

FIG. 1

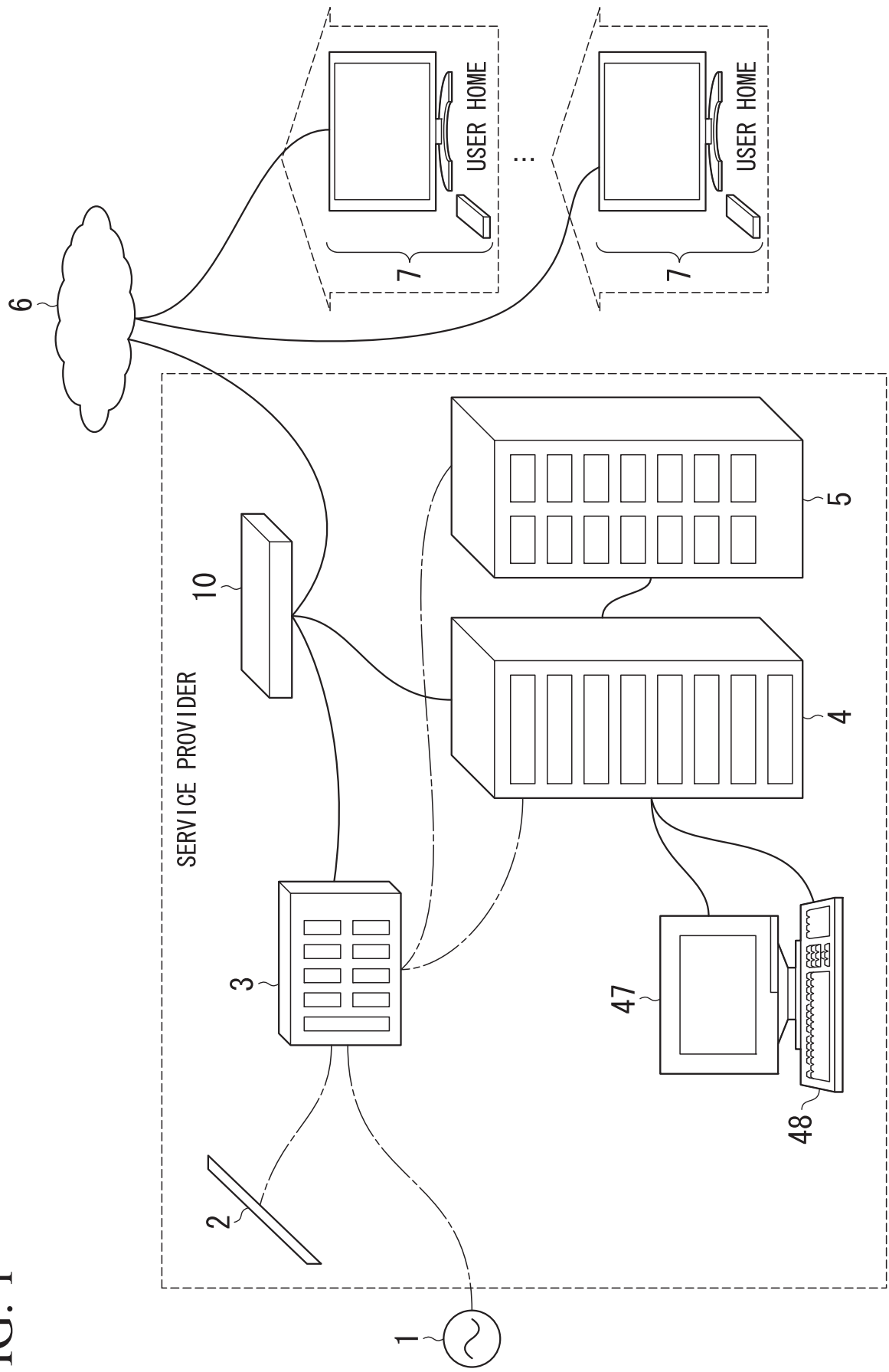


FIG. 2

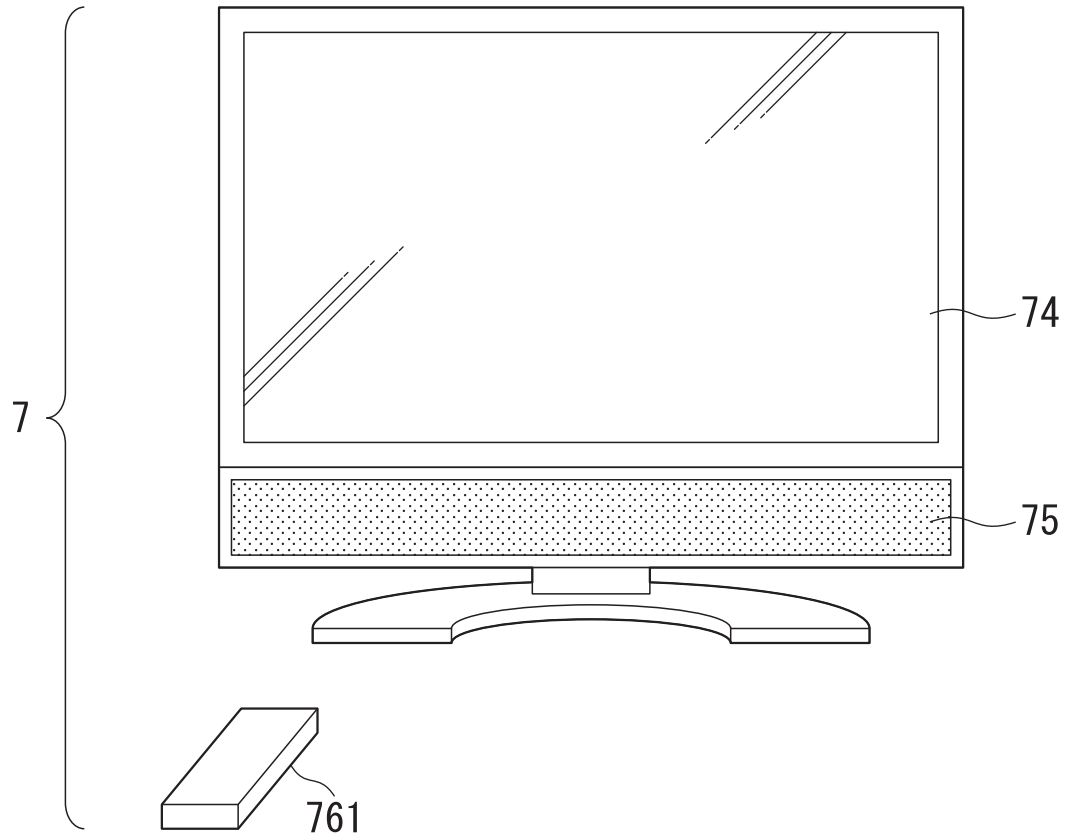


FIG. 3

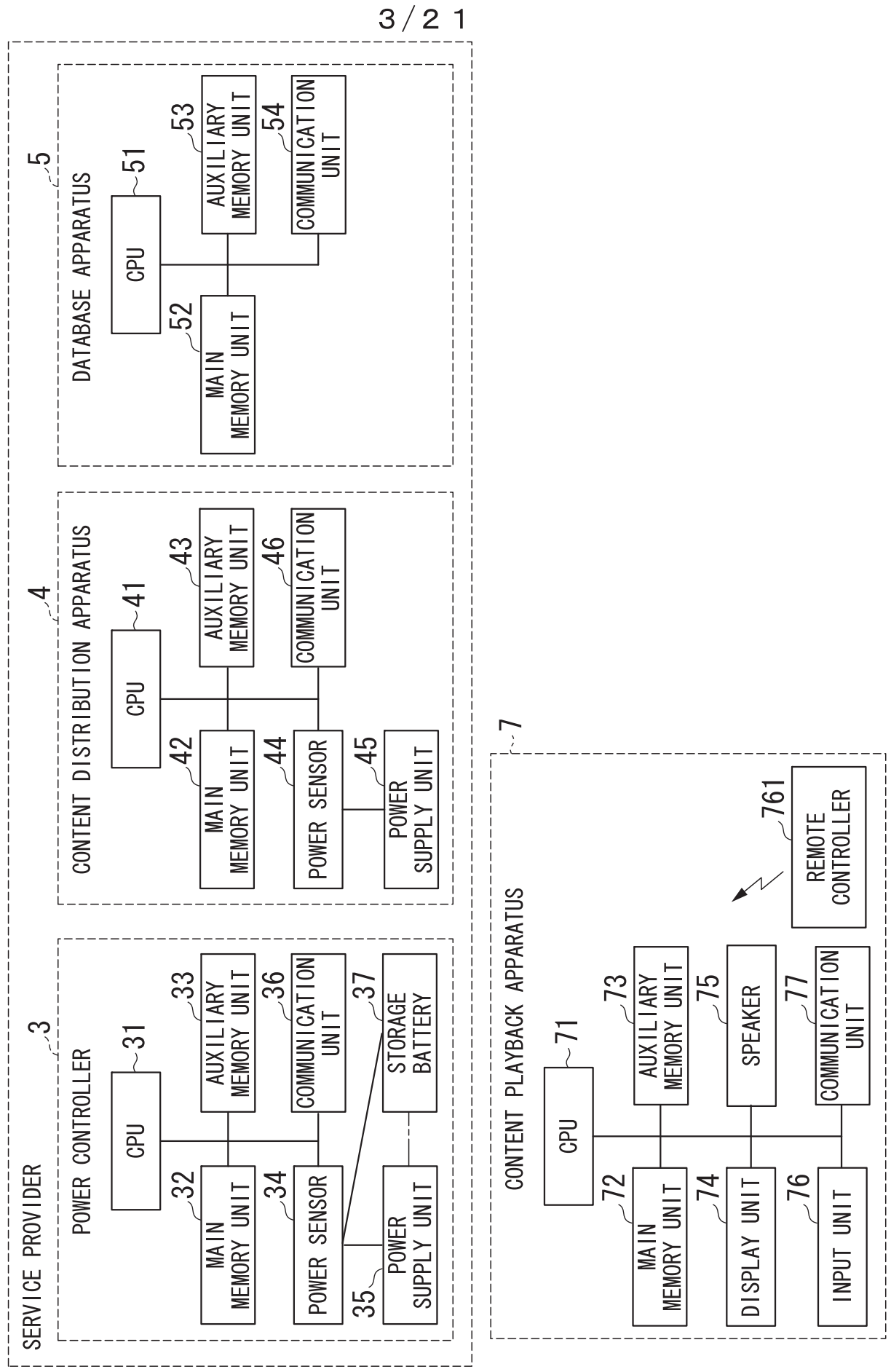


FIG. 4

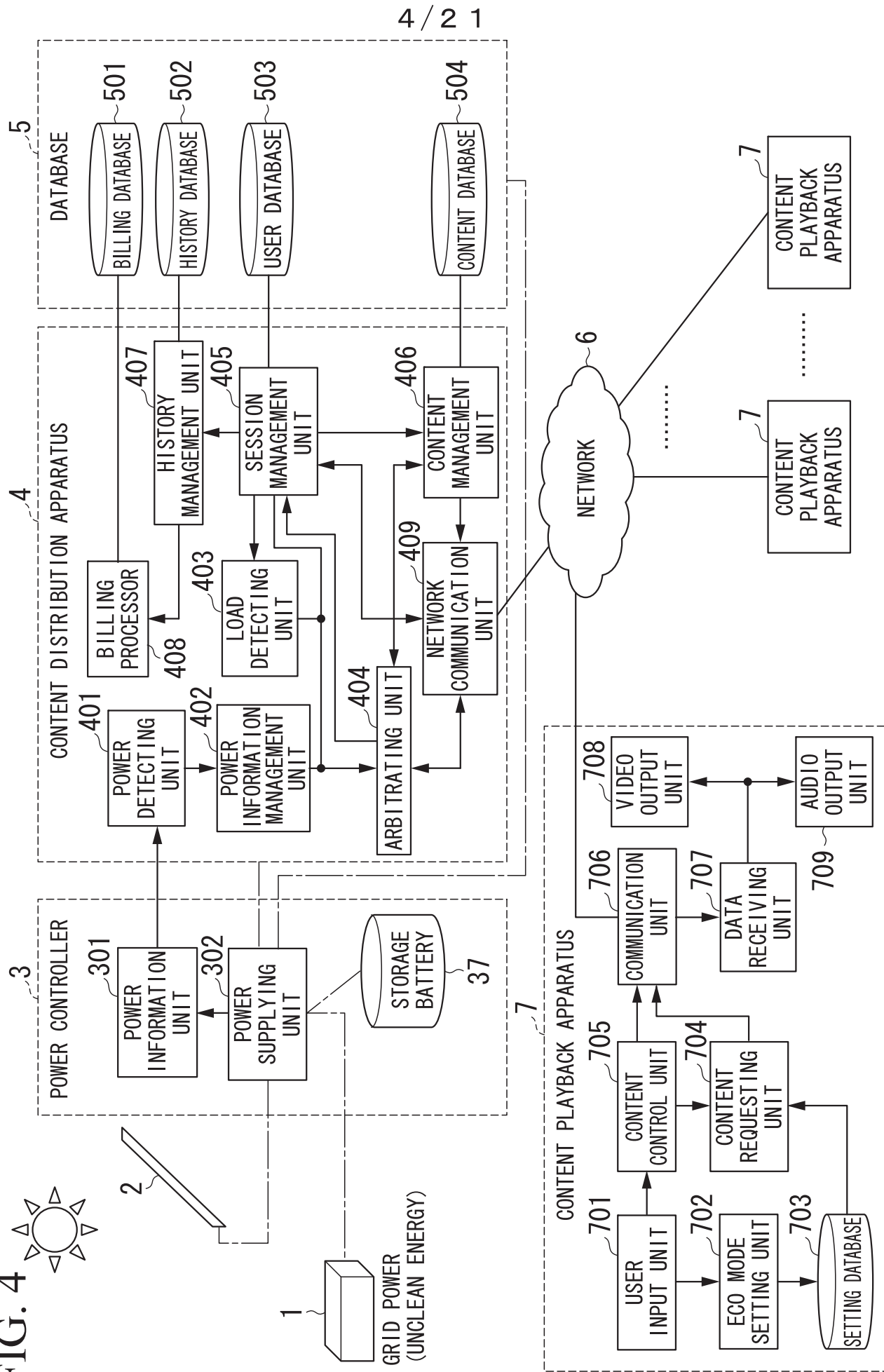


FIG. 5

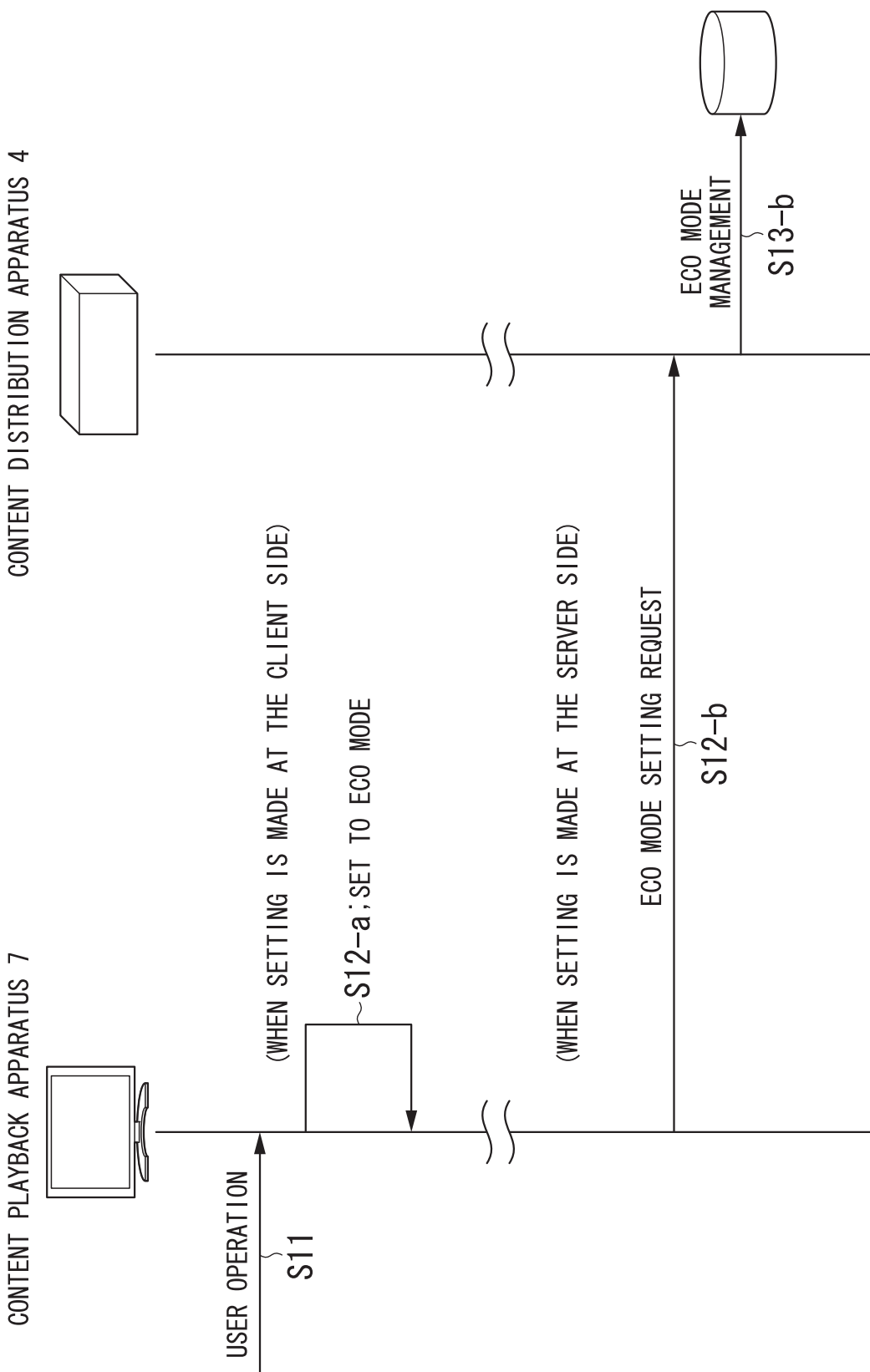


FIG. 6

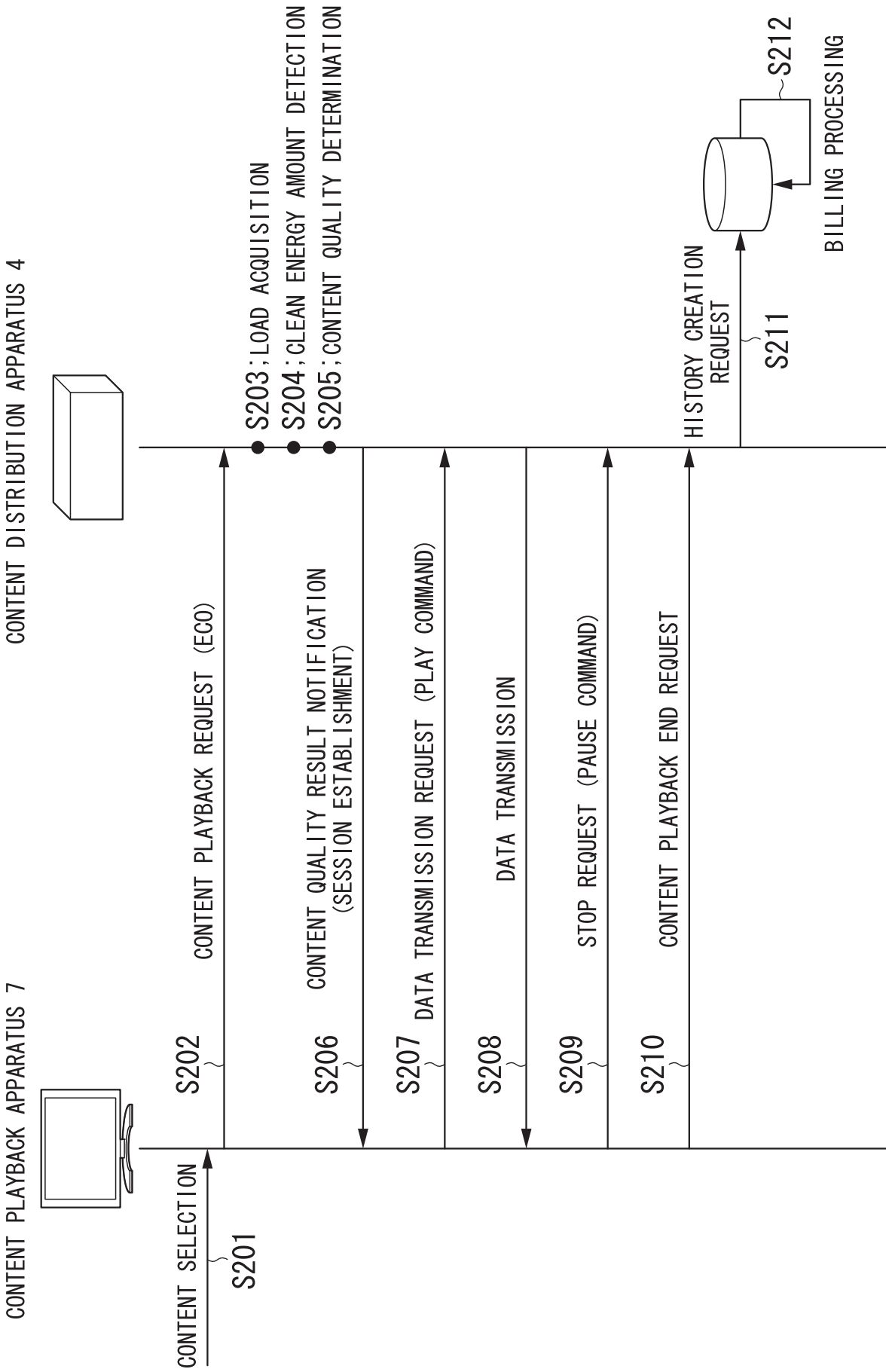


FIG. 7

```

INVITE sip:vod_service@iptv.net SIP/2.0
From: sip:alice@iptv.net
To: sip:vod1@iptv.net

v=0
o=alice 2890844526 2890842807 IN IP4 123.45.67.89
s=SDP Offer
t=0
m=video 51372 RTP/AVP 33
c=IN IP4 123.45.67.89
b=AS:15000
a=fmtp:33 eco; bitrate=2000-; brightness=50-
...

```

FIG. 8

CONTENT DISTRIBUTION APPARATUS CURRENT POWER USE	50 kW
NUMBER OF CURRENT SESSIONS	500 SESSIONS
CURRENT OVERALL BIT RATE	5000 Mbps
STATISTICAL AVERAGE NUMBER OF SESSIONS IN THE CURRENT TIME SLOT	450 SESSIONS
STATISTICAL STANDARD DEVIATION OF NUMBER OF SESSIONS IN THE CURRENT TIME SLOT	175 SESSIONS

FIG. 9

CLEAN ENERGY POWER USED	50 kW
UNCLEAN ENERGY POWER USED	0 kW
CLEAN ENERGY STORED POWER	50 kWh
STORAGE RATE	+5 kW

FIG. 10

CONTENT ID	BIT RATE (kbps)	BRIGHTNESS
vod1-1	2000	100
vod1-1-60	2000	60
vod1-2	4000	100
vod1-2-60	4000	60
vod1-3	10000	100
vod1-4	20000	100
vod2-1	2000	100
vod2-1-80	2000	60
vod2-2	10000	100
...		

FIG. 11

BIT RATE (kbps)	POWER USED	USABILITY IN ECO MODE
2000	10W	○
4000	20W	○
10000	50W	○
20000	100W	×

FIG. 12

```

SIP/2.0 200 OK
From: sip:alice@iptv.net
To: sip:vod1@iptv.net

v=0
o=iptv_service 2890844526 2890842807 IN IP4 100.1.1.100
s=SDP Answer
t=0
m=video 21372 RTP/AVP 33
c=IN IP4 100.1.1.100
a=fmtp:33 uri=rtsp://100.1.1.100/vod1; session=11111111
a=fmtp:33 eco=2; bitrate=4000; brightness=60
...

```

FIG. 13

USER ID	VIEWING DATE	CONTENT ID	VIEWING TIME (MINUTES)	ENVIRONMENTAL INDEX
alice	11/3	vod12-3	120	3
alice	11/4	vod5-2	60	2
alice	11/10	vod9-4	60	0
alice	11/11	vod10-1	60	1
<u>alice</u>	<u>11/15</u>	<u>vod1-2-60</u>	<u>120</u>	<u>2</u>
bob	...	...	...	...
caro	...	...	...	...

FIG. 14

POWER USED/AVERAGE SURPLUS POWER	ENVIRONMENTAL INDEX	UNIT PRICE (YEN/HOUR)
0.1 OR LOWER	3	40
0.5 OR LOWER	2	60
1 OR LOWER	1	80
GREATER THAN 1 OR AVERAGE SURPLUS POWER IS 0	0	100

FIG. 15

USER ID	BILLING MONTH	NON-eco VIEWING TIME	NON-eco BILLING	eco=1 VIEWING TIME	eco=1 BILLED AMOUNT	eco=2 VIEWING TIME	eco=2 BILLED AMOUNT	eco=3 VIEWING TIME	eco=3 BILLED AMOUNT	TOTAL BILLED AMOUNT
alice	2009/11	60	100	60	80	180	180	120	80	440
bob	...	...	...	...	...	...	...	...	...	...
carol	...	...	...	...	...	...	...	...	...	...

FIG. 16

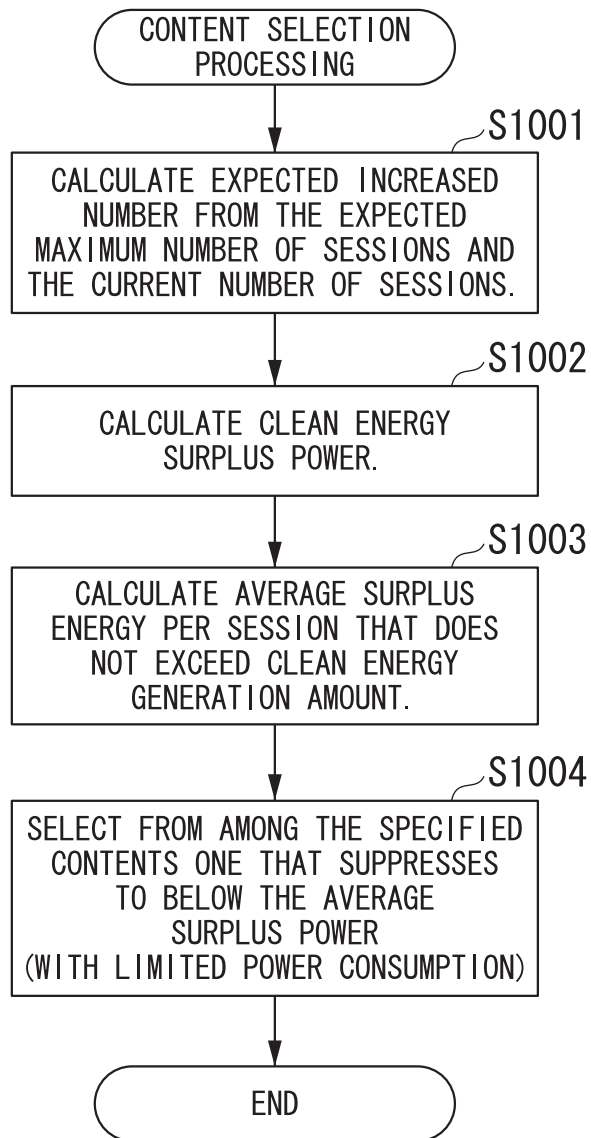


FIG. 17

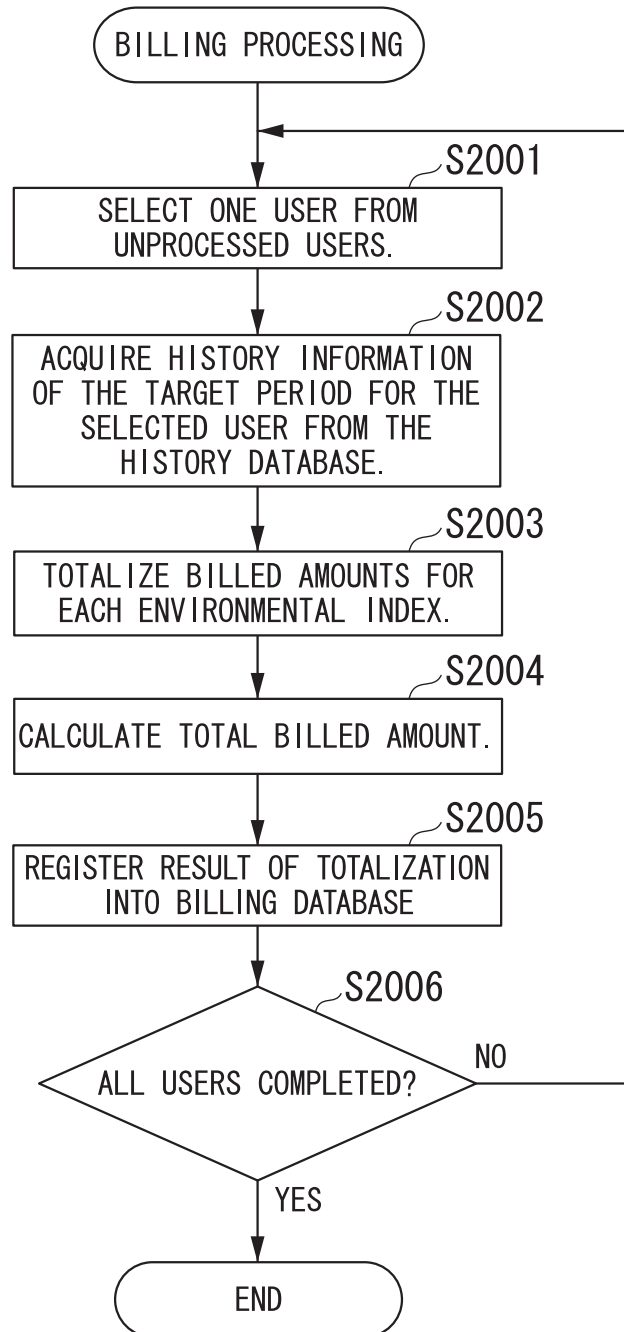


FIG. 18

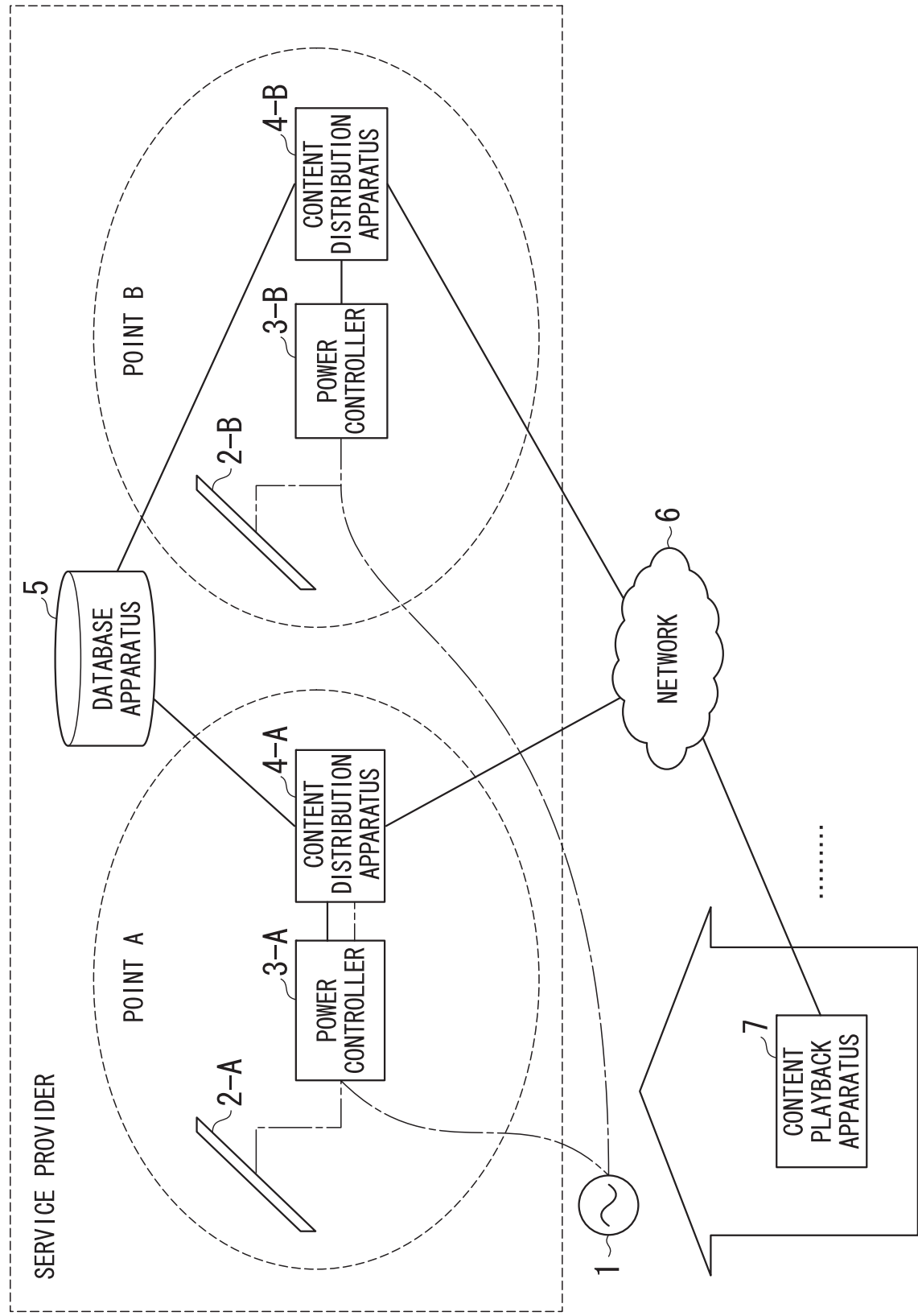


FIG. 19

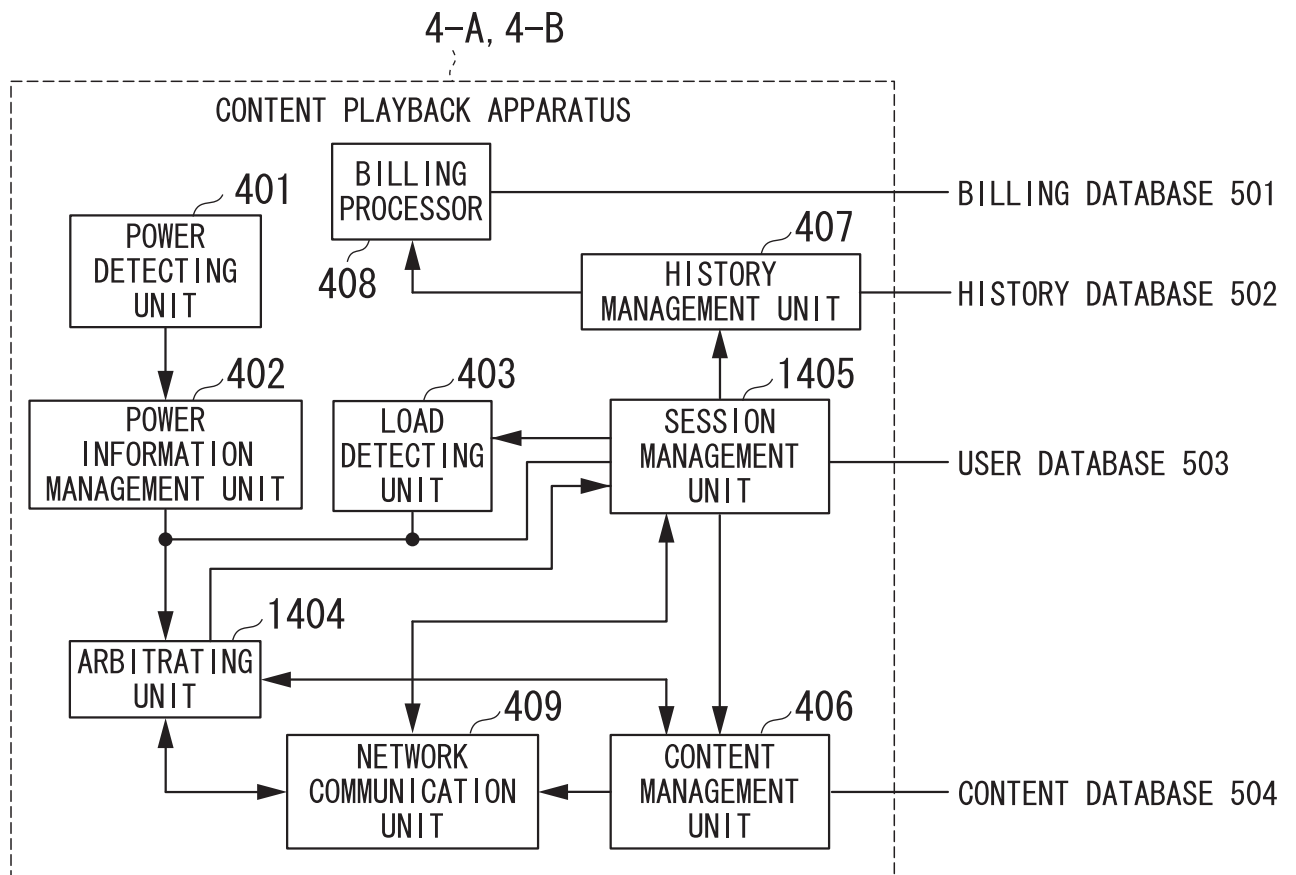


FIG. 20

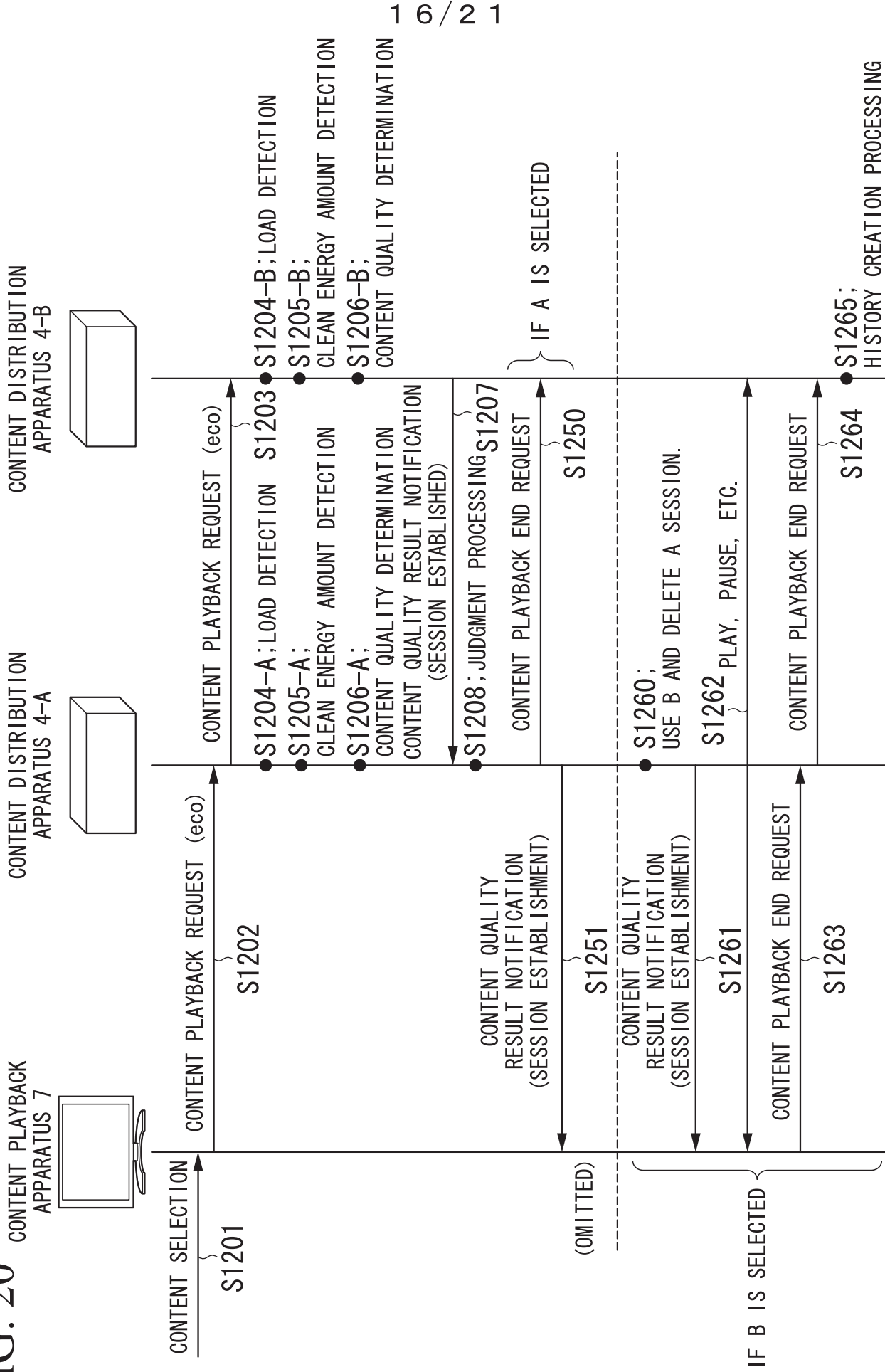


FIG. 21

	CONTENT DISTRIBUTION APPARATUS 4-A	CONTENT DISTRIBUTION APPARATUS 4-B
CLEAN ENERGY POWER USED	40 kW	50 kW
UNCLEAN ENERGY POWER USED	5k W	0 kW
CLEAN ENERGY STORED POWER	10 kWh	100 kWh
STORAGE RATE	-5 kW	+10 kW

FIG. 22

```
SIP/2.0 200 OK
From: sip:alice@iptv.net
To: sip:vod1@iptv.net

v=0
o=iptv_service 2890844526 2890842807 IN IP4 100.2.1.100
s=SDP Answer
t=0
m=video 31372 RTP/AVP 33
c=IN IP4 100.2.1.100
a=fmtp:33 uri=rtsp://100.2.1.100/vod1; session=11111111
a=fmtp:33 eco=1; bitrate=2000-; brightness=50-
...
```

FIG. 23

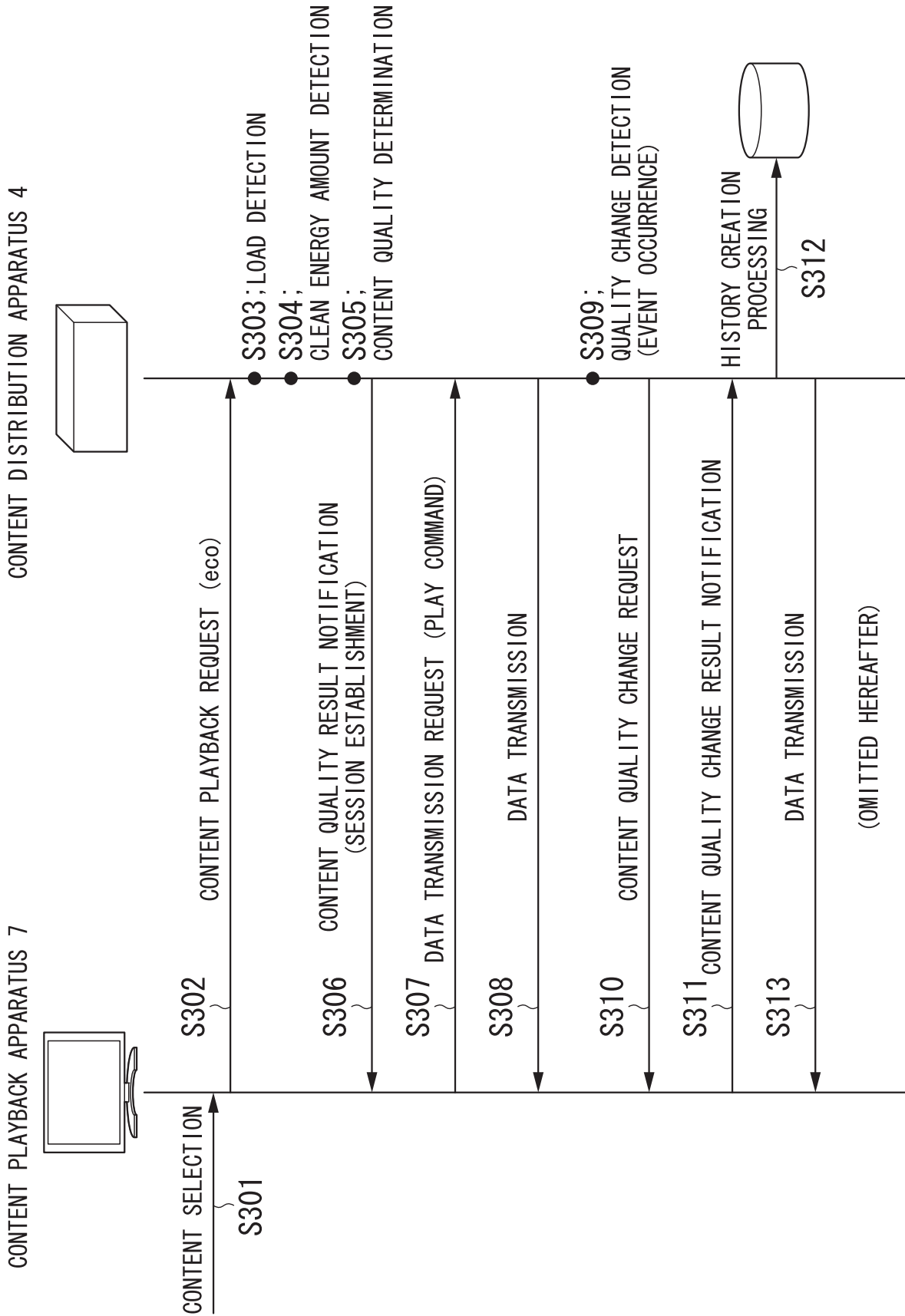


FIG. 24

```
INVITE sip:vod_service@iptv.net SIP/2.0
From: sip:alice@iptv.net
To: sip:vod1@iptv.net

v=0
o=alice 2890844526 2890842807 IN IP4 123.45.67.89
s=SDP Offer
t=0
m=video 51372 RTP/AVP 31
c=IN IP4 123.45.67.89
b=AS:15000
a=fmtp:33 eco; flexible; bitrate=2000-; brightness=50-
...
```

FIG. 25

```
SIP/2.0 200 OK
From: sip:alice@iptv.net
To: sip:vod1@iptv.net

v=0
o=iptv_service 2890844526 2890842807 IN IP4 100.1.1.100
s=SDP Answer
t=0
m=video 21372 RTP/AVP 31
c=IN IP4 100.1.1.100
a=fmtp:33 uri=rtsp://100.1.1.100/vod1; session=11111111
a=fmtp:33 eco=2; flexible; bitrate=4000; brightness=60
...
```

FIG. 26

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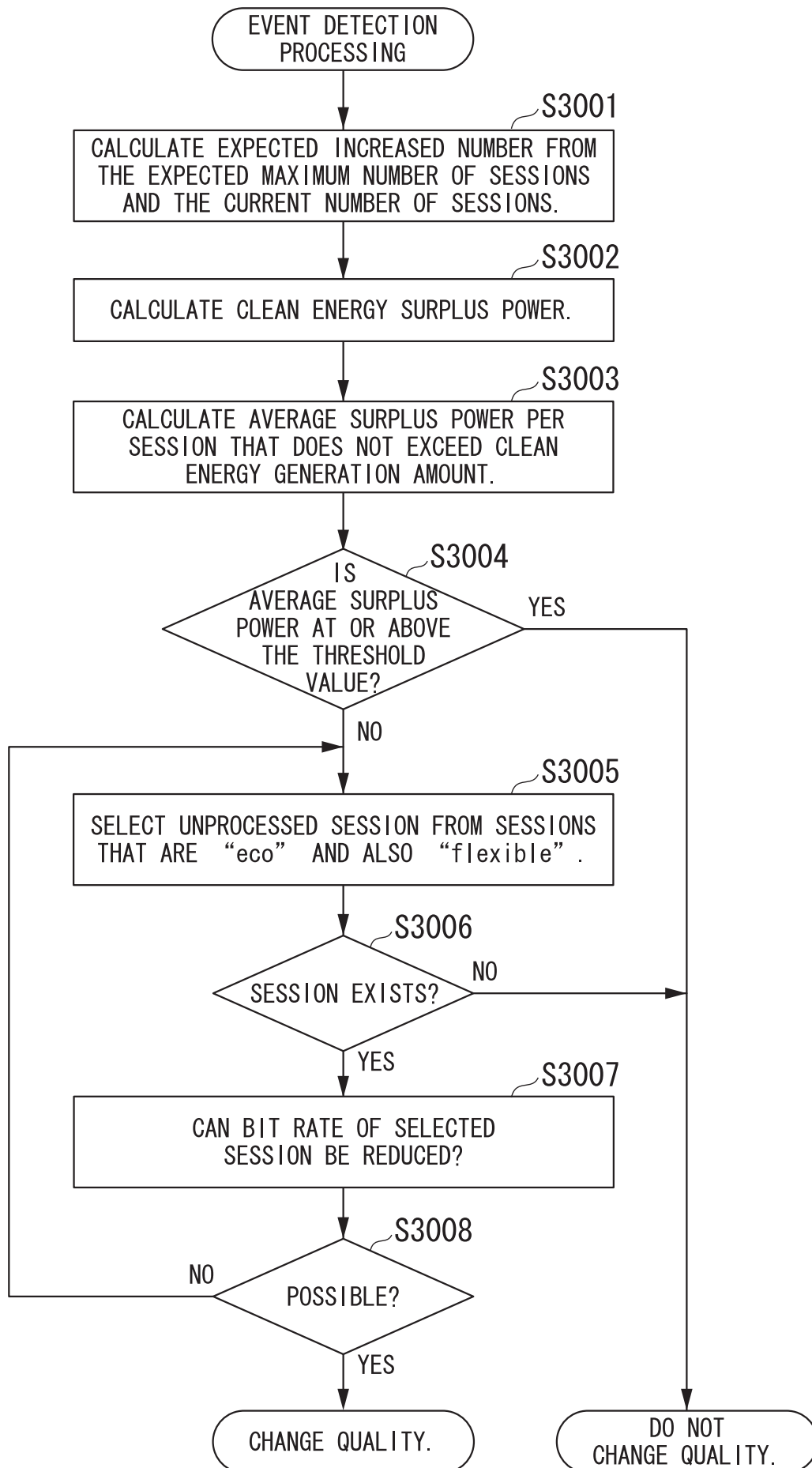


FIG. 27

```

INVITE sip:vod1@iptv.net SIP/2.0
From: sip:vod1@iptv.net
To: sip:alice@iptv.net

v=0
o=iptv_service 2890844526 2890842808 IN IP4 100.1.1.100
s=SDP Offer
t=0
m=video 21372 RTP/AVP 31
c=IN IP4 100.1.1.100
a=fmtp:33 uri=rtsp://100.1.1.100/vod1; session=1111111
a=fmtp:33 eco=2; flexible; bitrate=2000; brightness=60
...

```

FIG. 28

