FIG. 1

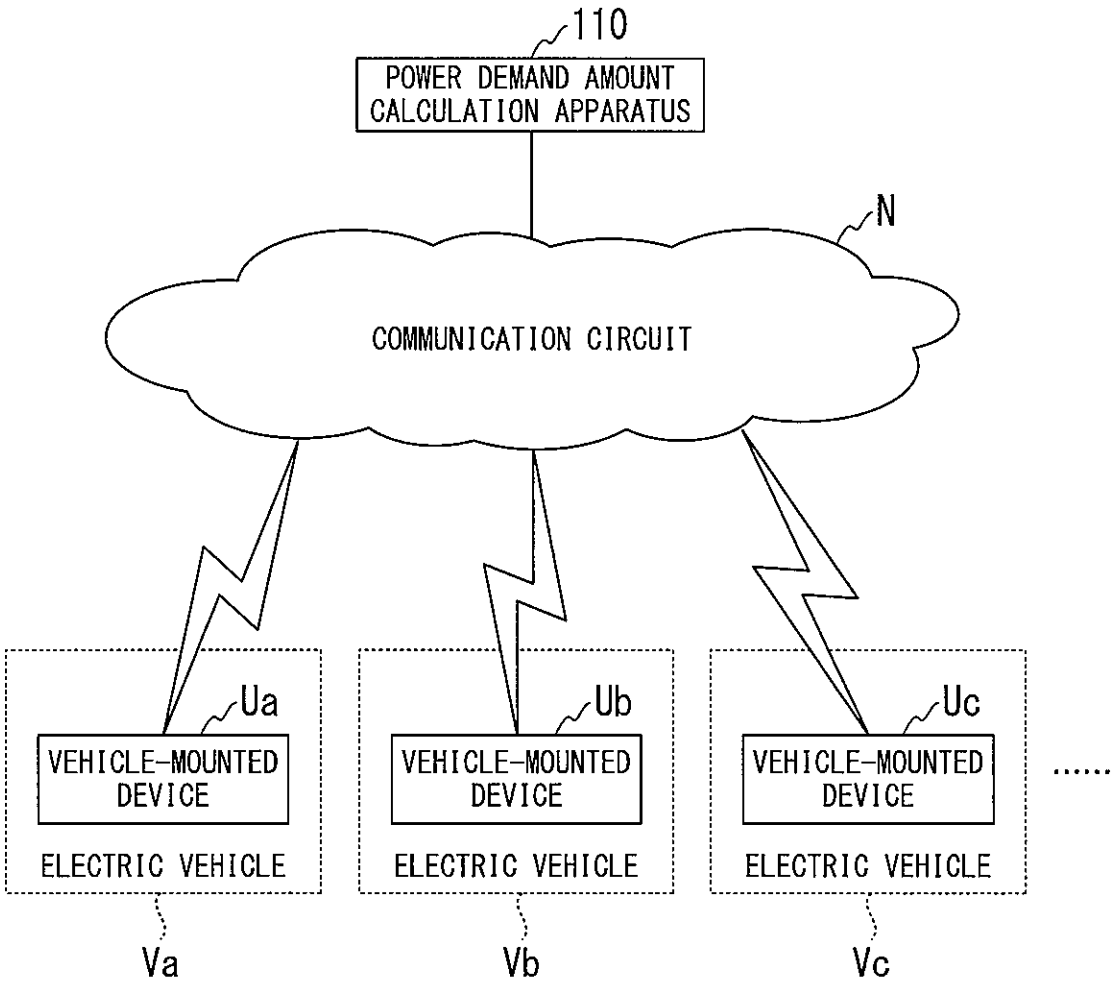

100
110
POWER DEMAND AMOUNT CALCULATION APPARATUS
N
COMMUNICATION CIRCUIT
Ua
VEHICLE-MOUNTED DEVICE
ELECTRIC VEHICLE
Va
Ub
VEHICLE-MOUNTED DEVICE
ELECTRIC VEHICLE
Vb
Uc
VEHICLE-MOUNTED DEVICE
ELECTRIC VEHICLE
Vc
.....

FIG. 2

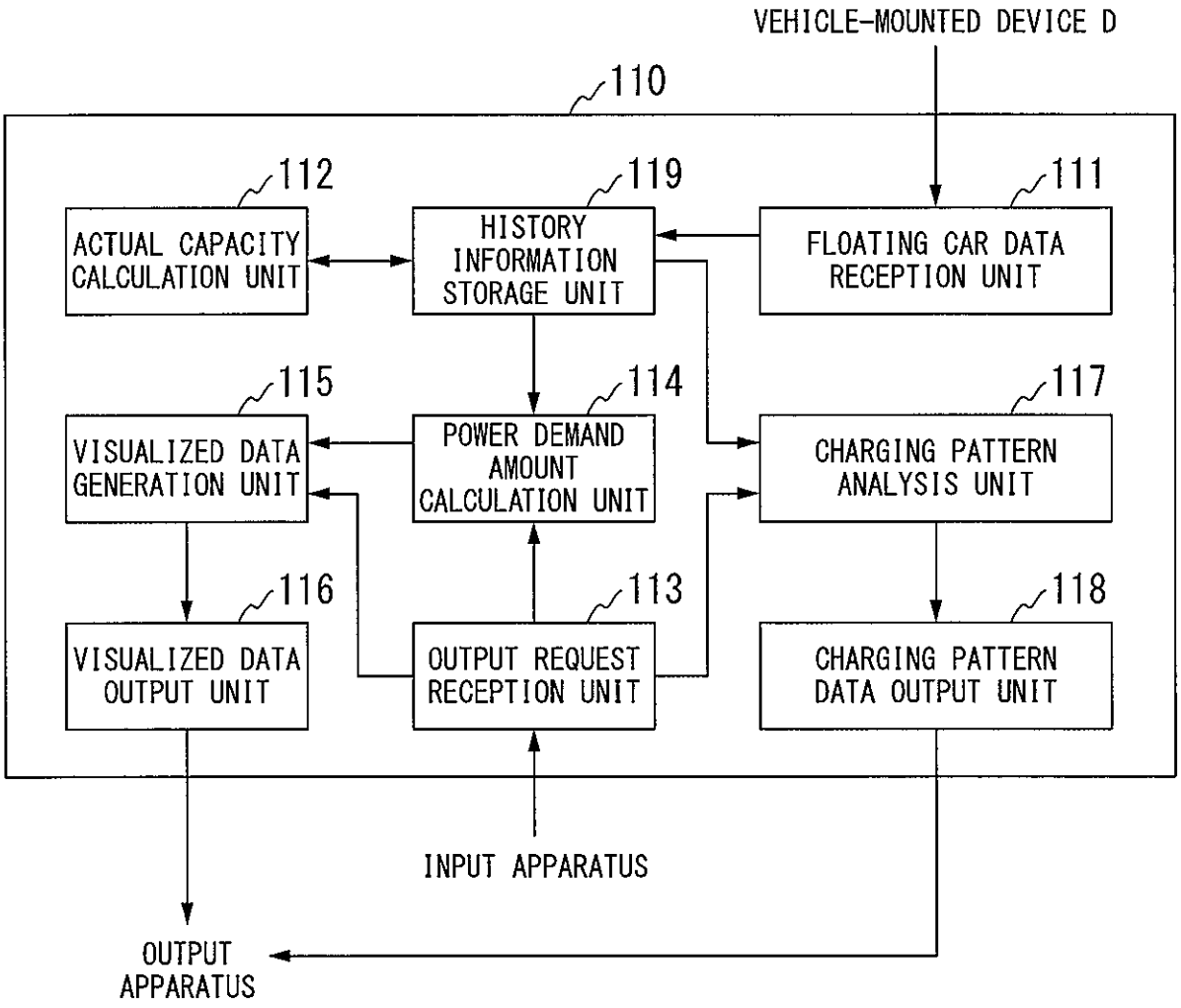

VEHICLE-MOUNTED DEVICE D
110
112
ACTUAL CAPACITY CALCULATION UNIT
119
HISTORY INFORMATION STORAGE UNIT
111
FLOATING CAR DATA RECEPTION UNIT
115
VISUALIZED DATA GENERATION UNIT
114
POWER DEMAND AMOUNT CALCULATION UNIT
117
CHARGING PATTERN ANALYSIS UNIT
116
VISUALIZED DATA OUTPUT UNIT
113
OUTPUT REQUEST RECEPTION UNIT
118
CHARGING PATTERN DATA OUTPUT UNIT
INPUT APPARATUS
OUTPUT APPARATUS

FIG. 3

119

| DATE AND TIME (YEAR/MONTH/DAY /HOUR:MINUTE) | VEHICLE ID | RATED CAPACITY (kWh) | CHARGE LEVEL (%) | ACTUAL CAPACITY (kWh) | IS CHARGING IN PROGRESS? (Yes or No) | POSITION (LATITUDE AND LONGITUDE) | VEHICLE MODEL |
|---|---|---|---|---|---|---|---|
| 2011/10/25/16:15 | V0928 | 16.0 | 50 | 8.0 | No | (X1、Y1) | MODEL A |
| 2011/10/25/16:15 | V0415 | 10.5 | 10 | 1.05 | No | (X2、Y2) | MODEL C |
| 2011/10/25/16:16 | V0707 | 16.0 | 30 | 4.8 | No | (X3、Y3) | MODEL B |
| ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ |
| 2011/10/25/16:25 | V0928 | 16.0 | 40 | 6.4 | No | (X4、Y4) | MODEL A |
| 2011/10/25/16:25 | V0415 | 10.5 | 75 | 7.875 | Yes | (X5、Y5) | MODEL C |
| 2011/10/25/16:26 | V0707 | 16.0 | 25 | 4.0 | No | (X6、Y6) | MODEL B |
| ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ |
| 2011/10/25/16:35 | V0928 | 16.0 | 35 | 5.6 | No | (X7、Y7) | MODEL A |
| 2011/10/25/16:35 | V0415 | 10.5 | 80 | 8.4 | Yes | (X5、Y5) | MODEL C |
| 2011/10/25/16:36 | V0707 | 16.0 | 30 | 4.8 | Yes | (X9、Y9) | MODEL B |
| ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ |

FIG. 4

D10

| D11 | D12 | D13 | D14 | D15 | D16 |
|---|---|---|---|---|---|
| V0928 | 16.0(kWh) | 50(%) | No | (X1、Y1) | MODEL A |

FIG. 5

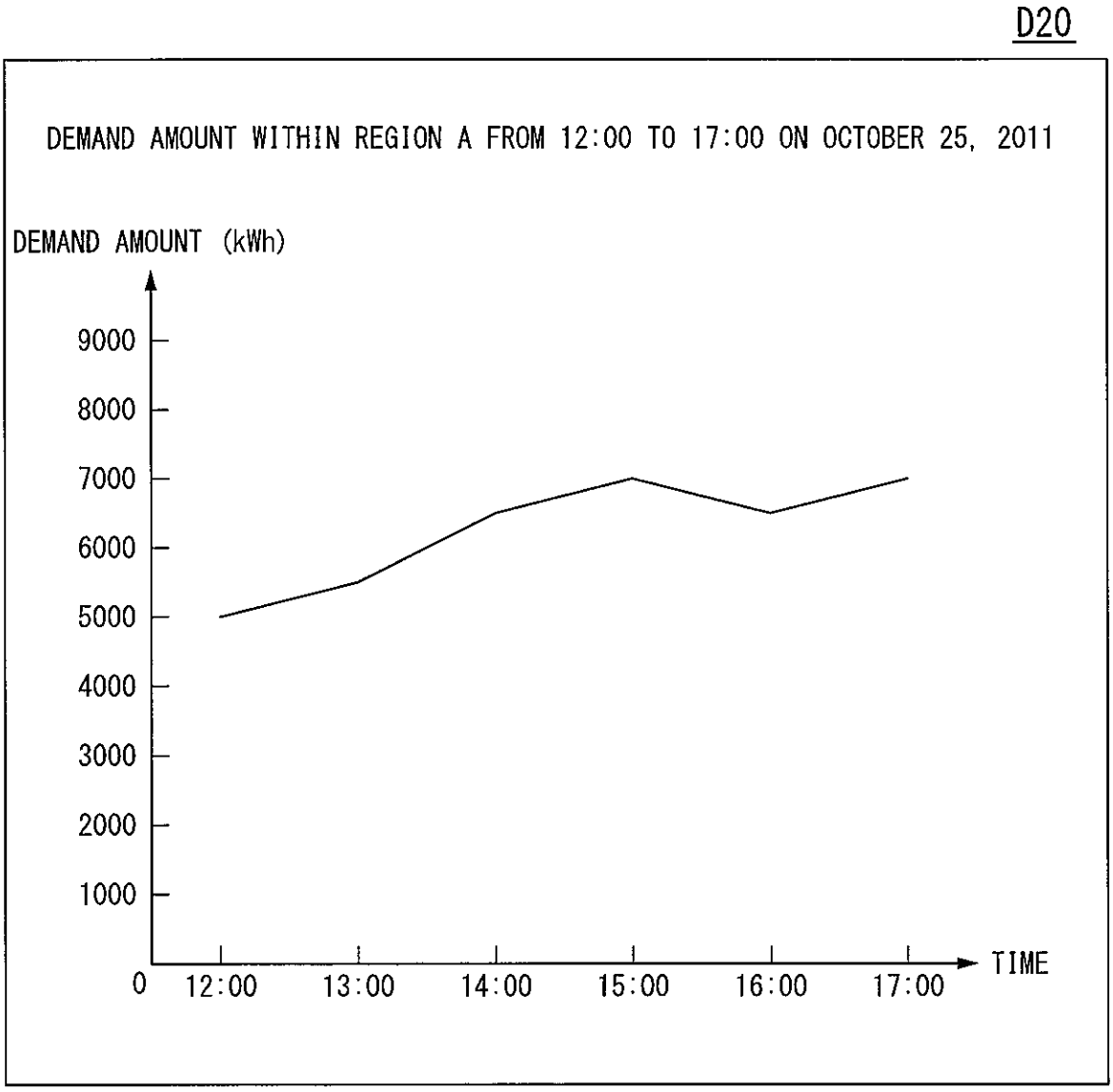


FIG. 6

D30

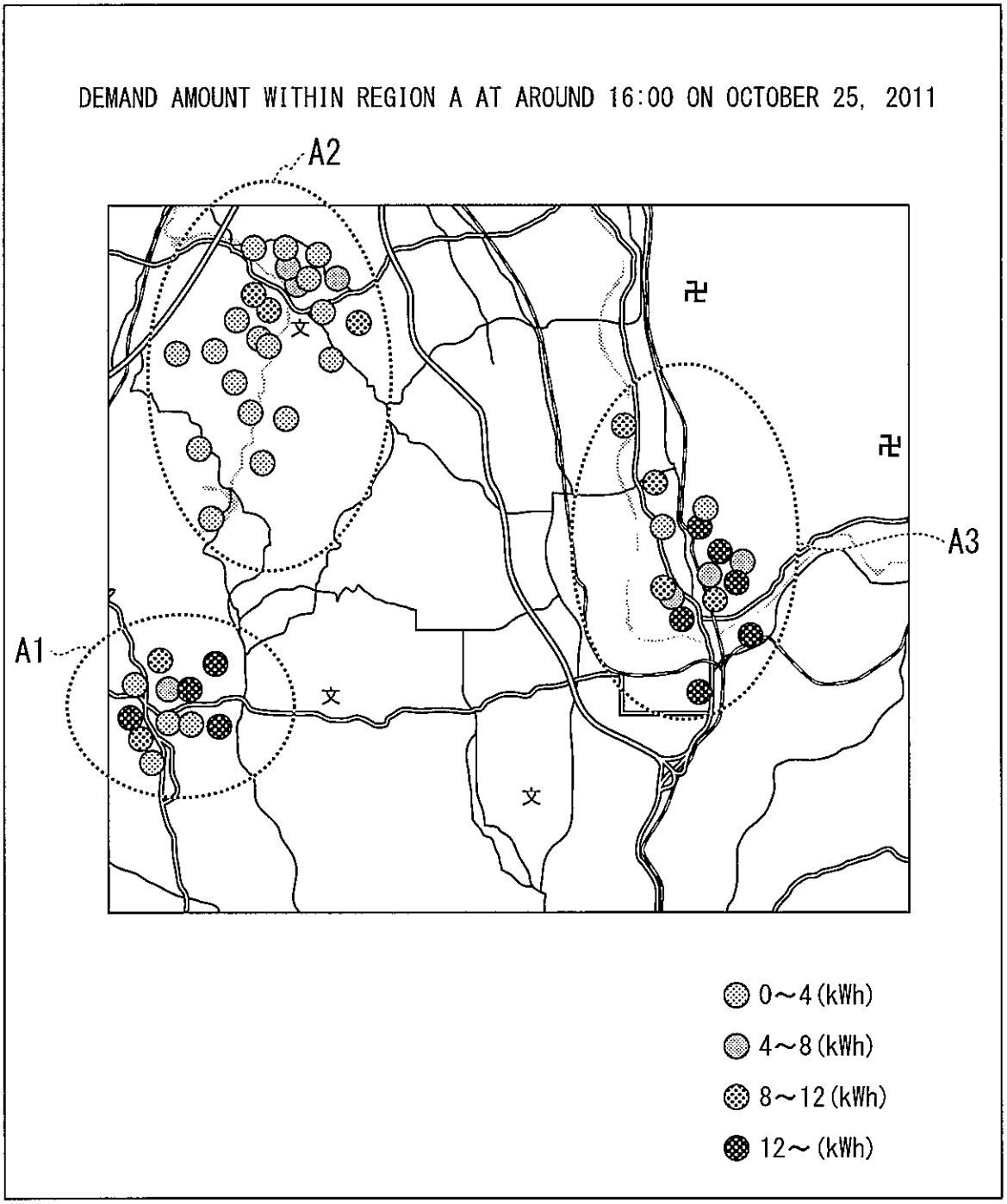
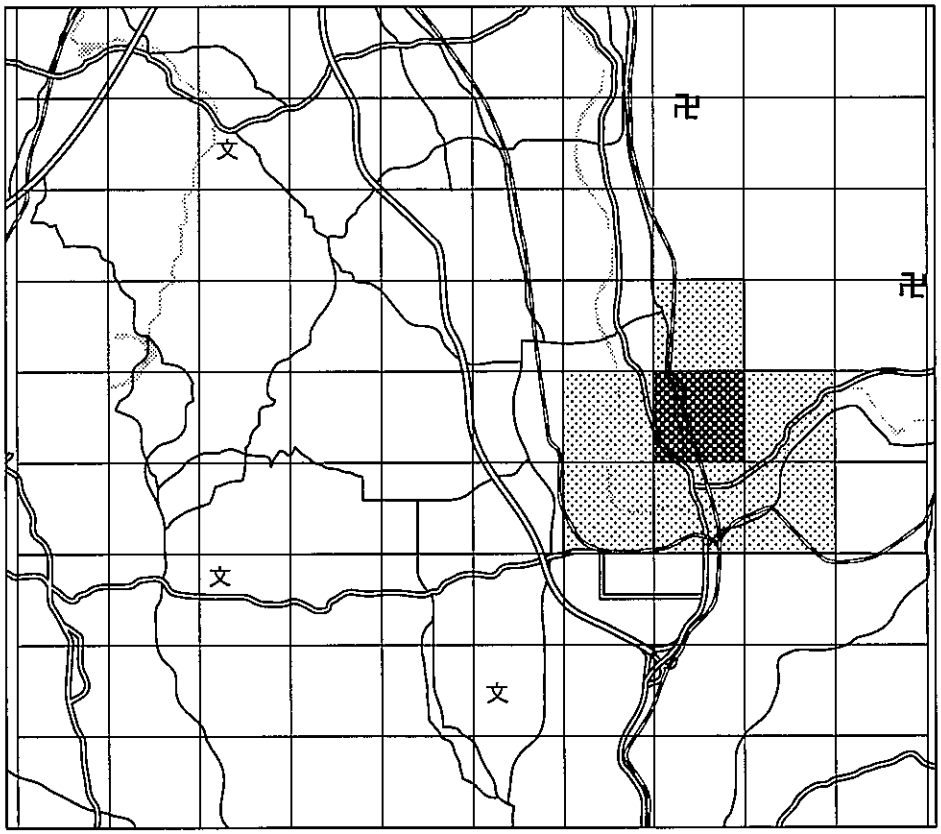

DEMAND AMOUNT WITHIN REGION A AT AROUND 16:00 ON OCTOBER 25, 2011
A1
A2
A3
0～4 (kWh)
4～8 (kWh)
8～12 (kWh)
12～ (kWh)

FIG. 7

D40

DEMAND AMOUNT WITHIN REGION A AT AROUND 16:00 ON OCTOBER 25, 2011



REGION IN WHICH DEMAND IS SMALL

REGION IN WHICH DEMAND IS LARGE

REGION IN WHICH DEMAND IS PARTICULARLY LARGE

FIG. 8

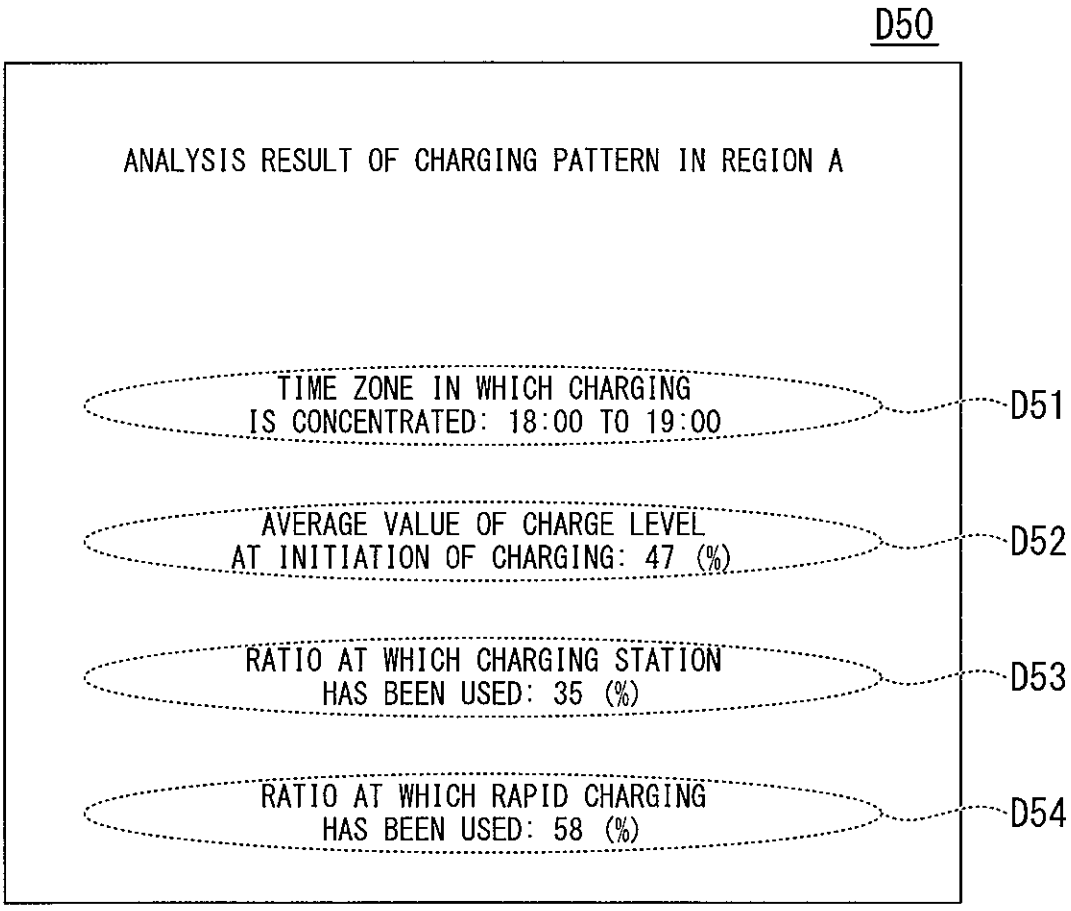

D50
ANALYSIS RESULT OF CHARGING PATTERN IN REGION A
TIME ZONE IN WHICH CHARGING IS CONCENTRATED: 18:00 TO 19:00
D51
AVERAGE VALUE OF CHARGE LEVEL AT INITIATION OF CHARGING: 47 (%)
D52
RATIO AT WHICH CHARGING STATION HAS BEEN USED: 35 (%)
D53
RATIO AT WHICH RAPID CHARGING HAS BEEN USED: 58 (%)
D54

FIG. 9

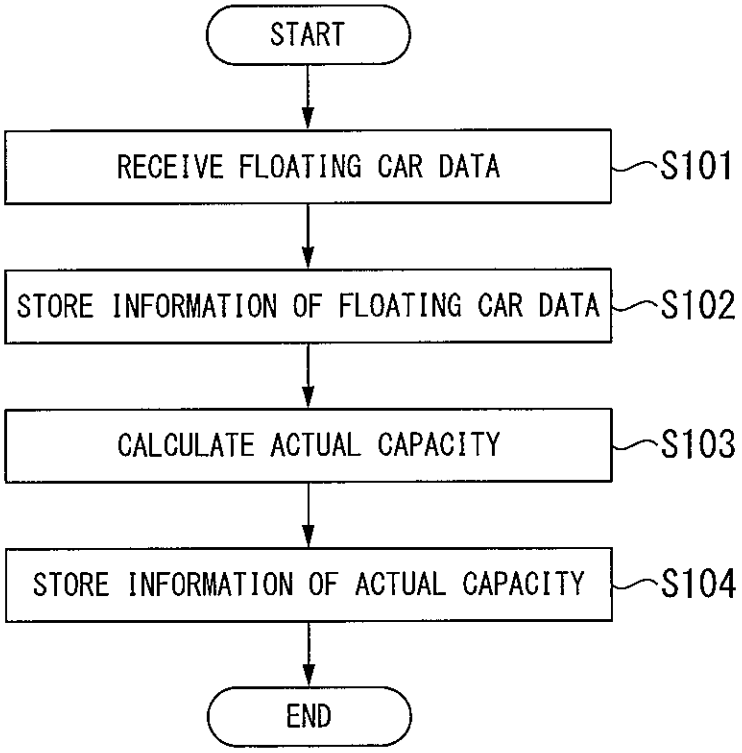

START
RECEIVE FLOATING CAR DATA
S101
STORE INFORMATION OF FLOATING CAR DATA
S102
CALCULATE ACTUAL CAPACITY
S103
STORE INFORMATION OF ACTUAL CAPACITY
S104
END

FIG. 10

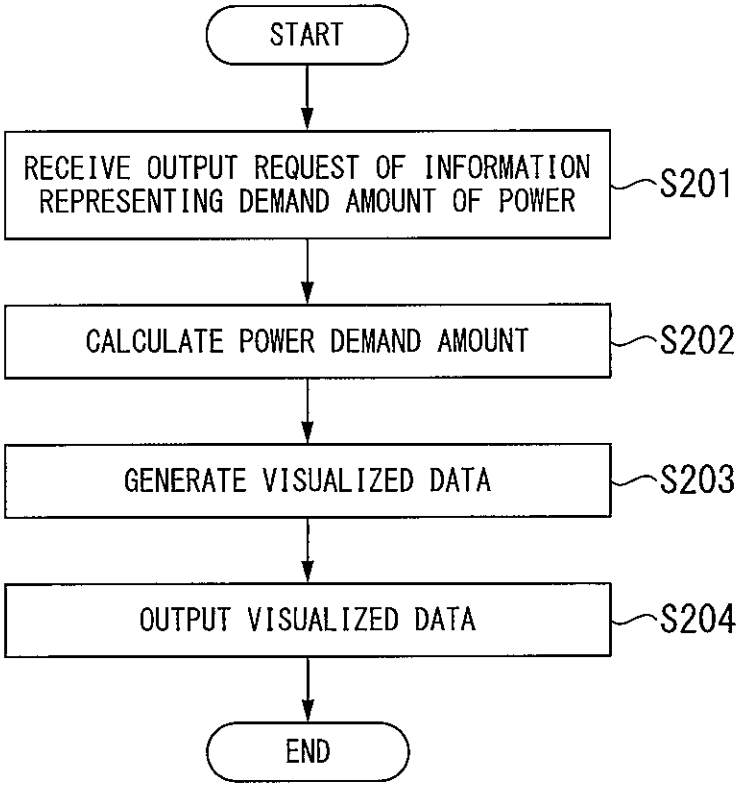

START
RECEIVE OUTPUT REQUEST OF INFORMATION REPRESENTING DEMAND AMOUNT OF POWER
S201
CALCULATE POWER DEMAND AMOUNT
S202
GENERATE VISUALIZED DATA
S203
OUTPUT VISUALIZED DATA
S204
END

FIG. 11

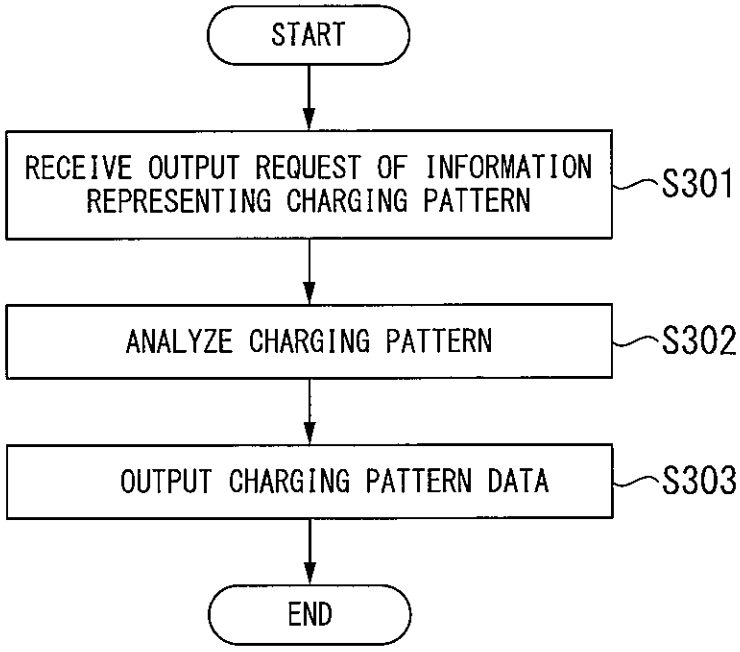
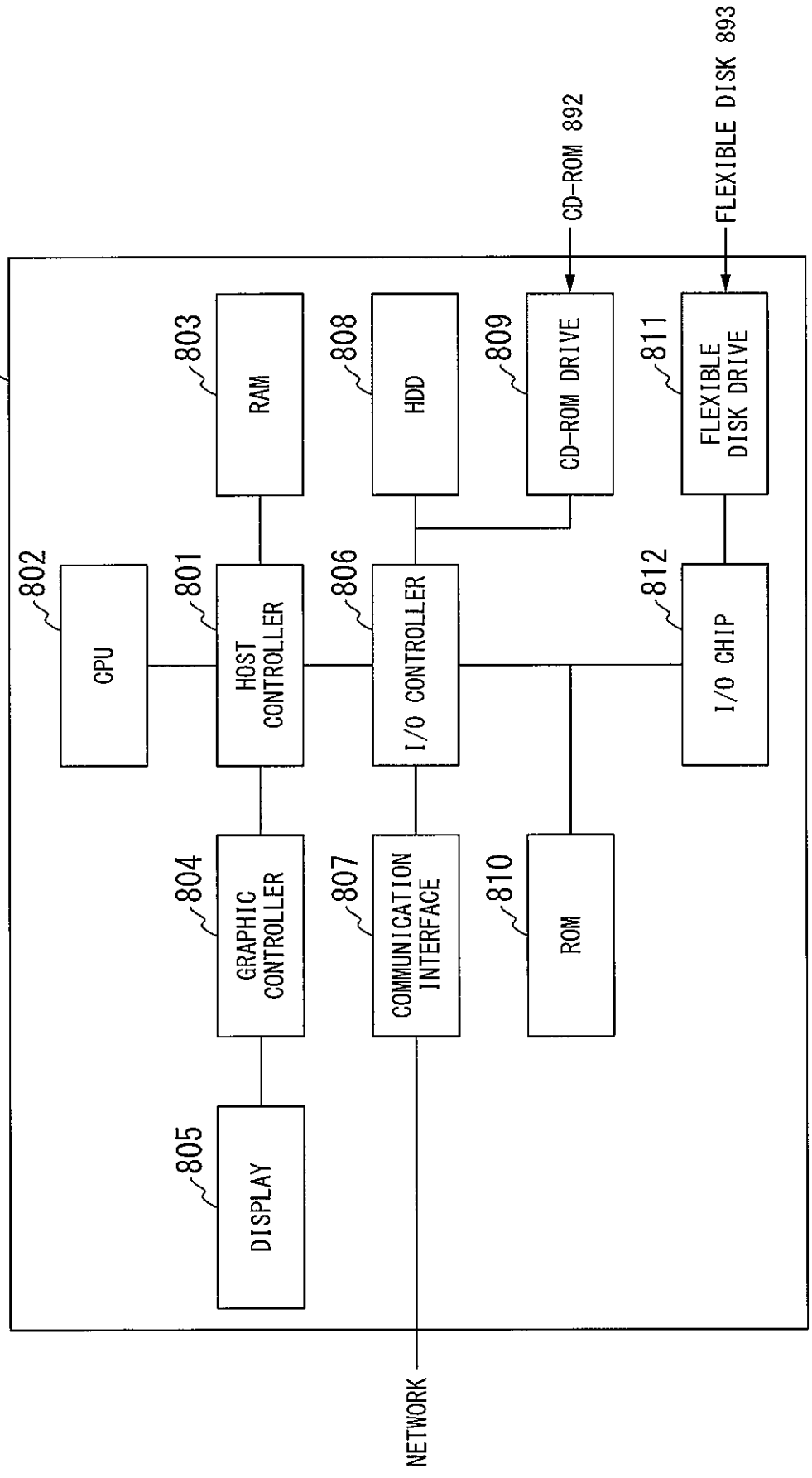

START
RECEIVE OUTPUT REQUEST OF INFORMATION REPRESENTING CHARGING PATTERN
S301
ANALYZE CHARGING PATTERN
S302
OUTPUT CHARGING PATTERN DATA
S303
END

FIG. 12


800
803
RAM
808
HDD
809
CD-ROM DRIVE
811
FLEXIBLE DISK DRIVE
CD-ROM 892
FLEXIBLE DISK 893
802
CPU
801
HOST CONTROLLER
806
I/O CONTROLLER
812
I/O CHIP
804
GRAPHIC CONTROLLER
807
COMMUNICATION INTERFACE
810
ROM
805
DISPLAY
NETWORK