FIG. 1

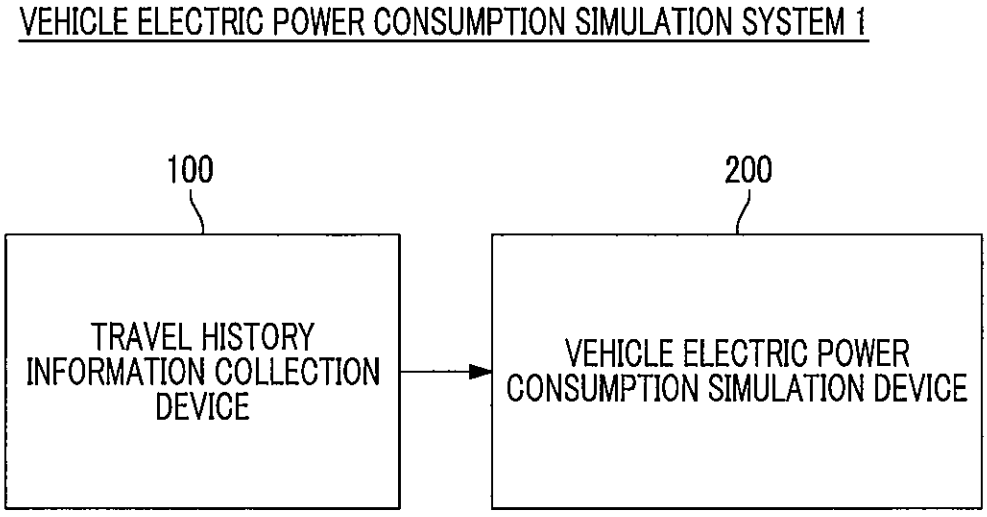

VEHICLE ELECTRIC POWER CONSUMPTION SIMULATION SYSTEM 1
100
200
TRAVEL HISTORY INFORMATION COLLECTION DEVICE
VEHICLE ELECTRIC POWER CONSUMPTION SIMULATION DEVICE

FIG. 2

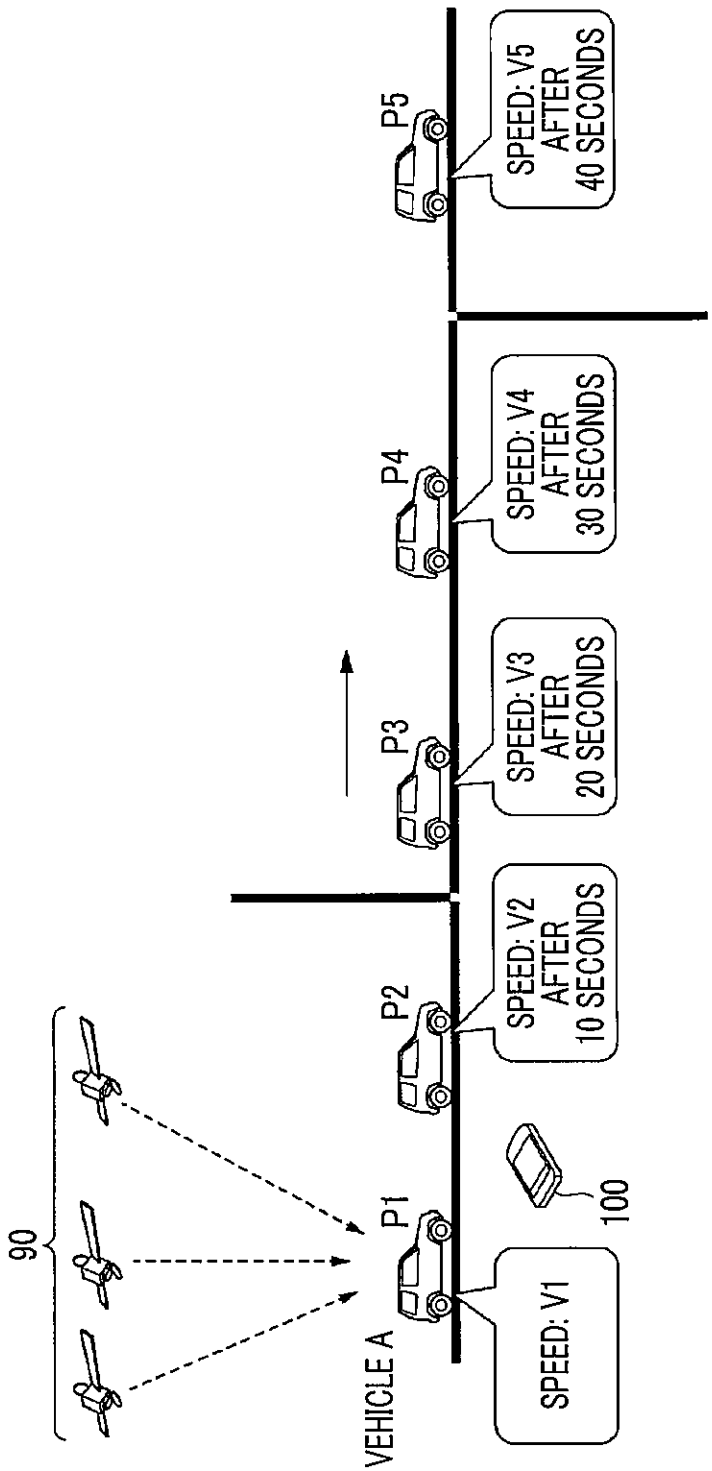

90
VEHICLE A
P1
SPEED: V1
100
P2
SPEED: V2
AFTER
10 SECONDS
P3
SPEED: V3
AFTER
20 SECONDS
P4
SPEED: V4
AFTER
30 SECONDS
P5
SPEED: V5
AFTER
40 SECONDS

FIG. 3

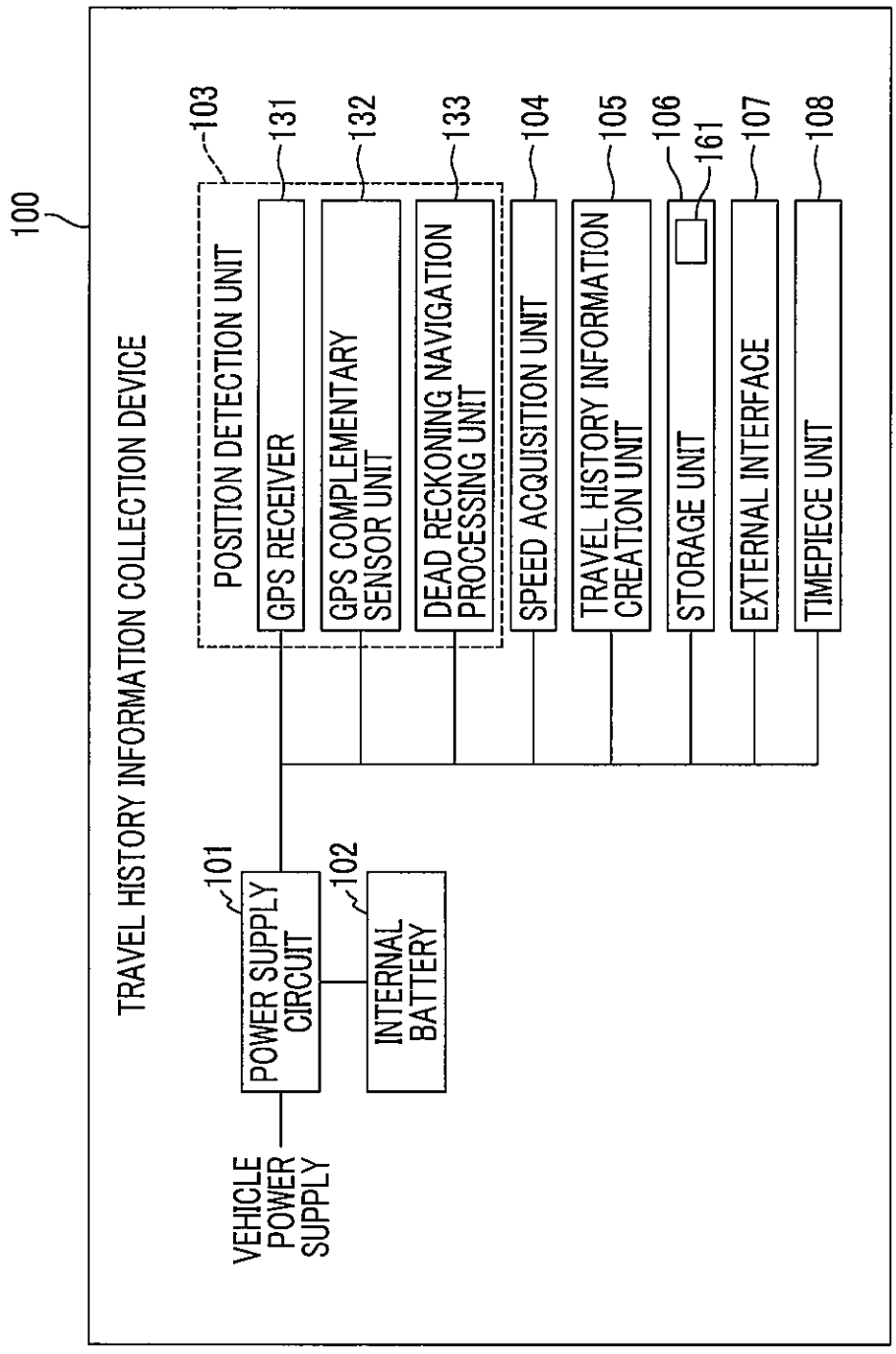

100
TRAVEL HISTORY INFORMATION COLLECTION DEVICE
103
POSITION DETECTION UNIT
131
GPS RECEIVER
132
GPS COMPLEMENTARY SENSOR UNIT
133
DEAD RECKONING NAVIGATION PROCESSING UNIT
104
SPEED ACQUISITION UNIT
105
TRAVEL HISTORY INFORMATION CREATION UNIT
106
161
STORAGE UNIT
107
EXTERNAL INTERFACE
108
TIMEPIECE UNIT
101
POWER SUPPLY CIRCUIT
102
INTERNAL BATTERY
VEHICLE POWER SUPPLY

FIG. 4

TRAVEL HISTORY INFORMATION TABLE (161)

TIME	・・・	9:39:00	9:39:10	9:39:20	・・・	9:40:20	9:40:30	・・・
LATITUDE		+35.25.33.135	+35.25.44.456	+35.25.45.222		+35.35.10.123	+35.35.22.234	
LONGITUDE		+139.40.20.234	+139.40.50.123	+139.40.55.111		+139.45.10.567	+139.45.15.432	
SPEED		45.5	56.5	60.0		52.0	63.5	

FIG. 5

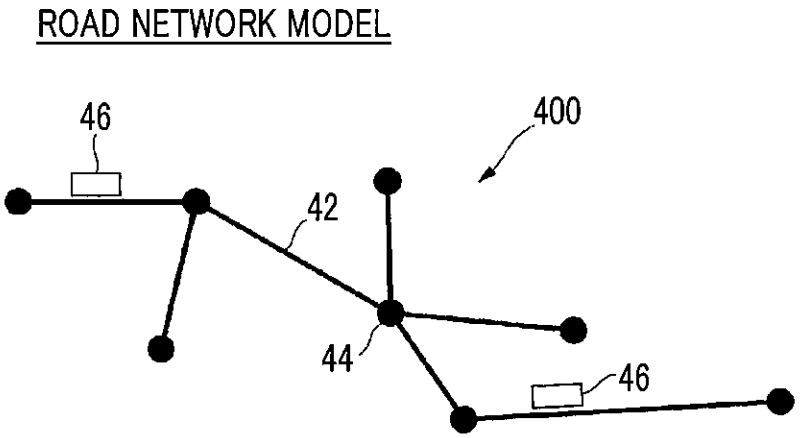


FIG. 6

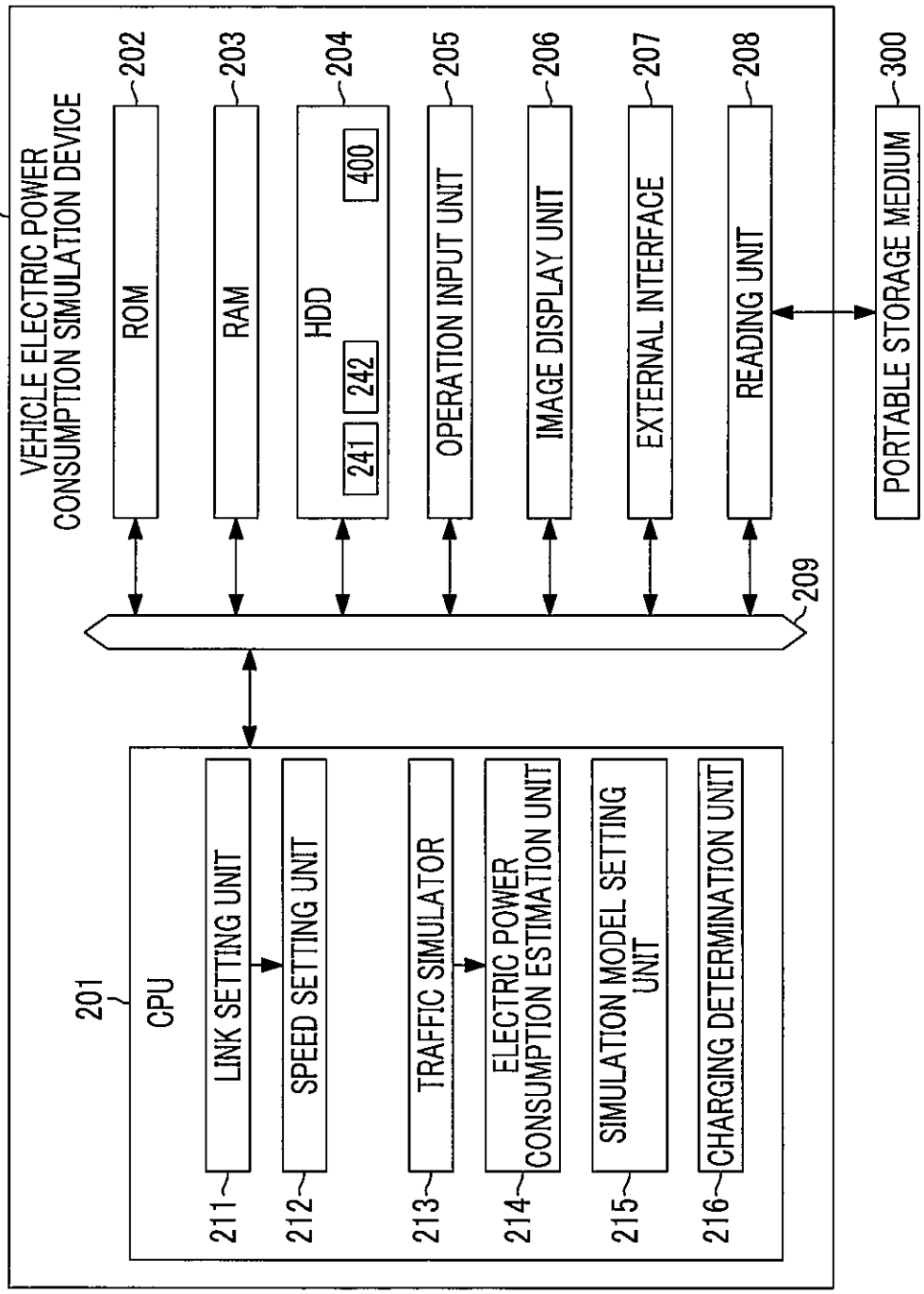

200
VEHICLE ELECTRIC POWER CONSUMPTION SIMULATION DEVICE
ROM
202
RAM
203
HDD
204
400
241
242
OPERATION INPUT UNIT
205
IMAGE DISPLAY UNIT
206
EXTERNAL INTERFACE
207
READING UNIT
208
209
PORTABLE STORAGE MEDIUM
300
201
CPU
LINK SETTING UNIT
211
SPEED SETTING UNIT
212
TRAFFIC SIMULATOR
213
ELECTRIC POWER CONSUMPTION ESTIMATION UNIT
214
SIMULATION MODEL SETTING UNIT
215
CHARGING DETERMINATION UNIT
216

FIG. 7

LINK ATTRIBUTE SETTING TABLE 242

LINK POSITION	LINK SPEED
R1	・・・
R2	・・・
⋮	⋮

FIG. 8

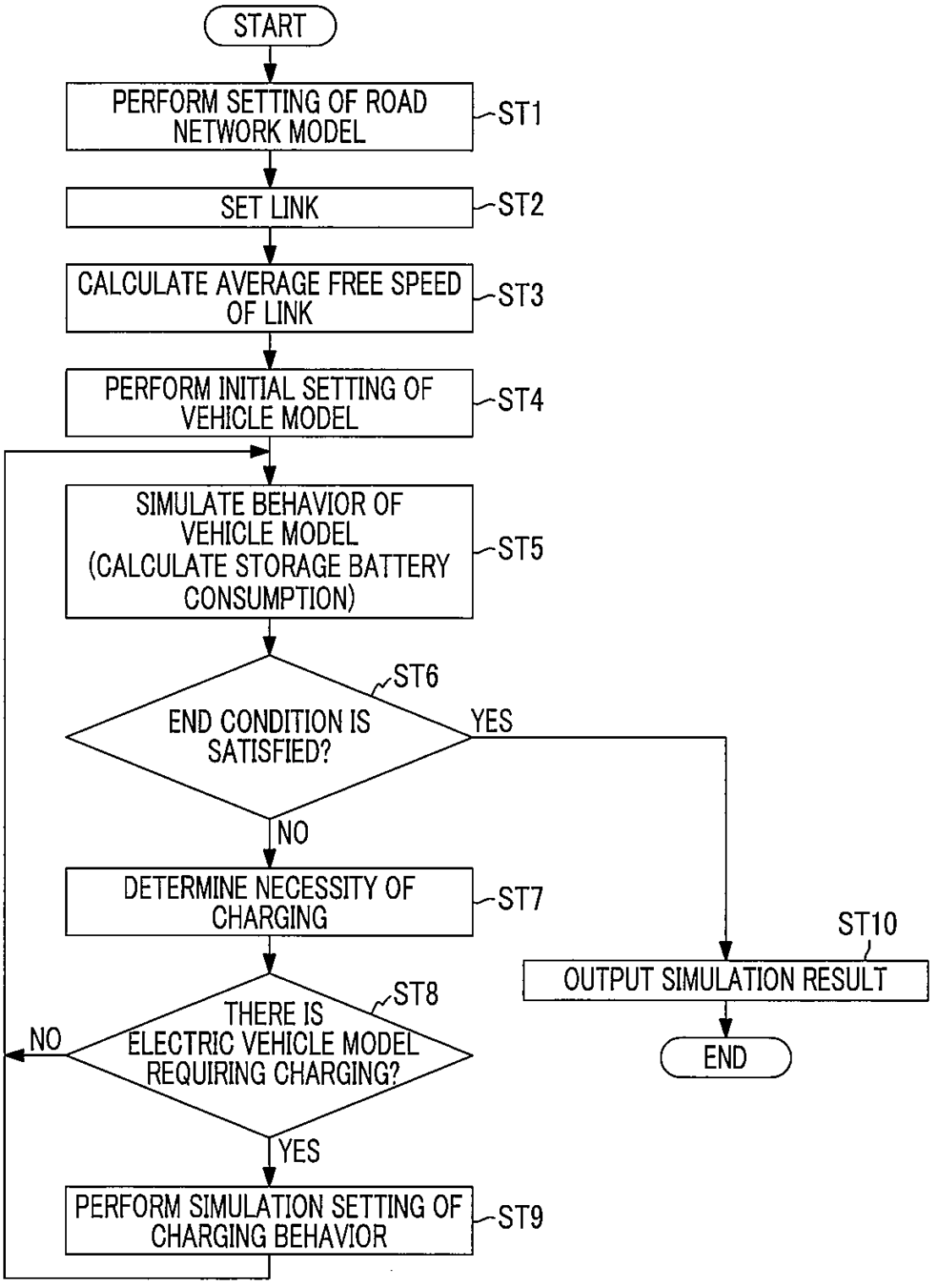

START
PERFORM SETTING OF ROAD NETWORK MODEL
ST1
SET LINK
ST2
CALCULATE AVERAGE FREE SPEED OF LINK
ST3
PERFORM INITIAL SETTING OF VEHICLE MODEL
ST4
SIMULATE BEHAVIOR OF VEHICLE MODEL (CALCULATE STORAGE BATTERY CONSUMPTION)
ST5
ST6
END CONDITION IS SATISFIED?
YES
NO
DETERMINE NECESSITY OF CHARGING
ST7
ST8
THERE IS ELECTRIC VEHICLE MODEL REQUIRING CHARGING?
NO
YES
PERFORM SIMULATION SETTING OF CHARGING BEHAVIOR
ST9
ST10
OUTPUT SIMULATION RESULT
END

FIG. 9

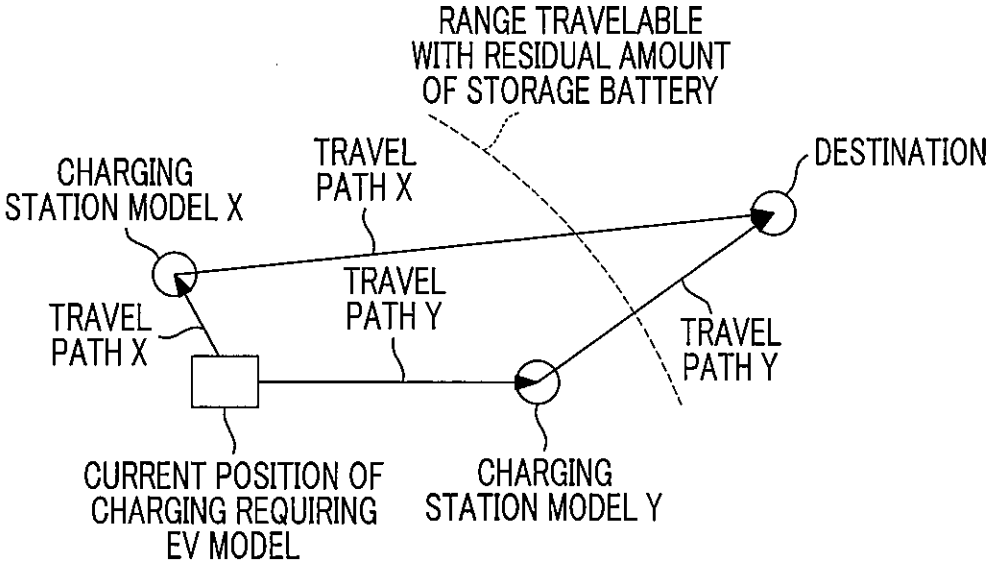

RANGE TRAVELABLE WITH RESIDUAL AMOUNT OF STORAGE BATTERY
CHARGING STATION MODEL X
TRAVEL PATH X
DESTINATION
TRAVEL PATH Y
TRAVEL PATH X
TRAVEL PATH Y
CURRENT POSITION OF CHARGING REQUIRING EV MODEL
CHARGING STATION MODEL Y

FIG. 10

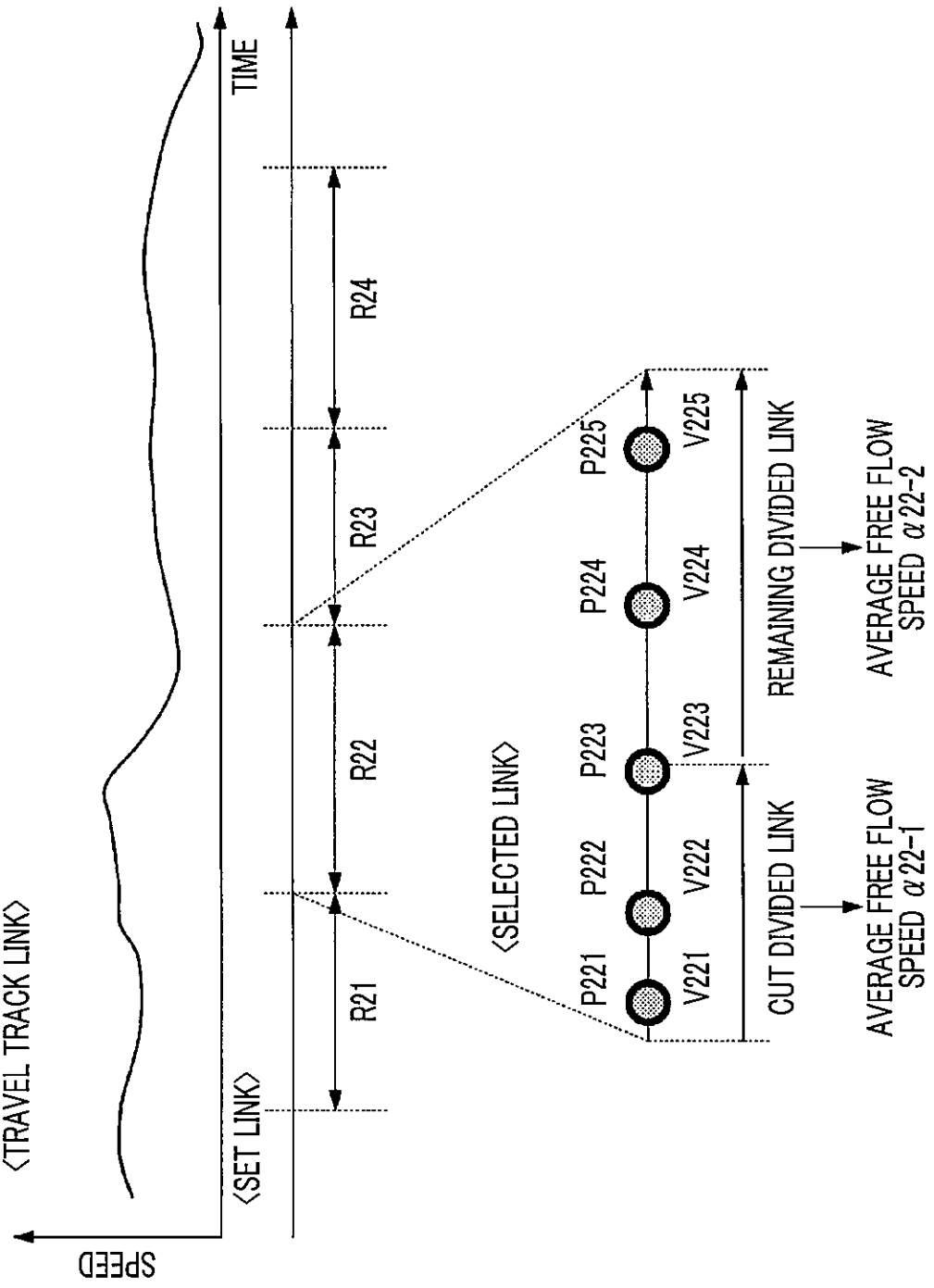

SPEED
TIME
〈TRAVEL TRACK LINK〉
〈SET LINK〉
R21
R22
R23
R24
〈SELECTED LINK〉
P221
P222
P223
P224
P225
V221
V222
V223
V224
V225
CUT DIVIDED LINK
REMAINING DIVIDED LINK
AVERAGE FREE FLOW SPEED α22-1
AVERAGE FREE FLOW SPEED α22-2

FIG. 11

TRAVEL HISTORY INFORMATION TABLE (241)

TIME	・・・	・・・	・・・	・・・	・・・	・・・	・・・	・・・
POSITION INFORMATION (LATITUDE, LONGITUDE)	P211	P212	P213	P221	P222	P223	P224	・・・
SPEED	V211	V212	V213	V221	V222	V223	V224	・・・

FIG. 12A

LINK ATTRIBUTE SETTING TABLE 242_1

LINK POSITION (LINK ID)	TRAVEL POSITION IN LINK
R21	P211, P212, P213
R22	P221, P222, P223, P224, P225
⋮	⋮

FIG. 12B

LINK ATTRIBUTE SETTING TABLE 242_2

LINK POSITION (LINK ID)	DIVIDED POSITION	LINK SPEED (AVERAGE FREE FLOW SPEED)
R21	-	α21
R22	P221-P223	α22-1
R22	P223-P224	α22-2
R23	-	...
R24	-	...
⋮		⋮

FIG. 13

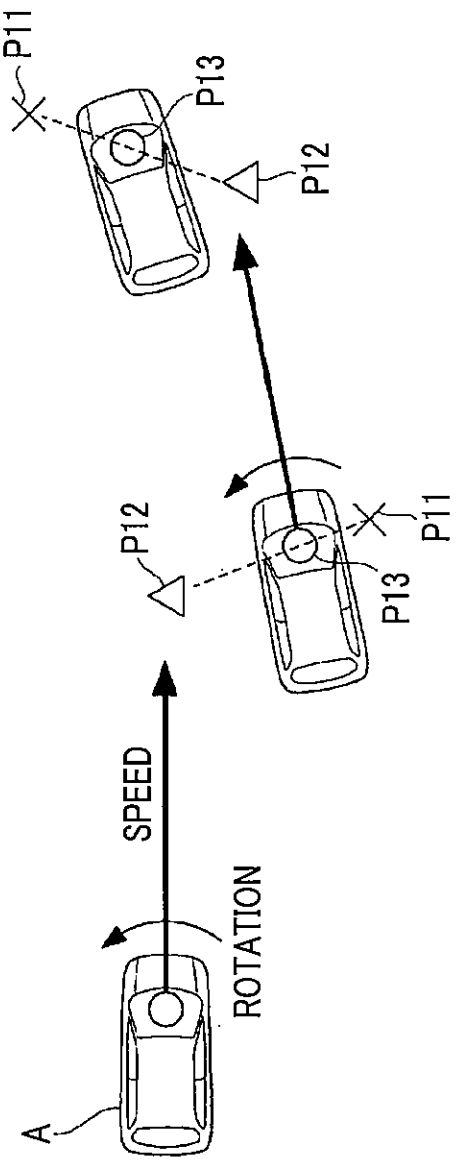


FIG. 14

