storage device
Sky wave
Internet network
Satellite wave
Provider of video/audio signals (Broadcasting station)
Video/audio signal, Metadata
Collection of looking an listening patterns and tastes of users

FIG. 2

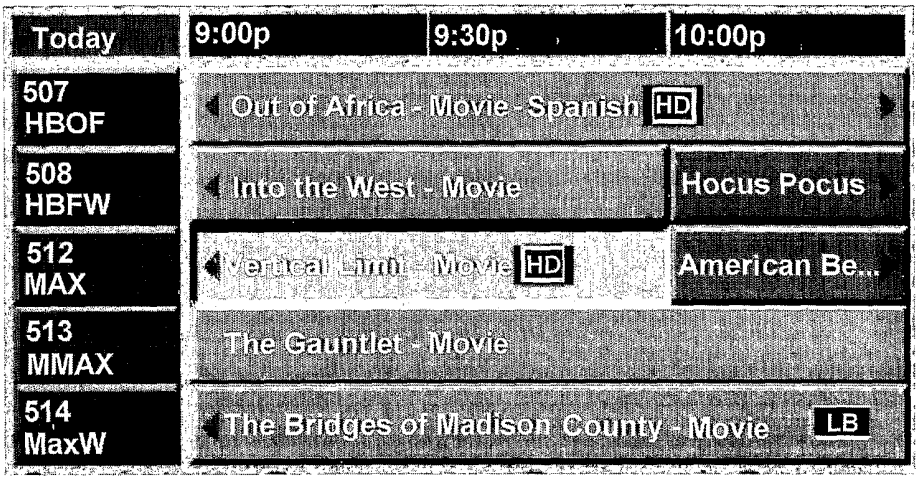

Today
9:00p
9:30p
10:00p
507 HBOF
Out of Africa - Movie - Spanish
HD
508 HBFW
Into the West - Movie
Hocus Pocus
512 MAX
Vertical Limit - Movie
HD
American Be...
513 MMAX
The Gauntlet - Movie
514 MaxW
The Bridges of Madison County - Movie
LB

FIG. 3

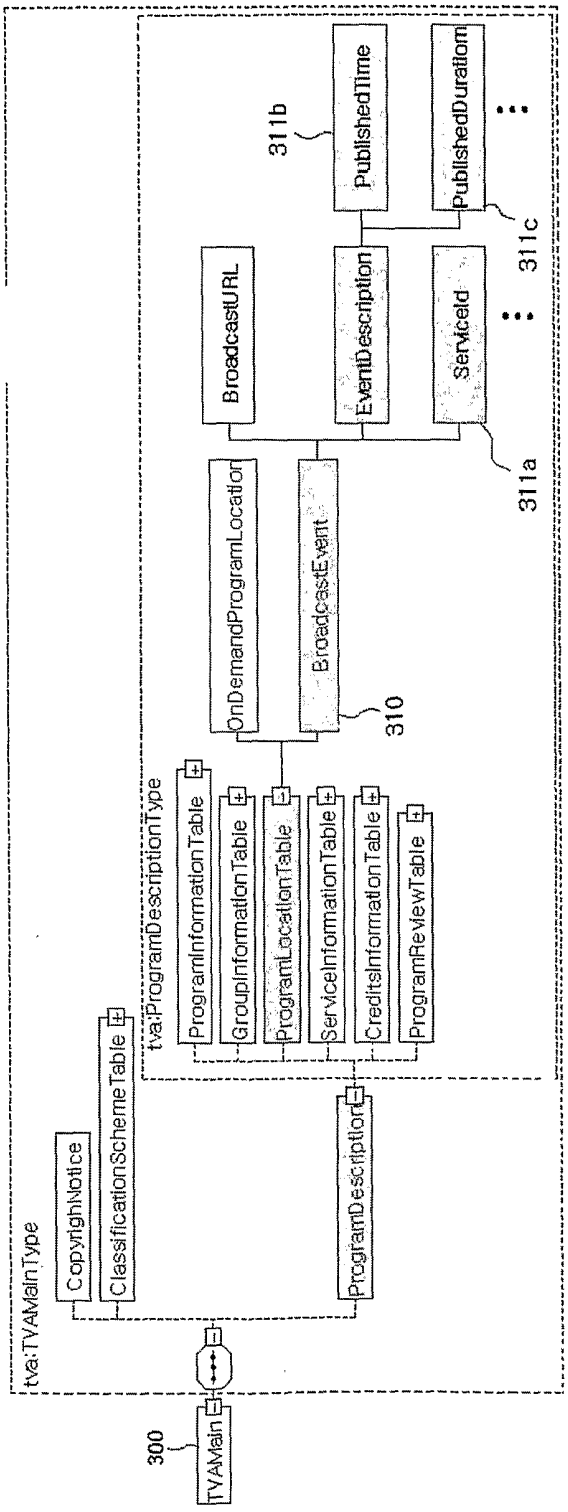

tva:TVAMainType
CopyrightNotice
ClassificationSchemeTable
ProgramDescription
tva:ProgramDescriptionType
ProgramInformationTable
GroupInformationTable
ProgramLocationTable
ServiceInformationTable
CreditsInformationTable
ProgramReviewTable
OnDemandProgramLocation
BroadcastEvent
310
BroadcastURL
EventDescription
ServiceId
311a
311b
PublishedTime
PublishedDuration
311c
TVAMain
300

FIG. 4

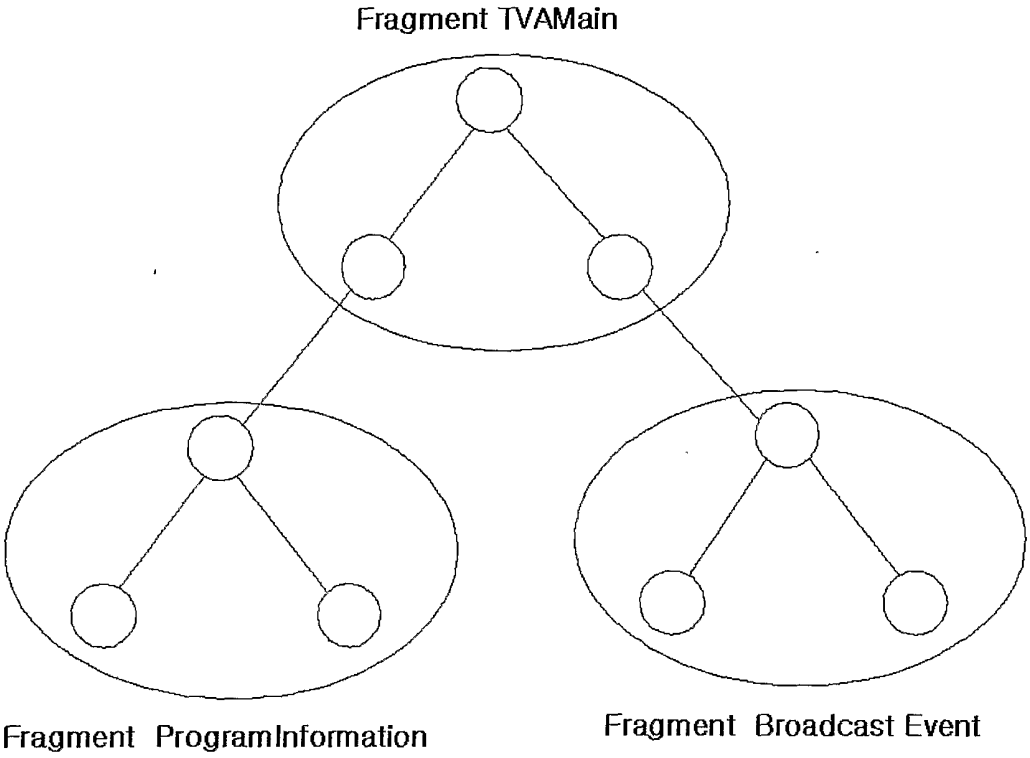

Fragment TVAMain
Fragment ProgramInformation
Fragment Broadcast Event

FIG. 5

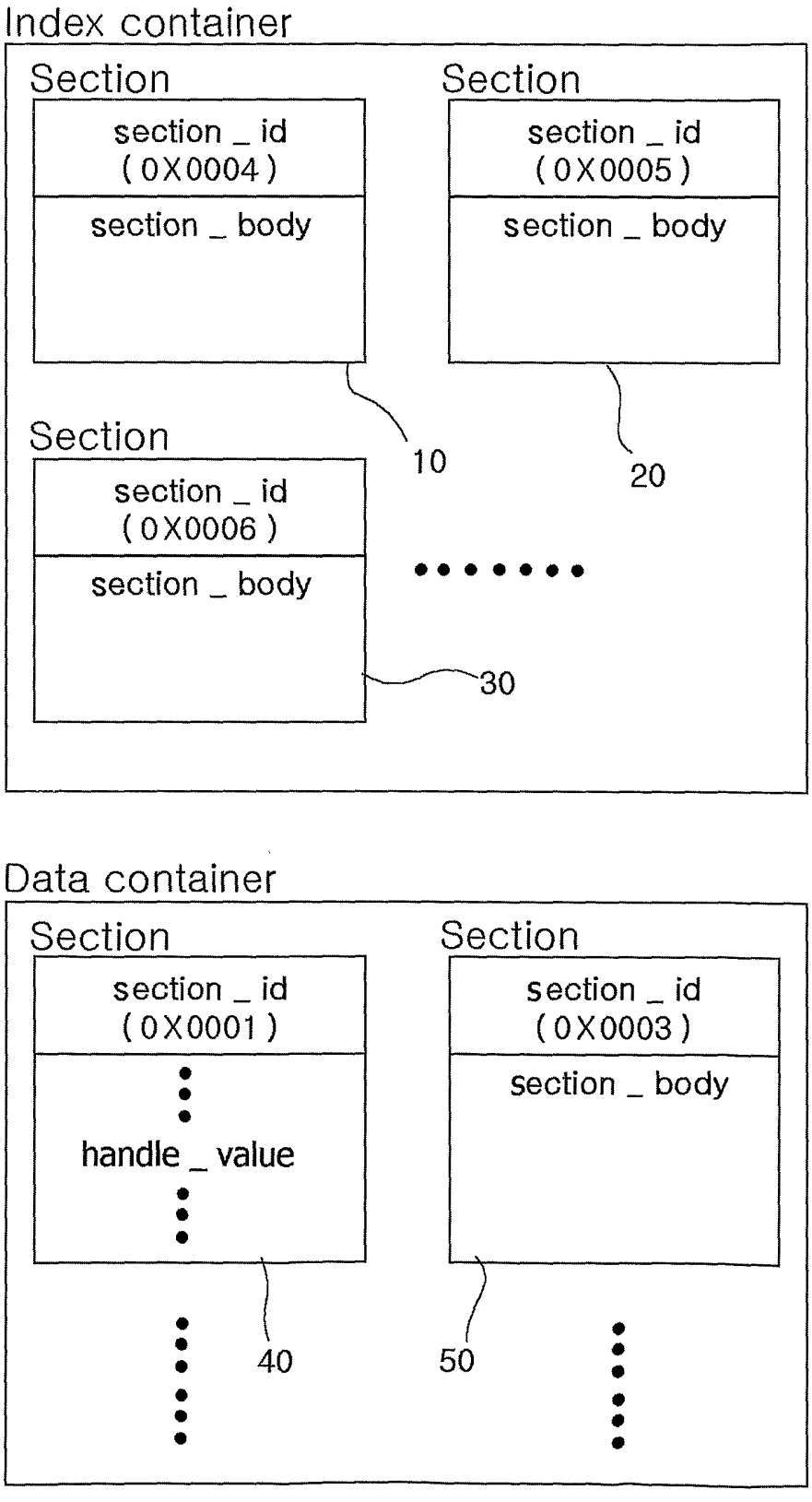

Index container
Section
section _ id
(0X0004)
section _ body
Section
section _ id
(0X0005)
section _ body
10
20
Section
section _ id
(0X0006)
section _ body
30
Data container
Section
section _ id
(0X0001)
handle _ value
Section
section _ id
(0X0003)
section _ body
40
50

FIG. 6

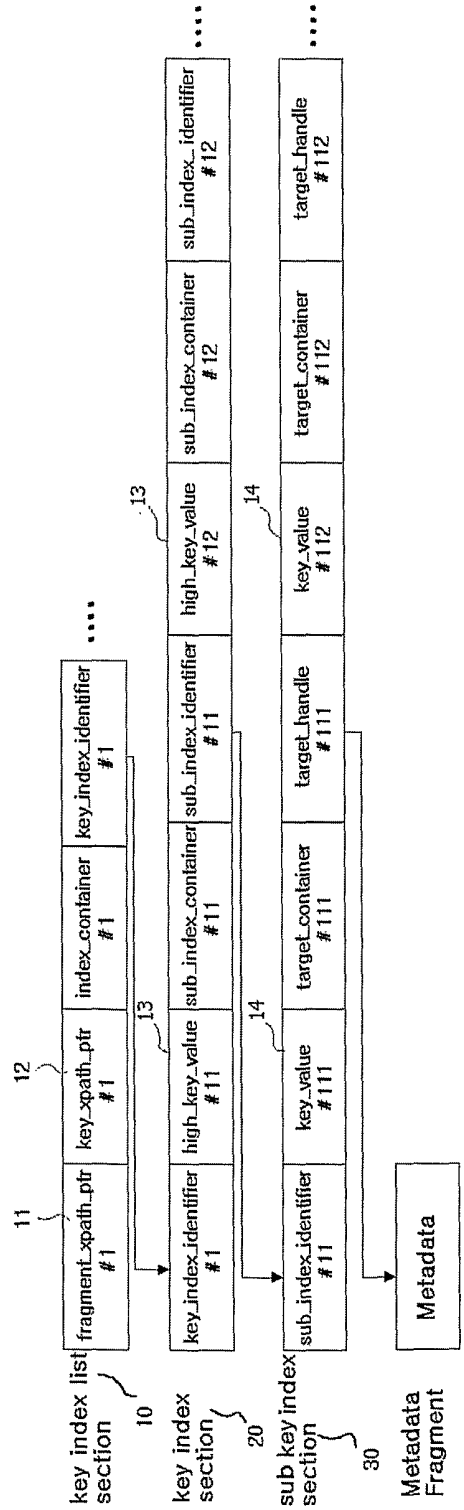

key index list section
10
fragment_xpath_ptr #1
key_xpath_ptr #1
index_container #1
key_index_identifier #1
11
12
13
14
key index section
20
key_index_identifier #1
high_key_value #11
sub_index_container #11
sub_index_identifier #11
high_key_value #12
sub_index_container #12
sub_index_identifier #12
sub key index section
30
sub_index_identifier #11
key_value #111
target_container #111
target_handle #111
key_value #112
target_container #112
target_handle #112
Metadata Fragment
Metadata

FIG. 7

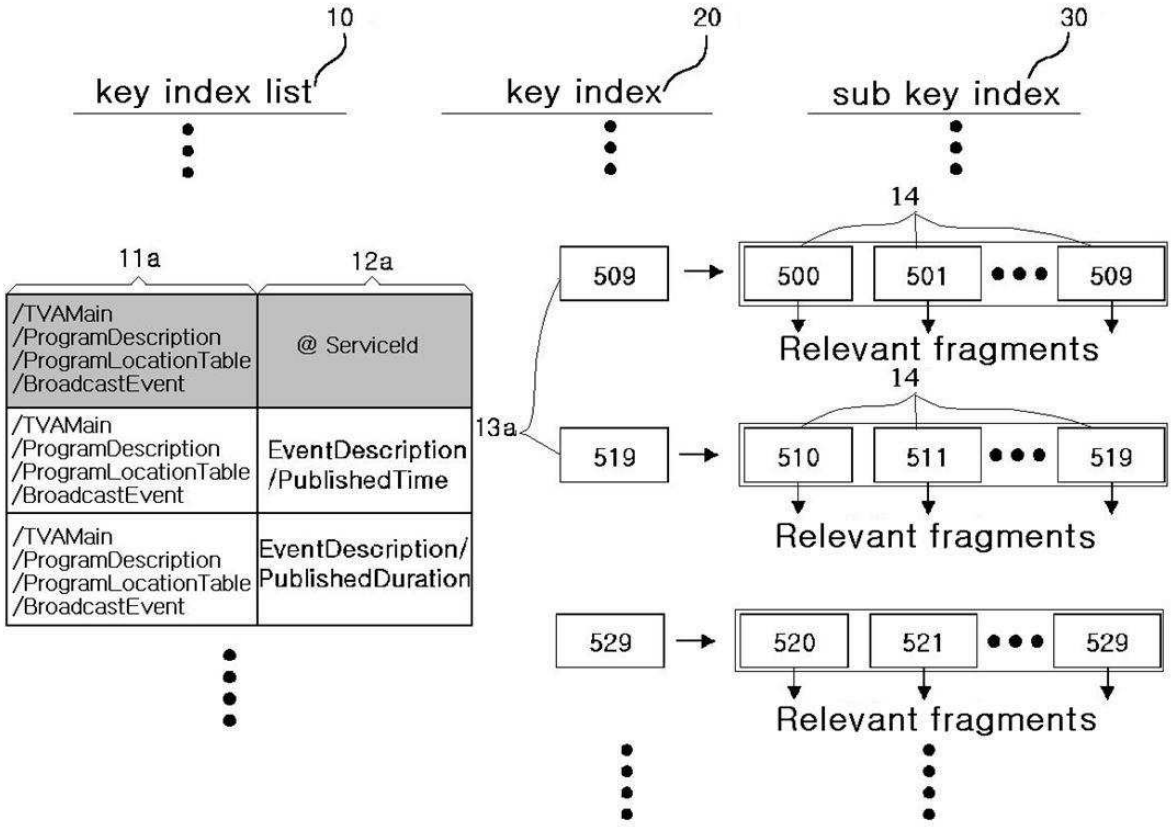

10
key index list
20
key index
30
sub key index
11a
12a
/TVAMain
/ProgramDescription
/ProgramLocationTable
/BroadcastEvent
@ ServiceId
/TVAMain
/ProgramDescription
/ProgramLocationTable
/BroadcastEvent
EventDescription
/PublishedTime
/TVAMain
/ProgramDescription
/ProgramLocationTable
/BroadcastEvent
EventDescription/
PublishedDuration
13a
509
519
529
14
500
501
509
Relevant fragments
14
510
511
519
Relevant fragments
520
521
529
Relevant fragments

FIG. 8

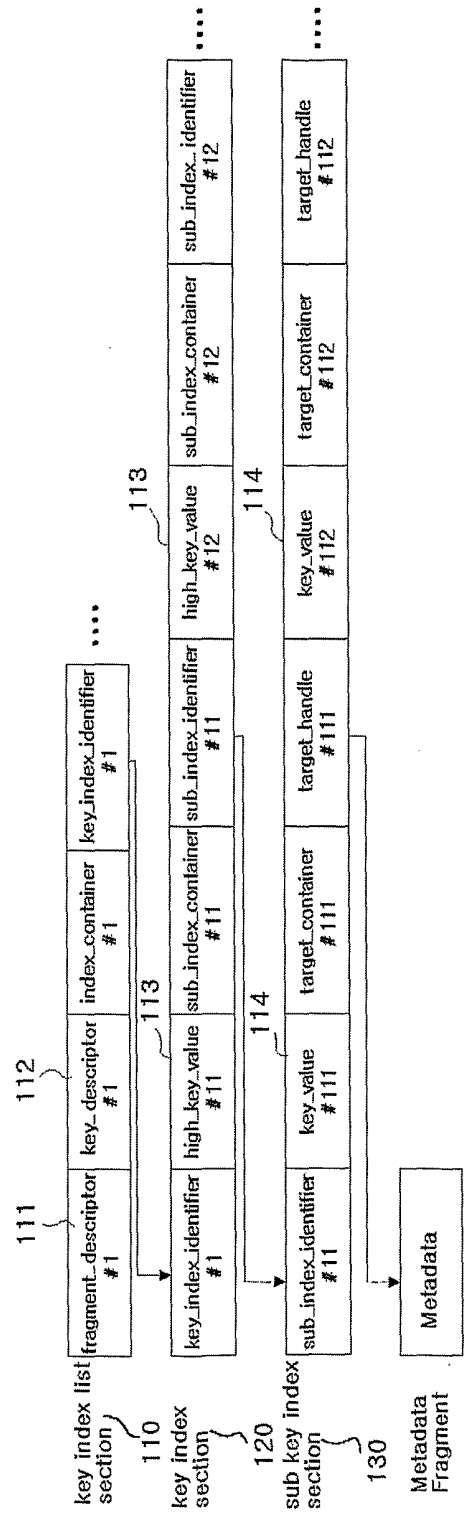

key index list section
110
key index section
120
sub key index section
130
Metadata Fragment
111
112
113
114
fragment_descriptor #1
key_descriptor #1
index_container #1
key_index_identifier #1
key_index_identifier #1
high_key_value #11
sub_index_container #11
sub_index_identifier #11
high_key_value #12
sub_index_container #12
sub_index_identifier #12
sub_index_identifier #11
key_value #111
target_container #111
target_handle #111
key_value #112
target_container #112
target_handle #112
Metadata

FIG. 9

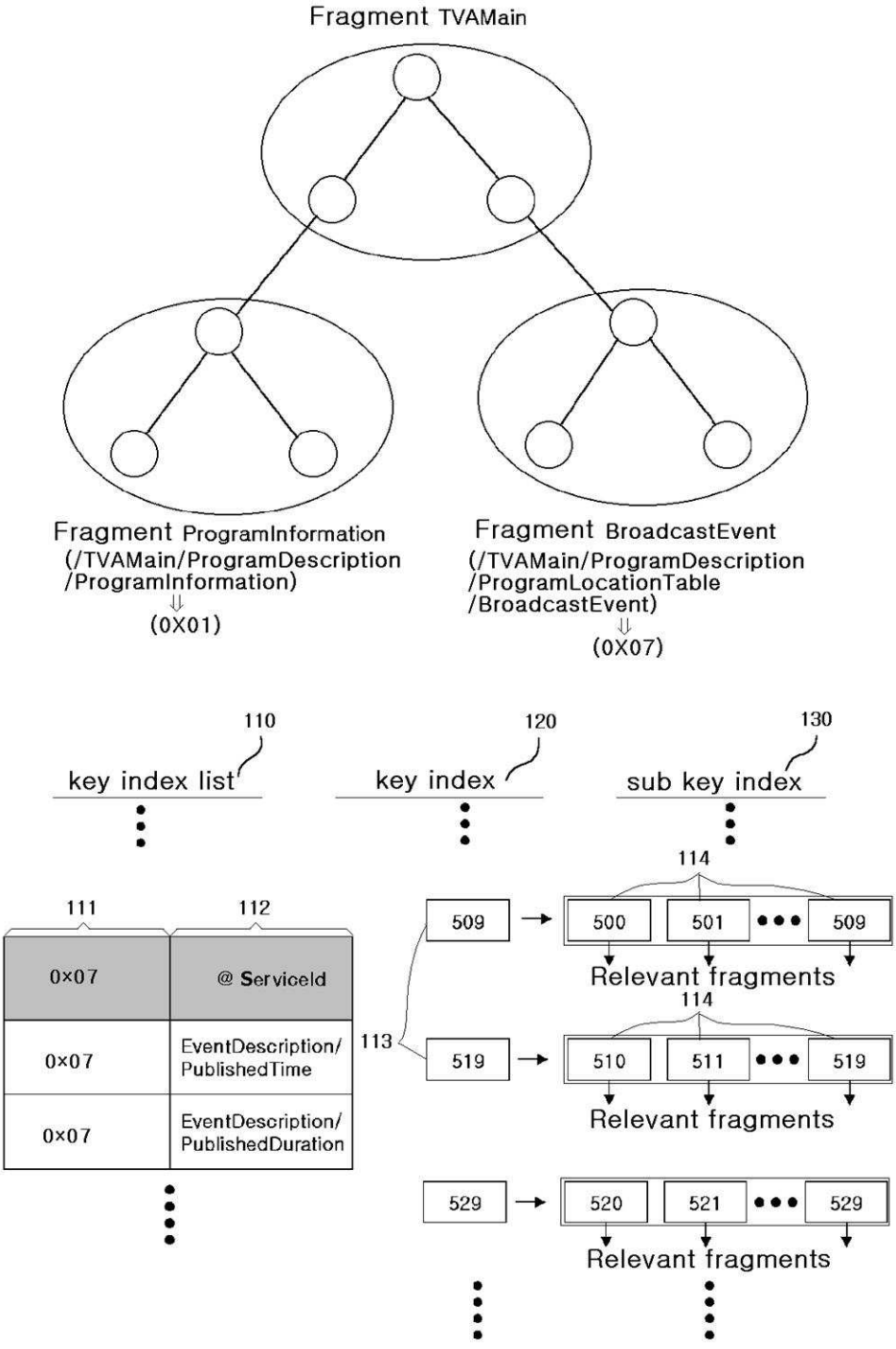

Fragment TVAMain
Fragment ProgramInformation
(/TVAMain/ProgramDescription
/ProgramInformation)
(0X01)
Fragment BroadcastEvent
(/TVAMain/ProgramDescription
/ProgramLocationTable
/BroadcastEvent)
(0X07)
110
key index list
120
key index
130
sub key index
111
112
0×07
@ ServiceId
0×07
EventDescription/
PublishedTime
0×07
EventDescription/
PublishedDuration
113
509
519
529
114
500
501
509
Relevant fragments
510
511
519
520
521
529

FIG. 10

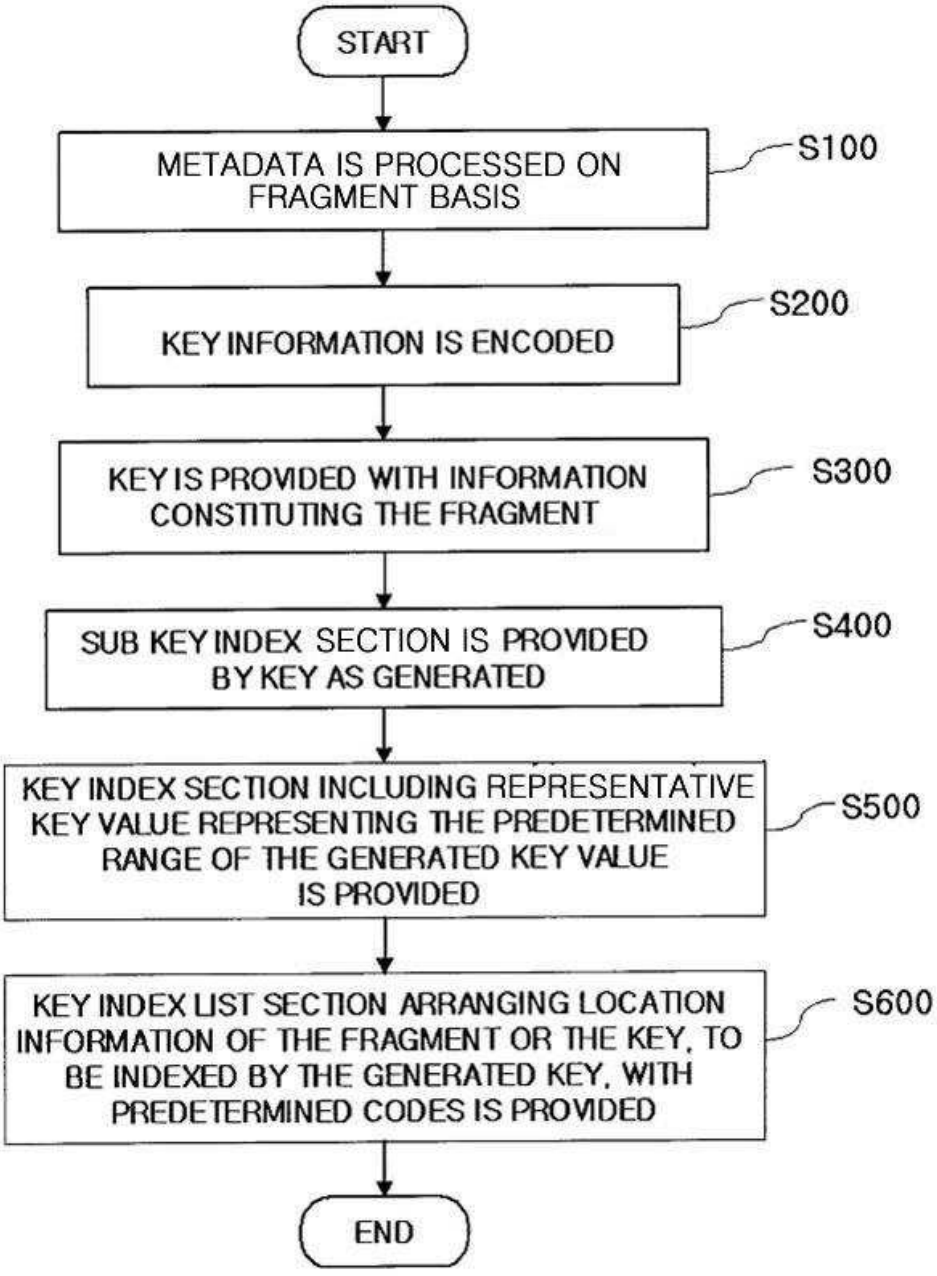

START
METADATA IS PROCESSED ON FRAGMENT BASIS
S100
KEY INFORMATION IS ENCODED
S200
KEY IS PROVIDED WITH INFORMATION CONSTITUTING THE FRAGMENT
S300
SUB KEY INDEX SECTION IS PROVIDED BY KEY AS GENERATED
S400
KEY INDEX SECTION INCLUDING REPRESENTATIVE KEY VALUE REPRESENTING THE PREDETERMINED RANGE OF THE GENERATED KEY VALUE IS PROVIDED
S500
KEY INDEX LIST SECTION ARRANGING LOCATION INFORMATION OF THE FRAGMENT OR THE KEY, TO BE INDEXED BY THE GENERATED KEY, WITH PREDETERMINED CODES IS PROVIDED
S600
END

FIG. 11

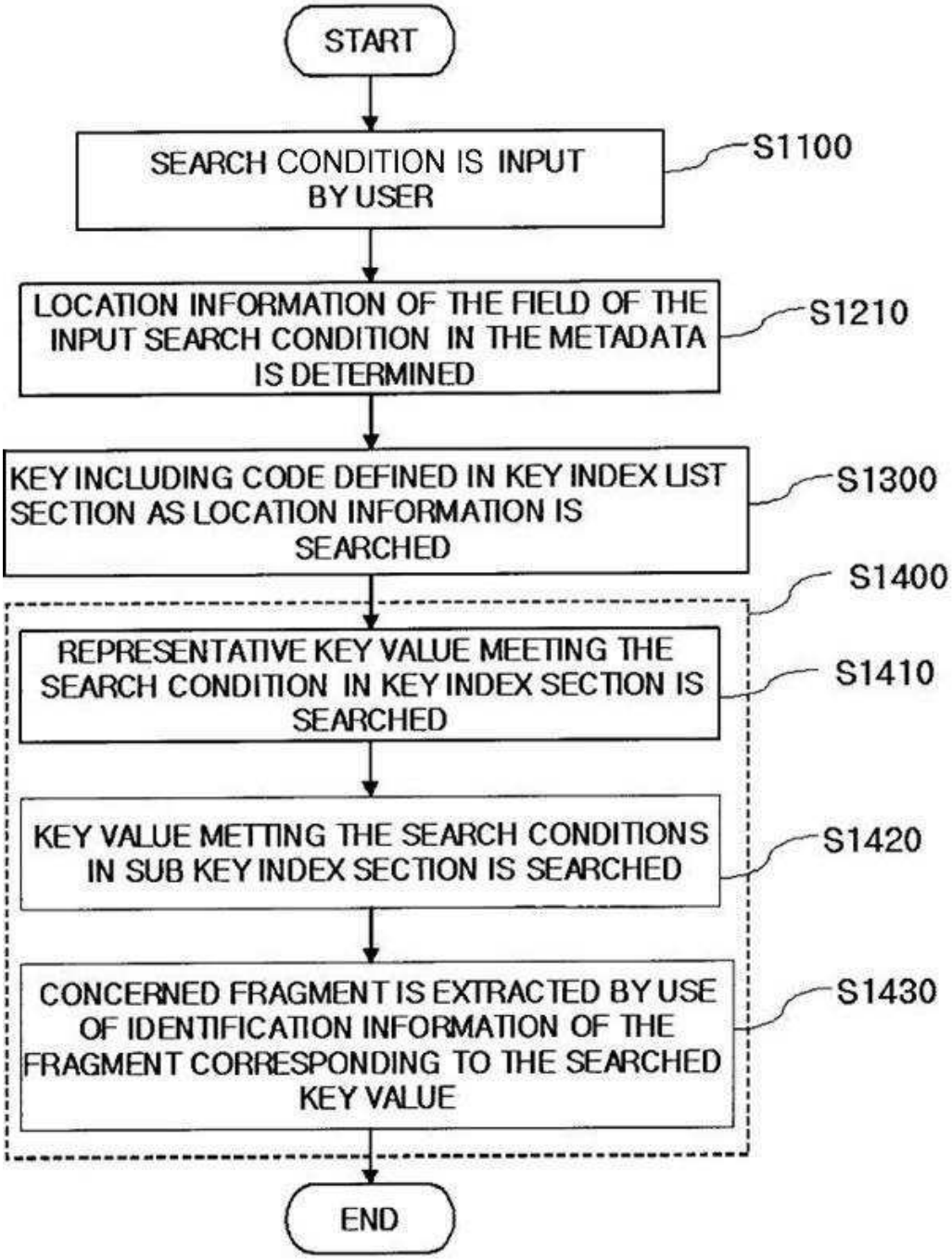
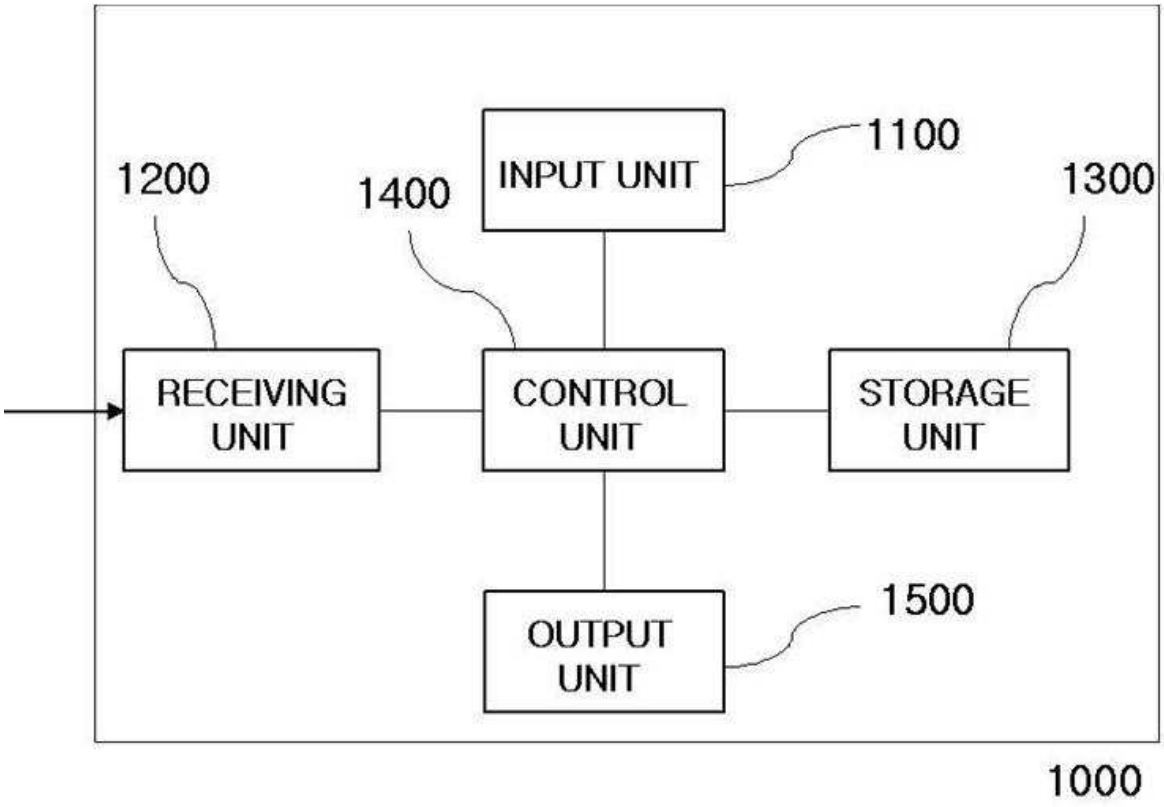

START
SEARCH CONDITION IS INPUT BY USER
S1100
LOCATION INFORMATION OF THE FIELD OF THE INPUT SEARCH CONDITION IN THE METADATA IS DETERMINED
S1210
KEY INCLUDING CODE DEFINED IN KEY INDEX LIST SECTION AS LOCATION INFORMATION IS SEARCHED
S1300
S1400
REPRESENTATIVE KEY VALUE MEETING THE SEARCH CONDITION IN KEY INDEX SECTION IS SEARCHED
S1410
KEY VALUE METTING THE SEARCH CONDITIONS IN SUB KEY INDEX SECTION IS SEARCHED
S1420
CONCERNED FRAGMENT IS EXTRACTED BY USE OF IDENTIFICATION INFORMATION OF THE FRAGMENT CORRESPONDING TO THE SEARCHED KEY VALUE
S1430
END

FIG. 12


1200
1400
INPUT UNIT
1100
1300
RECEIVING UNIT
CONTROL UNIT
STORAGE UNIT
OUTPUT UNIT
1500
1000