FIG. 1

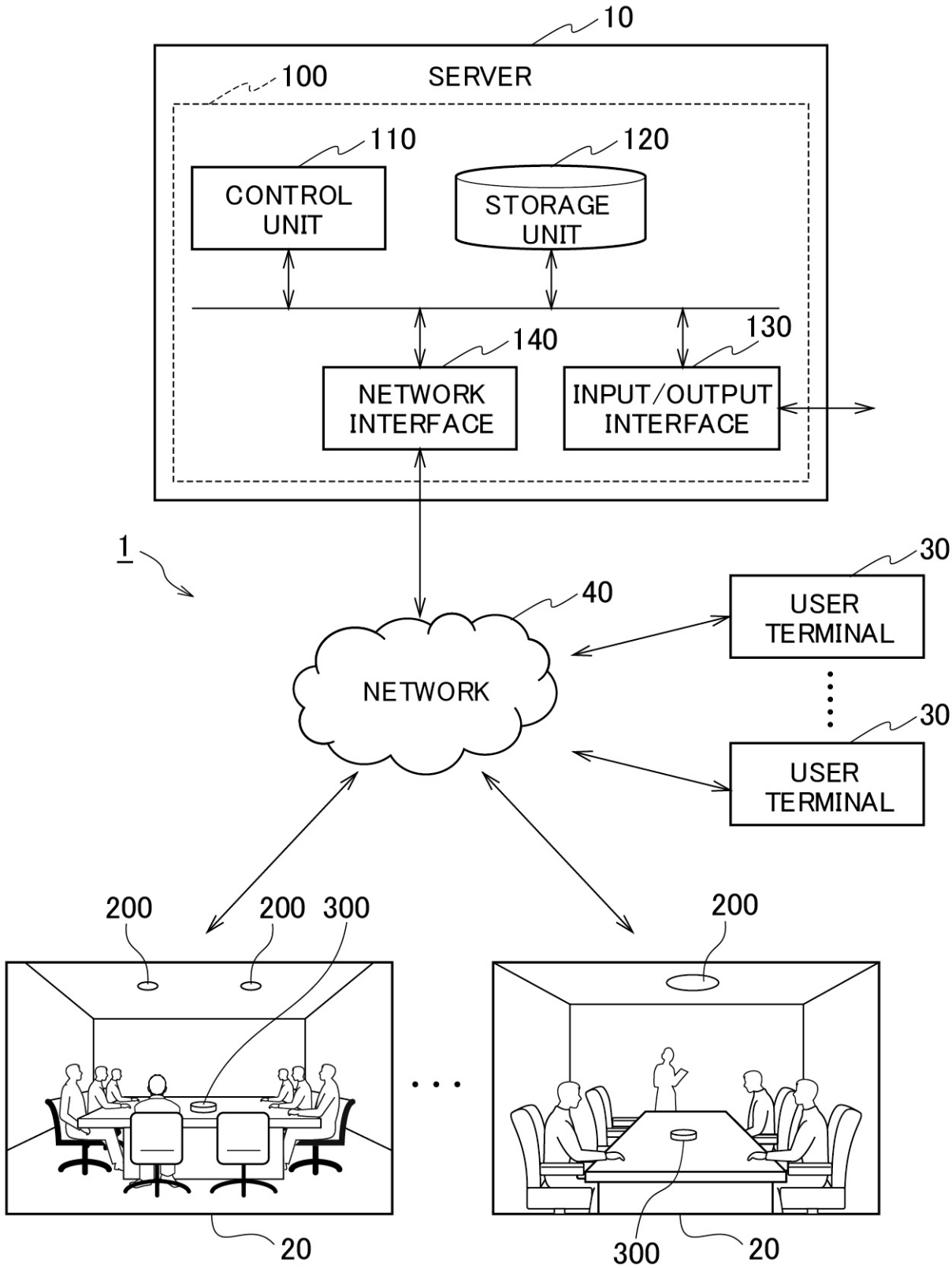

10
SERVER
100
110
CONTROL UNIT
120
STORAGE UNIT
140
NETWORK INTERFACE
130
INPUT/OUTPUT INTERFACE
1
40
NETWORK
30
USER TERMINAL
30
USER TERMINAL
200
200
300
200
20
300
20

FIG. 2

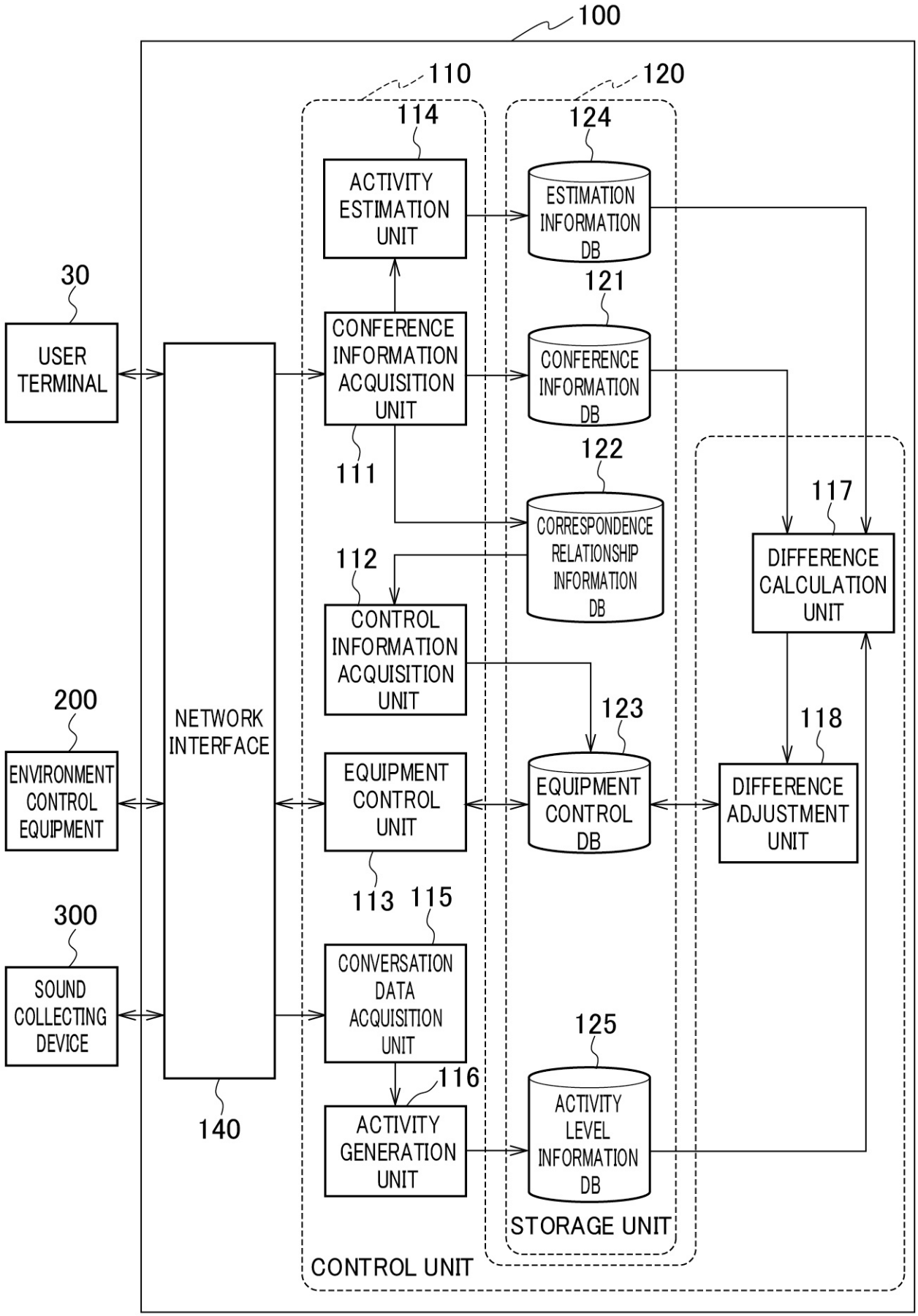

100
110
120
114
124
ACTIVITY ESTIMATION UNIT
ESTIMATION INFORMATION DB
30
121
USER TERMINAL
CONFERENCE INFORMATION ACQUISITION UNIT
CONFERENCE INFORMATION DB
111
122
117
CORRESPONDENCE RELATIONSHIP INFORMATION DB
DIFFERENCE CALCULATION UNIT
112
CONTROL INFORMATION ACQUISITION UNIT
200
NETWORK INTERFACE
123
118
ENVIRONMENT CONTROL EQUIPMENT
EQUIPMENT CONTROL UNIT
EQUIPMENT CONTROL DB
DIFFERENCE ADJUSTMENT UNIT
113
115
300
CONVERSATION DATA ACQUISITION UNIT
125
SOUND COLLECTING DEVICE
116
140
ACTIVITY GENERATION UNIT
ACTIVITY LEVEL INFORMATION DB
STORAGE UNIT
CONTROL UNIT

FIG. 3

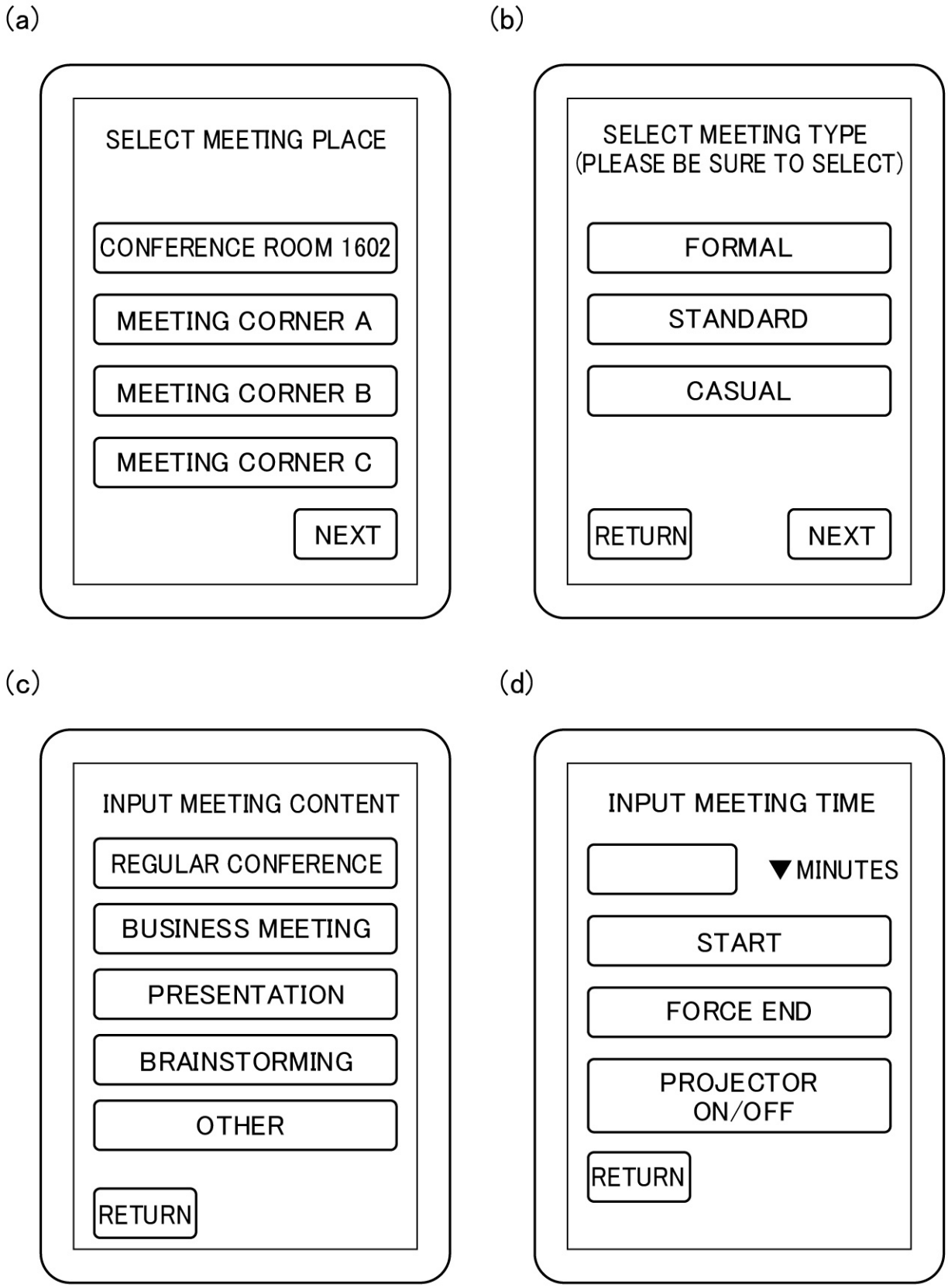

(a)
SELECT MEETING PLACE
CONFERENCE ROOM 1602
MEETING CORNER A
MEETING CORNER B
MEETING CORNER C
NEXT
(b)
SELECT MEETING TYPE
(PLEASE BE SURE TO SELECT)
FORMAL
STANDARD
CASUAL
RETURN
NEXT
(c)
INPUT MEETING CONTENT
REGULAR CONFERENCE
BUSINESS MEETING
PRESENTATION
BRAINSTORMING
OTHER
RETURN
(d)
INPUT MEETING TIME
▼MINUTES
START
FORCE END
PROJECTOR
ON/OFF
RETURN

FIG. 4

121

DATE	PLACE	TYPE	CONTENT	START TIME	END TIME
OCTOBER 10, 2020	1602	STANDARD	REGULAR CONFERENCE	14:00	15:00
OCTOBER 10, 2020	MEETING CORNER A	CASUAL	OTHER	16:00	18:00
.....	.....	.....	.....	.....	.....

FIG. 5

122

CONFERENCE INFORMATION			CONTROL INFORMATION				
PLACE	TYPE	TIME ZONE	LIGHTING	AIRFLOW	FRAGRANCE	SOUND	VENTILATION
CONFERENCE ROOM 1602	FORMAL	MORNING	5000K	LIGHT FLOW	NO FRAGRANCE	NO SOUND	WEAK
		AFTERNOON 1	5000K	LIGHT FLOW	NO FRAGRANCE	NO SOUND	MEDIUM
		AFTERNOON 2	5000K	LIGHT FLOW	NO FRAGRANCE	NO SOUND	MEDIUM
		NIGHT	5000K	LIGHT FLOW	NO FRAGRANCE	NO SOUND	STRONG
	STANDARD	MORNING	4000K	STEADY FLOW	MINT	NATURAL ENVIRONMENTAL SOUNDS	WEAK
		AFTERNOON 1	4000K	STEADY FLOW	MINT	NATURAL ENVIRONMENTAL SOUNDS	MEDIUM
		AFTERNOON 2	4000K	STEADY FLOW	MINT	NATURAL ENVIRONMENTAL SOUNDS	MEDIUM
		NIGHT	4000K	STEADY FLOW	MINT	NATURAL ENVIRONMENTAL SOUNDS	STRONG
	CASUAL	MORNING	3000K	FLUCTUATING FLOW	CITRUS	JAZZ	WEAK
		AFTERNOON 1	3000K	FLUCTUATING FLOW	CITRUS	JAZZ	MEDIUM
		AFTERNOON 2	3000K	FLUCTUATING FLOW	CITRUS	JAZZ	MEDIUM
		NIGHT	3000K	FLUCTUATING FLOW	CITRUS	JAZZ	STRONG
...	...	...	...	...	...	...	...
MEETING CORNER C	FORMAL	MORNING	5000K	–	–	–	–
		AFTERNOON 1	5000K	–	–	–	–
		AFTERNOON 2	5000K	–	–	–	–
		NIGHT	5000K	–	–	–	–
	STANDARD	MORNING	4000K	–	–	–	–
		AFTERNOON 1	4000K	–	–	–	–
		AFTERNOON 2	4000K	–	–	–	–
		NIGHT	4000K	–	–	–	–
	CASUAL	MORNING	3000K	–	–	–	–
		AFTERNOON 1	3000K	–	–	–	–
		AFTERNOON 2	3000K	–	–	–	–
		NIGHT	3000K	–	–	–	–

FIG. 6

123

PLACE	CONFERENCE ROOM 1602
TIME	15:00 TO 16:00
LIGHTING	4000K
AIRFLOW	STEADY FLOW
FRAGRANCE	MINT
SOUND	NATURAL ENVIRONMENTAL SOUNDS
VENTILATION	15:30 TO 15:45 (MEDIUM)
SOUND COLLECTION TIME	15:00 TO16:00

FIG. 7

CONFERENCE CONTENT	ACTIVITY LEVEL ESTIMATION INFORMATION	ESTIMATION ACTIVITY LEVEL		
		FIRST HALF	MIDDLE	SECOND HALF
REGULAR CONFERENCE	PATTERN A		MEDIUM	
BUSINESS MEETING	PATTERN B		MEDIUM	MEDIUM
PRESENTATION	PATTERN C	LOW	LOW	MEDIUM
BRAINSTORMING	PATTERN D	HIGH	HIGH	
OTHER	PATTERN A		MEDIUM	

FIG. 8

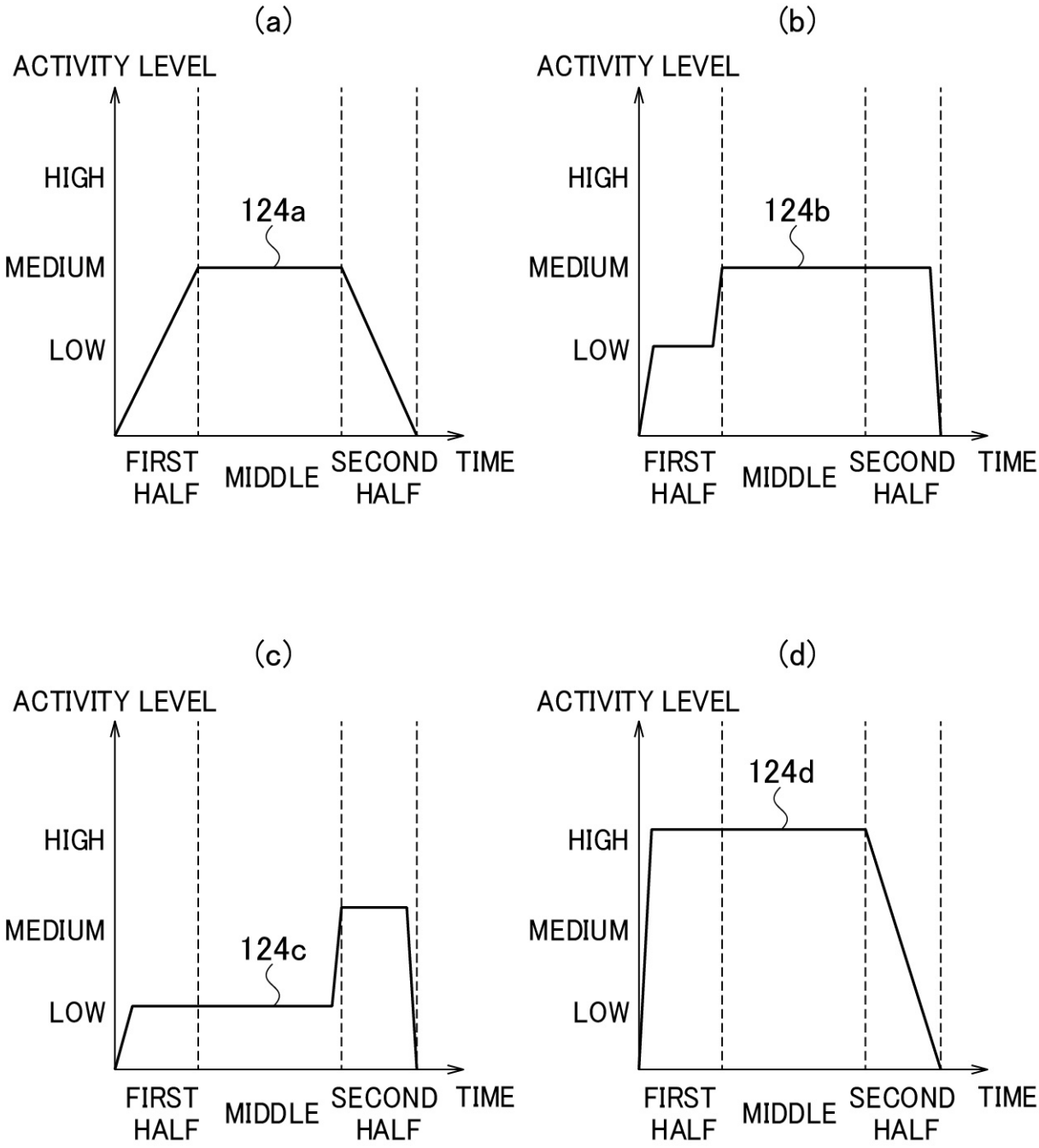

(a)
ACTIVITY LEVEL
HIGH
MEDIUM
LOW
124a
FIRST HALF
MIDDLE
SECOND HALF
TIME
(b)
ACTIVITY LEVEL
HIGH
MEDIUM
LOW
124b
FIRST HALF
MIDDLE
SECOND HALF
TIME
(c)
ACTIVITY LEVEL
HIGH
MEDIUM
LOW
124c
FIRST HALF
MIDDLE
SECOND HALF
TIME
(d)
ACTIVITY LEVEL
HIGH
MEDIUM
LOW
124d
FIRST HALF
MIDDLE
SECOND HALF
TIME

FIG. 9

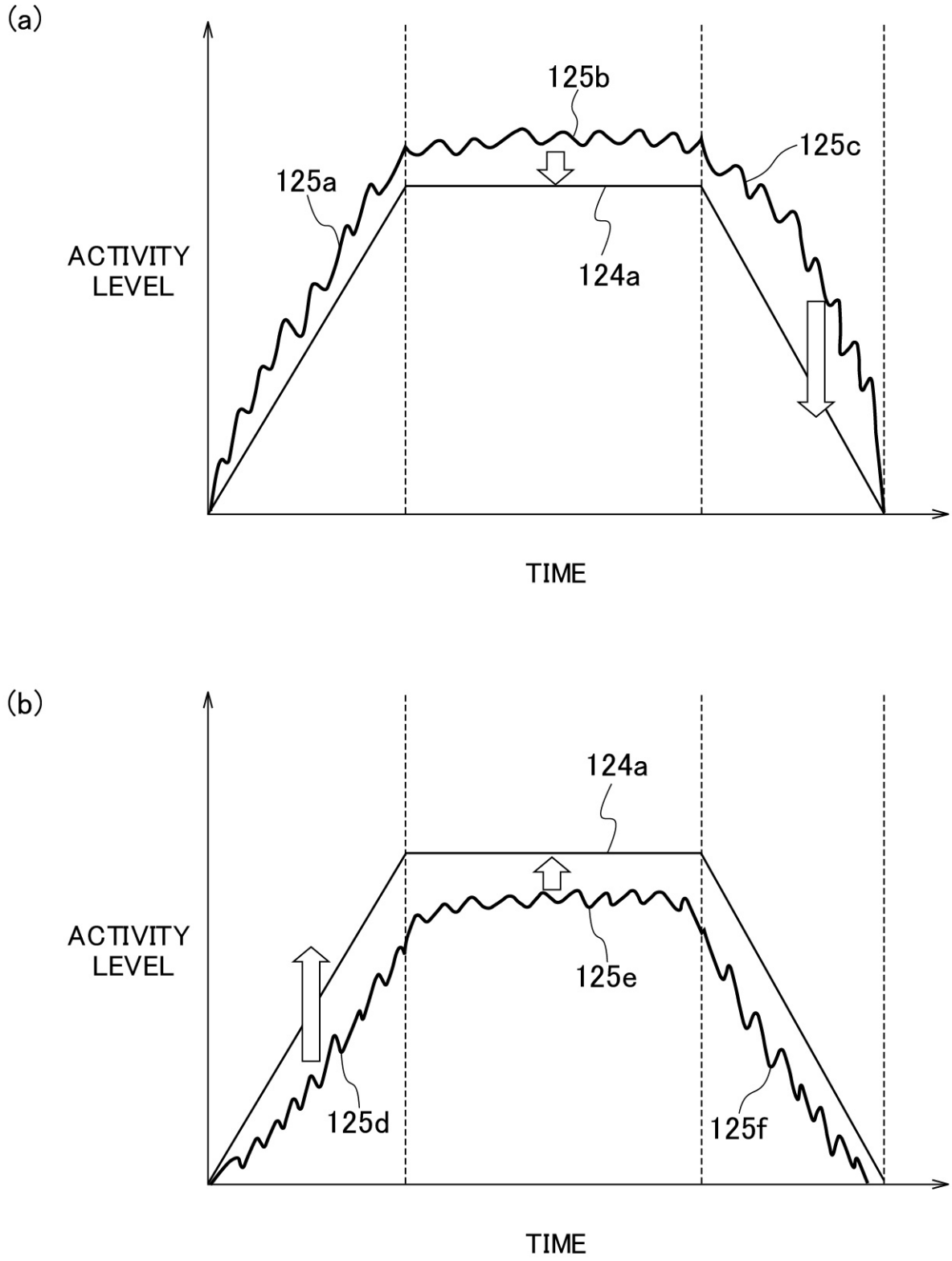

(a)
125b
125c
125a
ACTIVITY LEVEL
124a
TIME
(b)
124a
ACTIVITY LEVEL
125e
125d
125f
TIME

FIG. 10

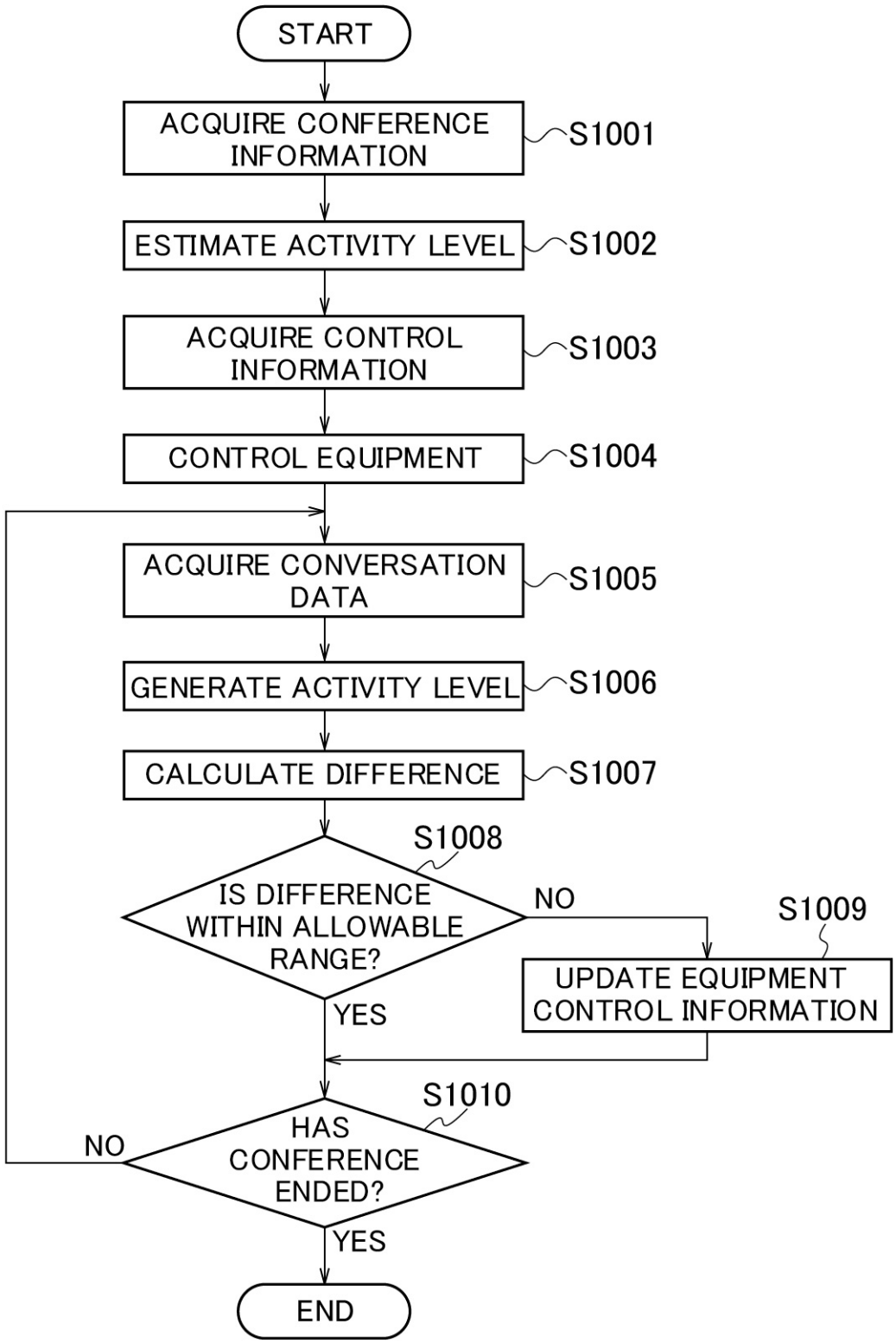
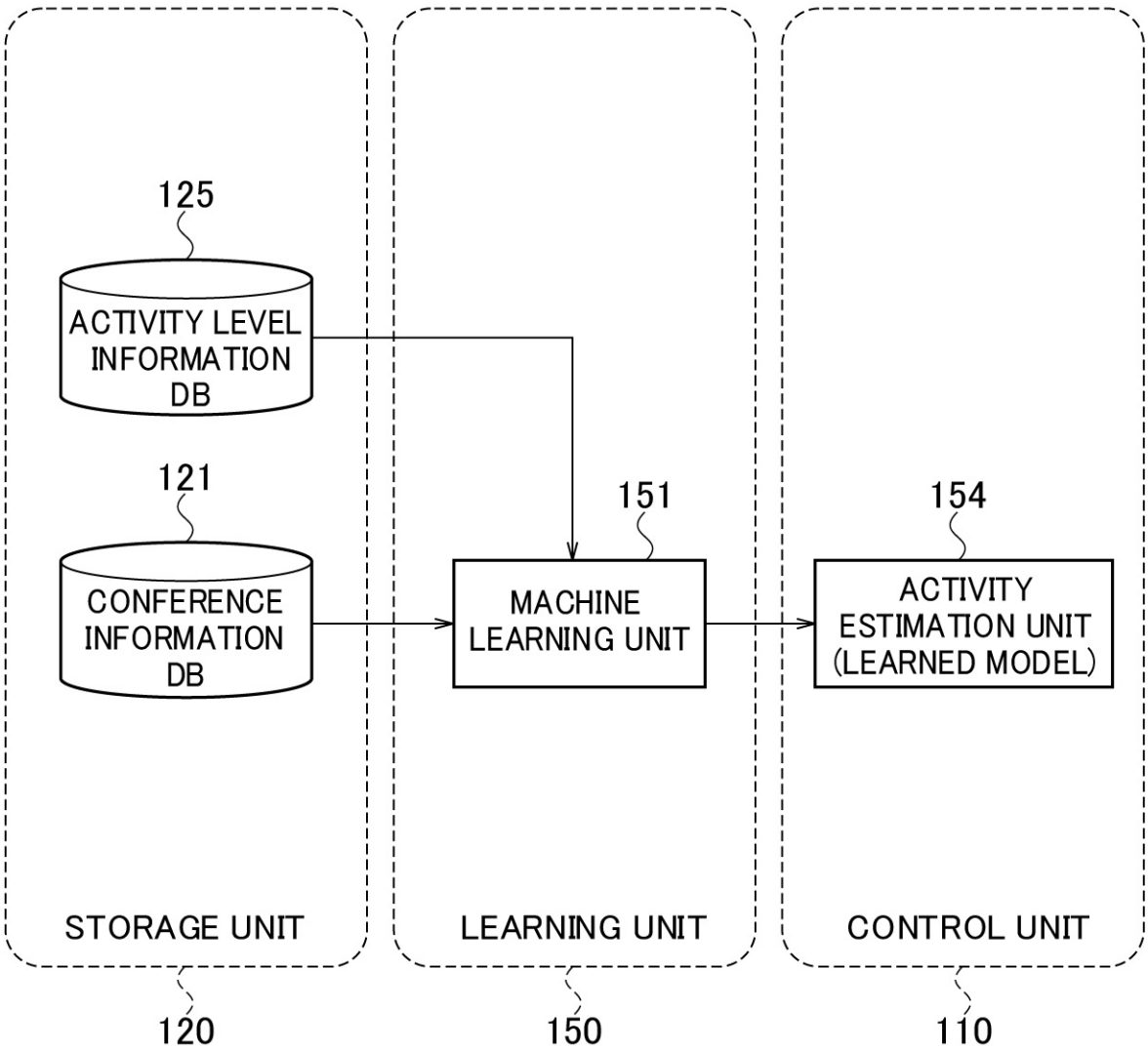

START
ACQUIRE CONFERENCE INFORMATION
S1001
ESTIMATE ACTIVITY LEVEL
S1002
ACQUIRE CONTROL INFORMATION
S1003
CONTROL EQUIPMENT
S1004
ACQUIRE CONVERSATION DATA
S1005
GENERATE ACTIVITY LEVEL
S1006
CALCULATE DIFFERENCE
S1007
S1008
IS DIFFERENCE WITHIN ALLOWABLE RANGE?
NO
S1009
UPDATE EQUIPMENT CONTROL INFORMATION
YES
S1010
HAS CONFERENCE ENDED?
NO
YES
END

FIG. 11


125
ACTIVITY LEVEL INFORMATION DB
121
CONFERENCE INFORMATION DB
151
MACHINE LEARNING UNIT
154
ACTIVITY ESTIMATION UNIT (LEARNED MODEL)
STORAGE UNIT
LEARNING UNIT
CONTROL UNIT
120
150
110