163163

G00002

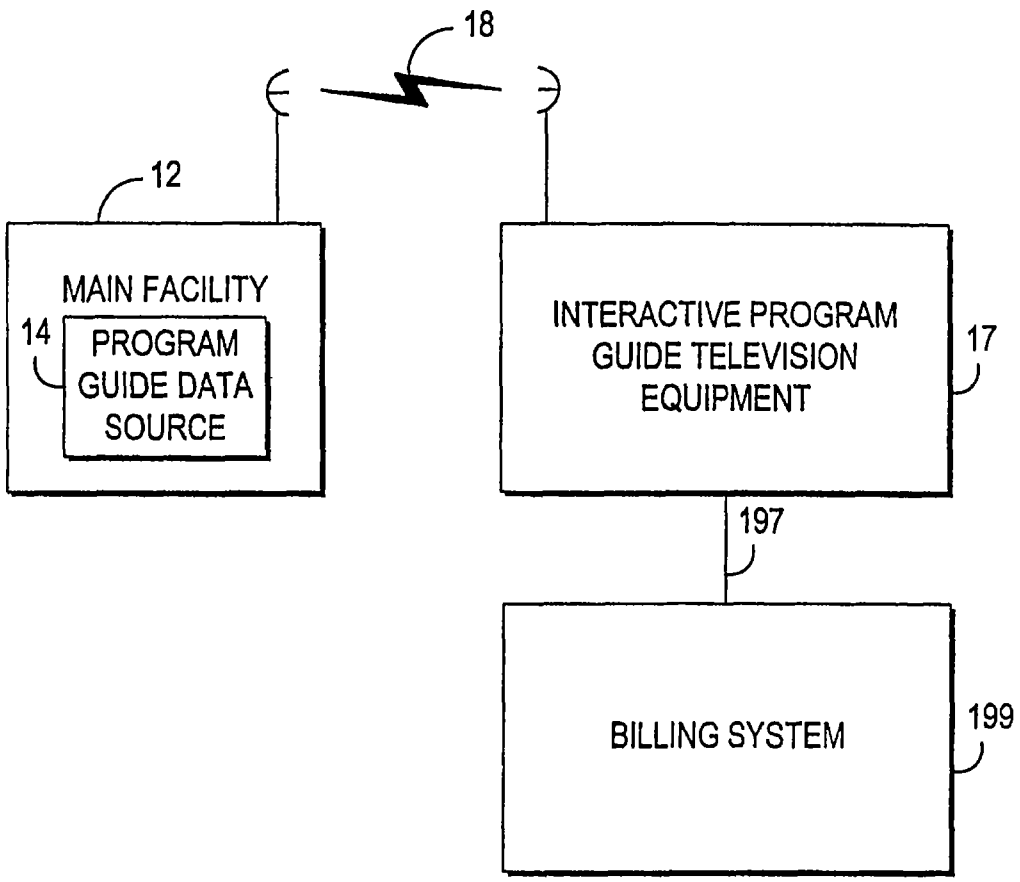


FIG. 1

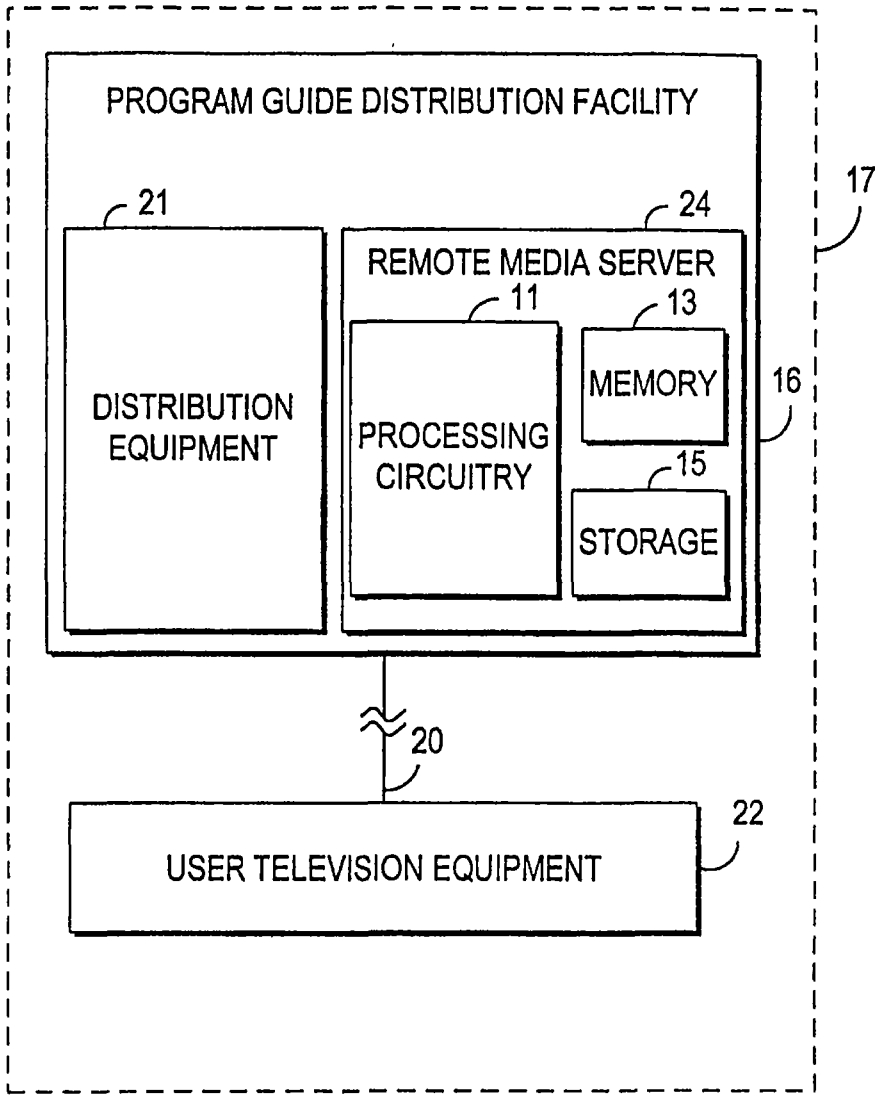

PROGRAM GUIDE DISTRIBUTION FACILITY
17
21
24
REMOTE MEDIA SERVER
11
13
DISTRIBUTION EQUIPMENT
PROCESSING CIRCUITRY
MEMORY
16
15
STORAGE
20
22
USER TELEVISION EQUIPMENT

FIG. 2a

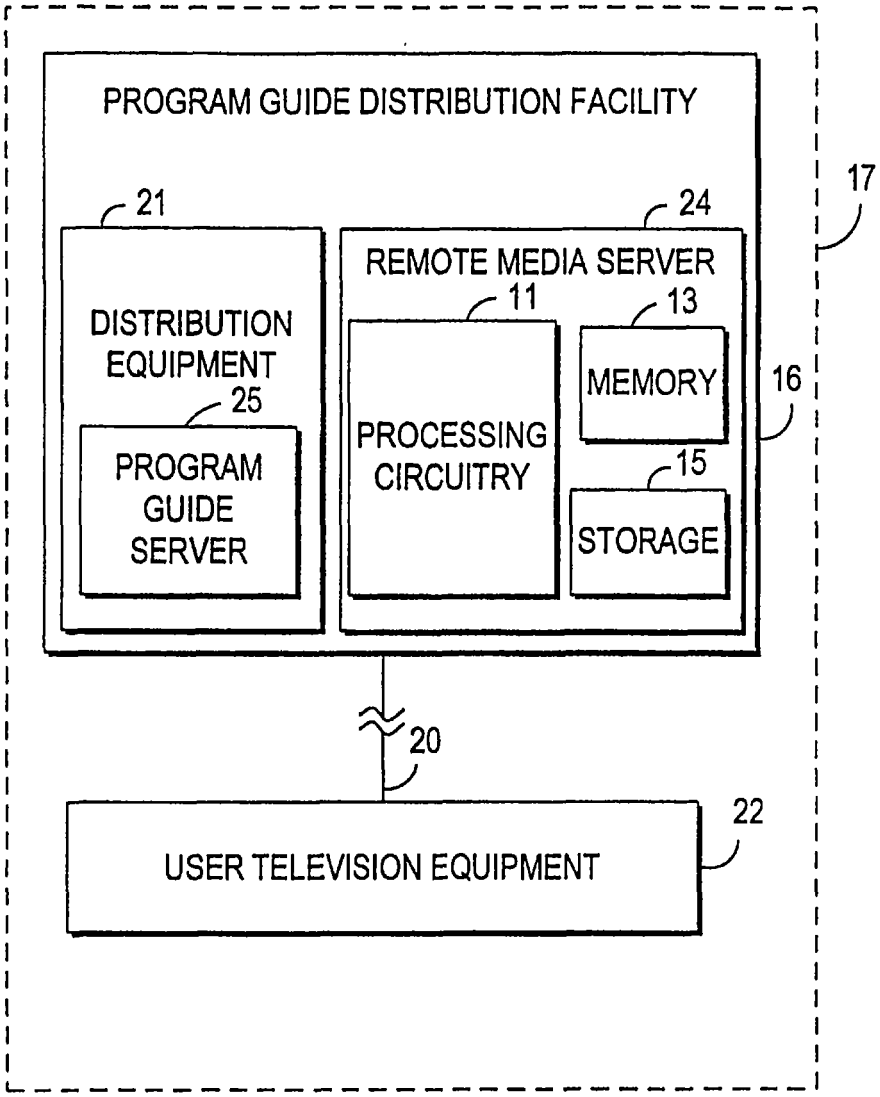

PROGRAM GUIDE DISTRIBUTION FACILITY
17
21
24
DISTRIBUTION EQUIPMENT
25
PROGRAM GUIDE SERVER
REMOTE MEDIA SERVER
11
13
PROCESSING CIRCUITRY
MEMORY
16
15
STORAGE
20
22
USER TELEVISION EQUIPMENT

FIG. 2b

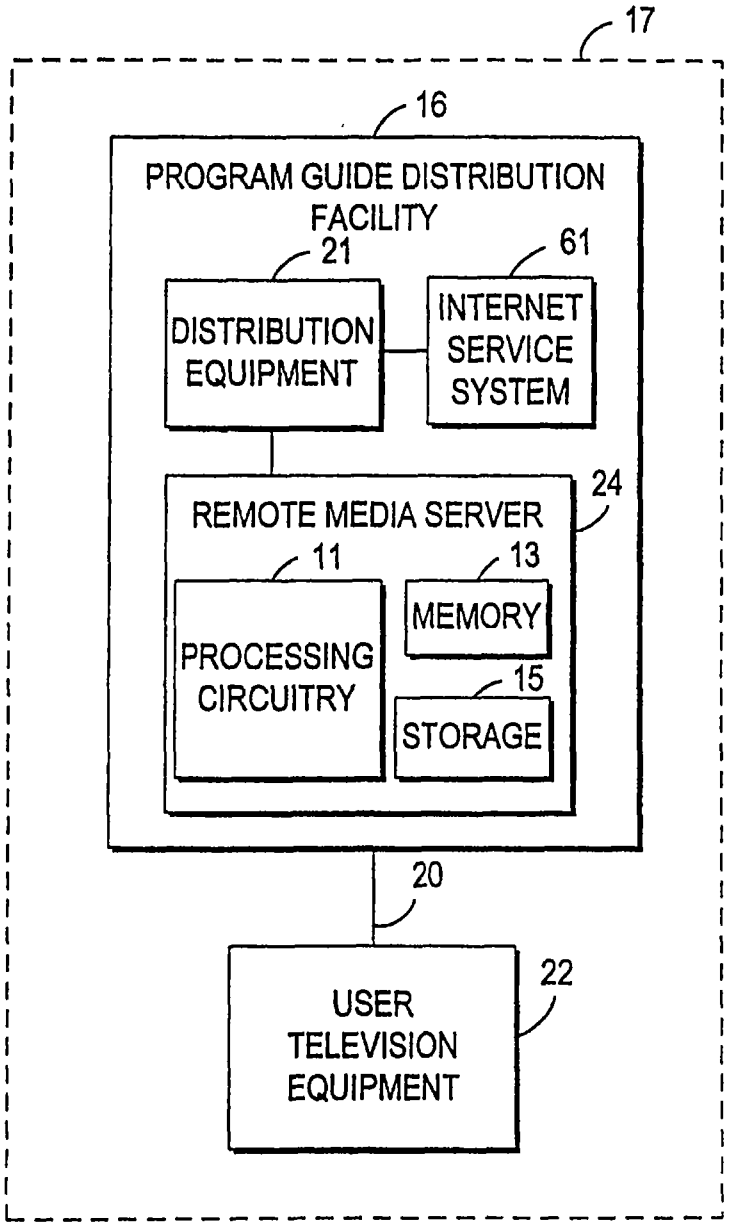

17
16
PROGRAM GUIDE DISTRIBUTION FACILITY
21
61
DISTRIBUTION EQUIPMENT
INTERNET SERVICE SYSTEM
24
REMOTE MEDIA SERVER
11
13
PROCESSING CIRCUITRY
MEMORY
15
STORAGE
20
22
USER TELEVISION EQUIPMENT

FIG. 2c

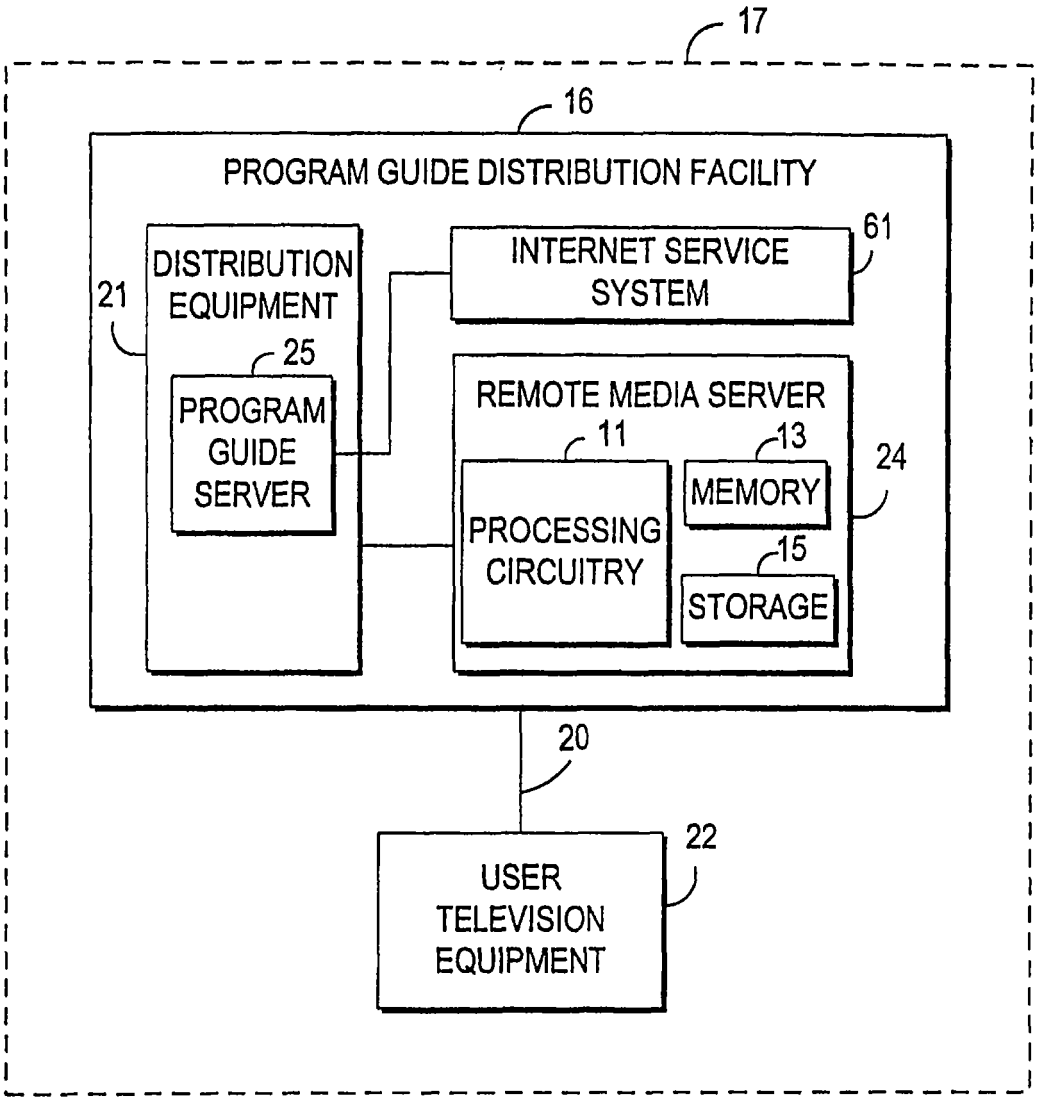

17
16
PROGRAM GUIDE DISTRIBUTION FACILITY
DISTRIBUTION EQUIPMENT
21
25
PROGRAM GUIDE SERVER
INTERNET SERVICE SYSTEM
61
REMOTE MEDIA SERVER
11
PROCESSING CIRCUITRY
13
MEMORY
15
STORAGE
24
20
USER TELEVISION EQUIPMENT
22

FIG. 2d

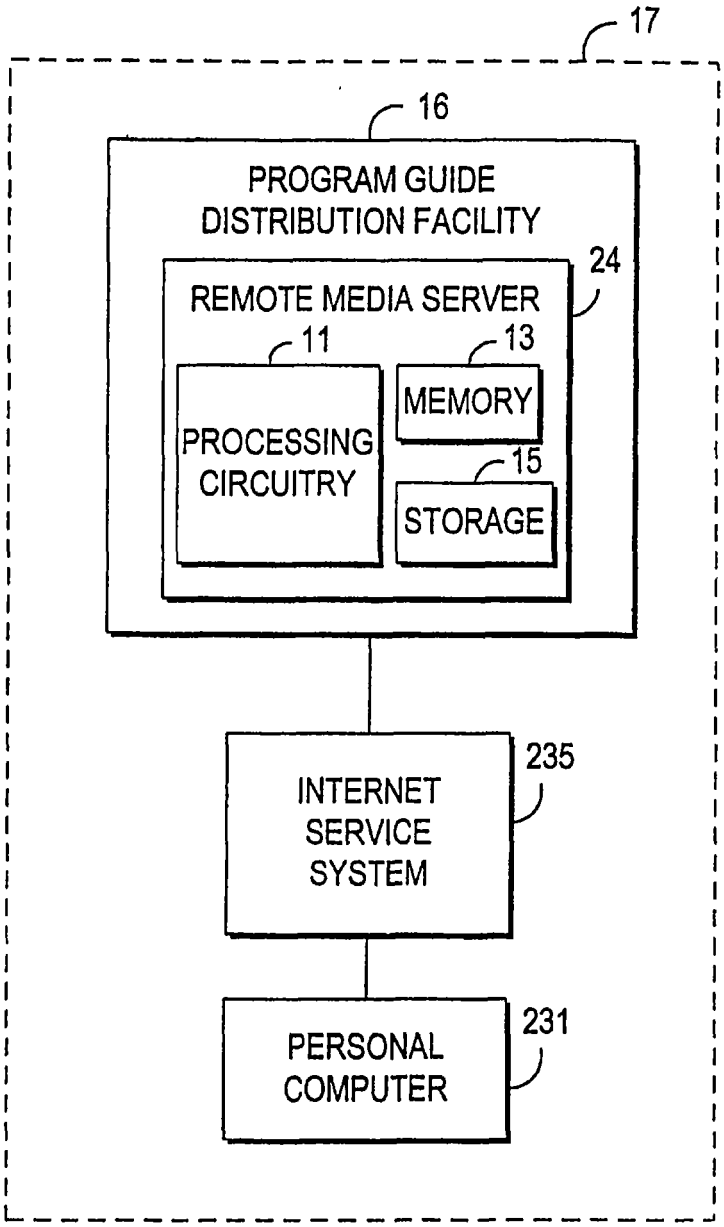

17
16
PROGRAM GUIDE DISTRIBUTION FACILITY
24
REMOTE MEDIA SERVER
11
13
PROCESSING CIRCUITRY
MEMORY
15
STORAGE
235
INTERNET SERVICE SYSTEM
231
PERSONAL COMPUTER

FIG. 2e

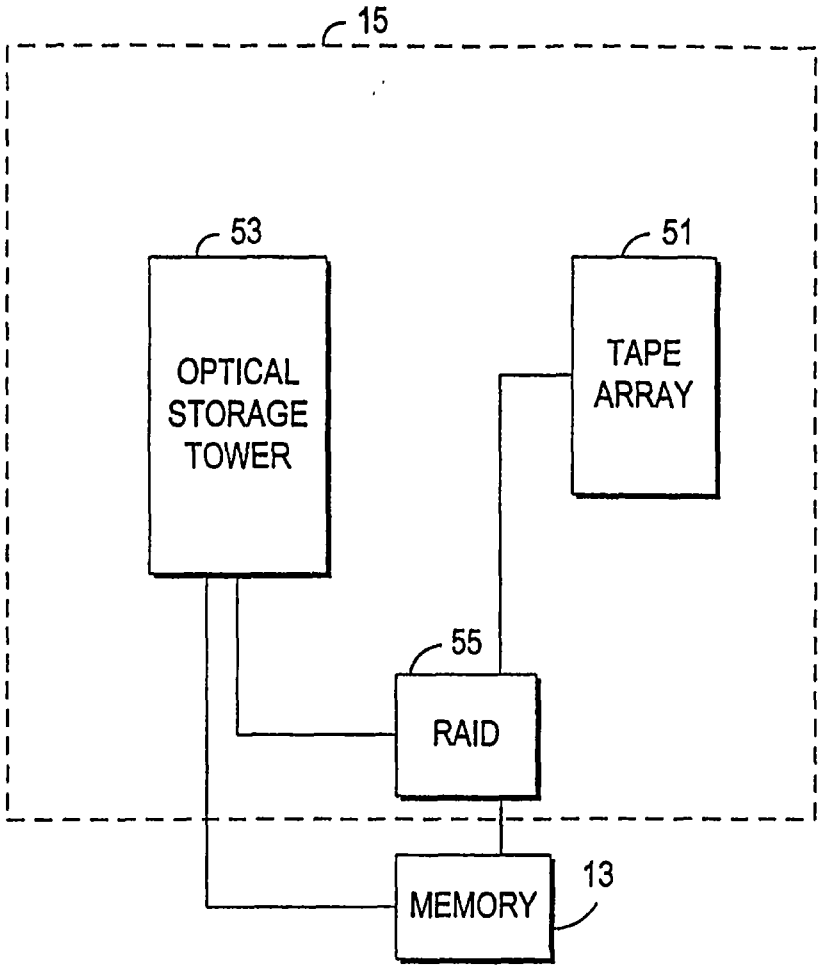


FIG. 3

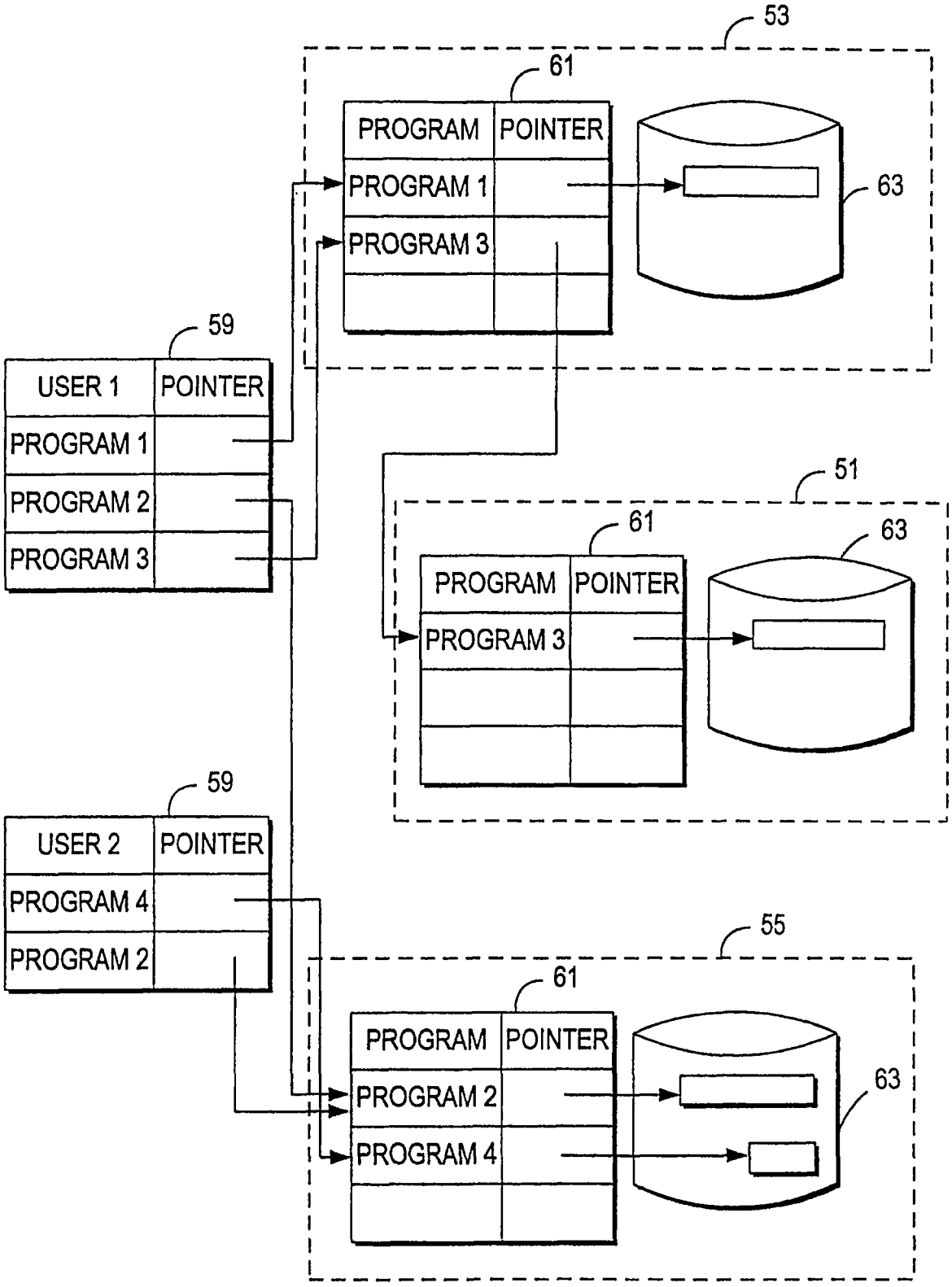

53
61
PROGRAM
POINTER
PROGRAM 1
PROGRAM 3
63
59
USER 1
POINTER
PROGRAM 1
PROGRAM 2
PROGRAM 3
51
61
63
PROGRAM
POINTER
PROGRAM 3
59
USER 2
POINTER
PROGRAM 4
PROGRAM 2
55
61
PROGRAM
POINTER
PROGRAM 2
PROGRAM 4
63

FIG. 4

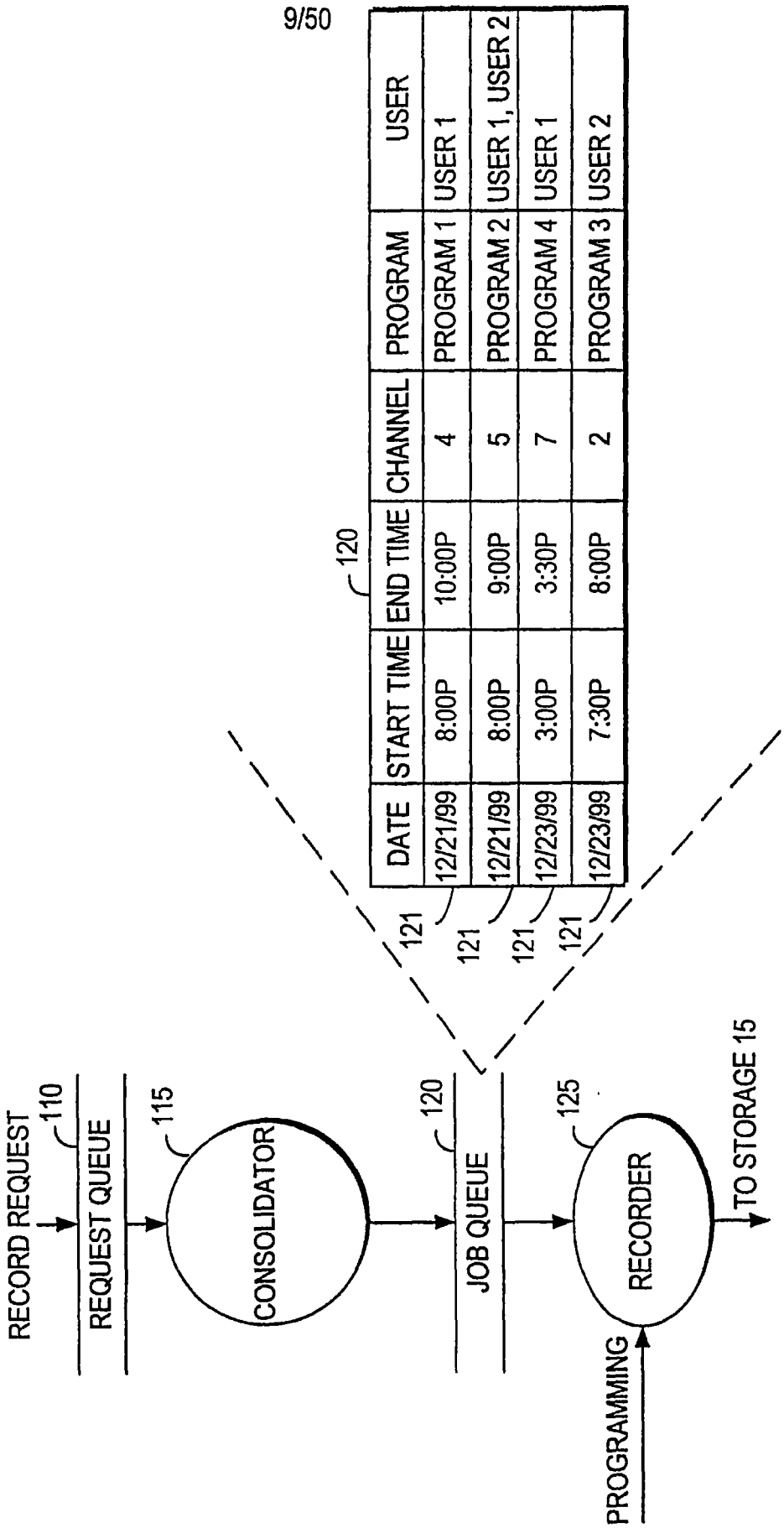

RECORD REQUEST
110
REQUEST QUEUE
115
CONSOLIDATOR
120
JOB QUEUE
125
RECORDER
TO STORAGE 15
PROGRAMMING
120
121
121
121
121
DATE
START TIME
END TIME
CHANNEL
PROGRAM
USER
12/21/99
8:00P
10:00P
4
PROGRAM 1
USER 1
12/21/99
8:00P
9:00P
5
PROGRAM 2
USER 1, USER 2
12/23/99
3:00P
3:30P
7
PROGRAM 4
USER 1
12/23/99
7:30P
8:00P
2
PROGRAM 3
USER 2

FIG. 5

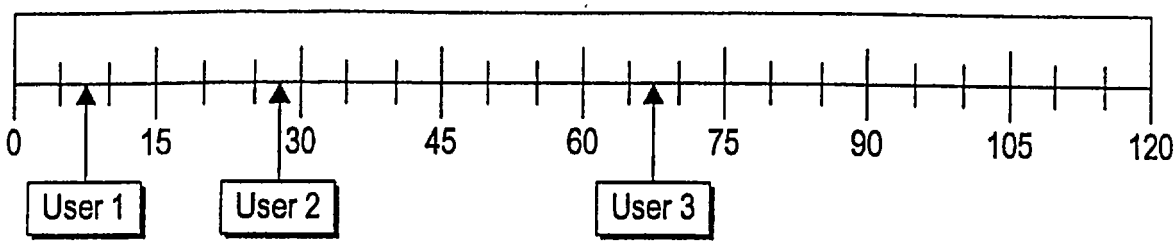

0
15
30
45
60
75
90
105
120
User 1
User 2
User 3

FIG. 6a

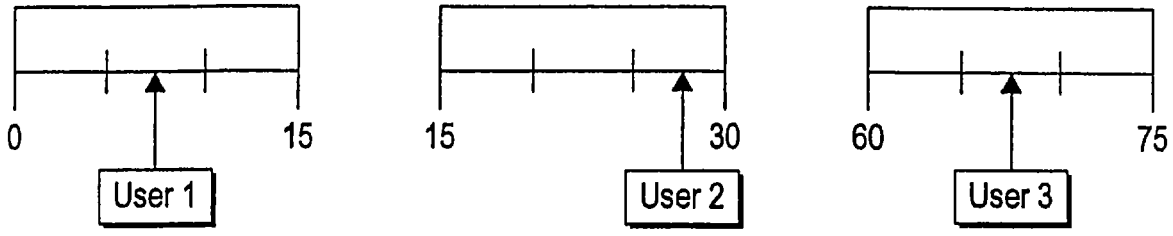

0
15
User 1
15
30
User 2
60
75
User 3

FIG. 6b

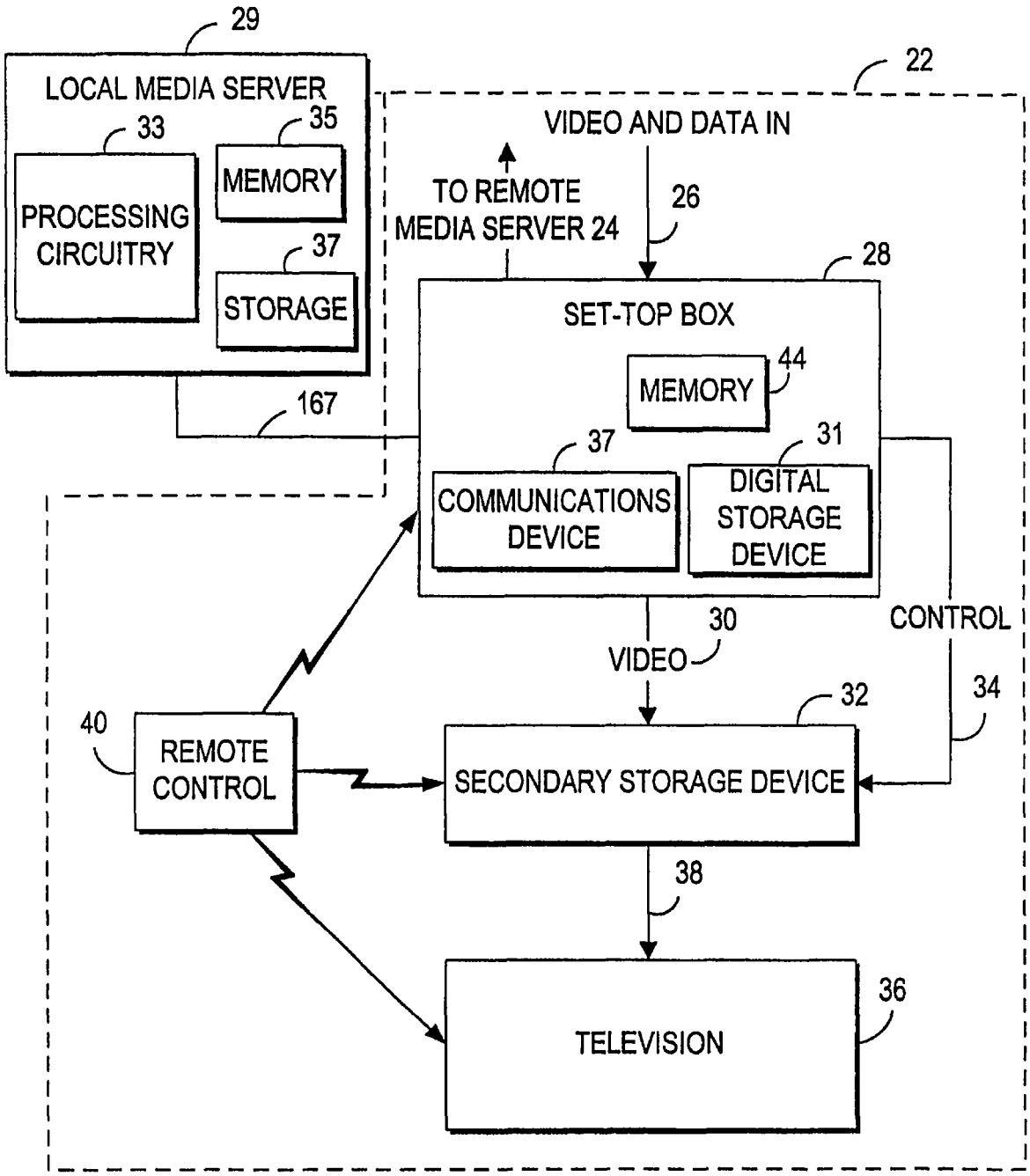

29
LOCAL MEDIA SERVER
33
PROCESSING CIRCUITRY
35
MEMORY
37
STORAGE
22
VIDEO AND DATA IN
TO REMOTE MEDIA SERVER 24
26
28
SET-TOP BOX
44
MEMORY
167
37
COMMUNICATIONS DEVICE
31
DIGITAL STORAGE DEVICE
30
VIDEO
CONTROL
34
32
40
REMOTE CONTROL
SECONDARY STORAGE DEVICE
38
36
TELEVISION

FIG. 7

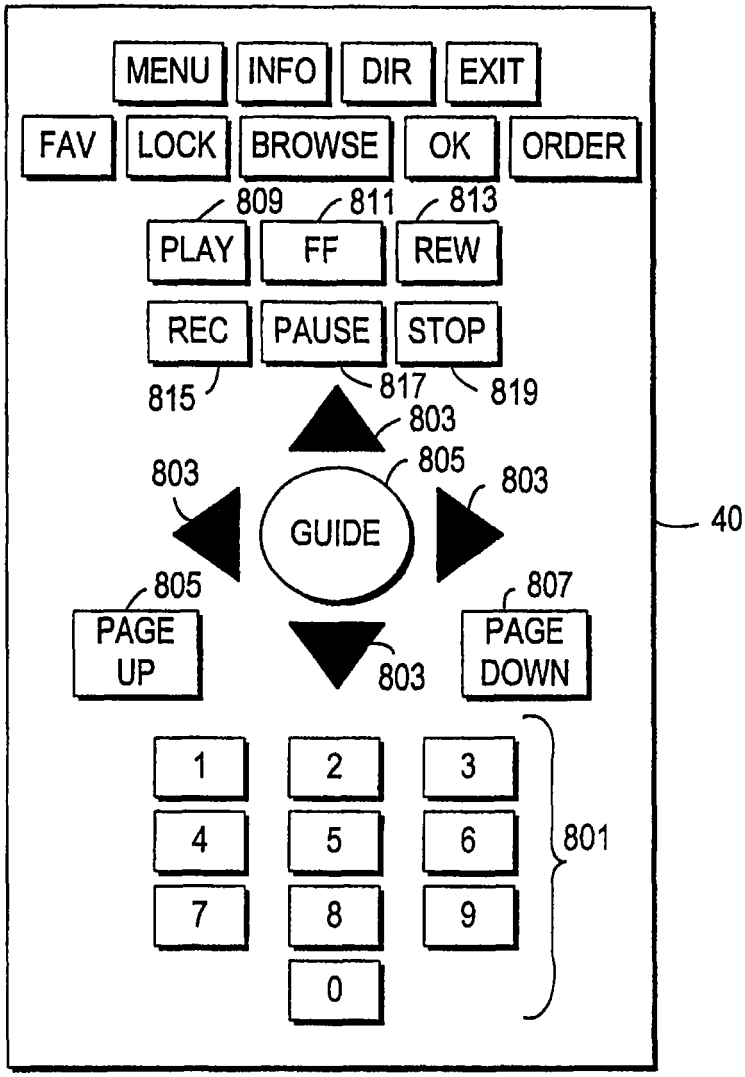

MENU
INFO
DIR
EXIT
FAV
LOCK
BROWSE
OK
ORDER
809
811
813
PLAY
FF
REW
REC
PAUSE
STOP
815
817
819
803
803
805
803
GUIDE
40
805
807
PAGE UP
PAGE DOWN
803
1
2
3
4
5
6
801
7
8
9
0

FIG. 8

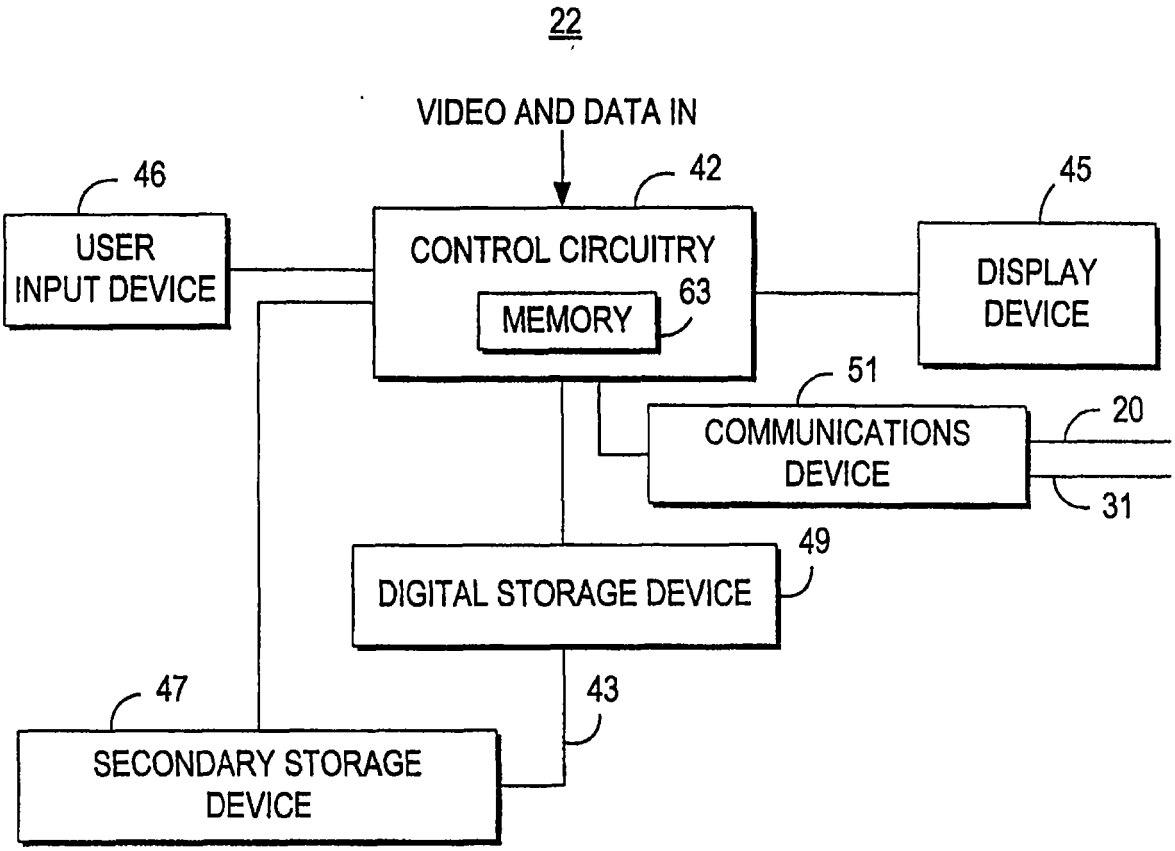

22
VIDEO AND DATA IN
46
USER INPUT DEVICE
42
CONTROL CIRCUITRY
MEMORY
63
45
DISPLAY DEVICE
51
COMMUNICATIONS DEVICE
20
31
49
DIGITAL STORAGE DEVICE
47
SECONDARY STORAGE DEVICE
43

FIG. 9

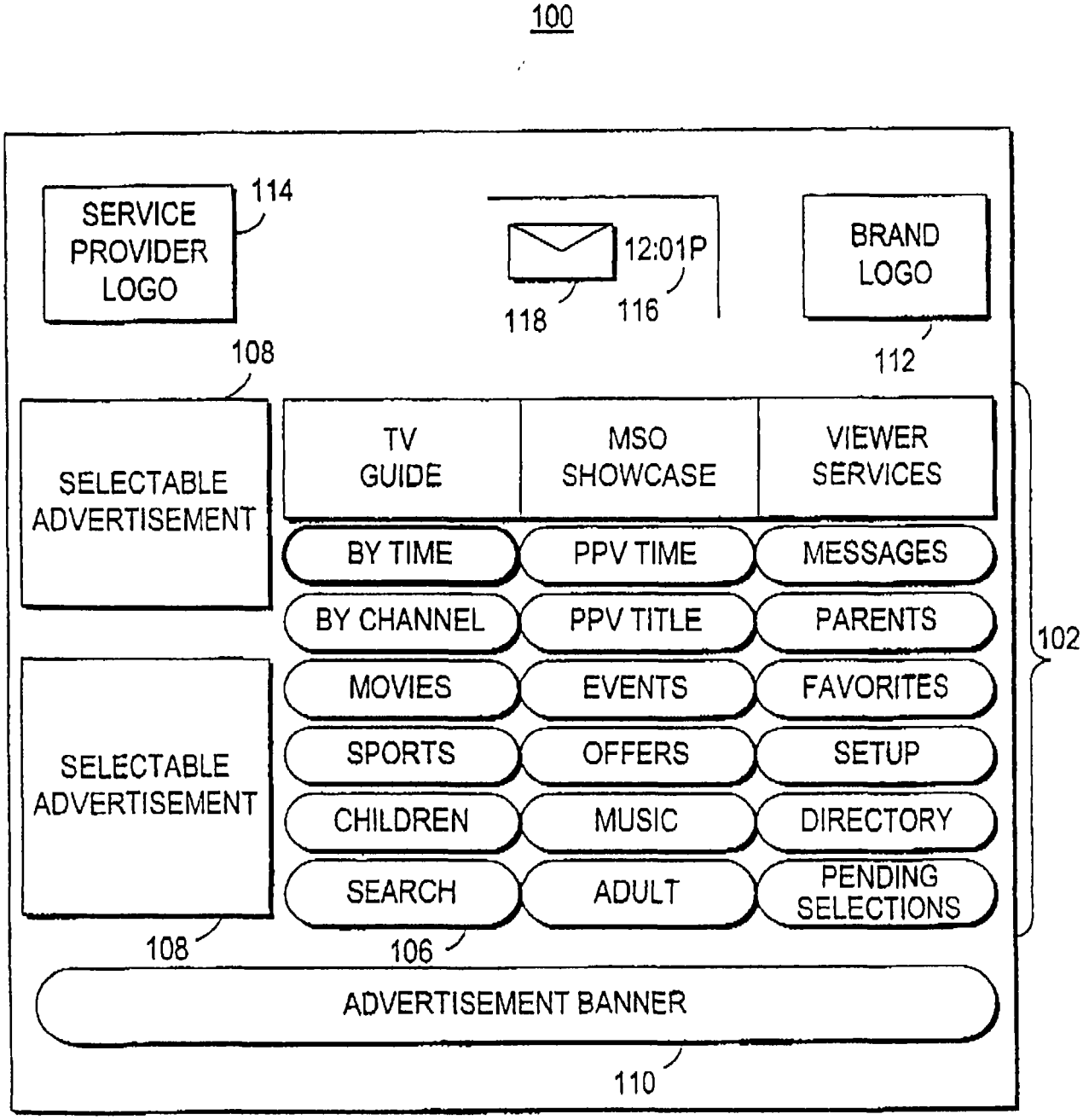

100
SERVICE PROVIDER LOGO
114
12:01P
118
116
BRAND LOGO
112
108
SELECTABLE ADVERTISEMENT
TV GUIDE
MSO SHOWCASE
VIEWER SERVICES
BY TIME
PPV TIME
MESSAGES
BY CHANNEL
PPV TITLE
PARENTS
MOVIES
EVENTS
FAVORITES
SPORTS
OFFERS
SETUP
CHILDREN
MUSIC
DIRECTORY
SEARCH
ADULT
PENDING SELECTIONS
SELECTABLE ADVERTISEMENT
102
108
106
ADVERTISEMENT BANNER
110

FIG. 10

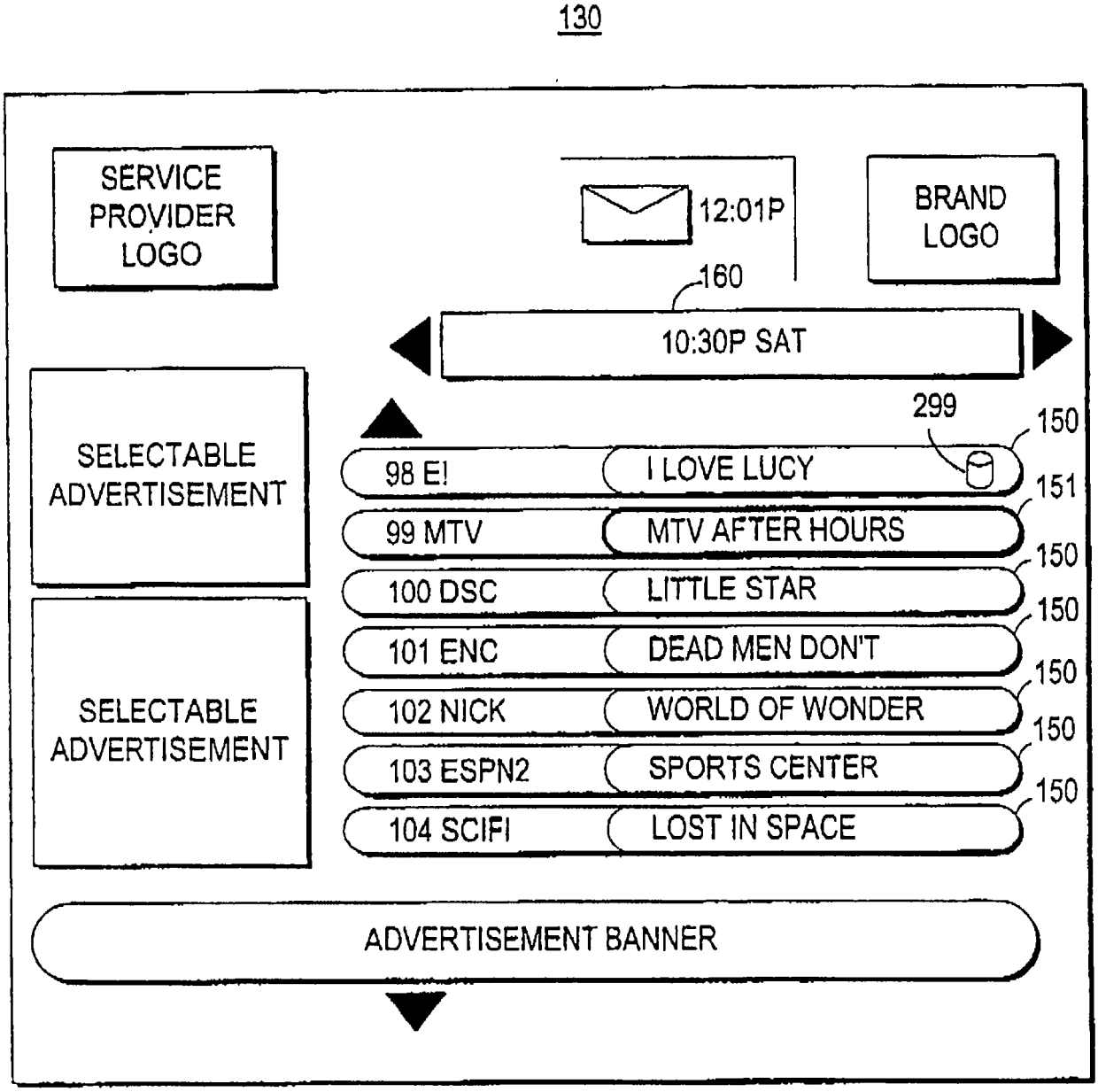

130
SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
160
10:30P SAT
SELECTABLE ADVERTISEMENT
SELECTABLE ADVERTISEMENT
299
150
98 E!
I LOVE LUCY
151
99 MTV
MTV AFTER HOURS
150
100 DSC
LITTLE STAR
150
101 ENC
DEAD MEN DON'T
150
102 NICK
WORLD OF WONDER
150
103 ESPN2
SPORTS CENTER
150
104 SCIFI
LOST IN SPACE
ADVERTISEMENT BANNER

FIG. 11a

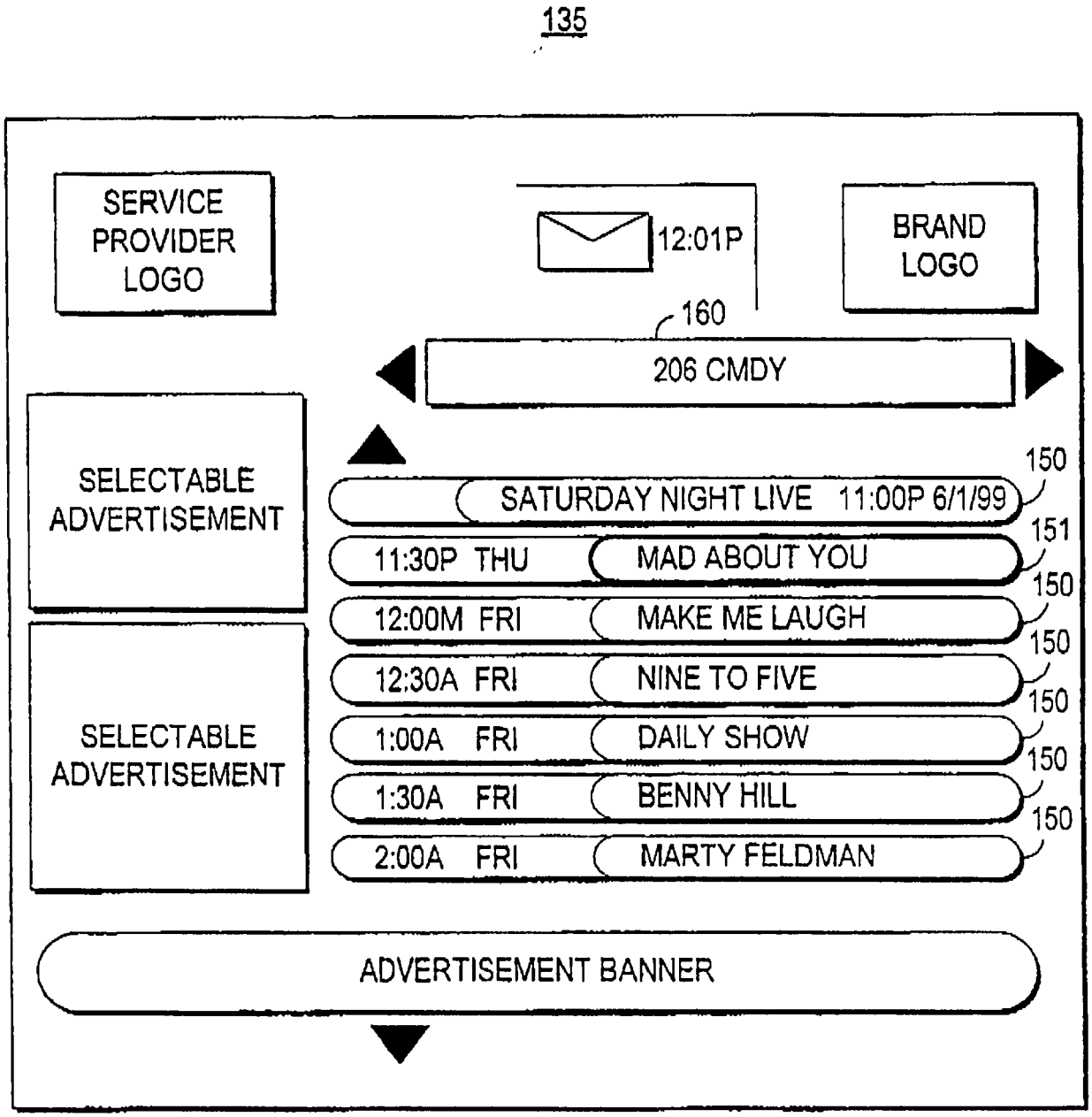

135
SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
160
206 CMDY
SELECTABLE ADVERTISEMENT
SELECTABLE ADVERTISEMENT
SATURDAY NIGHT LIVE 11:00P 6/1/99
150
11:30P THU
MAD ABOUT YOU
151
12:00M FRI
MAKE ME LAUGH
150
12:30A FRI
NINE TO FIVE
150
1:00A FRI
DAILY SHOW
150
1:30A FRI
BENNY HILL
150
2:00A FRI
MARTY FELDMAN
150
ADVERTISEMENT BANNER

FIG. 11b

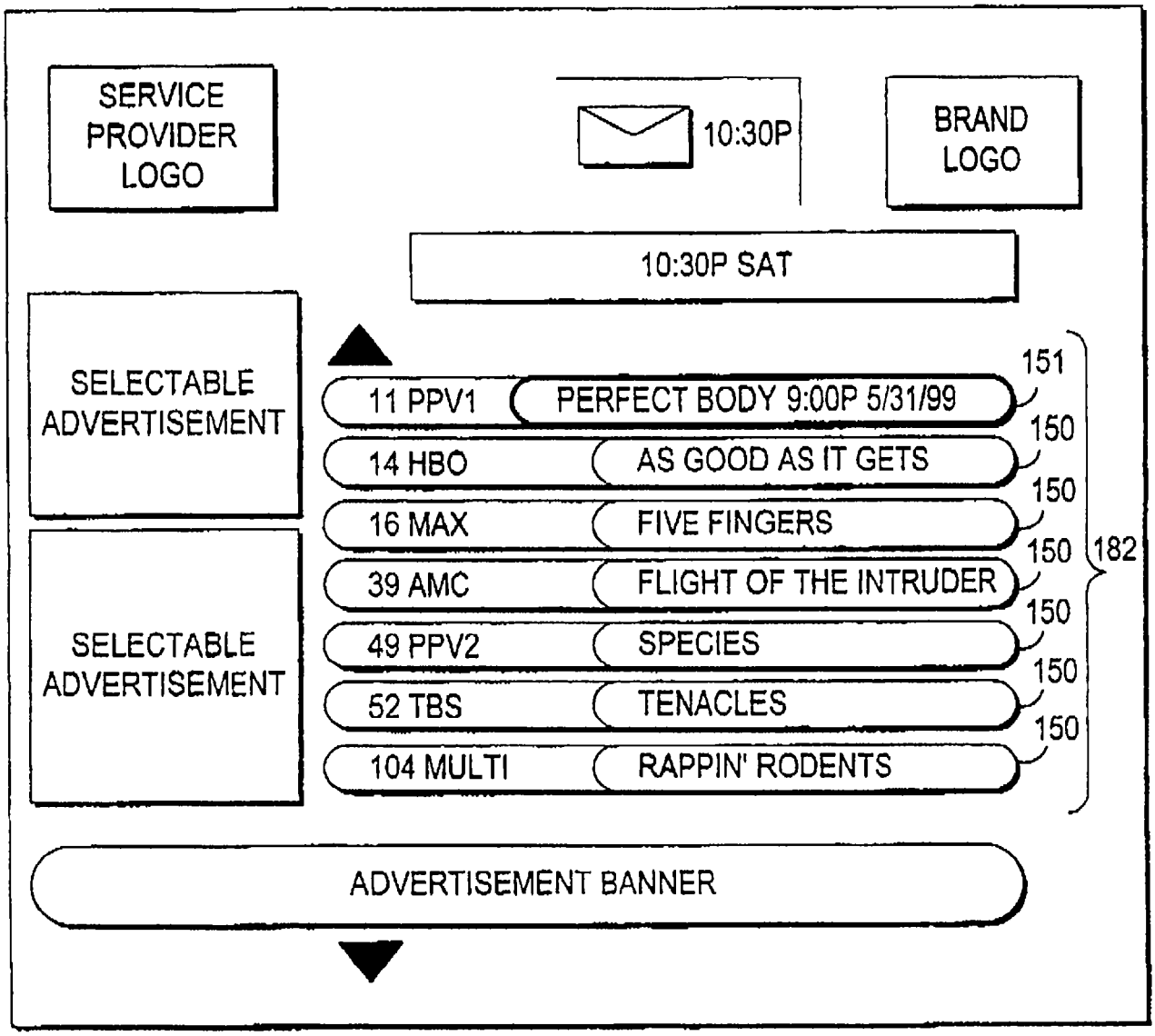

140
SERVICE PROVIDER LOGO
10:30P
BRAND LOGO
10:30P SAT
SELECTABLE ADVERTISEMENT
SELECTABLE ADVERTISEMENT
11 PPV1
PERFECT BODY 9:00P 5/31/99
151
14 HBO
AS GOOD AS IT GETS
150
16 MAX
FIVE FINGERS
150
39 AMC
FLIGHT OF THE INTRUDER
150
49 PPV2
SPECIES
150
52 TBS
TENACLES
150
104 MULTI
RAPPIN' RODENTS
150
182
ADVERTISEMENT BANNER

FIG. 11c

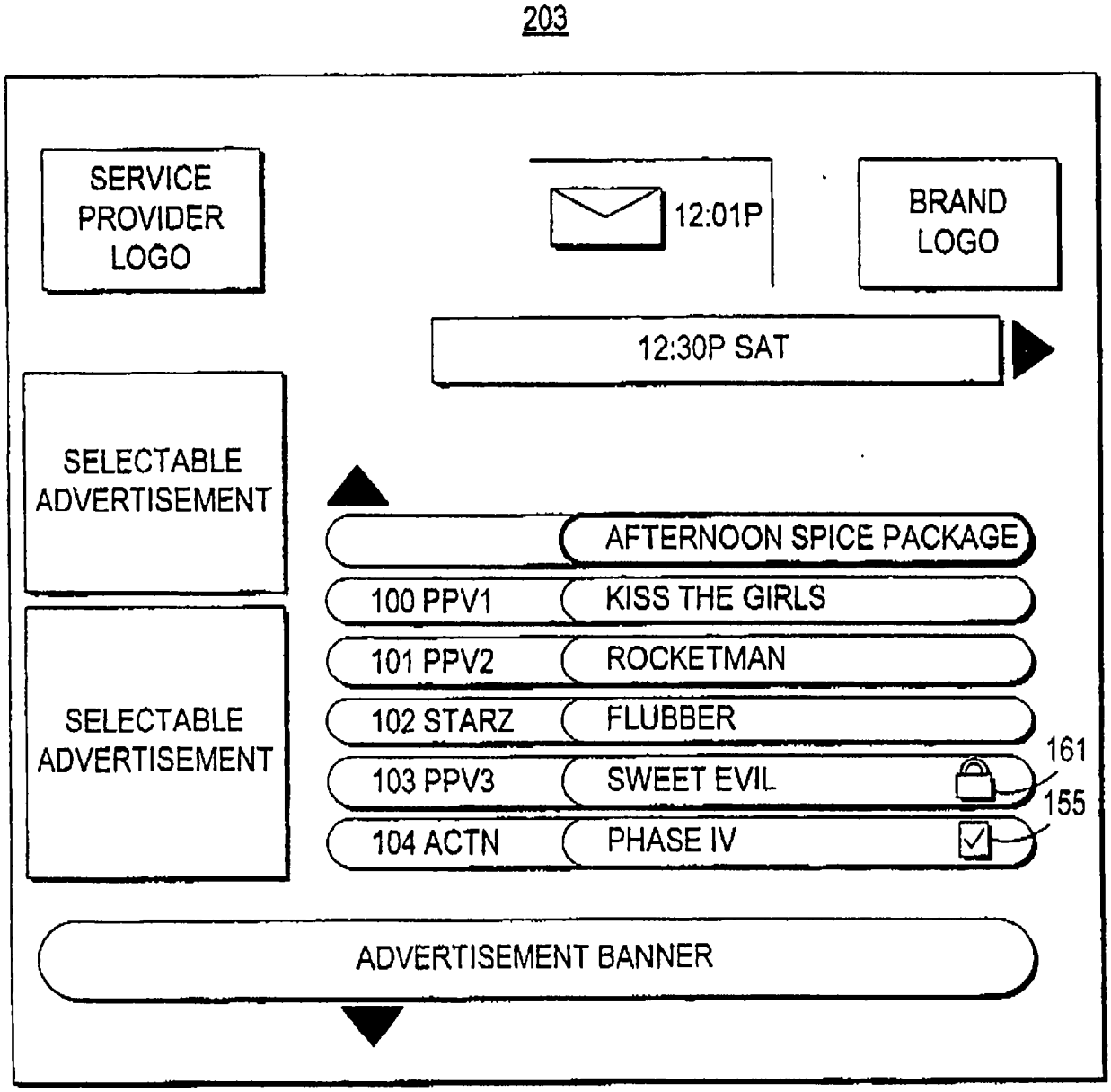

203
SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
12:30P SAT
SELECTABLE ADVERTISEMENT
SELECTABLE ADVERTISEMENT
AFTERNOON SPICE PACKAGE
100 PPV1
KISS THE GIRLS
101 PPV2
ROCKETMAN
102 STARZ
FLUBBER
103 PPV3
SWEET EVIL
161
104 ACTN
PHASE IV
155
ADVERTISEMENT BANNER

FIG. 12a

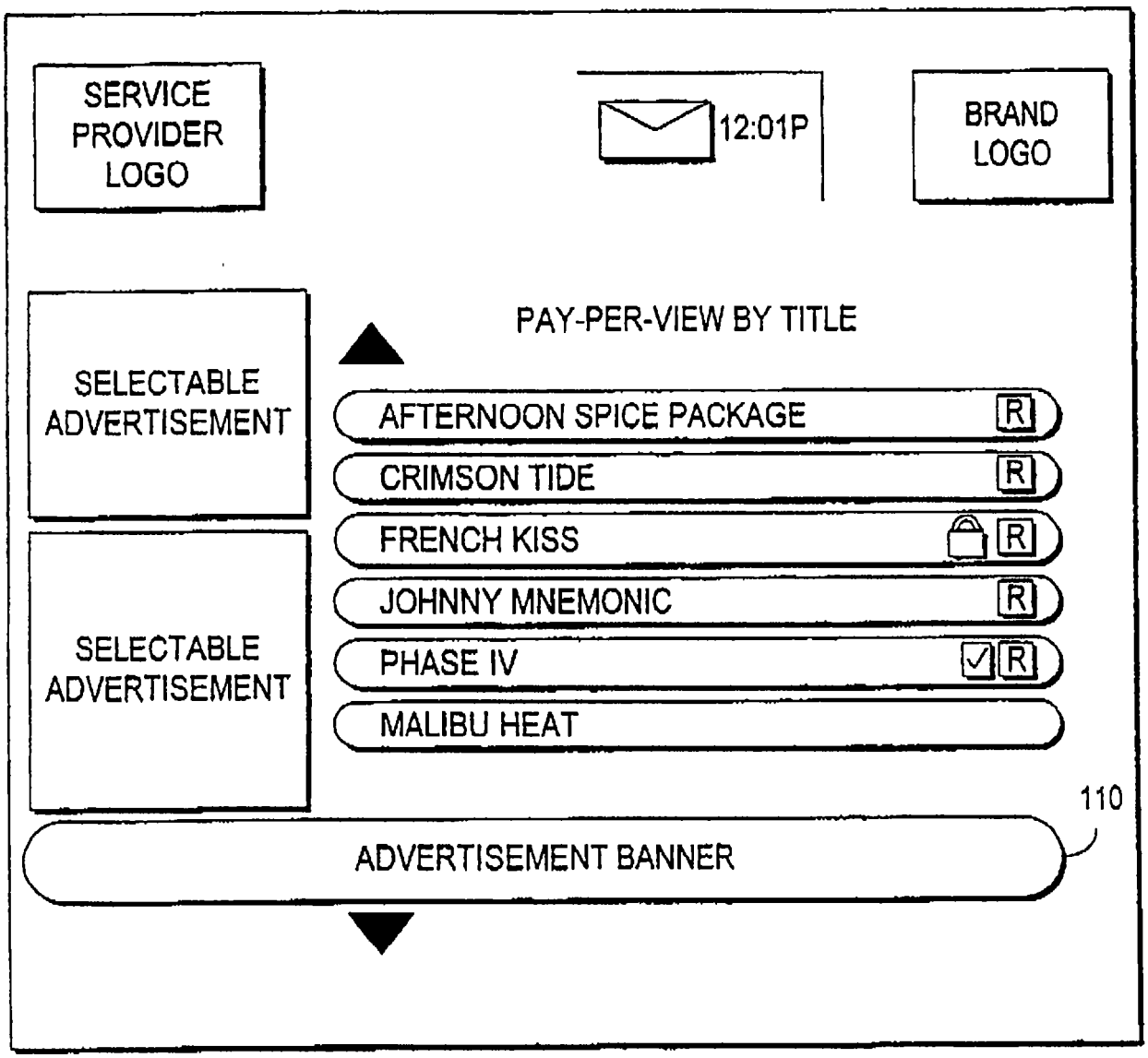

211
SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
SELECTABLE ADVERTISEMENT
SELECTABLE ADVERTISEMENT
PAY-PER-VIEW BY TITLE
AFTERNOON SPICE PACKAGE R
CRIMSON TIDE R
FRENCH KISS R
JOHNNY MNEMONIC R
PHASE IV R
MALIBU HEAT
110
ADVERTISEMENT BANNER

FIG. 12b

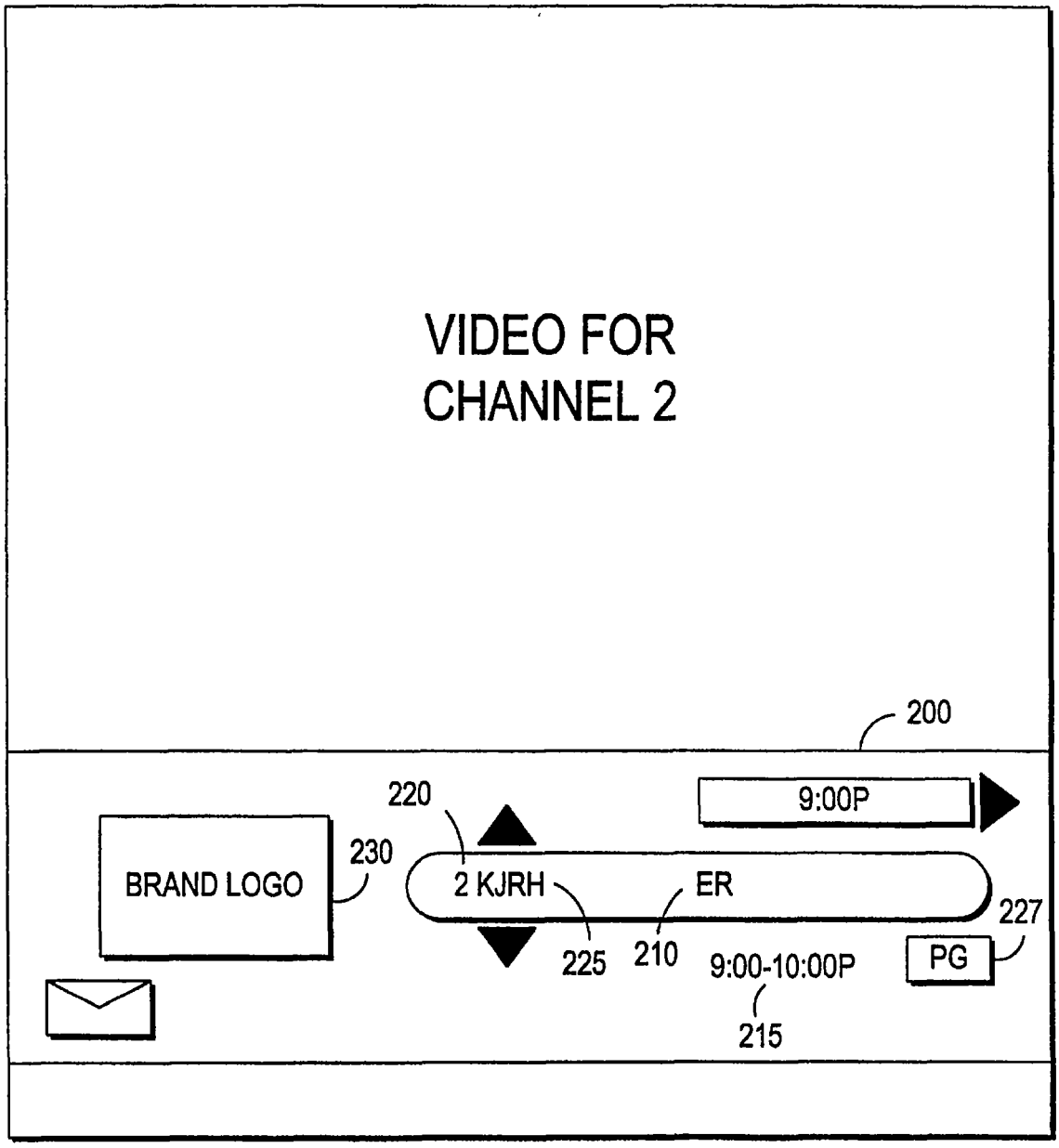

VIDEO FOR
CHANNEL 2
200
220
9:00P
BRAND LOGO
230
2 KJRH
ER
227
225
210
9:00-10:00P
PG
215

FIG. 13a

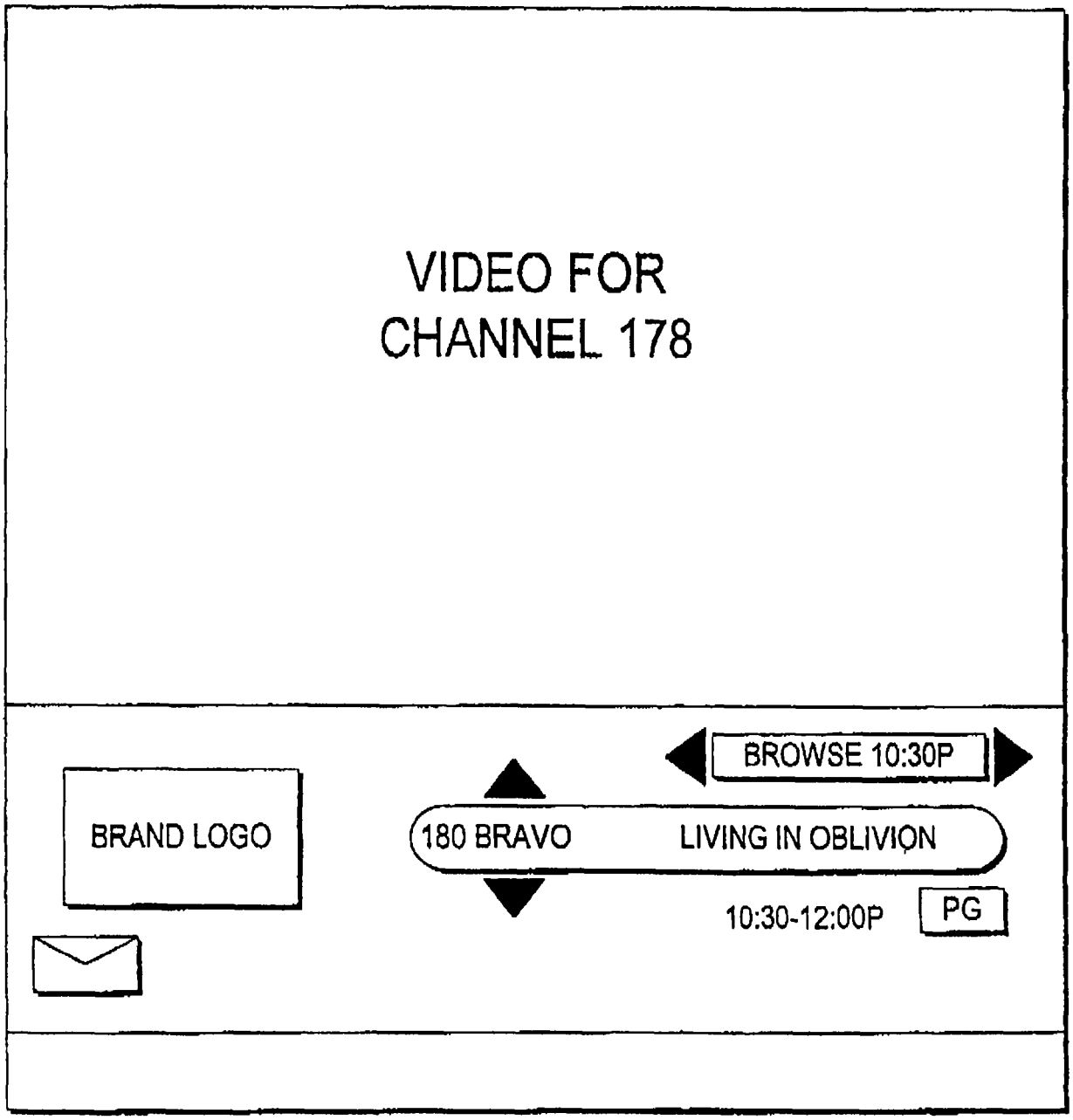

VIDEO FOR
CHANNEL 178
BROWSE 10:30P
BRAND LOGO
180 BRAVO
LIVING IN OBLIVION
10:30-12:00P
PG

FIG. 13b

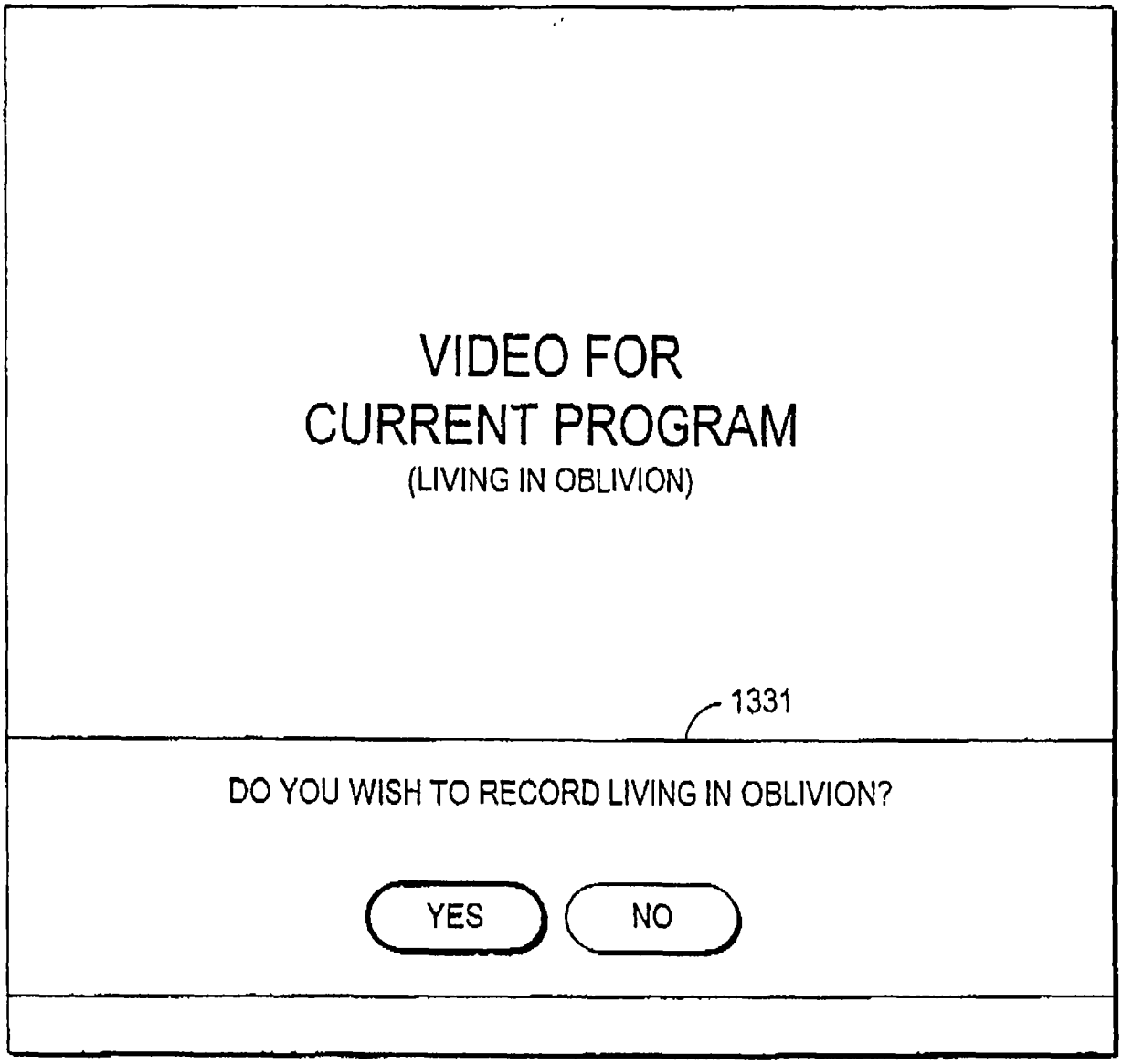

VIDEO FOR
CURRENT PROGRAM
(LIVING IN OBLIVION)
1331
DO YOU WISH TO RECORD LIVING IN OBLIVION?
YES
NO

FIG. 14a

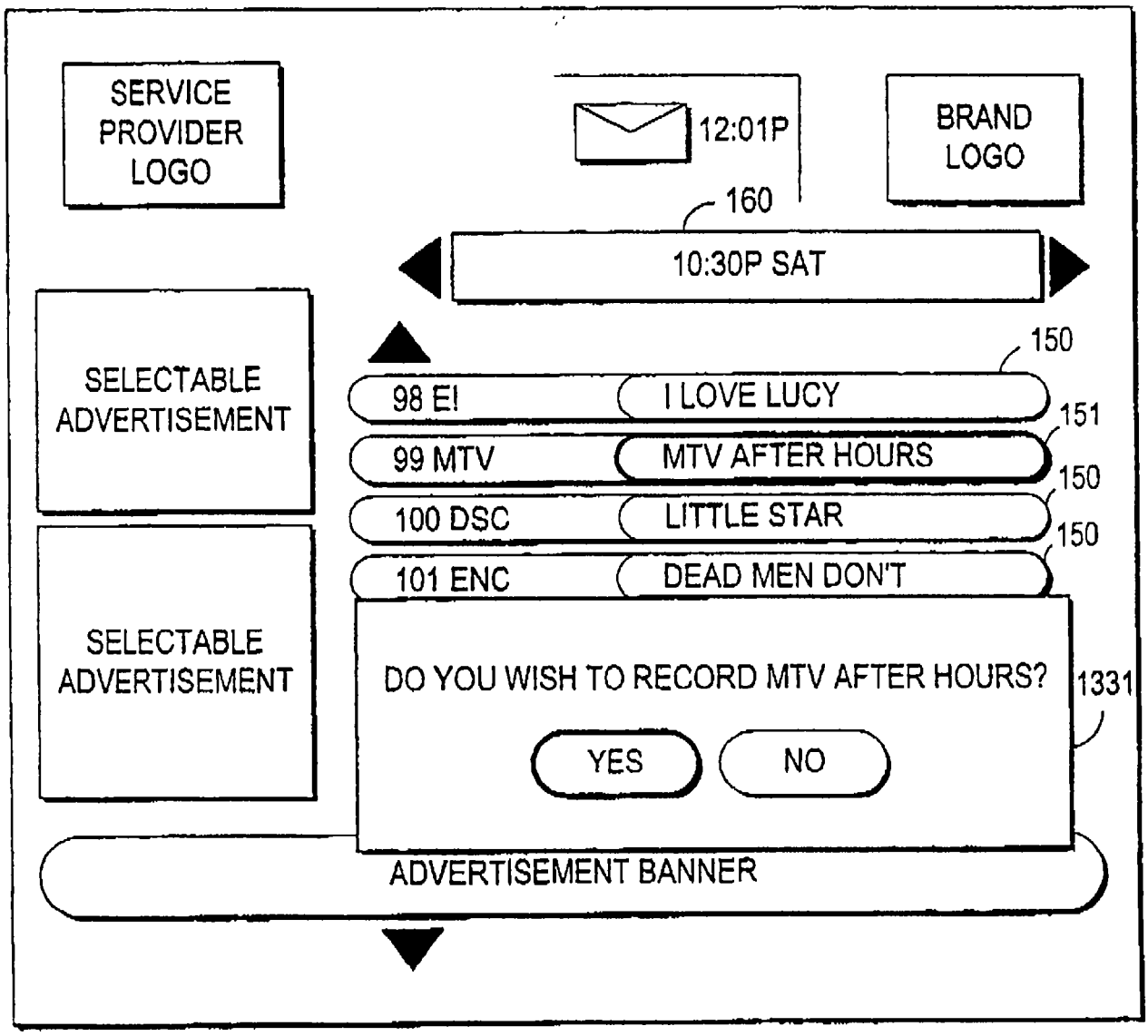

SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
160
10:30P SAT
SELECTABLE ADVERTISEMENT
150
98 E!
I LOVE LUCY
151
99 MTV
MTV AFTER HOURS
150
100 DSC
LITTLE STAR
150
101 ENC
DEAD MEN DON'T
SELECTABLE ADVERTISEMENT
DO YOU WISH TO RECORD MTV AFTER HOURS?
1331
YES
NO
ADVERTISEMENT BANNER

FIG. 14b

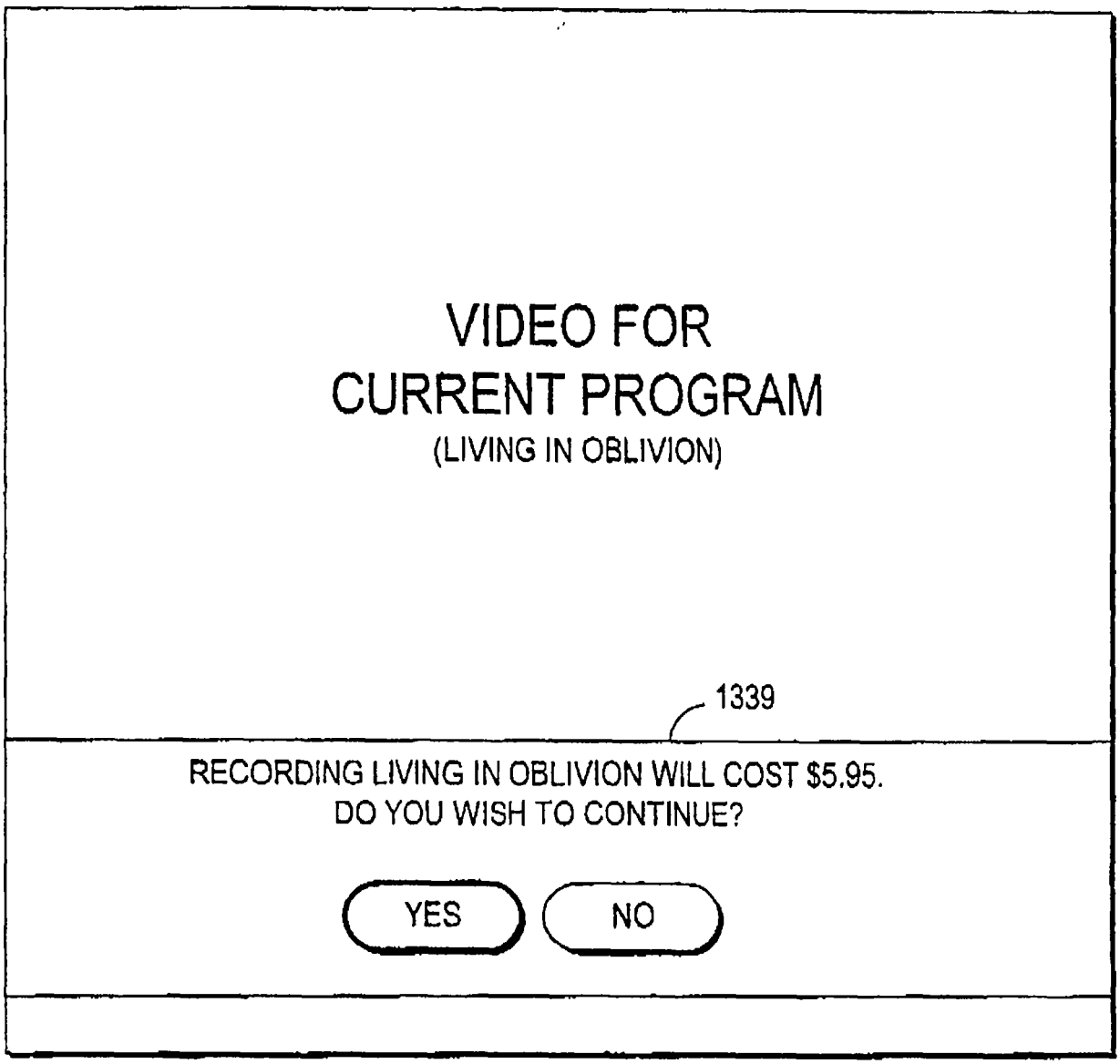

VIDEO FOR
CURRENT PROGRAM
(LIVING IN OBLIVION)
1339
RECORDING LIVING IN OBLIVION WILL COST $5.95.
DO YOU WISH TO CONTINUE?
YES
NO

FIG. 14c

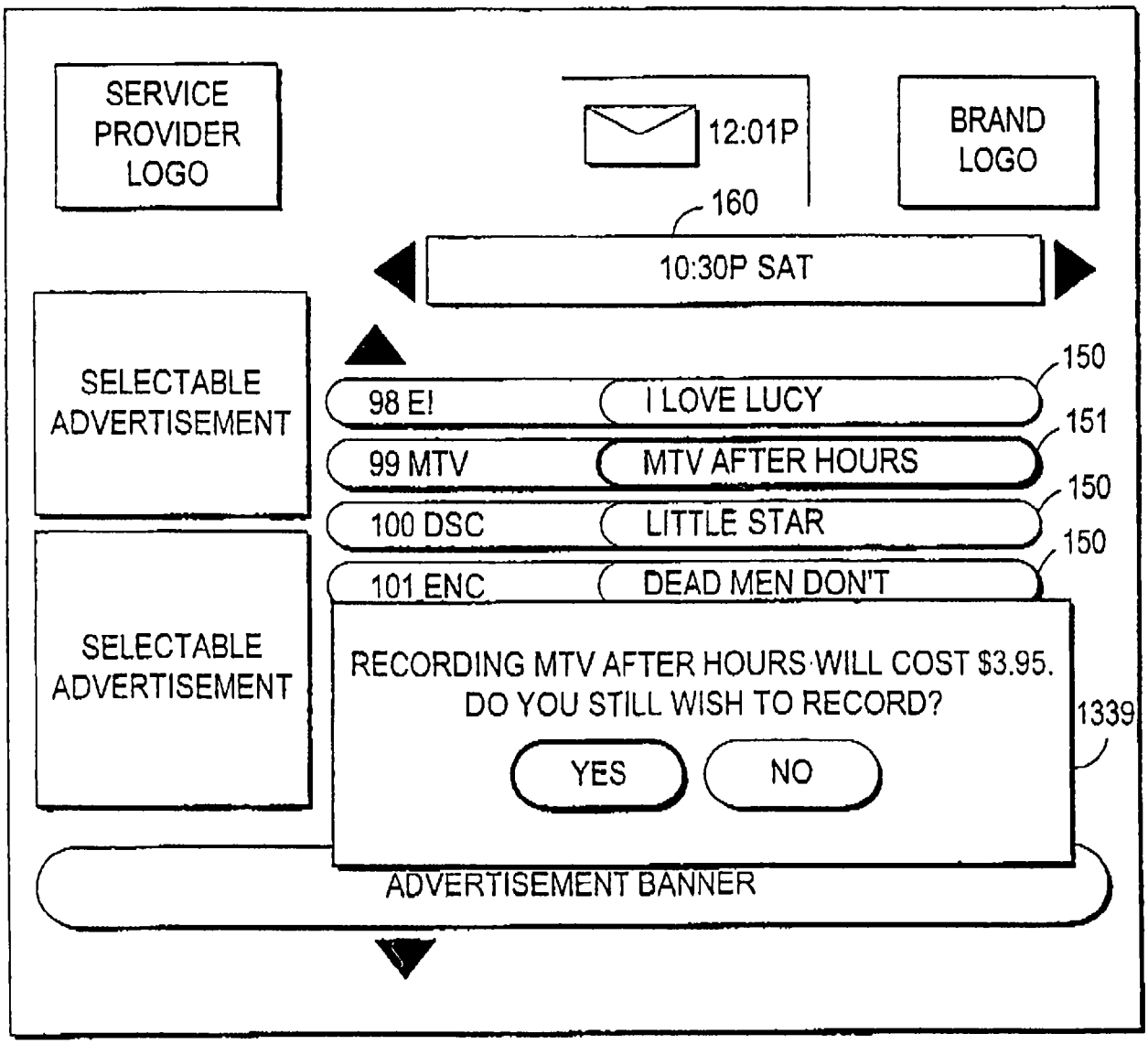

SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
160
10:30P SAT
SELECTABLE ADVERTISEMENT
150
98 E!
I LOVE LUCY
151
99 MTV
MTV AFTER HOURS
150
100 DSC
LITTLE STAR
150
101 ENC
DEAD MEN DON'T
SELECTABLE ADVERTISEMENT
RECORDING MTV AFTER HOURS WILL COST $3.95.
DO YOU STILL WISH TO RECORD?
YES
NO
1339
ADVERTISEMENT BANNER

FIG. 14d

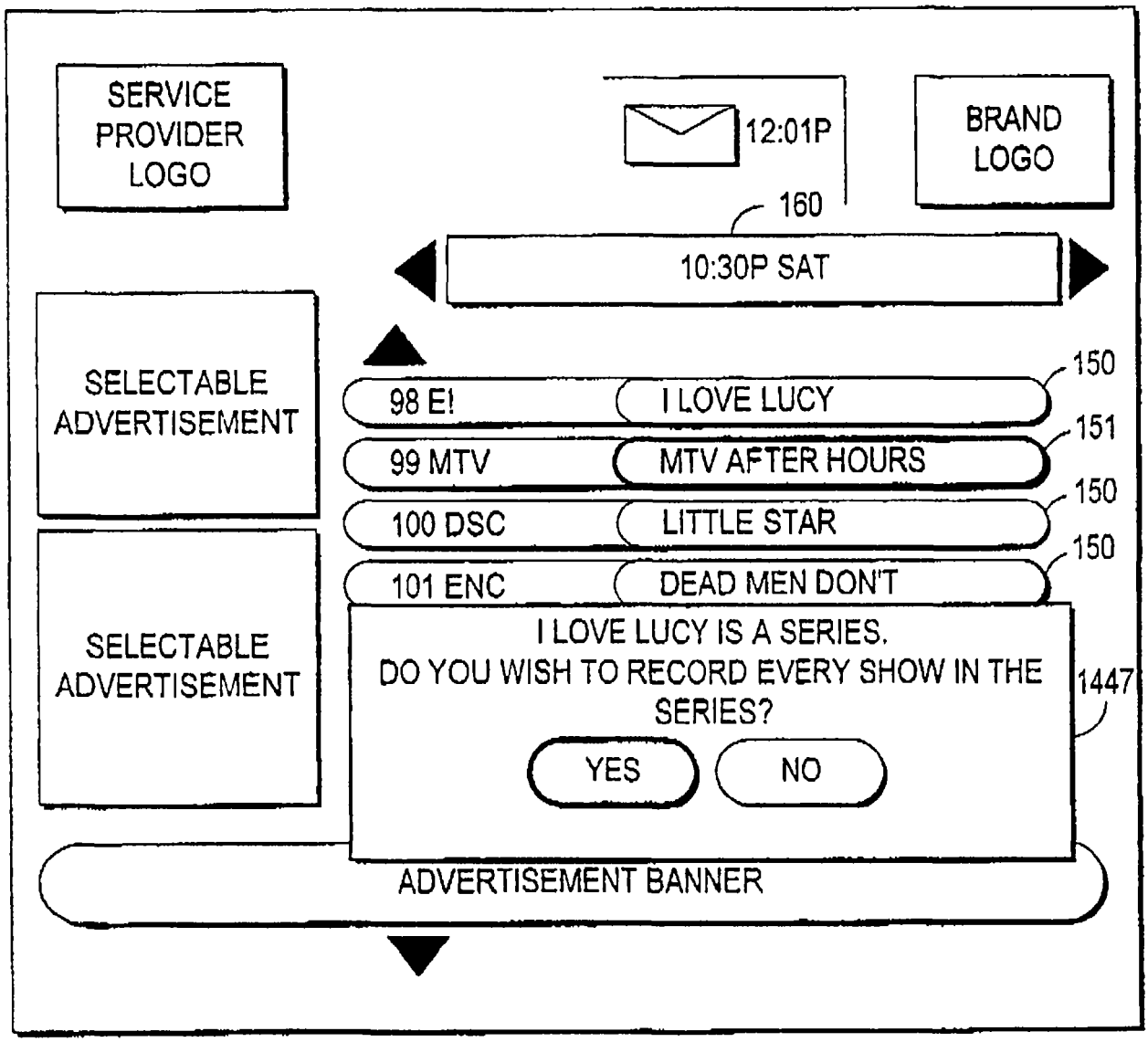

SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
160
10:30P SAT
SELECTABLE ADVERTISEMENT
SELECTABLE ADVERTISEMENT
150
98 E!
I LOVE LUCY
151
99 MTV
MTV AFTER HOURS
150
100 DSC
LITTLE STAR
150
101 ENC
DEAD MEN DON'T
I LOVE LUCY IS A SERIES.
DO YOU WISH TO RECORD EVERY SHOW IN THE SERIES?
1447
YES
NO
ADVERTISEMENT BANNER

FIG. 14e

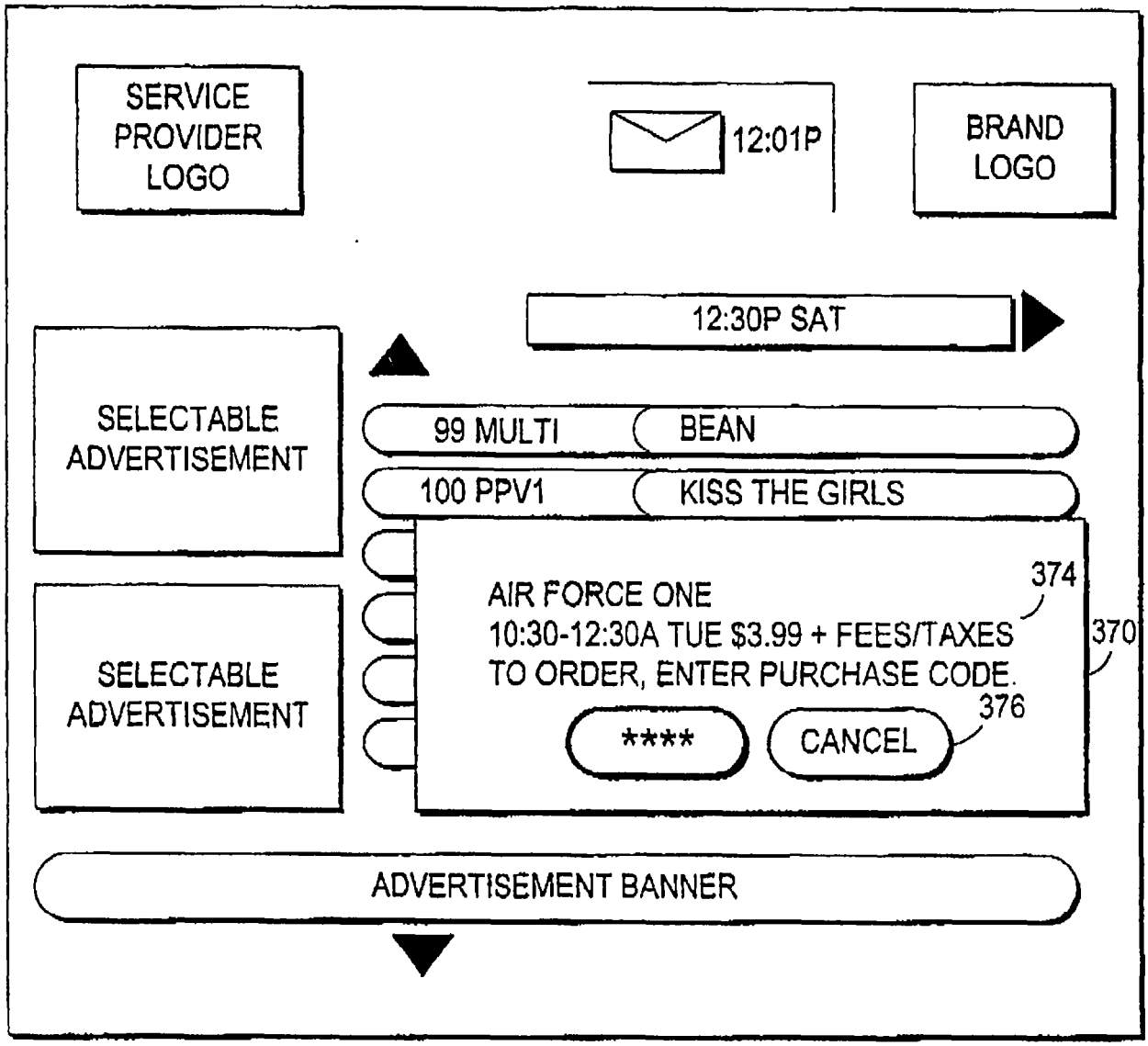

SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
12:30P SAT
SELECTABLE ADVERTISEMENT
99 MULTI
BEAN
100 PPV1
KISS THE GIRLS
AIR FORCE ONE
10:30-12:30A TUE $3.99 + FEES/TAXES
TO ORDER, ENTER PURCHASE CODE.
374
370
376
****
CANCEL
SELECTABLE ADVERTISEMENT
ADVERTISEMENT BANNER

FIG. 15a

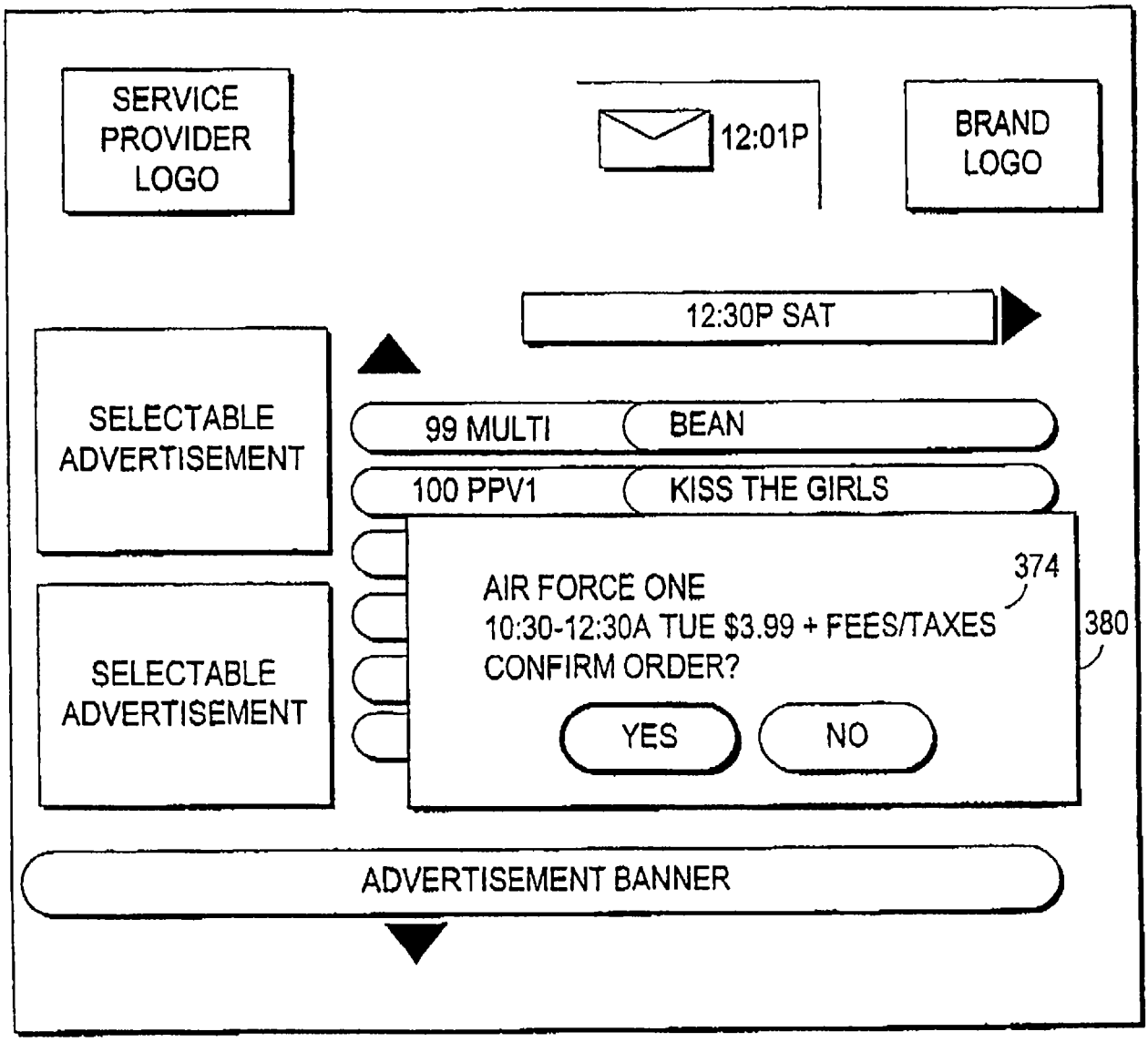

SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
12:30P SAT
SELECTABLE ADVERTISEMENT
99 MULTI
BEAN
100 PPV1
KISS THE GIRLS
AIR FORCE ONE
10:30-12:30A TUE $3.99 + FEES/TAXES
CONFIRM ORDER?
374
380
YES
NO
SELECTABLE ADVERTISEMENT
ADVERTISEMENT BANNER

FIG. 15b

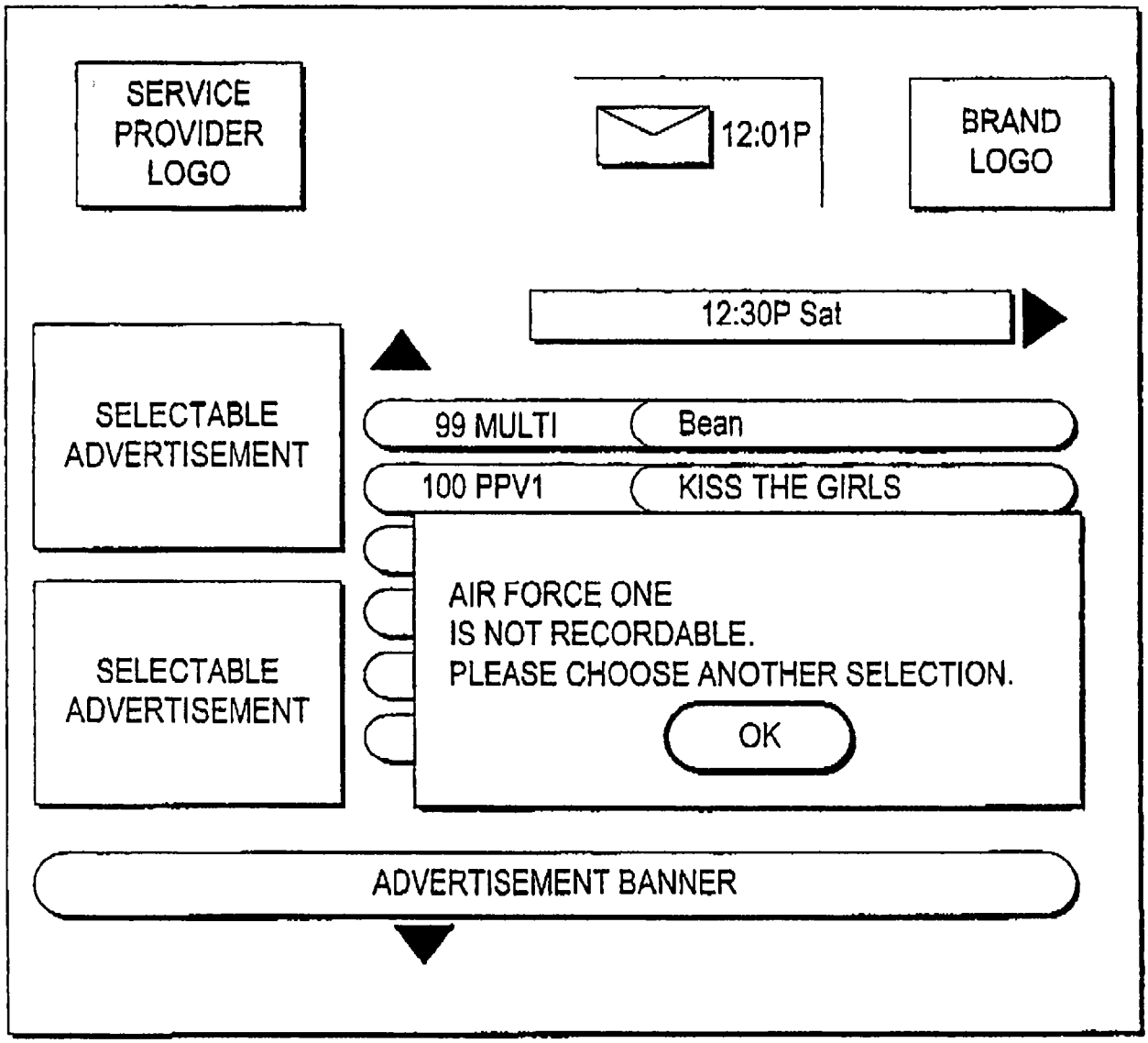

SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
12:30P Sat
SELECTABLE ADVERTISEMENT
99 MULTI
Bean
100 PPV1
KISS THE GIRLS
AIR FORCE ONE
IS NOT RECORDABLE.
PLEASE CHOOSE ANOTHER SELECTION.
OK
SELECTABLE ADVERTISEMENT
ADVERTISEMENT BANNER

FIG. 16

811

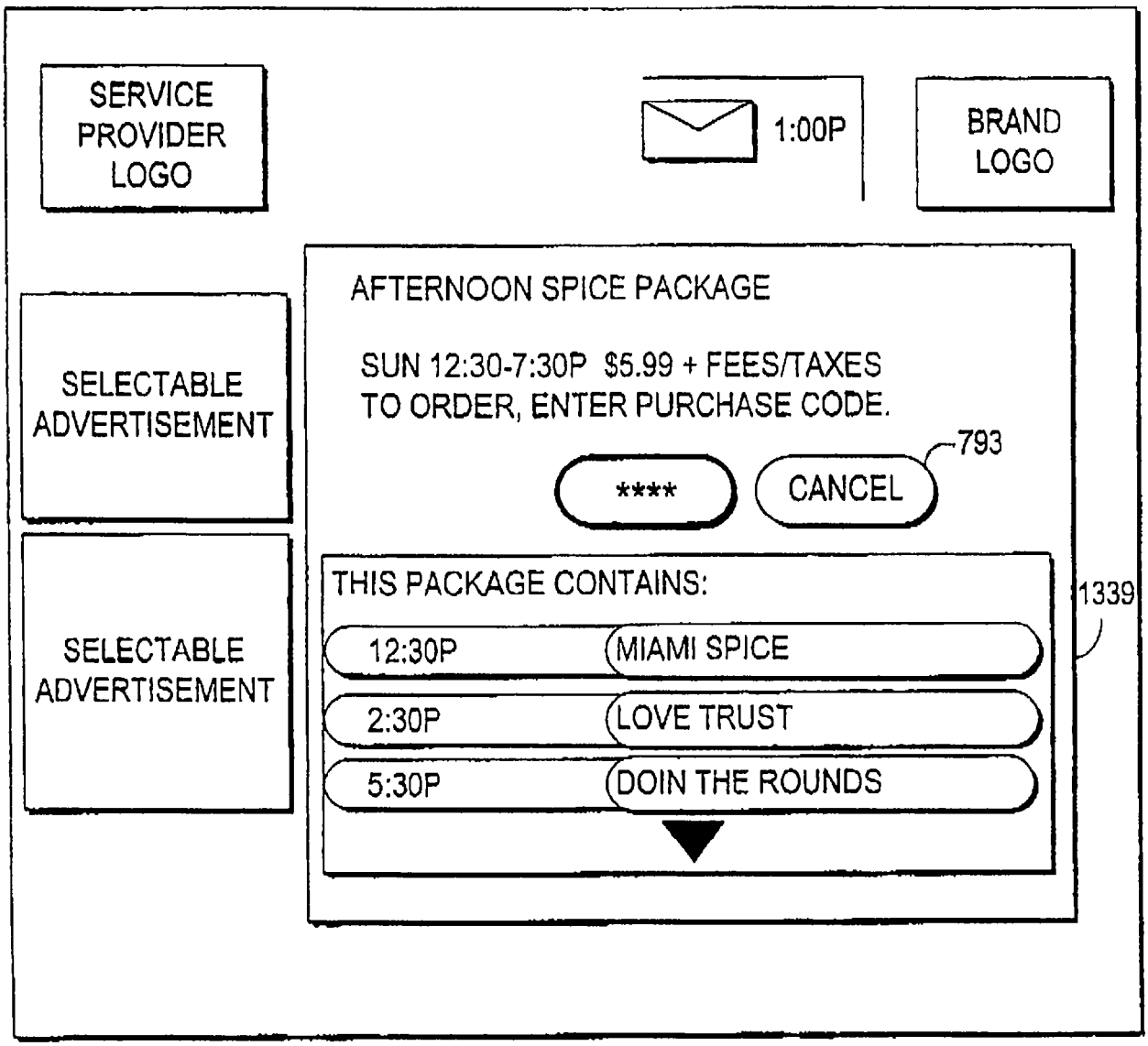

SERVICE PROVIDER LOGO
1:00P
BRAND LOGO
AFTERNOON SPICE PACKAGE
SUN 12:30-7:30P $5.99 + FEES/TAXES
TO ORDER, ENTER PURCHASE CODE.
SELECTABLE ADVERTISEMENT
****
CANCEL
793
THIS PACKAGE CONTAINS:
1339
12:30P
MIAMI SPICE
2:30P
LOVE TRUST
5:30P
DOIN THE ROUNDS
SELECTABLE ADVERTISEMENT

FIG. 17

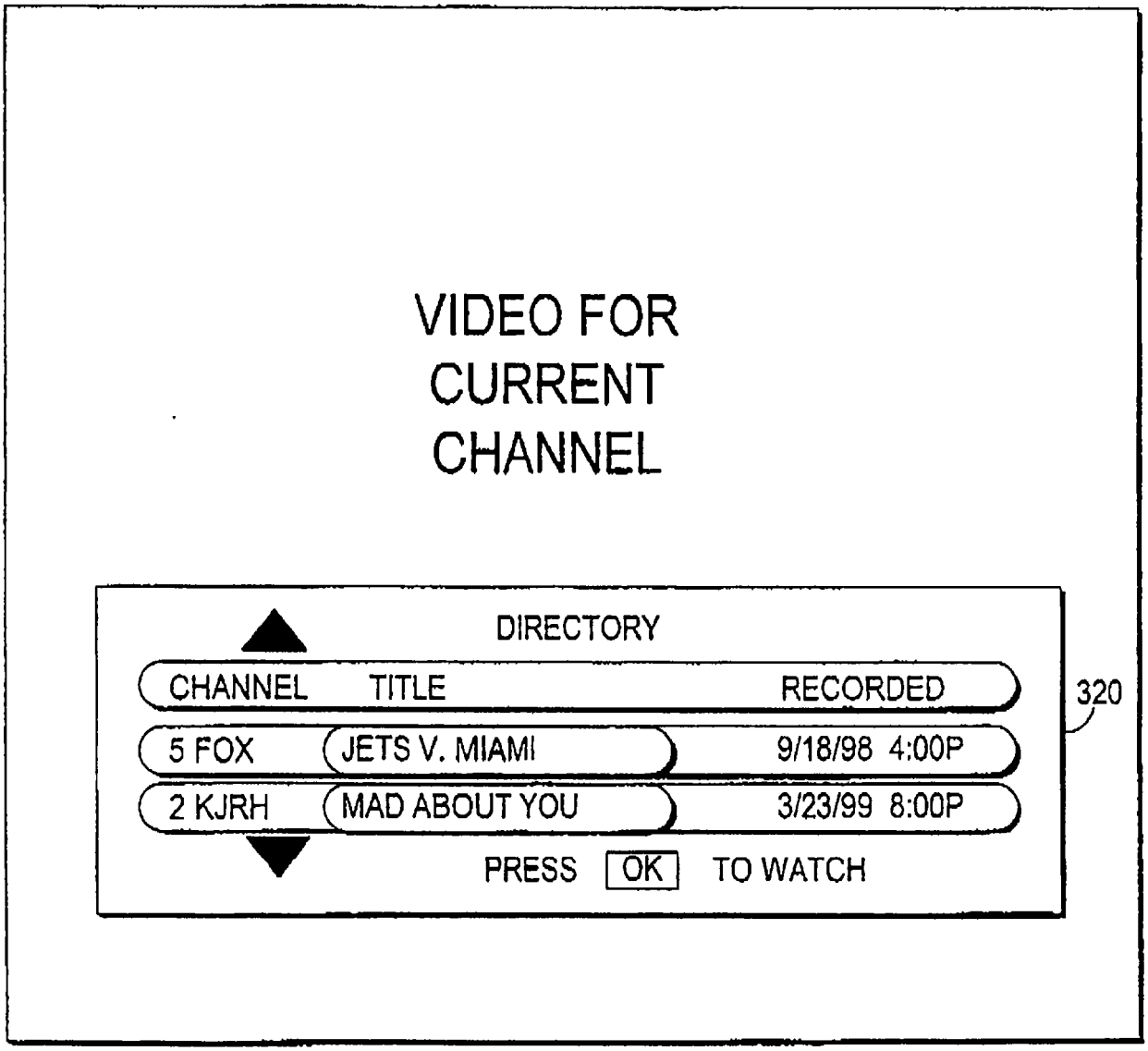

VIDEO FOR
CURRENT
CHANNEL
DIRECTORY
CHANNEL
TITLE
RECORDED
5 FOX
JETS V. MIAMI
9/18/98 4:00P
2 KJRH
MAD ABOUT YOU
3/23/99 8:00P
PRESS
OK
TO WATCH
320

FIG. 18a

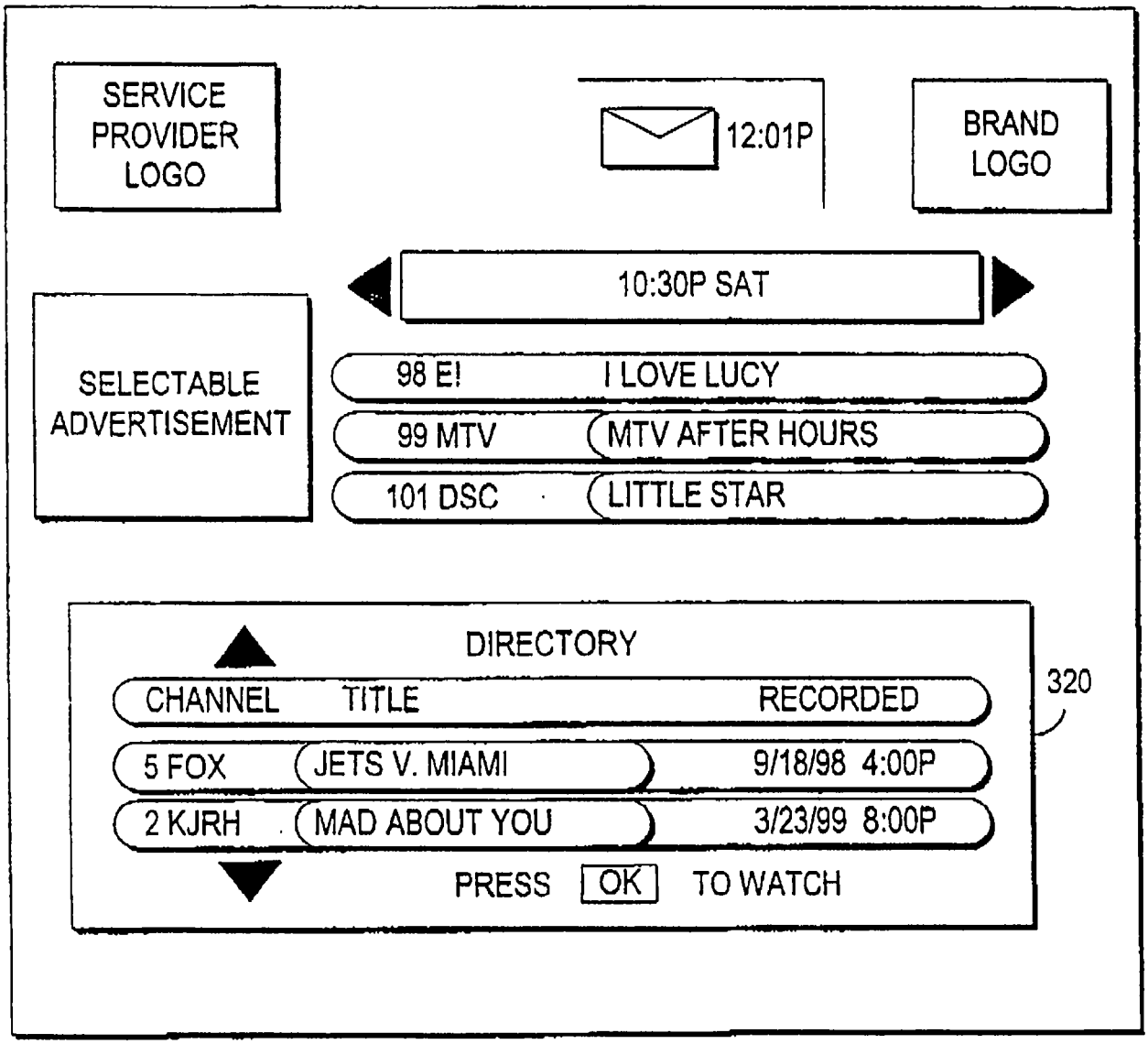

SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
10:30P SAT
SELECTABLE ADVERTISEMENT
98 E! I LOVE LUCY
99 MTV MTV AFTER HOURS
101 DSC LITTLE STAR
DIRECTORY
CHANNEL TITLE RECORDED
5 FOX JETS V. MIAMI 9/18/98 4:00P
2 KJRH MAD ABOUT YOU 3/23/99 8:00P
PRESS OK TO WATCH
320

FIG. 18b

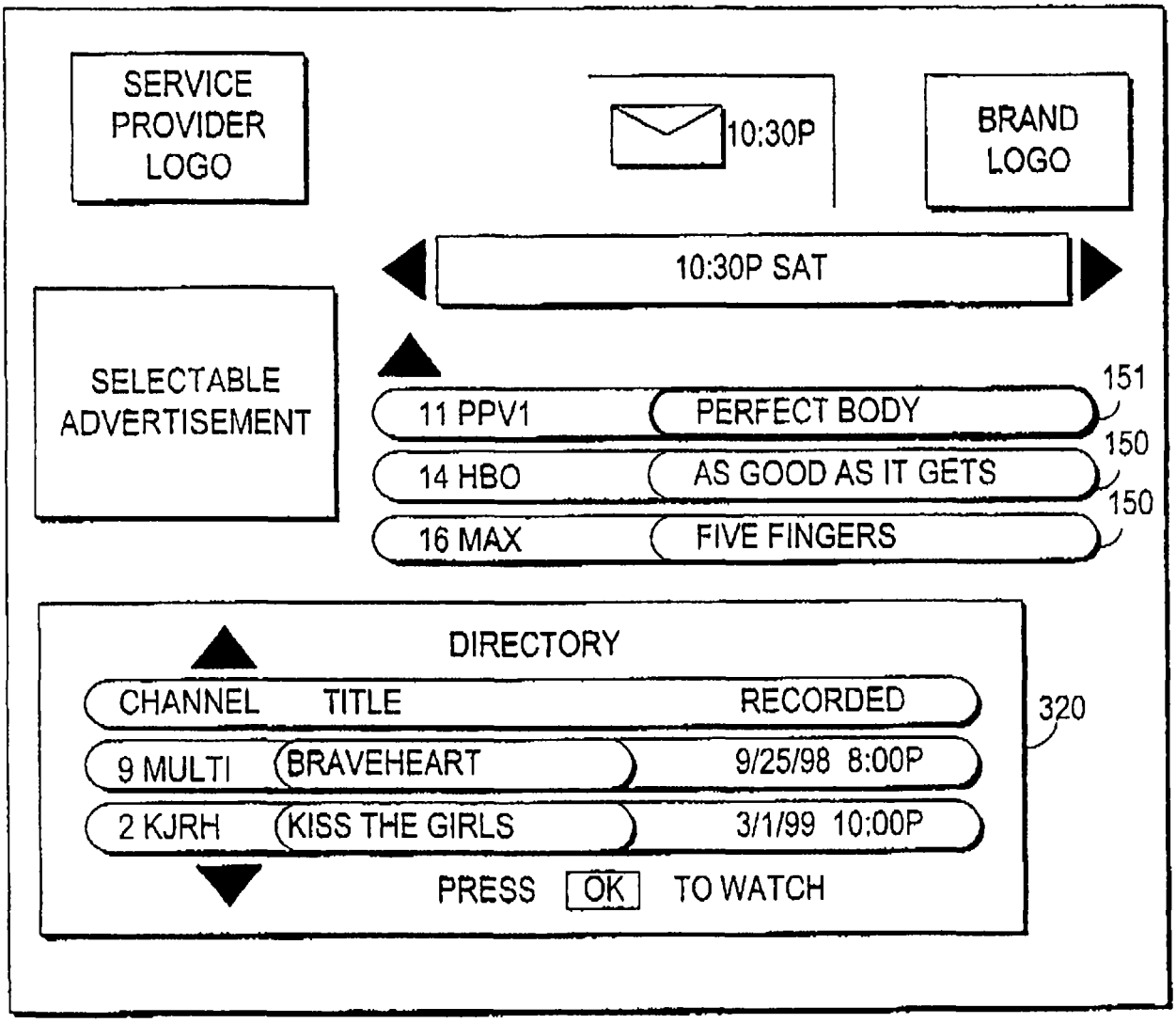

SERVICE PROVIDER LOGO
10:30P
BRAND LOGO
10:30P SAT
SELECTABLE ADVERTISEMENT
11 PPV1
PERFECT BODY
151
14 HBO
AS GOOD AS IT GETS
150
16 MAX
FIVE FINGERS
150
DIRECTORY
CHANNEL
TITLE
RECORDED
320
9 MULTI
BRAVEHEART
9/25/98 8:00P
2 KJRH
KISS THE GIRLS
3/1/99 10:00P
PRESS
OK
TO WATCH

FIG. 18c

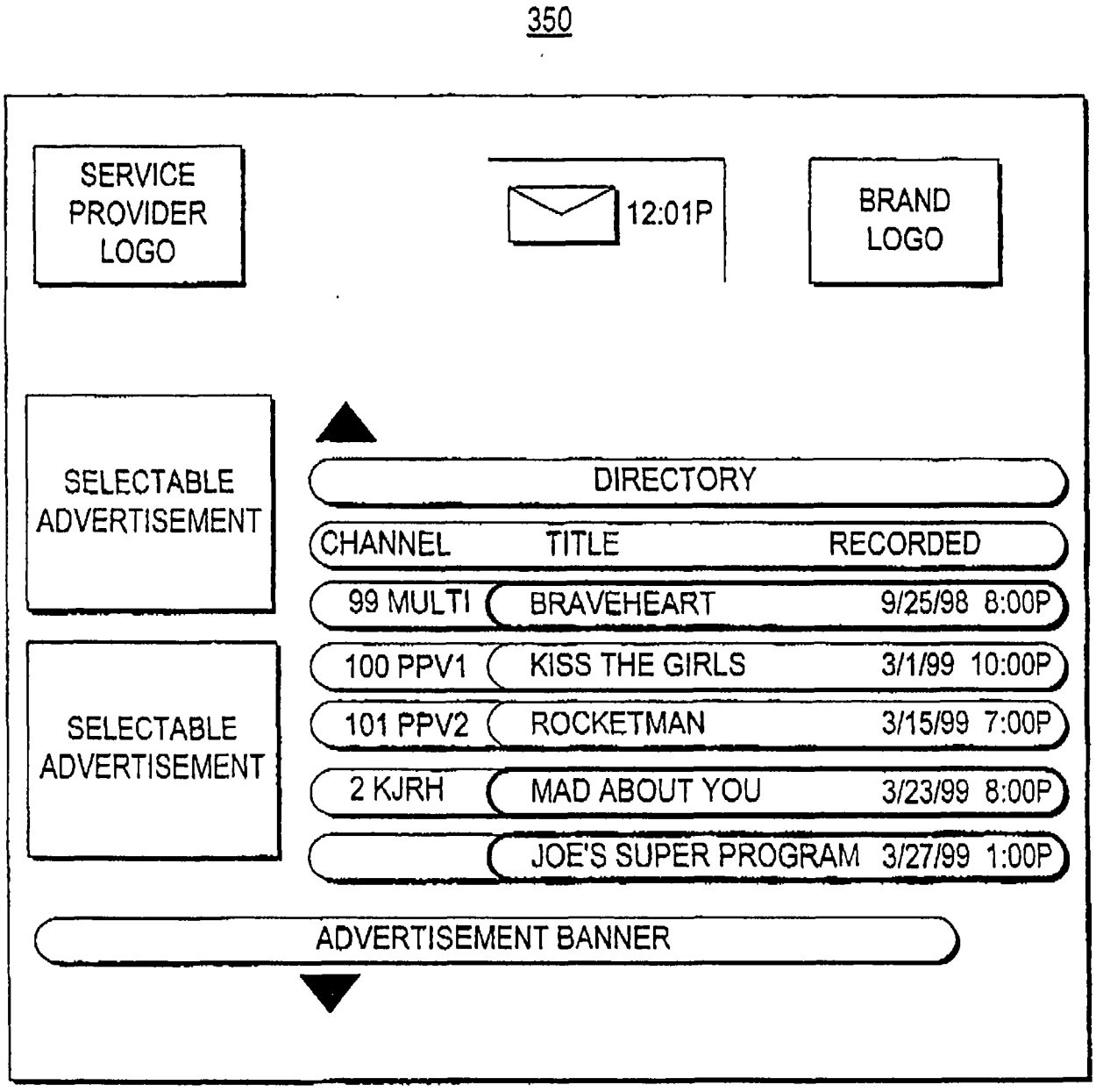

350
SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
SELECTABLE ADVERTISEMENT
SELECTABLE ADVERTISEMENT
DIRECTORY
CHANNEL TITLE RECORDED
99 MULTI BRAVEHEART 9/25/98 8:00P
100 PPV1 KISS THE GIRLS 3/1/99 10:00P
101 PPV2 ROCKETMAN 3/15/99 7:00P
2 KJRH MAD ABOUT YOU 3/23/99 8:00P
JOE'S SUPER PROGRAM 3/27/99 1:00P
ADVERTISEMENT BANNER

FIG. 18d

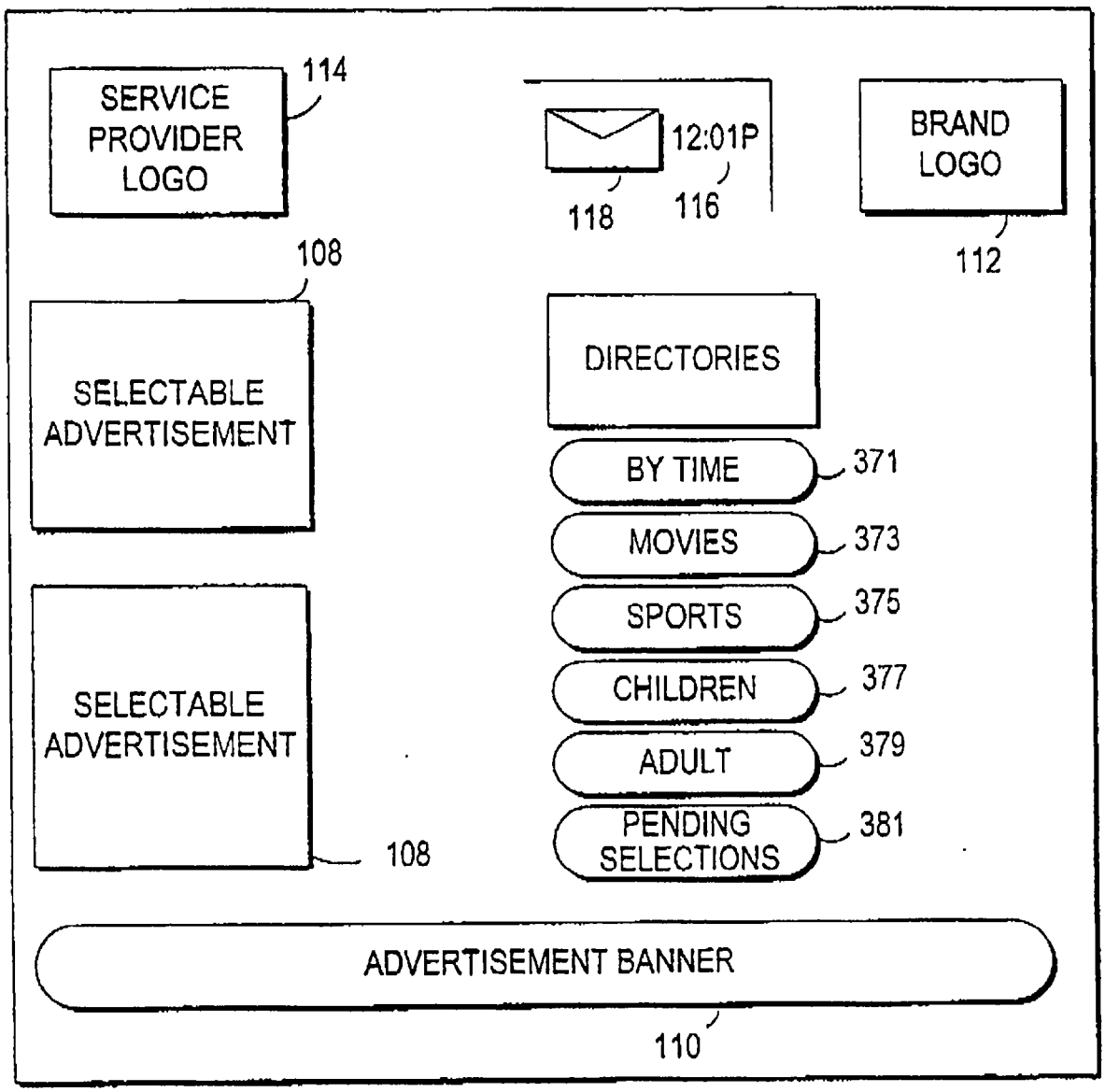

370
SERVICE PROVIDER LOGO
114
12:01P
118
116
BRAND LOGO
112
108
SELECTABLE ADVERTISEMENT
DIRECTORIES
BY TIME
371
MOVIES
373
SPORTS
375
CHILDREN
377
ADULT
379
PENDING SELECTIONS
381
SELECTABLE ADVERTISEMENT
108
ADVERTISEMENT BANNER
110

FIG. 18e

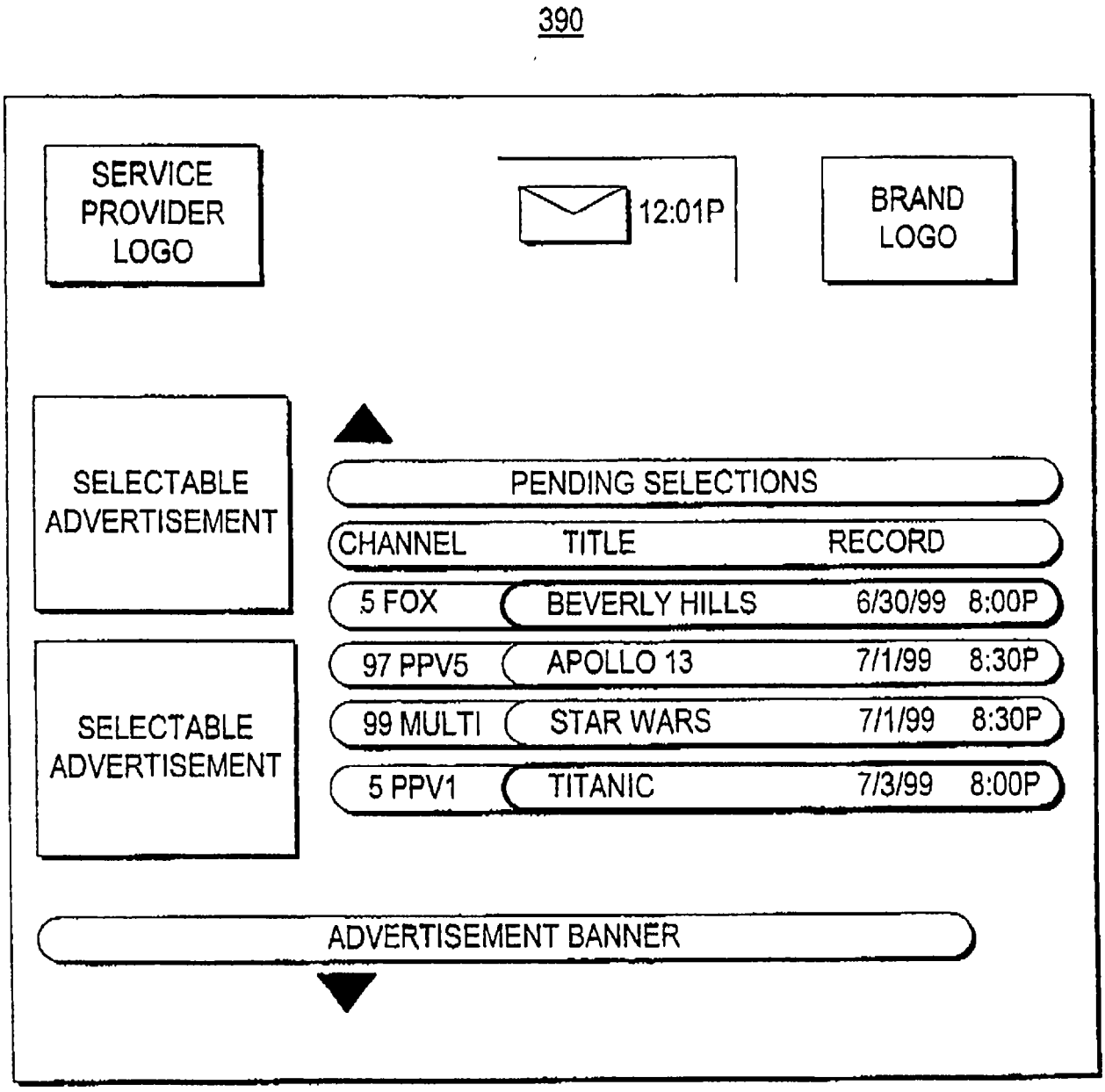

390
SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
SELECTABLE ADVERTISEMENT
SELECTABLE ADVERTISEMENT
PENDING SELECTIONS
CHANNEL TITLE RECORD
5 FOX BEVERLY HILLS 6/30/99 8:00P
97 PPV5 APOLLO 13 7/1/99 8:30P
99 MULTI STAR WARS 7/1/99 8:30P
5 PPV1 TITANIC 7/3/99 8:00P
ADVERTISEMENT BANNER

FIG. 18f

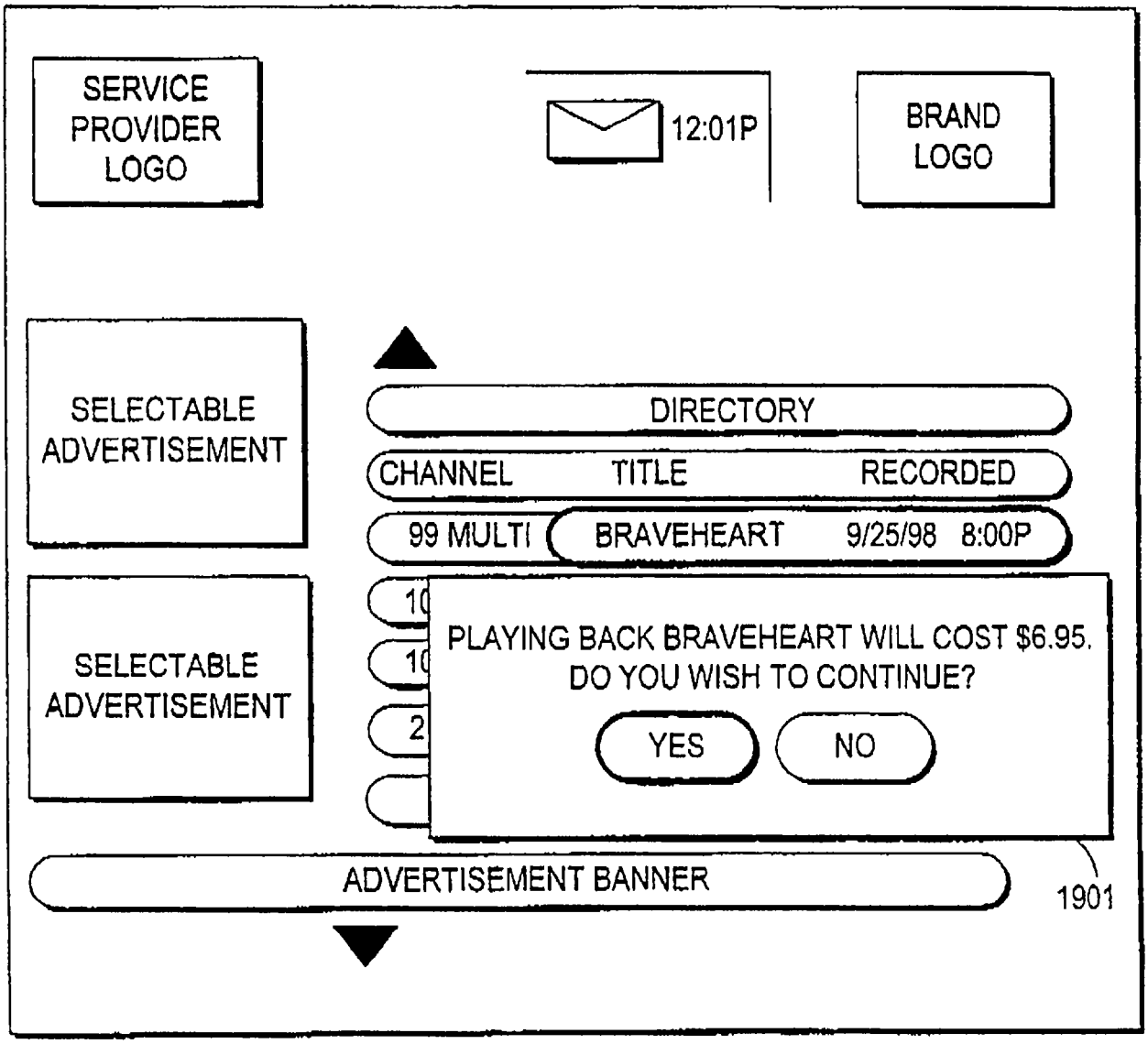

SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
SELECTABLE ADVERTISEMENT
DIRECTORY
CHANNEL TITLE RECORDED
99 MULTI BRAVEHEART 9/25/98 8:00P
SELECTABLE ADVERTISEMENT
PLAYING BACK BRAVEHEART WILL COST $6.95. DO YOU WISH TO CONTINUE?
YES
NO
ADVERTISEMENT BANNER
1901

FIG. 19

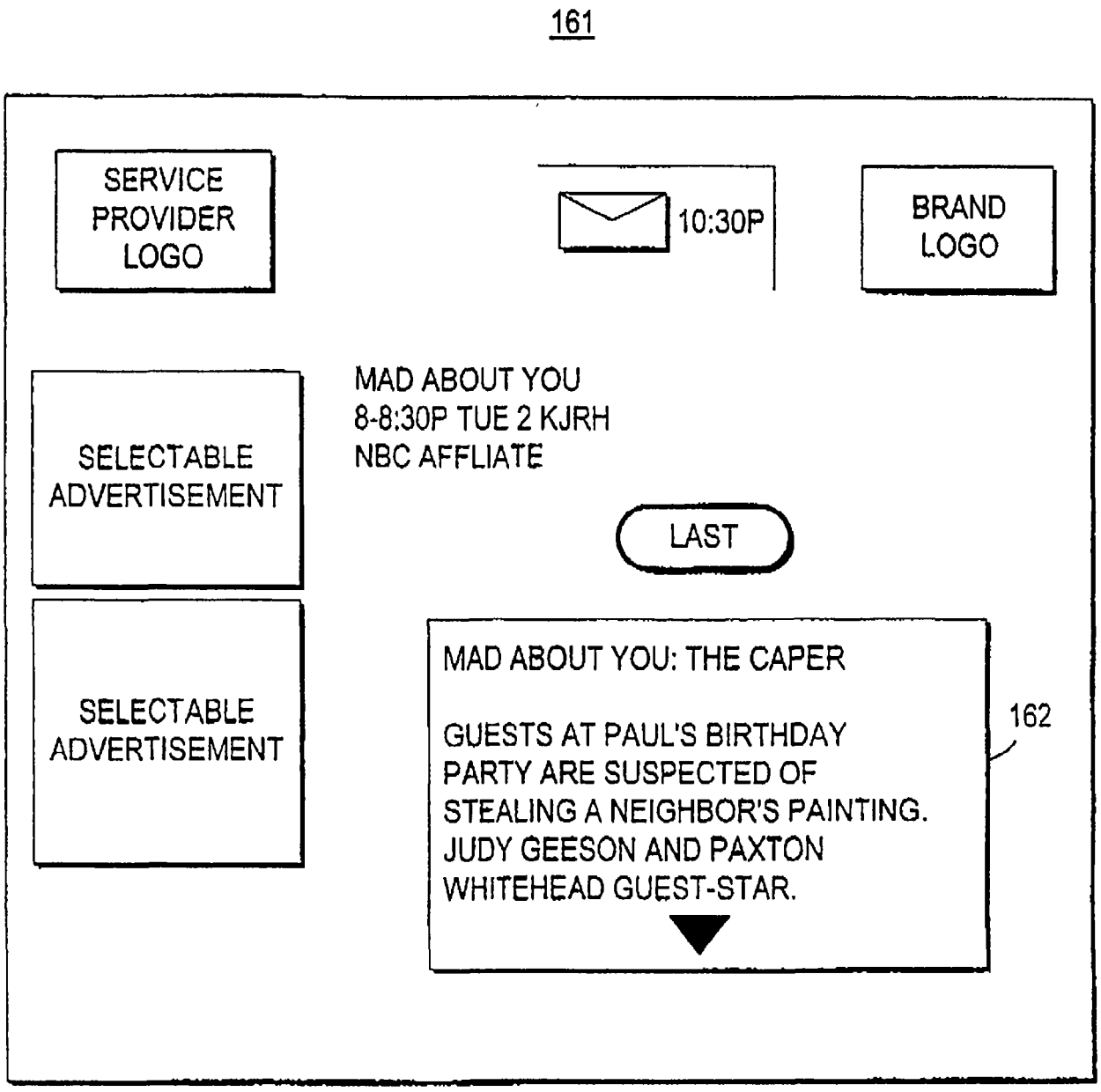

161
SERVICE PROVIDER LOGO
10:30P
BRAND LOGO
SELECTABLE ADVERTISEMENT
MAD ABOUT YOU
8-8:30P TUE 2 KJRH
NBC AFFLIATE
LAST
SELECTABLE ADVERTISEMENT
MAD ABOUT YOU: THE CAPER
GUESTS AT PAUL'S BIRTHDAY PARTY ARE SUSPECTED OF STEALING A NEIGHBOR'S PAINTING. JUDY GEESON AND PAXTON WHITEHEAD GUEST-STAR.
162

FIG. 20

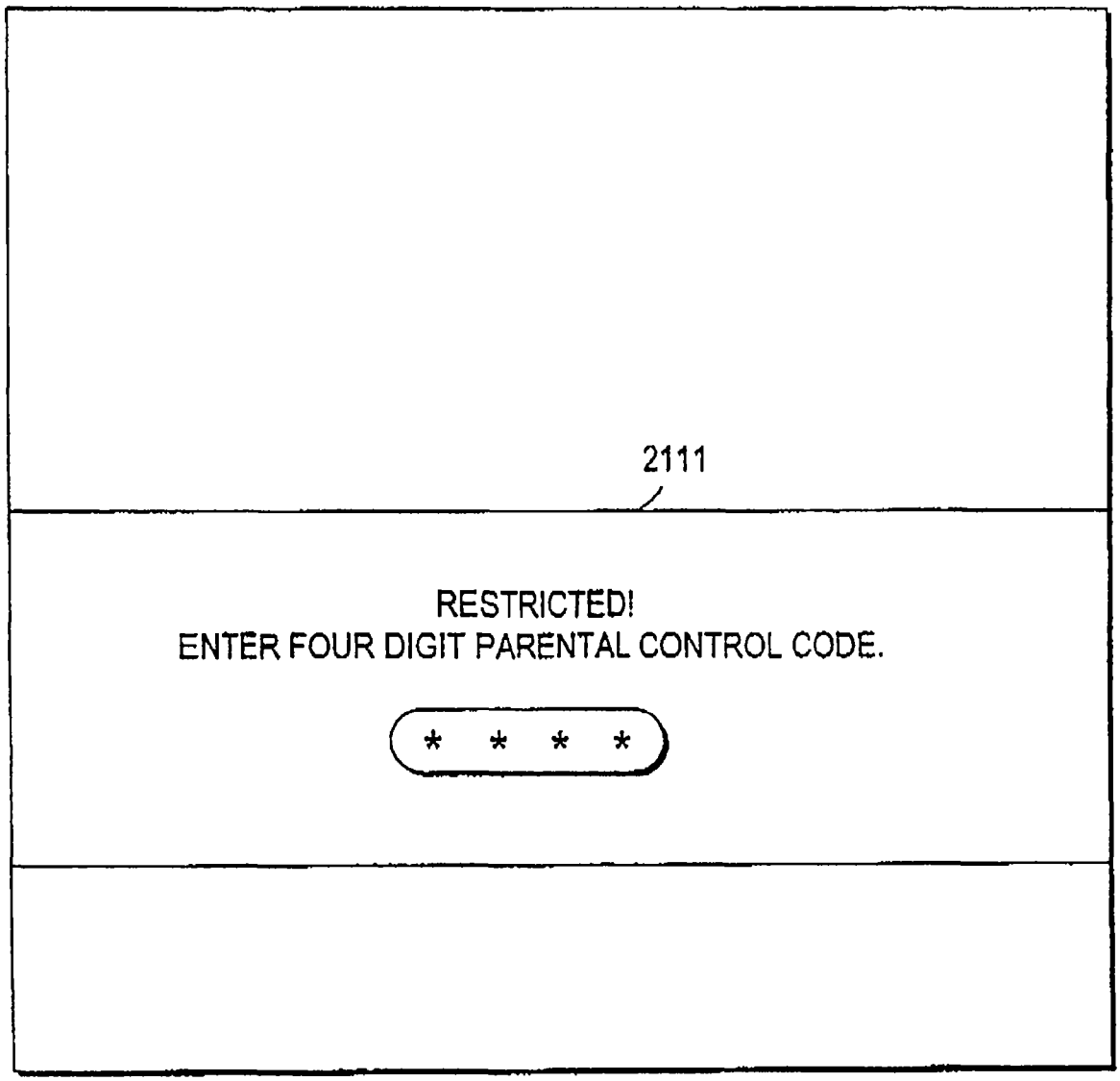


FIG. 21

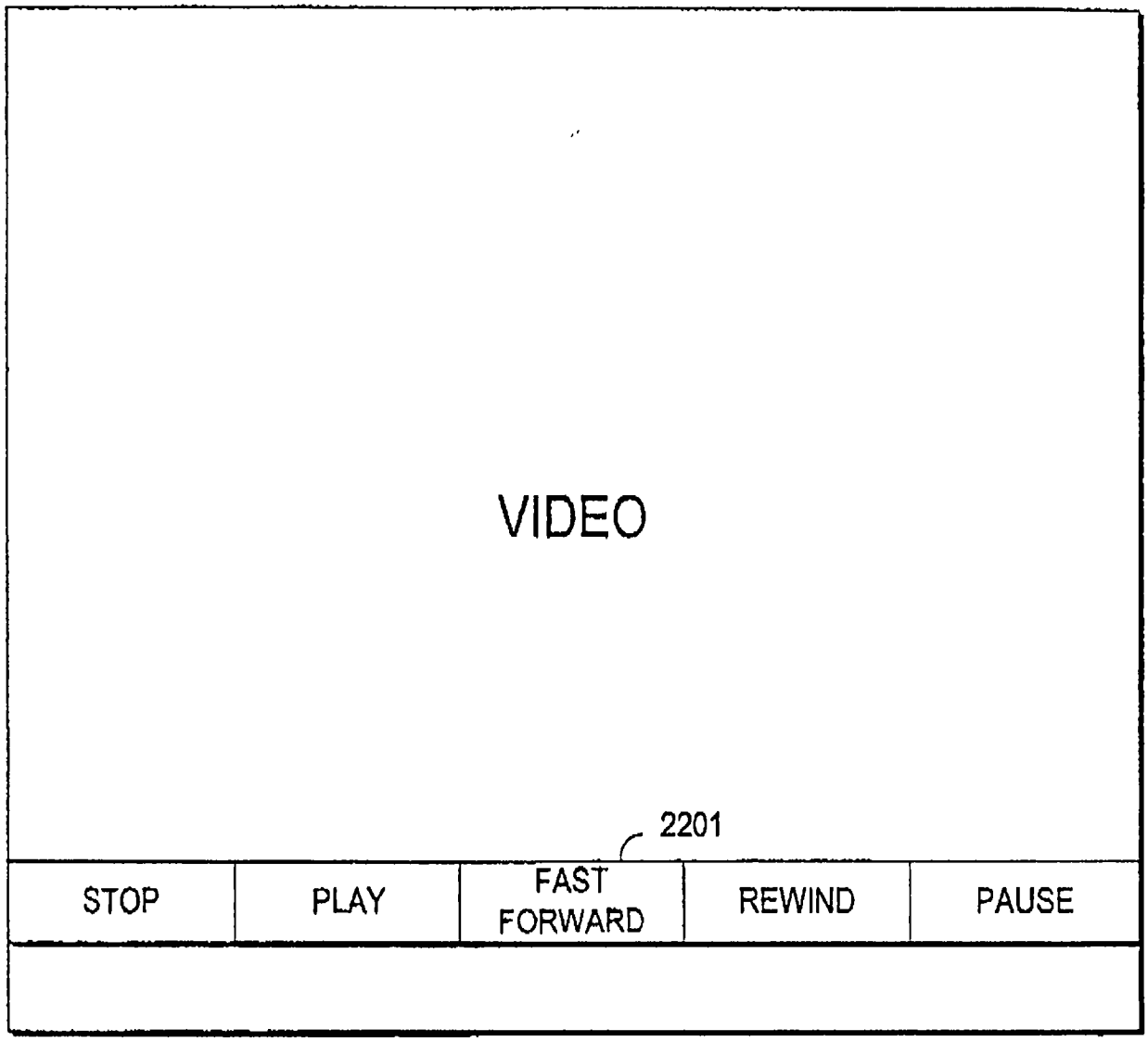


FIG. 22

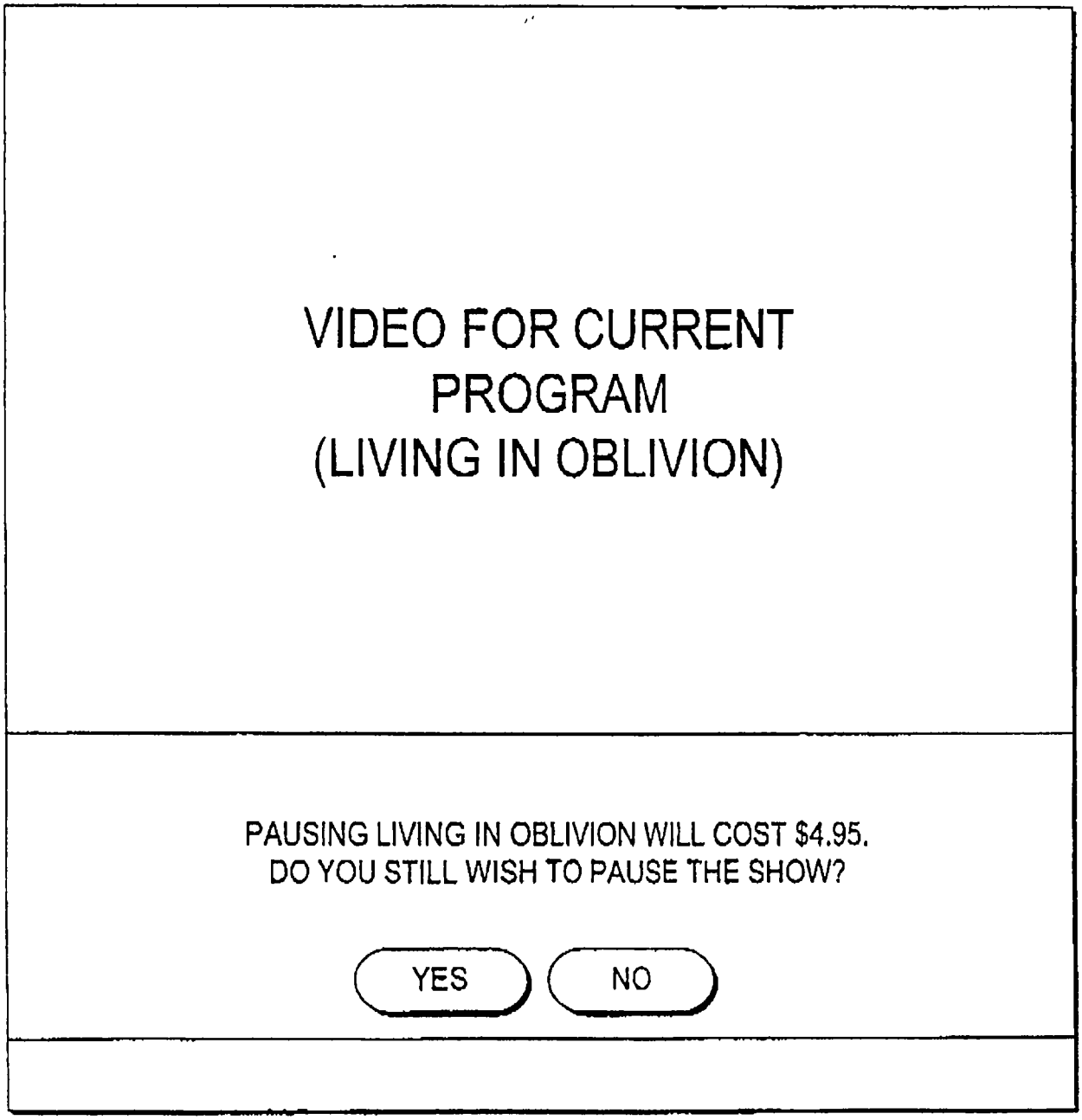

VIDEO FOR CURRENT
PROGRAM
(LIVING IN OBLIVION)
PAUSING LIVING IN OBLIVION WILL COST $4.95.
DO YOU STILL WISH TO PAUSE THE SHOW?
YES
NO

FIG. 23

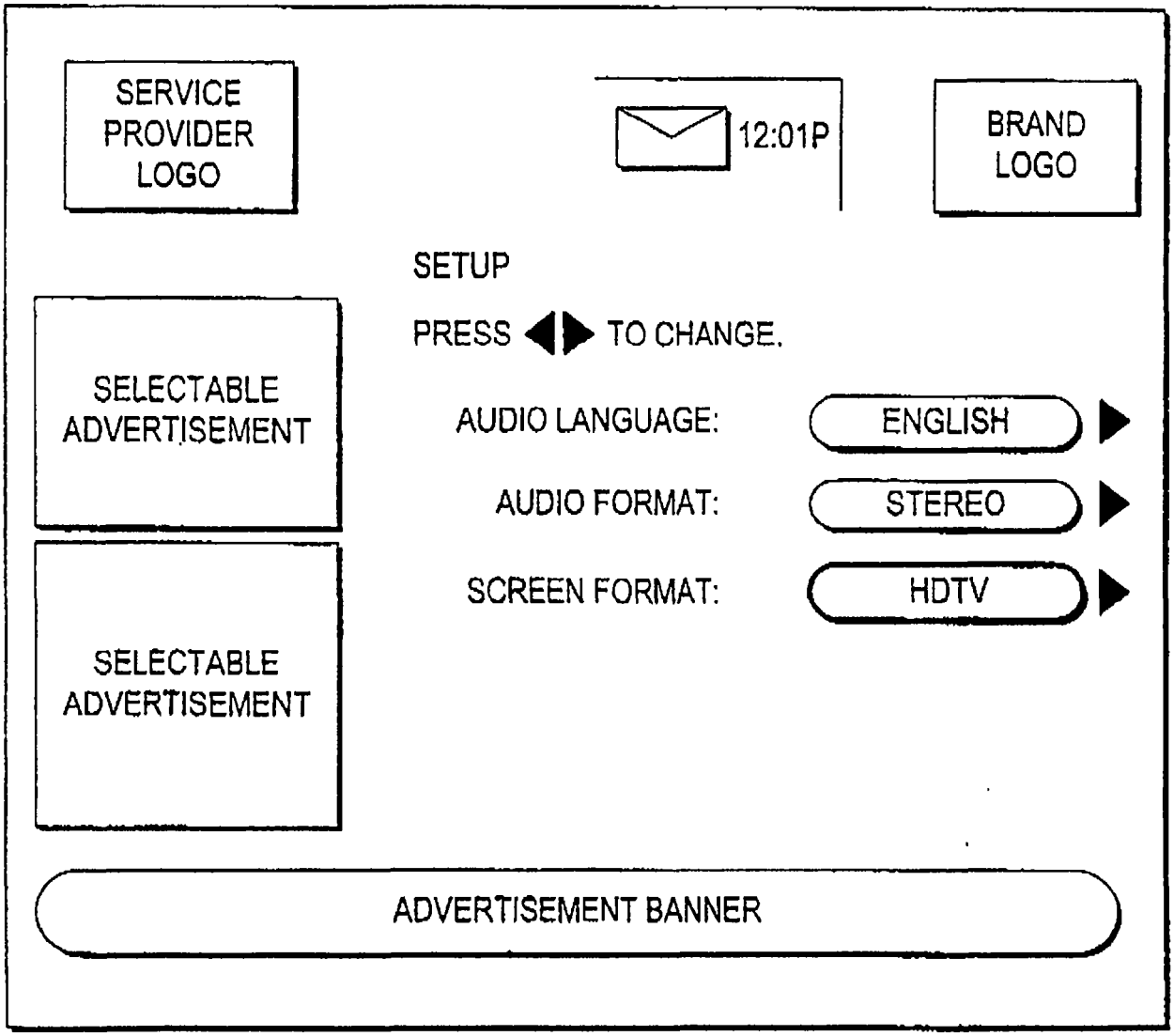

2401
SERVICE PROVIDER LOGO
12:01P
BRAND LOGO
SETUP
PRESS TO CHANGE.
SELECTABLE ADVERTISEMENT
AUDIO LANGUAGE:
ENGLISH
AUDIO FORMAT:
STEREO
SCREEN FORMAT:
HDTV
SELECTABLE ADVERTISEMENT
ADVERTISEMENT BANNER

FIG. 24

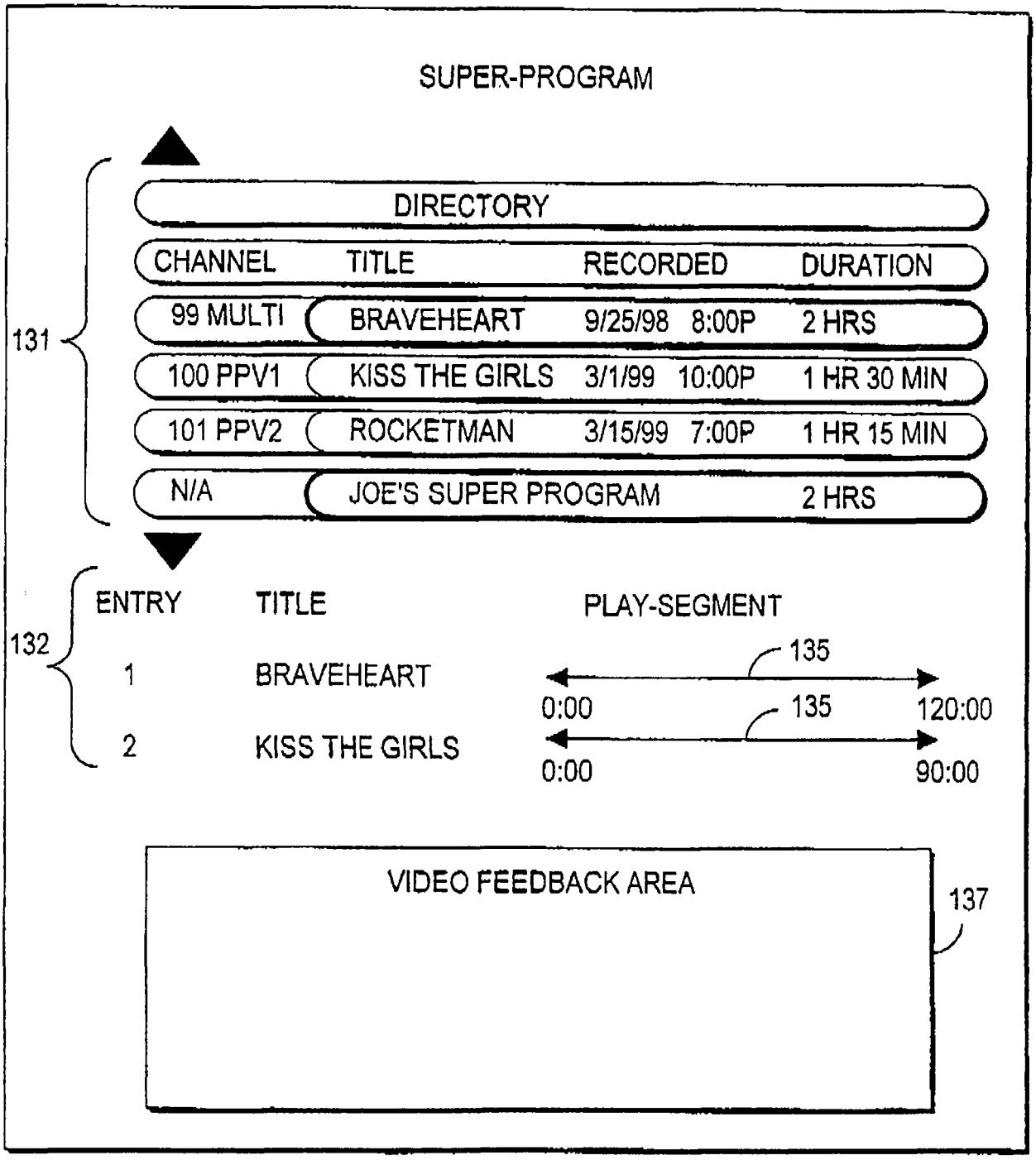

130
SUPER-PROGRAM
DIRECTORY
CHANNEL
TITLE
RECORDED
DURATION
99 MULTI
BRAVEHEART
9/25/98 8:00P
2 HRS
100 PPV1
KISS THE GIRLS
3/1/99 10:00P
1 HR 30 MIN
101 PPV2
ROCKETMAN
3/15/99 7:00P
1 HR 15 MIN
N/A
JOE'S SUPER PROGRAM
2 HRS
131
ENTRY
TITLE
PLAY-SEGMENT
132
1
BRAVEHEART
135
0:00
120:00
2
KISS THE GIRLS
135
0:00
90:00
VIDEO FEEDBACK AREA
137

FIG. 25a

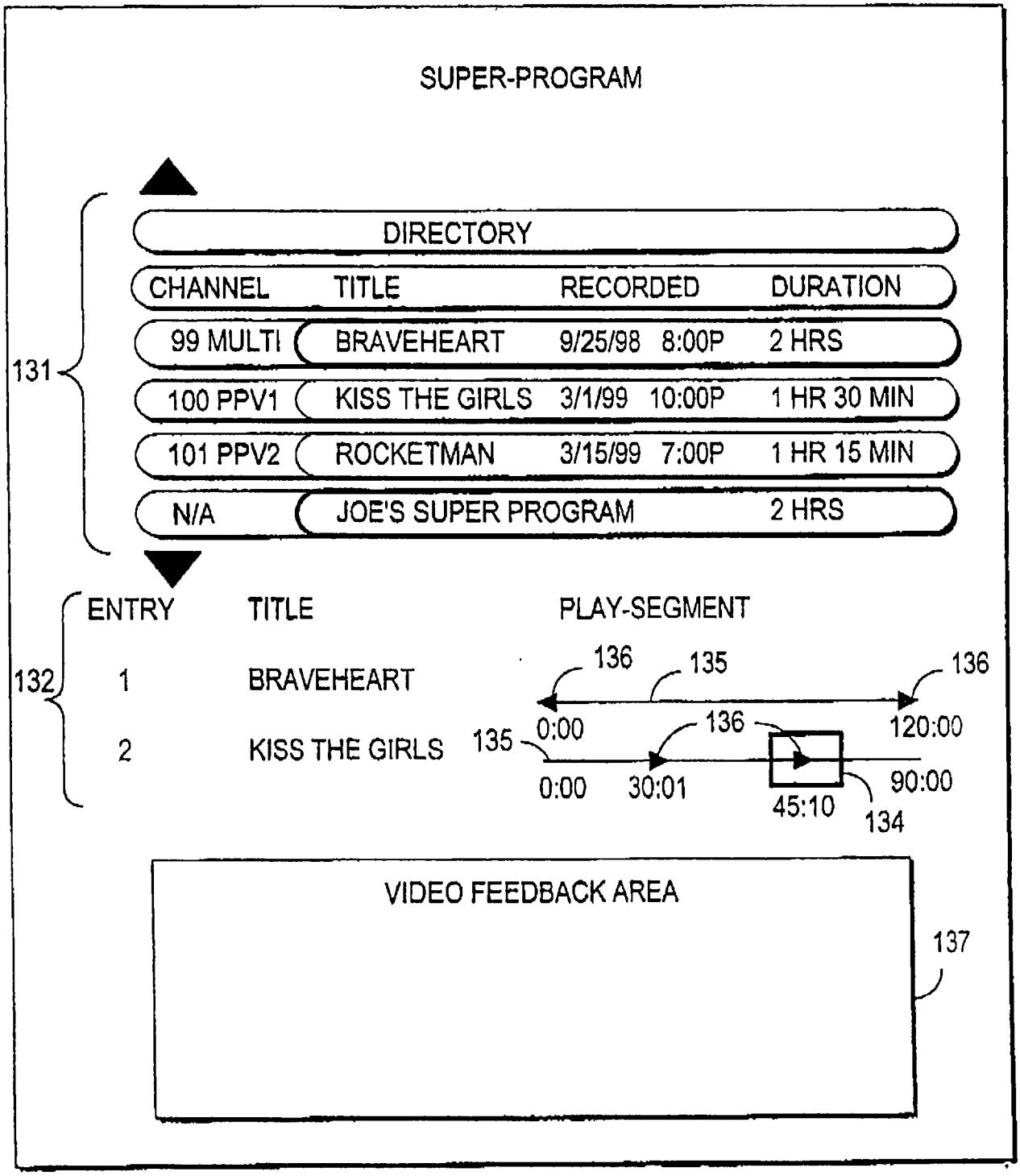

130
SUPER-PROGRAM
DIRECTORY
CHANNEL TITLE RECORDED DURATION
99 MULTI BRAVEHEART 9/25/98 8:00P 2 HRS
100 PPV1 KISS THE GIRLS 3/1/99 10:00P 1 HR 30 MIN
101 PPV2 ROCKETMAN 3/15/99 7:00P 1 HR 15 MIN
N/A JOE'S SUPER PROGRAM 2 HRS
131
ENTRY TITLE PLAY-SEGMENT
1 BRAVEHEART
2 KISS THE GIRLS
132
136
135
136
0:00
120:00
135
136
0:00
30:01
45:10
90:00
134
VIDEO FEEDBACK AREA
137

FIG. 25b

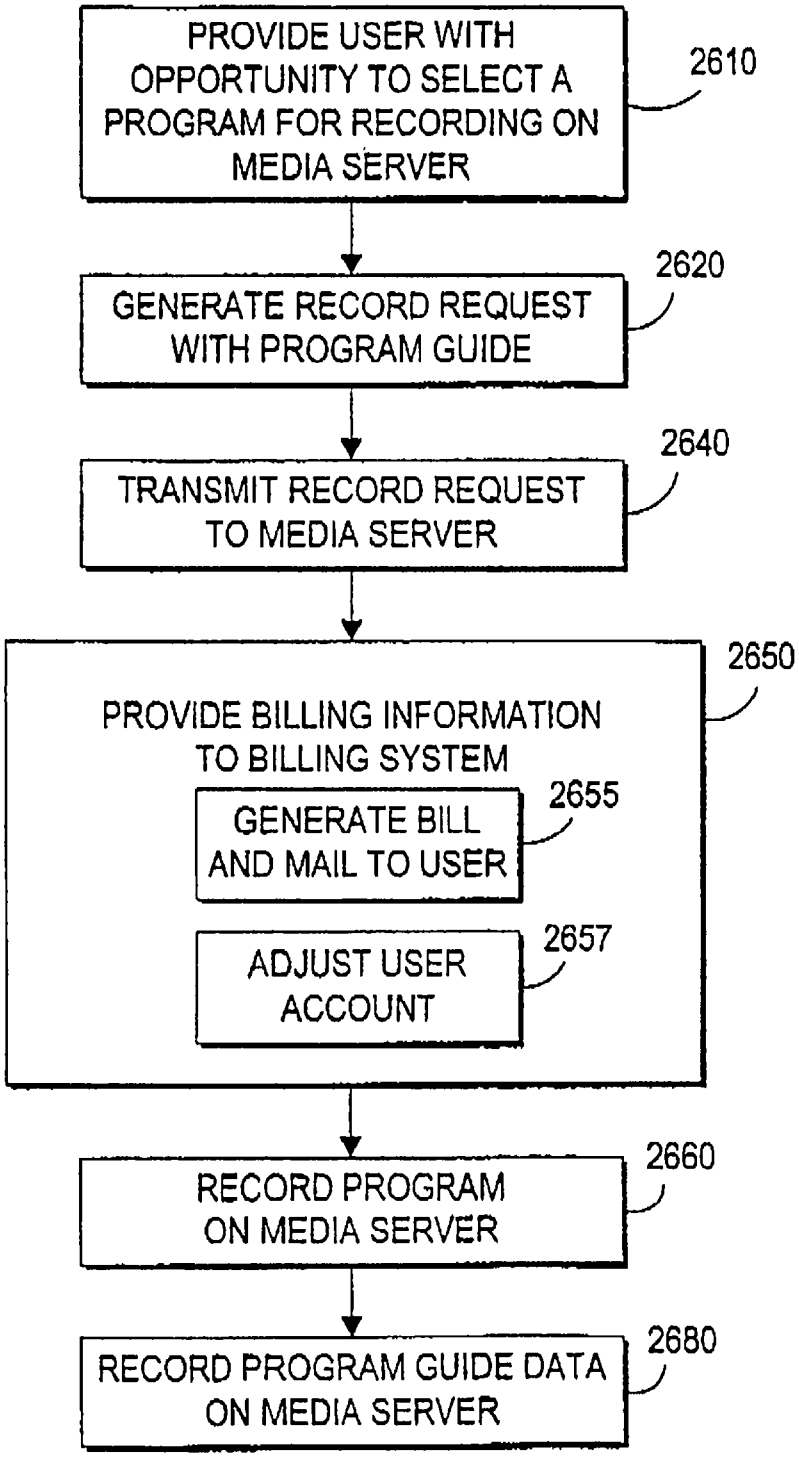

PROVIDE USER WITH OPPORTUNITY TO SELECT A PROGRAM FOR RECORDING ON MEDIA SERVER
2610
GENERATE RECORD REQUEST WITH PROGRAM GUIDE
2620
TRANSMIT RECORD REQUEST TO MEDIA SERVER
2640
PROVIDE BILLING INFORMATION TO BILLING SYSTEM
2650
GENERATE BILL AND MAIL TO USER
2655
ADJUST USER ACCOUNT
2657
RECORD PROGRAM ON MEDIA SERVER
2660
RECORD PROGRAM GUIDE DATA ON MEDIA SERVER
2680

FIG. 26

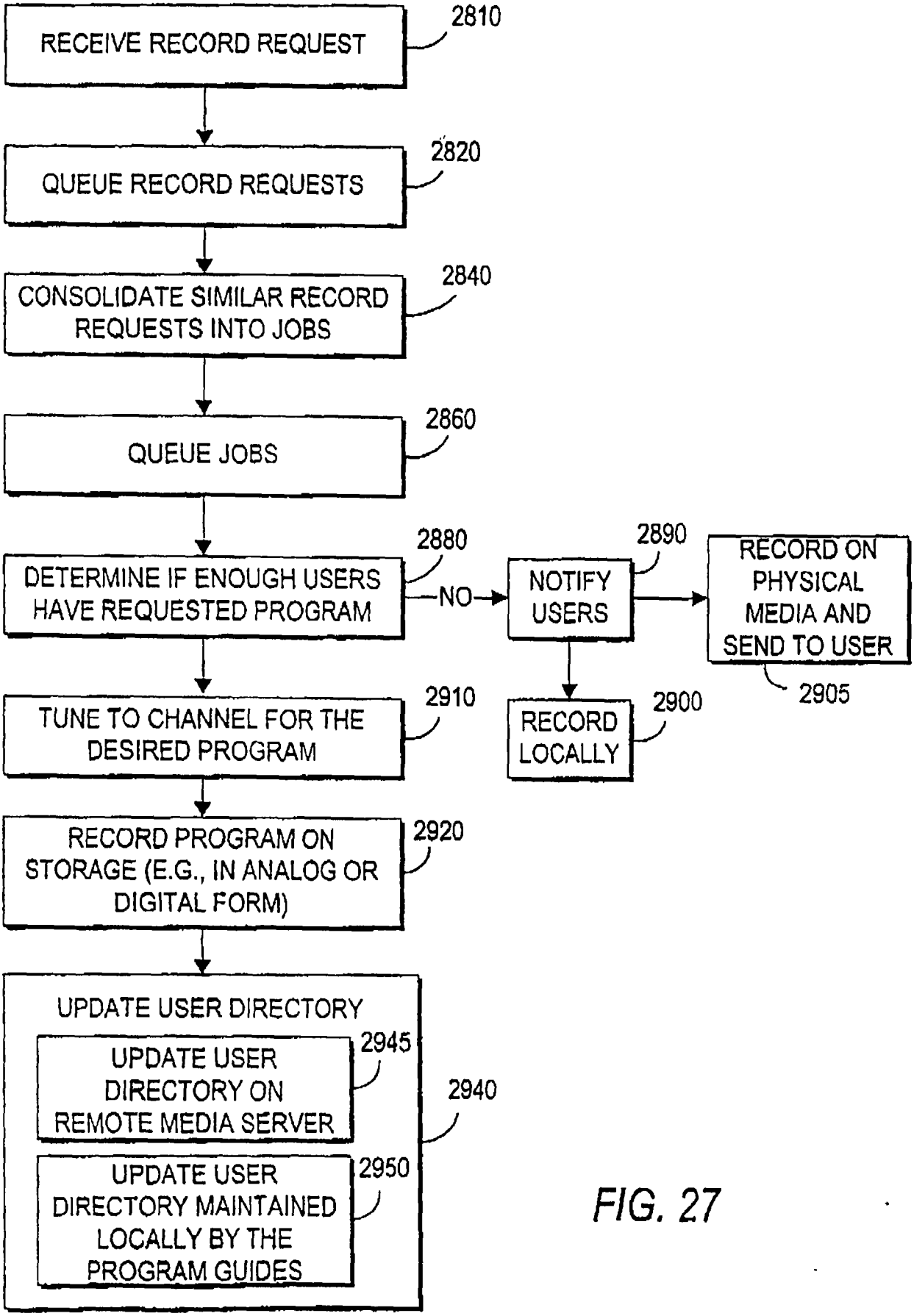

RECEIVE RECORD REQUEST
2810
QUEUE RECORD REQUESTS
2820
CONSOLIDATE SIMILAR RECORD REQUESTS INTO JOBS
2840
QUEUE JOBS
2860
DETERMINE IF ENOUGH USERS HAVE REQUESTED PROGRAM
2880
NO
NOTIFY USERS
2890
RECORD ON PHYSICAL MEDIA AND SEND TO USER
2905
TUNE TO CHANNEL FOR THE DESIRED PROGRAM
2910
RECORD LOCALLY
2900
RECORD PROGRAM ON STORAGE (E.G., IN ANALOG OR DIGITAL FORM)
2920
UPDATE USER DIRECTORY
UPDATE USER DIRECTORY ON REMOTE MEDIA SERVER
2945
UPDATE USER DIRECTORY MAINTAINED LOCALLY BY THE PROGRAM GUIDES
2950
2940

FIG. 27

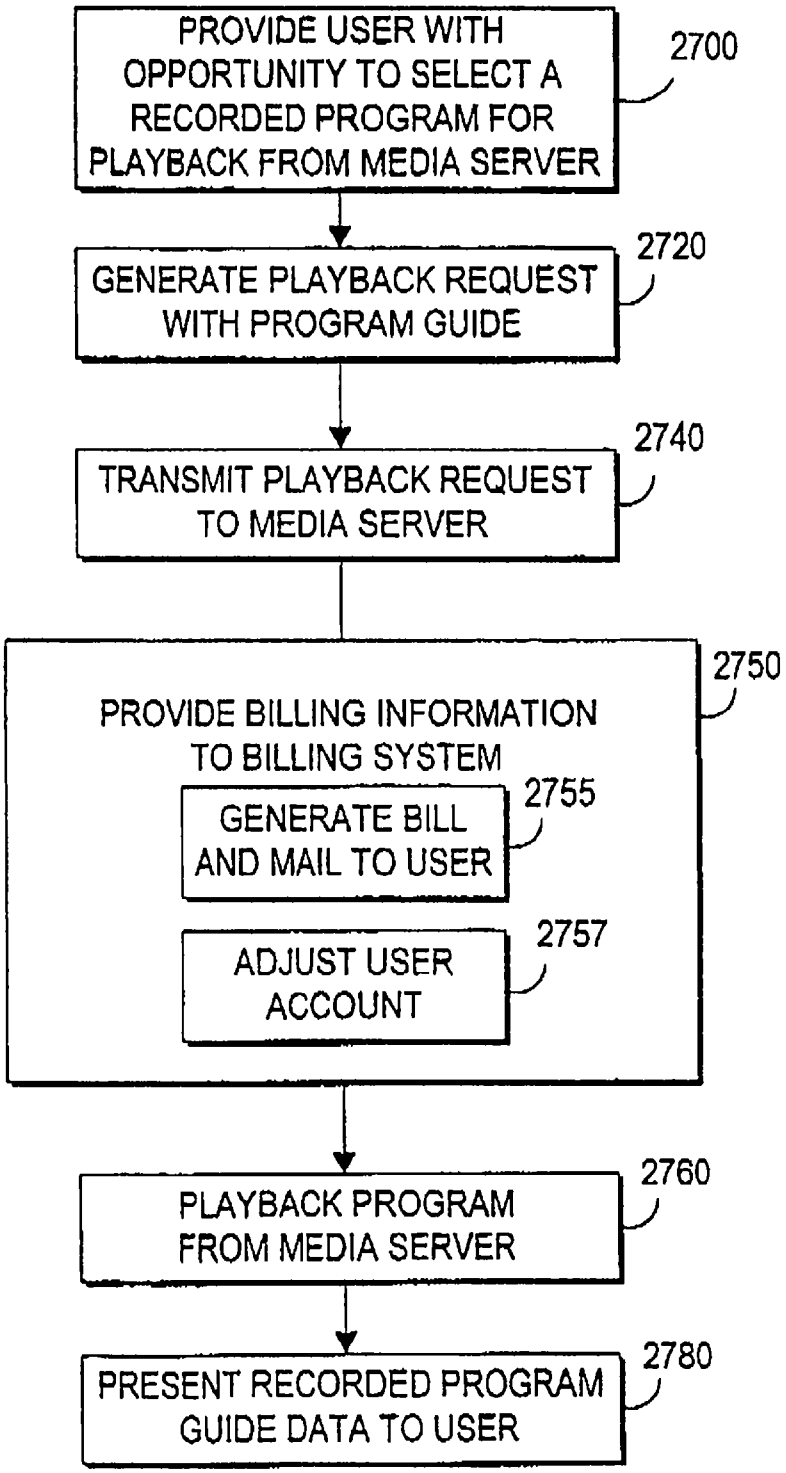

PROVIDE USER WITH OPPORTUNITY TO SELECT A RECORDED PROGRAM FOR PLAYBACK FROM MEDIA SERVER
2700
GENERATE PLAYBACK REQUEST WITH PROGRAM GUIDE
2720
TRANSMIT PLAYBACK REQUEST TO MEDIA SERVER
2740
PROVIDE BILLING INFORMATION TO BILLING SYSTEM
2750
GENERATE BILL AND MAIL TO USER
2755
ADJUST USER ACCOUNT
2757
PLAYBACK PROGRAM FROM MEDIA SERVER
2760
PRESENT RECORDED PROGRAM GUIDE DATA TO USER
2780

FIG. 28

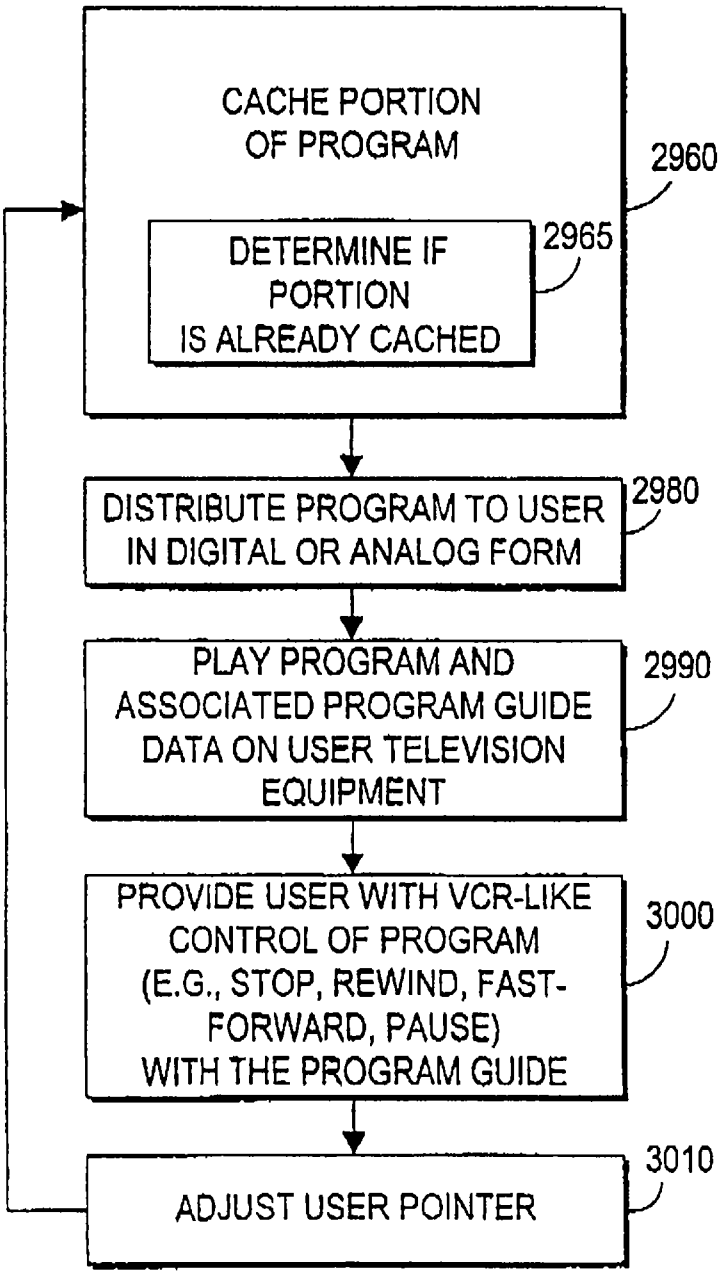

CACHE PORTION OF PROGRAM
2960
DETERMINE IF PORTION IS ALREADY CACHED
2965
DISTRIBUTE PROGRAM TO USER IN DIGITAL OR ANALOG FORM
2980
PLAY PROGRAM AND ASSOCIATED PROGRAM GUIDE DATA ON USER TELEVISION EQUIPMENT
2990
PROVIDE USER WITH VCR-LIKE CONTROL OF PROGRAM (E.G., STOP, REWIND, FAST-FORWARD, PAUSE) WITH THE PROGRAM GUIDE
3000
ADJUST USER POINTER
3010

FIG. 29

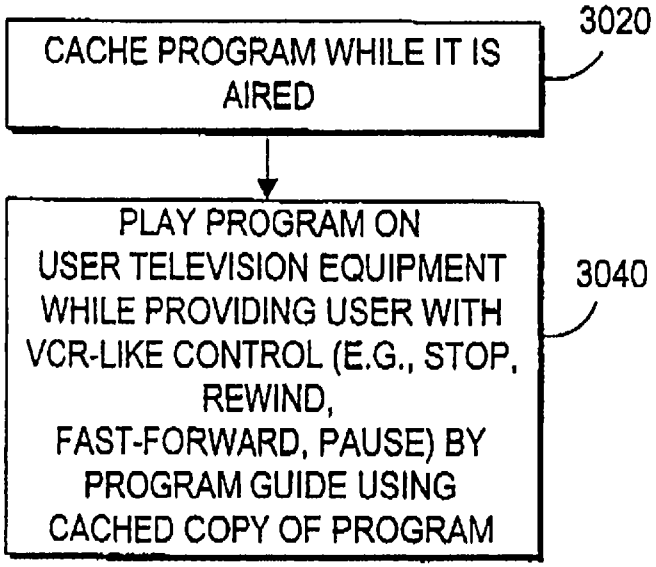

CACHE PROGRAM WHILE IT IS AIRED
3020
PLAY PROGRAM ON USER TELEVISION EQUIPMENT WHILE PROVIDING USER WITH VCR-LIKE CONTROL (E.G., STOP, REWIND, FAST-FORWARD, PAUSE) BY PROGRAM GUIDE USING CACHED COPY OF PROGRAM
3040

FIG. 30

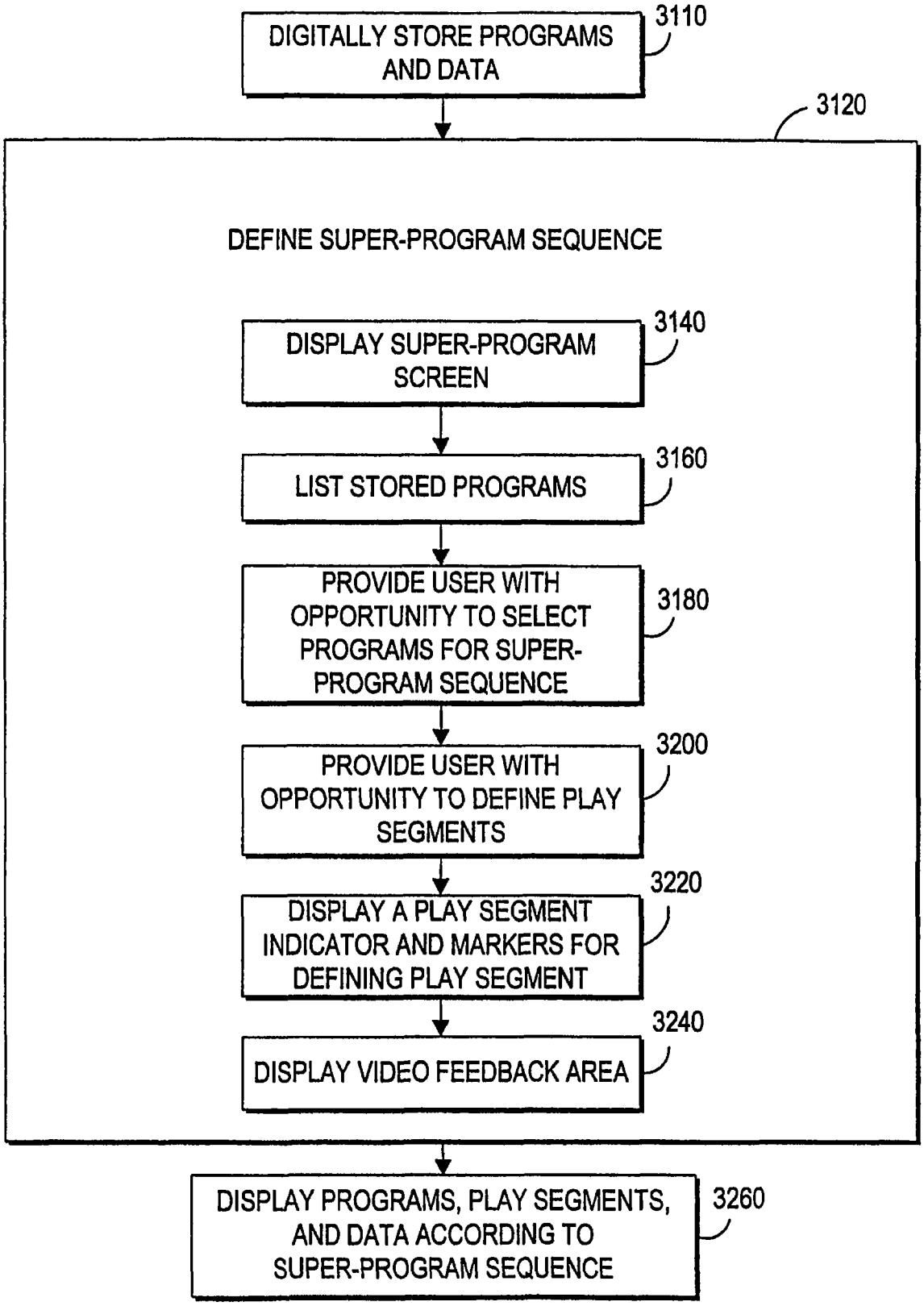

DIGITALLY STORE PROGRAMS AND DATA
3110
3120
DEFINE SUPER-PROGRAM SEQUENCE
DISPLAY SUPER-PROGRAM SCREEN
3140
LIST STORED PROGRAMS
3160
PROVIDE USER WITH OPPORTUNITY TO SELECT PROGRAMS FOR SUPER-PROGRAM SEQUENCE
3180
PROVIDE USER WITH OPPORTUNITY TO DEFINE PLAY SEGMENTS
3200
DISPLAY A PLAY SEGMENT INDICATOR AND MARKERS FOR DEFINING PLAY SEGMENT
3220
DISPLAY VIDEO FEEDBACK AREA
3240
DISPLAY PROGRAMS, PLAY SEGMENTS, AND DATA ACCORDING TO SUPER-PROGRAM SEQUENCE
3260

FIG. 31