FIG.1

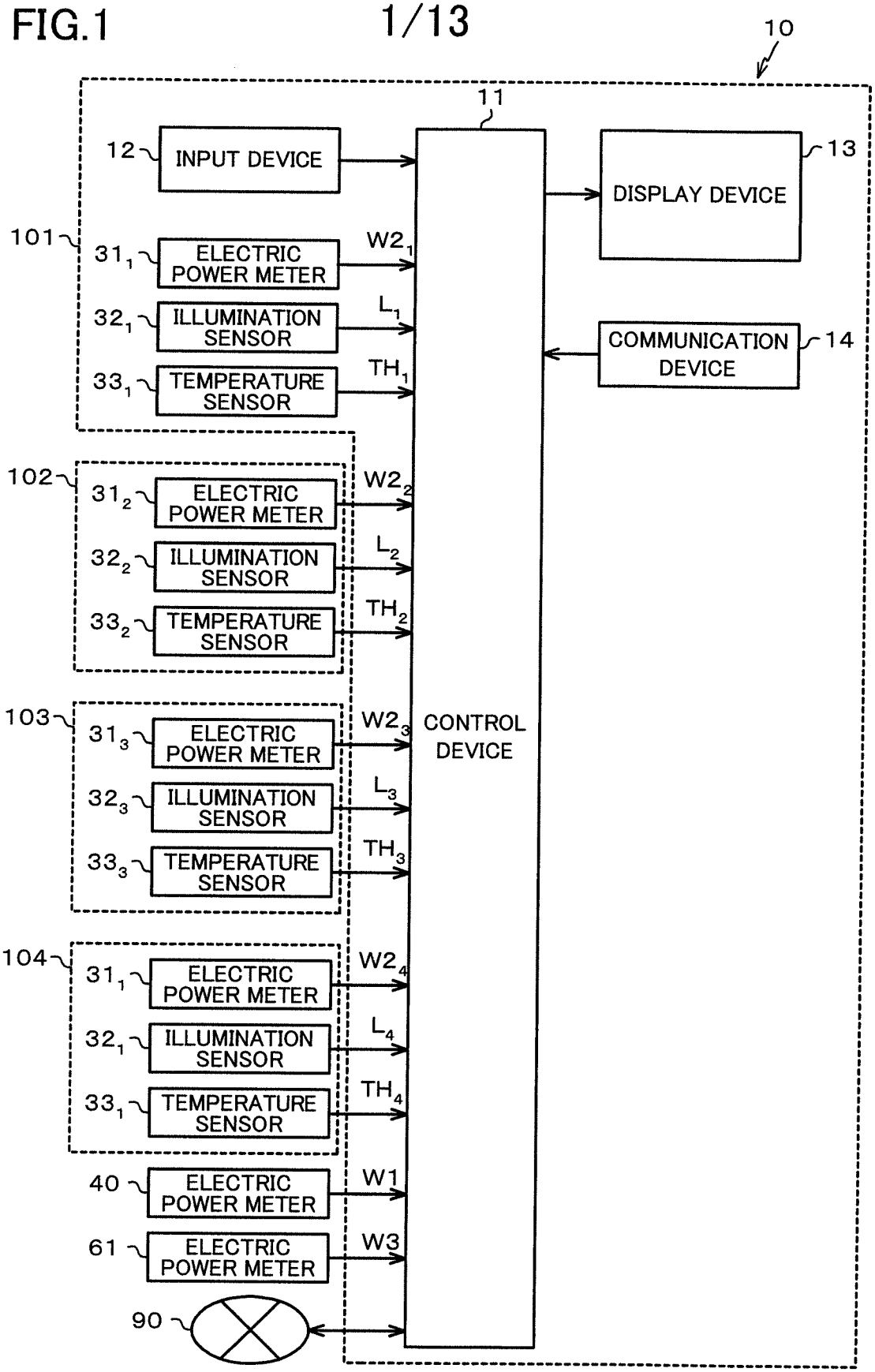

10
11
12
INPUT DEVICE
DISPLAY DEVICE
13
101
31 1
ELECTRIC POWER METER
W2 1
32 1
ILLUMINATION SENSOR
L 1
COMMUNICATION DEVICE
14
33 1
TEMPERATURE SENSOR
TH 1
102
31 2
ELECTRIC POWER METER
W2 2
32 2
ILLUMINATION SENSOR
L 2
33 2
TEMPERATURE SENSOR
TH 2
103
31 3
ELECTRIC POWER METER
W2 3
CONTROL DEVICE
32 3
ILLUMINATION SENSOR
L 3
33 3
TEMPERATURE SENSOR
TH 3
104
31 1
ELECTRIC POWER METER
W2 4
32 1
ILLUMINATION SENSOR
L 4
33 1
TEMPERATURE SENSOR
TH 4
40
ELECTRIC POWER METER
W1
61
ELECTRIC POWER METER
W3
90

FIG.2

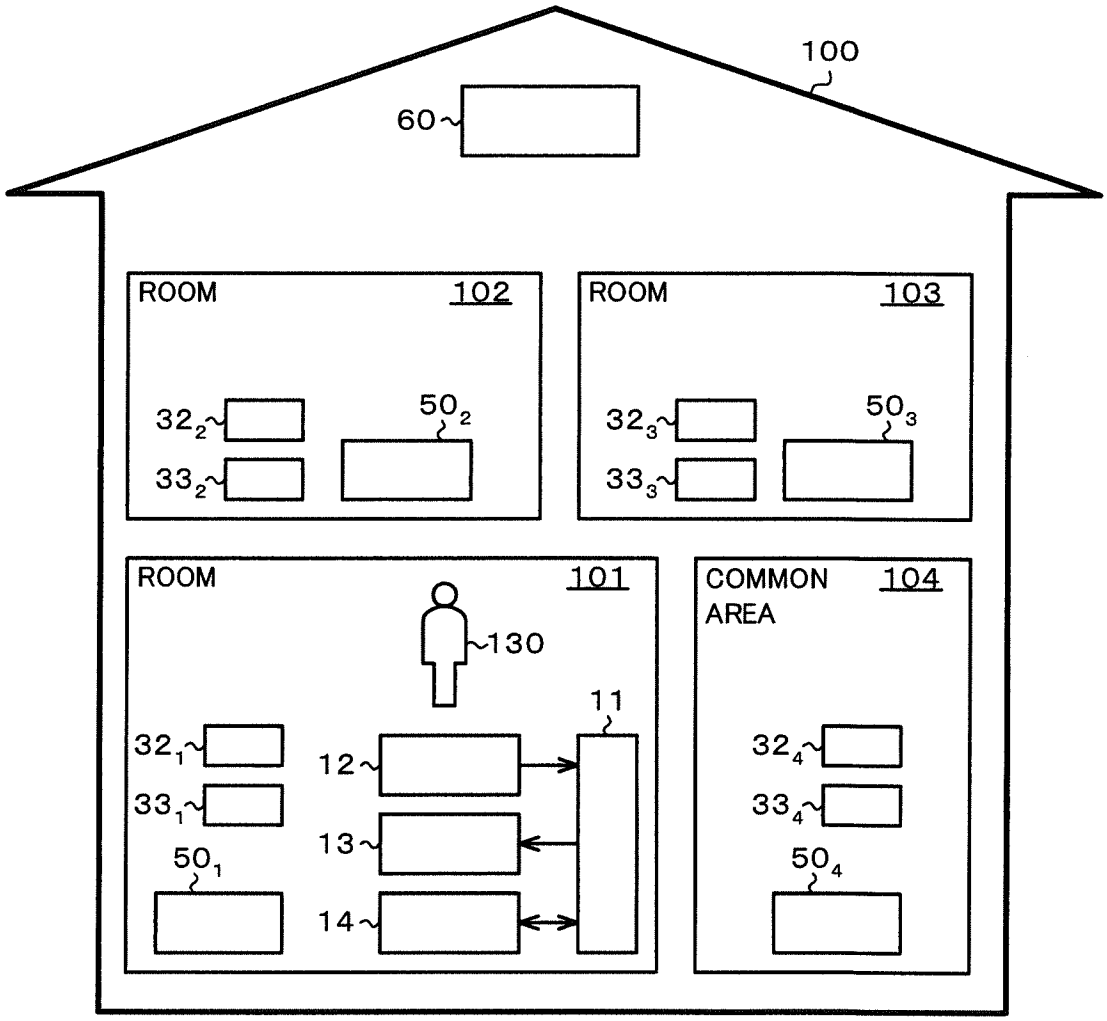

100
60
ROOM 102
32_2
33_2
50_2
ROOM 103
32_3
33_3
50_3
ROOM 101
130
11
32_1
33_1
50_1
12
13
14
COMMON AREA 104
32_4
33_4
50_4

FIG.3

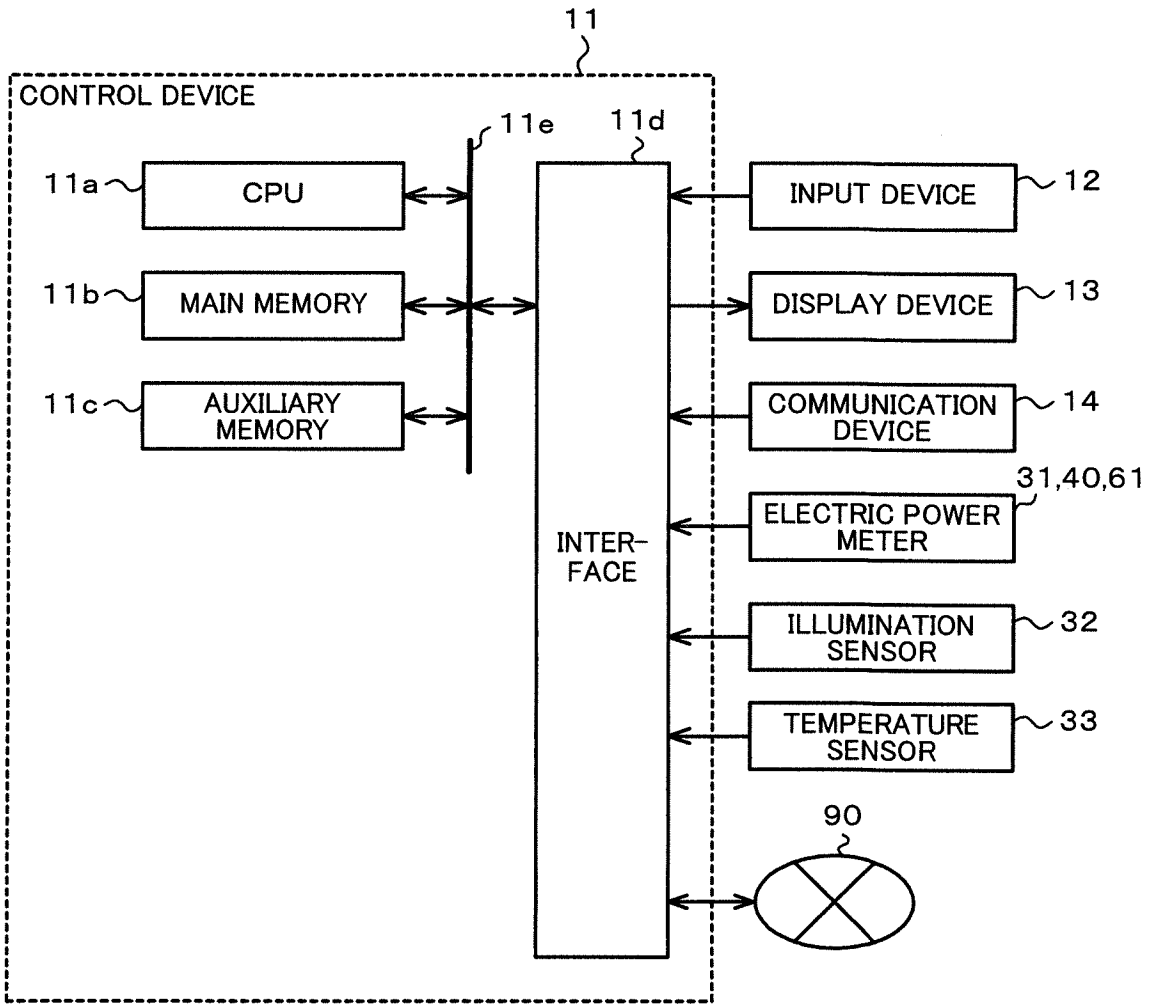

11
CONTROL DEVICE
11e
11d
11a
CPU
11b
MAIN MEMORY
11c
AUXILIARY MEMORY
INTER-FACE
INPUT DEVICE
12
DISPLAY DEVICE
13
COMMUNICATION DEVICE
14
31,40,61
ELECTRIC POWER METER
ILLUMINATION SENSOR
32
TEMPERATURE SENSOR
33
90

FIG.4

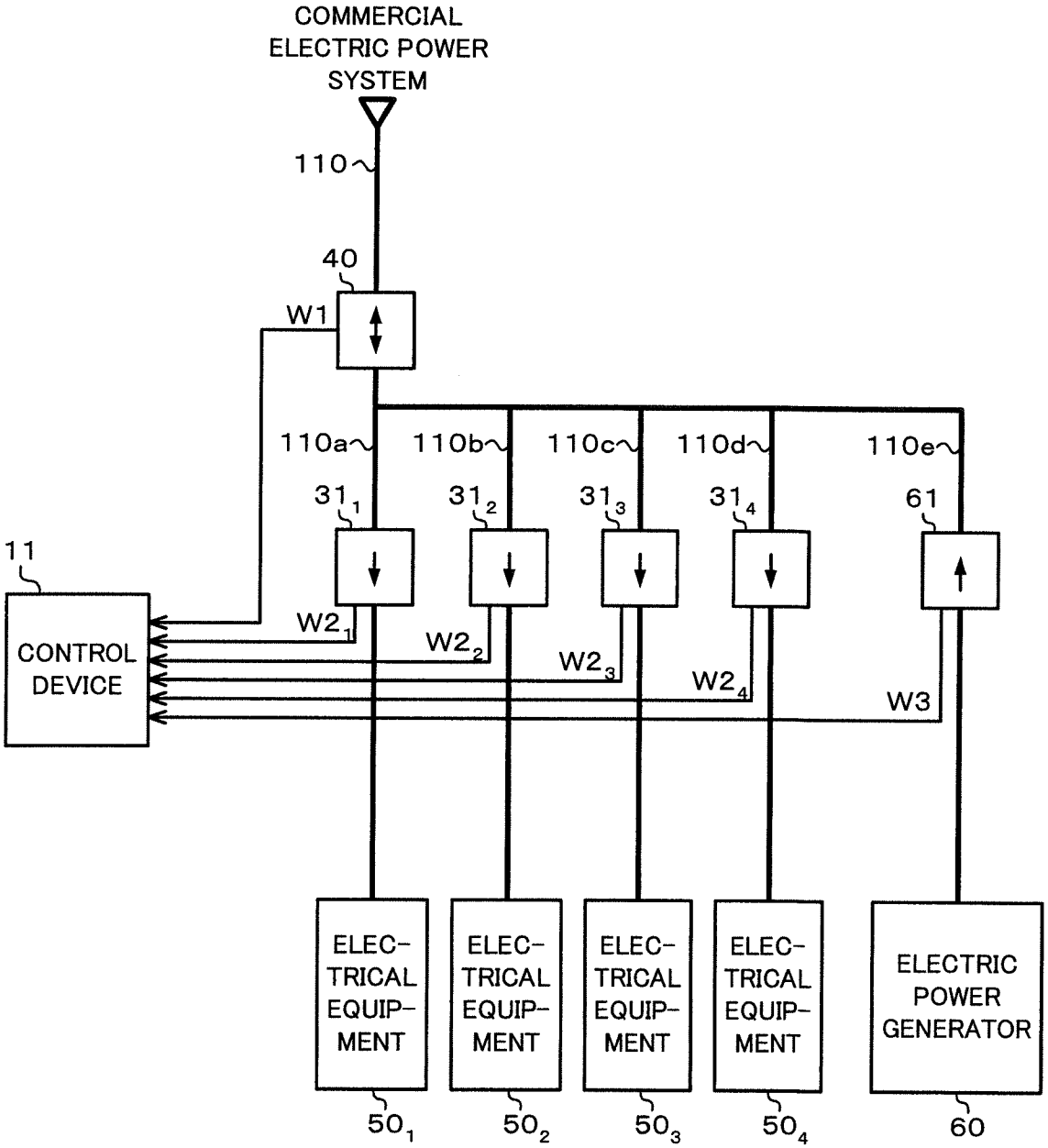

COMMERCIAL ELECTRIC POWER SYSTEM
110
40
W1
110a
110b
110c
110d
110e
31 1
31 2
31 3
31 4
61
11
CONTROL DEVICE
W2 1
W2 2
W2 3
W2 4
W3
ELEC-TRICAL EQUIP-MENT
ELEC-TRICAL EQUIP-MENT
ELEC-TRICAL EQUIP-MENT
ELEC-TRICAL EQUIP-MENT
ELECTRIC POWER GENERATOR
50 1
50 2
50 3
50 4
60

FIG.5

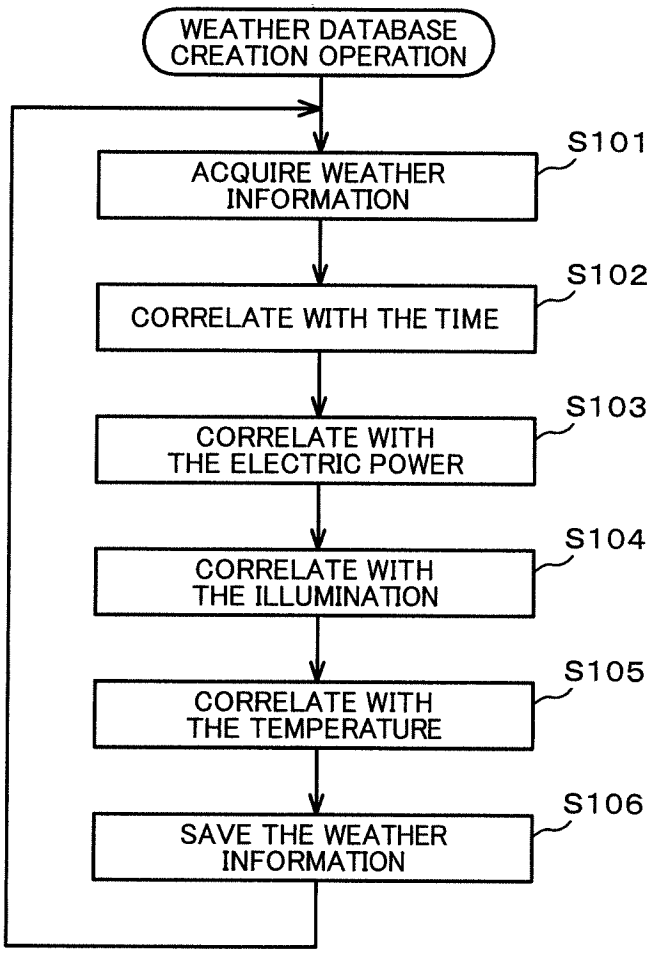

WEATHER DATABASE CREATION OPERATION
ACQUIRE WEATHER INFORMATION
S101
CORRELATE WITH THE TIME
S102
CORRELATE WITH THE ELECTRIC POWER
S103
CORRELATE WITH THE ILLUMINATION
S104
CORRELATE WITH THE TEMPERATURE
S105
SAVE THE WEATHER INFORMATION
S106

FIG.6

WR1									
Dy	2012								
Dm	10								
Dd	1					2			
Dt	12:00	13:00	14:00	15:00	16:00	0:00	1:00	2:00	3:00
P1	P1(1)	P1(2)	P1(3)	P1(4)	P1(5)	P1(1)	P1(2)	P1(3)	P1(4)
$P2_1$	$P2_1(1)$	$P2_1(2)$	$P2_1(3)$	$P2_1(4)$	$P2_1(5)$	$P2_1(1)$	$P2_1(2)$	$P2_1(3)$	$P2_1(4)$
$P2_2$	$P2_2(1)$	$P2_2(2)$	$P2_2(3)$	$P2_2(4)$	$P2_2(5)$	$P2_2(1)$	$P2_2(2)$	$P2_2(3)$	$P2_2(4)$
$P2_3$	$P2_3(1)$	$P2_3(2)$	$P2_3(3)$	$P2_3(4)$	$P2_3(5)$	$P2_3(1)$	$P2_3(2)$	$P2_3(3)$	$P2_3(4)$
$P2_4$	$P2_4(1)$	$P2_4(2)$	$P2_4(3)$	$P2_4(4)$	$P2_4(5)$	$P2_4(1)$	$P2_4(2)$	$P2_4(3)$	$P2_4(4)$
P3	P3(1)	P3(2)	P3(3)	P3(4)	P3(5)	P3(1)	P3(2)	P3(3)	P3(4)
LX1	LX1(1)	LX1(2)	LX1(3)	LX1(4)	LX1(5)	LX1(1)	LX1(2)	LX1(3)	LX1(4)
LX2	LX2(1)	LX2(2)	LX2(3)	LX2(4)	LX2(5)	LX2(1)	LX2(2)	LX2(3)	LX2(4)
LX3	LX3(1)	LX3(2)	LX3(3)	LX3(4)	LX3(5)	LX3(1)	LX3(2)	LX3(3)	LX3(4)
LX4	LX4(1)	LX4(2)	LX4(3)	LX4(4)	LX4(5)	LX4(1)	LX4(2)	LX4(3)	LX4(4)
TH1	TH1(1)	TH1(2)	TH1(3)	TH1(4)	TH1(5)	TH1(1)	TH1(2)	TH1(3)	TH1(4)
TH2	TH2(1)	TH2(2)	TH2(3)	TH2(4)	TH2(5)	TH2(1)	TH2(2)	TH2(3)	TH2(4)
TH3	TH3(1)	TH3(2)	TH3(3)	TH3(4)	TH3(5)	TH3(1)	TH3(2)	TH3(3)	TH3(4)
TH4	TH4(1)	TH4(2)	TH4(3)	TH4(4)	TH4(5)	TH4(1)	TH4(2)	TH4(3)	TH4(4)

FIG.7

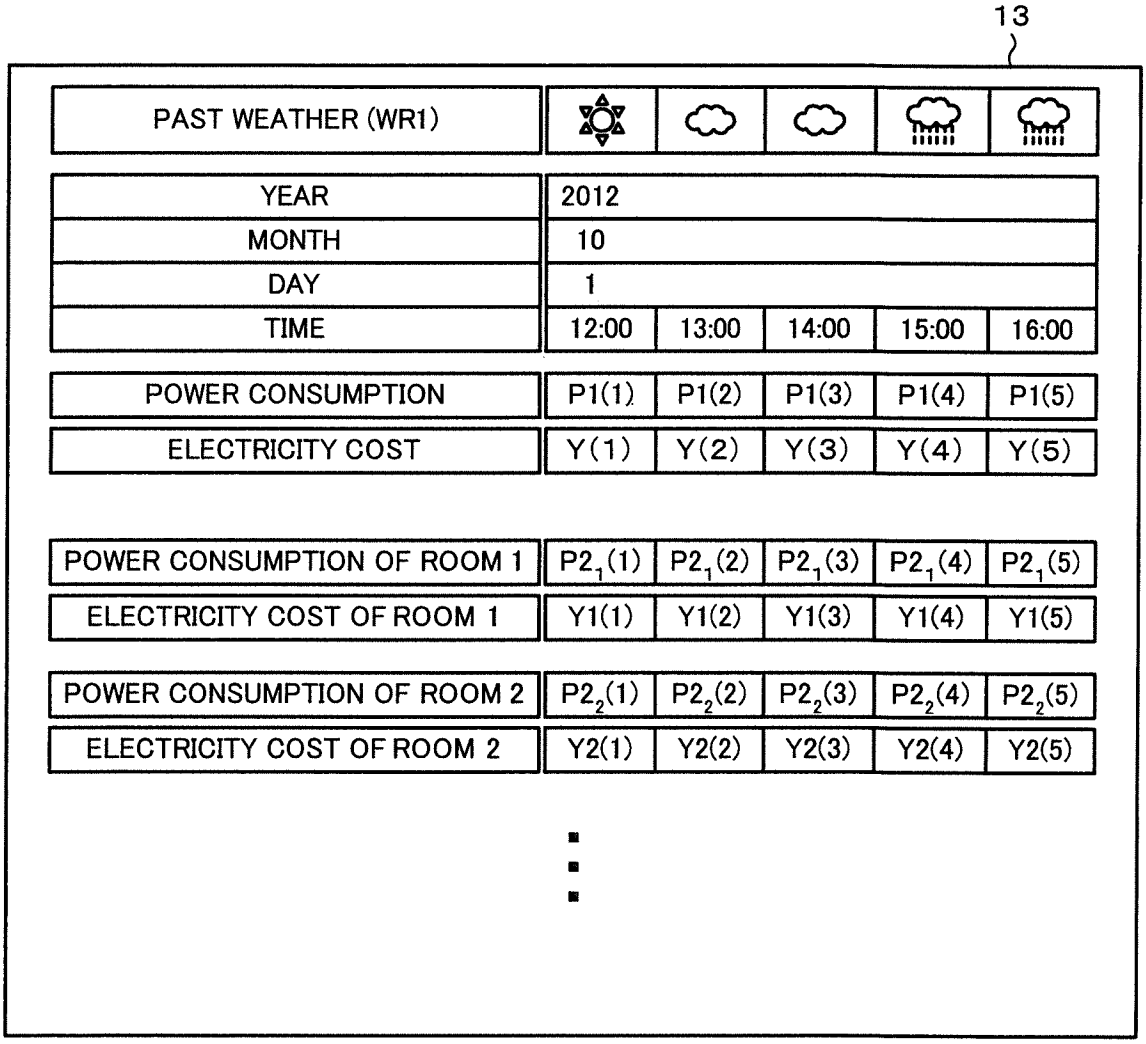

13
PAST WEATHER (WR1)
YEAR
2012
MONTH
10
DAY
1
TIME
12:00
13:00
14:00
15:00
16:00
POWER CONSUMPTION
P1(1)
P1(2)
P1(3)
P1(4)
P1(5)
ELECTRICITY COST
Y(1)
Y(2)
Y(3)
Y(4)
Y(5)
POWER CONSUMPTION OF ROOM 1
P2$_1$(1)
P2$_1$(2)
P2$_1$(3)
P2$_1$(4)
P2$_1$(5)
ELECTRICITY COST OF ROOM 1
Y1(1)
Y1(2)
Y1(3)
Y1(4)
Y1(5)
POWER CONSUMPTION OF ROOM 2
P2$_2$(1)
P2$_2$(2)
P2$_2$(3)
P2$_2$(4)
P2$_2$(5)
ELECTRICITY COST OF ROOM 2
Y2(1)
Y2(2)
Y2(3)
Y2(4)
Y2(5)

FIG.8

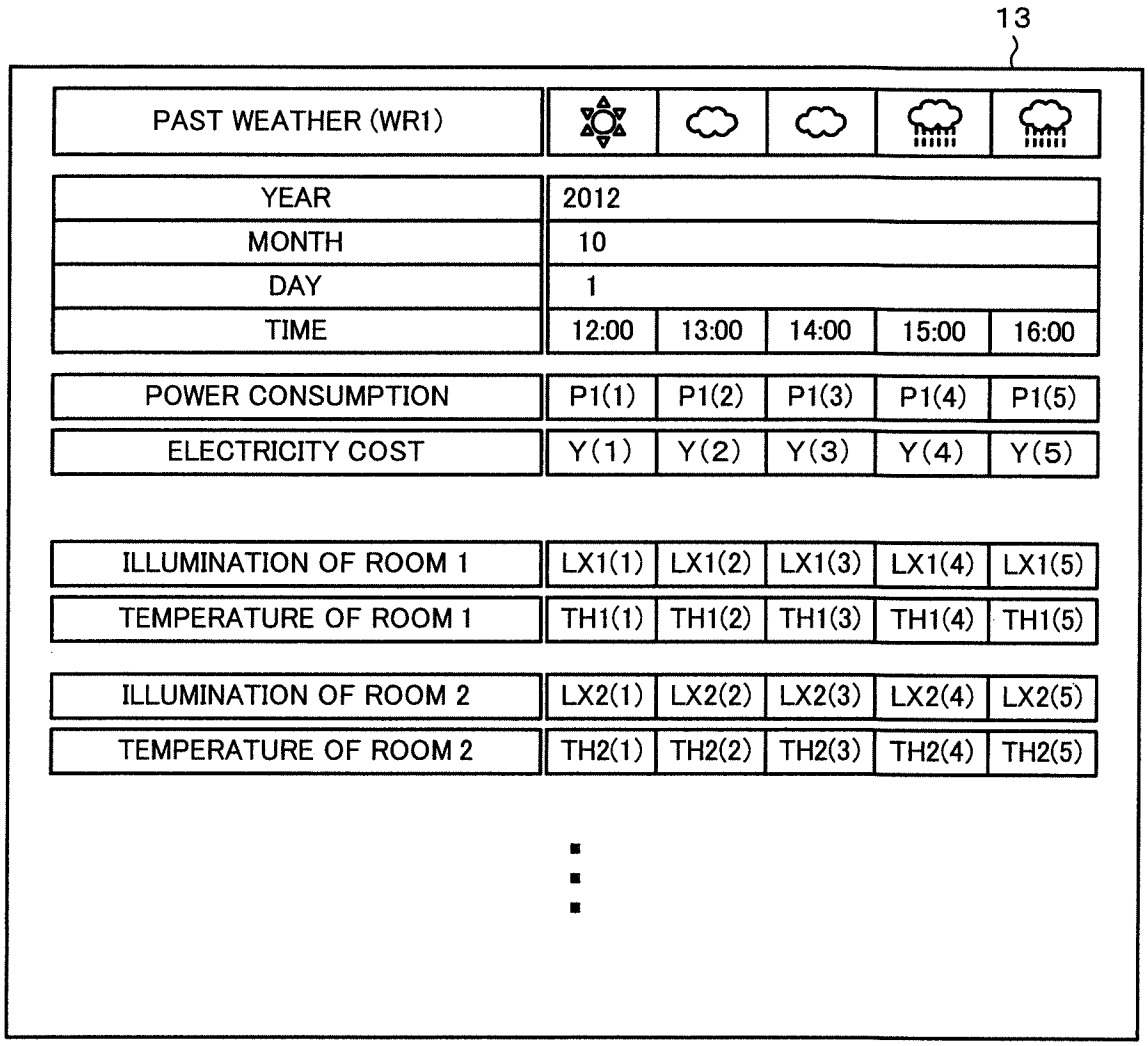

13
PAST WEATHER (WR1)
YEAR
2012
MONTH
10
DAY
1
TIME
12:00
13:00
14:00
15:00
16:00
POWER CONSUMPTION
P1(1)
P1(2)
P1(3)
P1(4)
P1(5)
ELECTRICITY COST
Y(1)
Y(2)
Y(3)
Y(4)
Y(5)
ILLUMINATION OF ROOM 1
LX1(1)
LX1(2)
LX1(3)
LX1(4)
LX1(5)
TEMPERATURE OF ROOM 1
TH1(1)
TH1(2)
TH1(3)
TH1(4)
TH1(5)
ILLUMINATION OF ROOM 2
LX2(1)
LX2(2)
LX2(3)
LX2(4)
LX2(5)
TEMPERATURE OF ROOM 2
TH2(1)
TH2(2)
TH2(3)
TH2(4)
TH2(5)

FIG.9

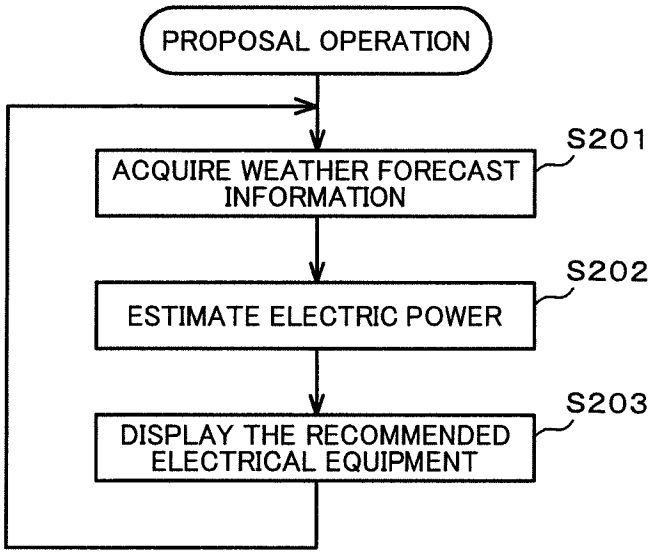

PROPOSAL OPERATION
S201
ACQUIRE WEATHER FORECAST INFORMATION
S202
ESTIMATE ELECTRIC POWER
S203
DISPLAY THE RECOMMENDED ELECTRICAL EQUIPMENT

FIG.10

WR2	☼
$P2_1$	$P2_1$(AVG)
$P2_2$	$P2_2$(AVG)
$P2_3$	$P2_3$(AVG)
$P2_4$	$P2_4$(AVG)

FIG.11

TIME	1 HOUR LATER	2 HOURS LATER	3 HOURS LATER	...
WR2				...
$P2_1$	$P2_1$(AVG)	$P2_1$(AVG)	$P2_1$(AVG)	...
$P2_2$	$P2_2$(AVG)	$P2_2$(AVG)	$P2_2$(AVG)	...
$P2_3$	$P2_3$(AVG)	$P2_3$(AVG)	$P2_3$(AVG)	...
$P2_4$	$P2_4$(AVG)	$P2_4$(AVG)	$P2_4$(AVG)	...

FIG.12

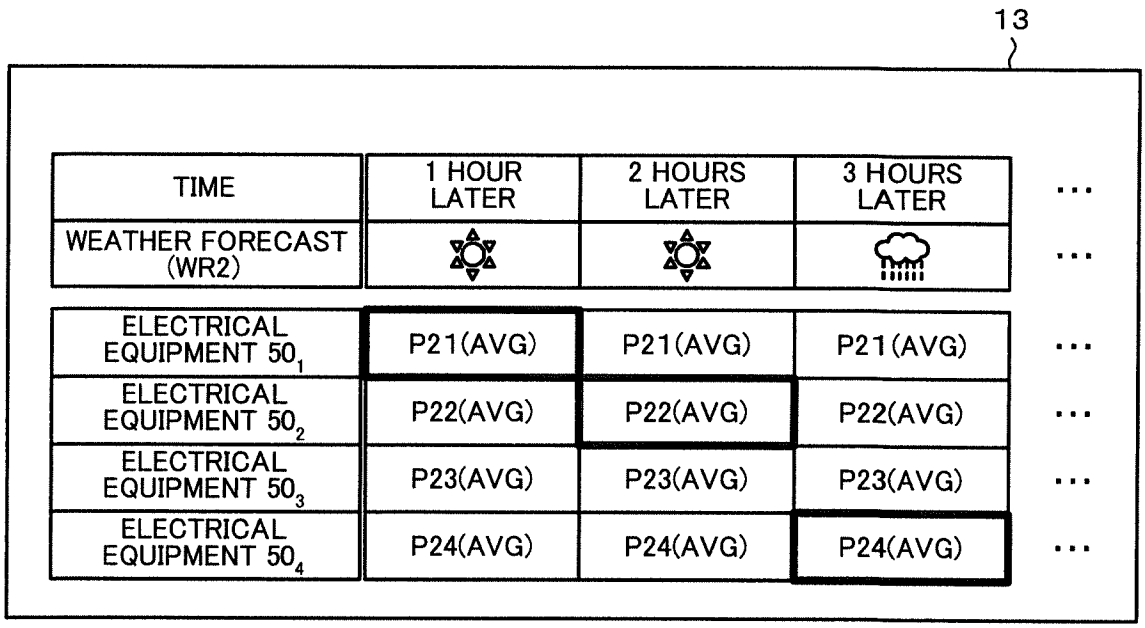
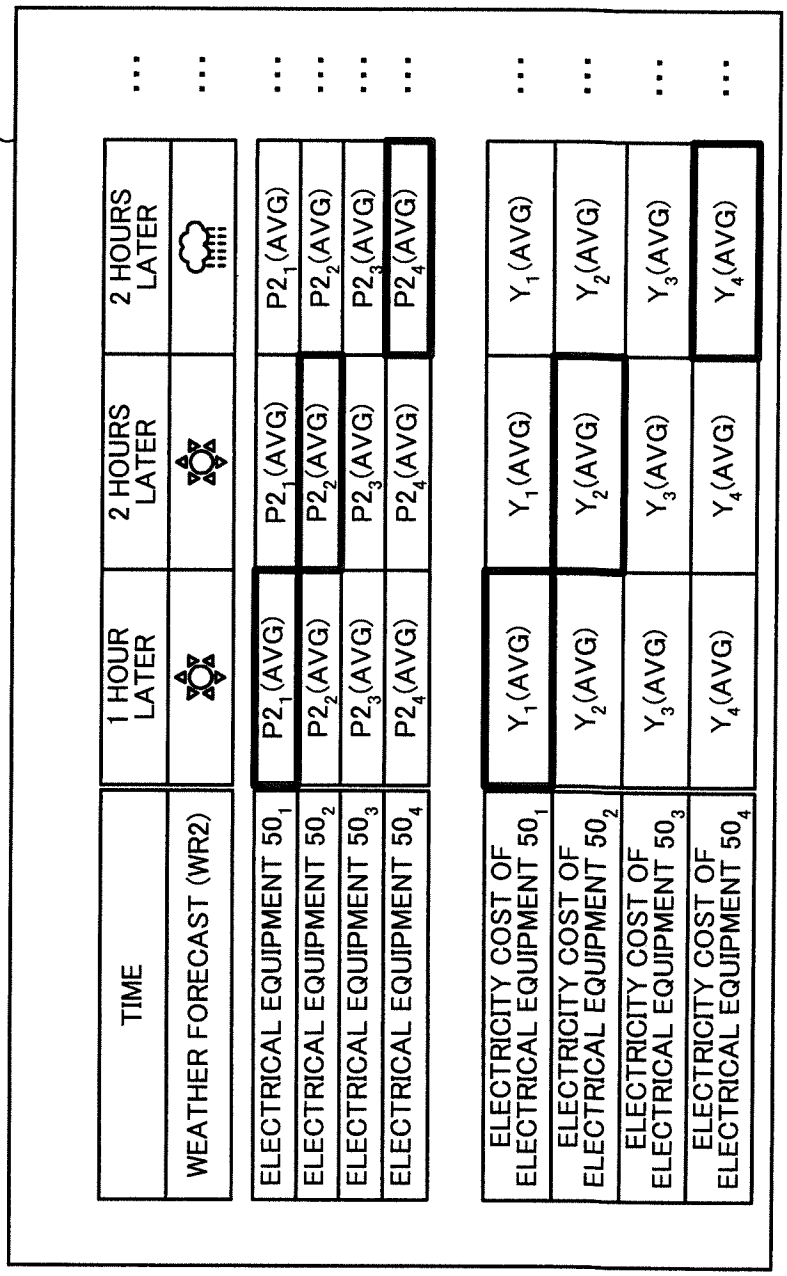

13
TIME
1 HOUR LATER
2 HOURS LATER
3 HOURS LATER
WEATHER FORECAST (WR2)
ELECTRICAL EQUIPMENT 50$_1$
P21(AVG)
P21(AVG)
P21(AVG)
ELECTRICAL EQUIPMENT 50$_2$
P22(AVG)
P22(AVG)
P22(AVG)
ELECTRICAL EQUIPMENT 50$_3$
P23(AVG)
P23(AVG)
P23(AVG)
ELECTRICAL EQUIPMENT 50$_4$
P24(AVG)
P24(AVG)
P24(AVG)

FIG.13


13
TIME
1 HOUR LATER
2 HOURS LATER
2 HOURS LATER
WEATHER FORECAST (WR2)
ELECTRICAL EQUIPMENT 50$_1$
ELECTRICAL EQUIPMENT 50$_2$
ELECTRICAL EQUIPMENT 50$_3$
ELECTRICAL EQUIPMENT 50$_4$
P2$_1$(AVG)
P2$_2$(AVG)
P2$_3$(AVG)
P2$_4$(AVG)
ELECTRICITY COST OF ELECTRICAL EQUIPMENT 50$_1$
ELECTRICITY COST OF ELECTRICAL EQUIPMENT 50$_2$
ELECTRICITY COST OF ELECTRICAL EQUIPMENT 50$_3$
ELECTRICITY COST OF ELECTRICAL EQUIPMENT 50$_4$
Y$_1$(AVG)
Y$_2$(AVG)
Y$_3$(AVG)
Y$_4$(AVG)