FIG. 1

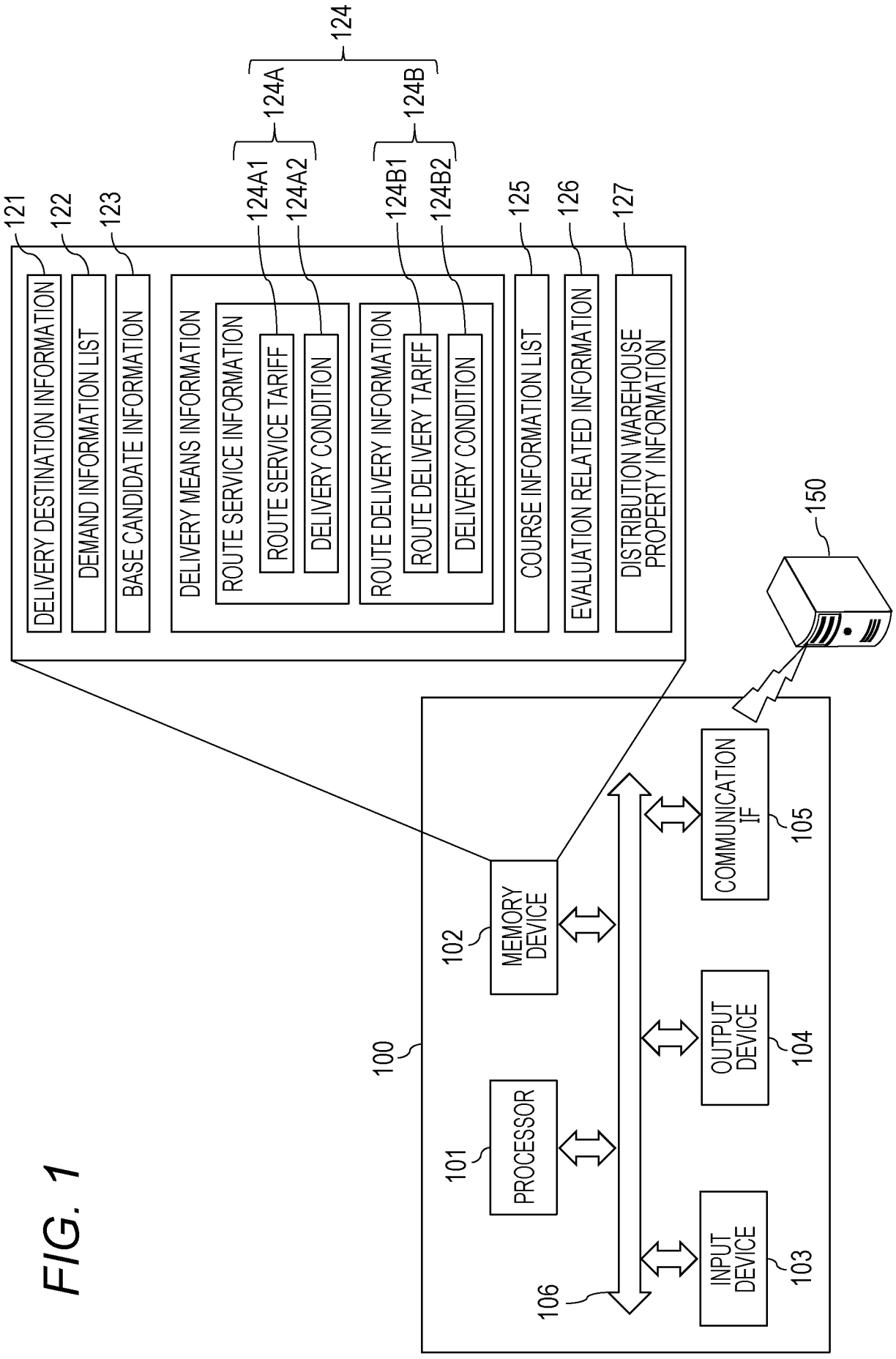

100
101
PROCESSOR
102
MEMORY DEVICE
103
INPUT DEVICE
104
OUTPUT DEVICE
105
COMMUNICATION IF
106
150
121
DELIVERY DESTINATION INFORMATION
122
DEMAND INFORMATION LIST
123
BASE CANDIDATE INFORMATION
124
DELIVERY MEANS INFORMATION
124A
ROUTE SERVICE INFORMATION
124A1
ROUTE SERVICE TARIFF
124A2
DELIVERY CONDITION
124B
ROUTE DELIVERY INFORMATION
124B1
ROUTE DELIVERY TARIFF
124B2
DELIVERY CONDITION
125
COURSE INFORMATION LIST
126
EVALUATION RELATED INFORMATION
127
DISTRIBUTION WAREHOUSE PROPERTY INFORMATION

FIG. 2

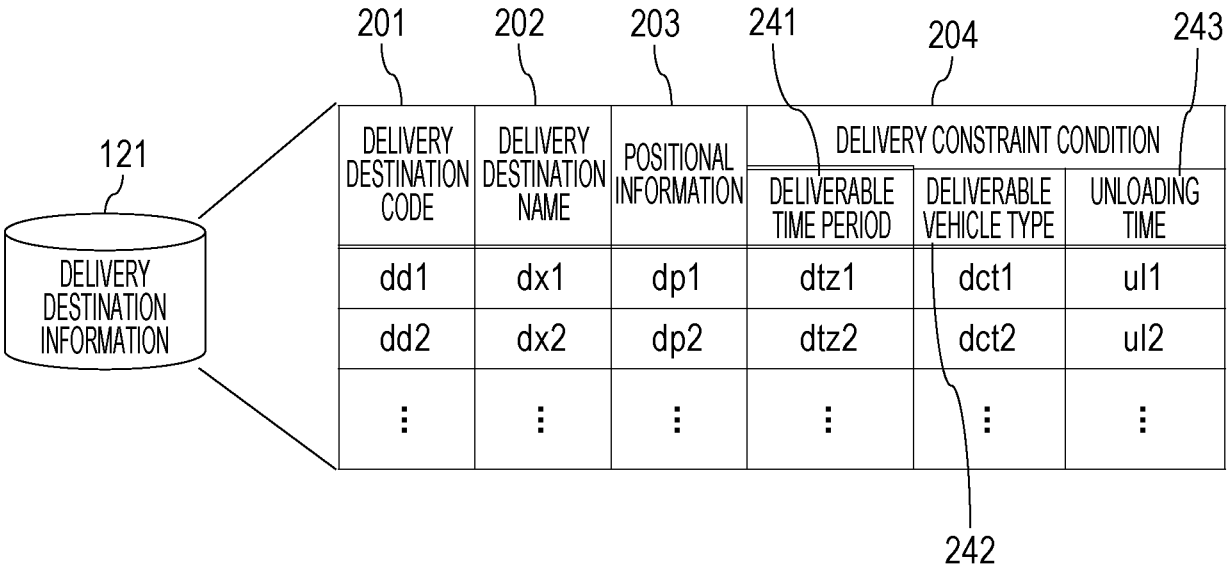

201
202
203
241
204
243
121
DELIVERY DESTINATION INFORMATION
DELIVERY DESTINATION CODE
DELIVERY DESTINATION NAME
POSITIONAL INFORMATION
DELIVERY CONSTRAINT CONDITION
DELIVERABLE TIME PERIOD
DELIVERABLE VEHICLE TYPE
UNLOADING TIME
dd1
dx1
dp1
dtz1
dct1
ul1
dd2
dx2
dp2
dtz2
dct2
ul2
242

FIG. 3

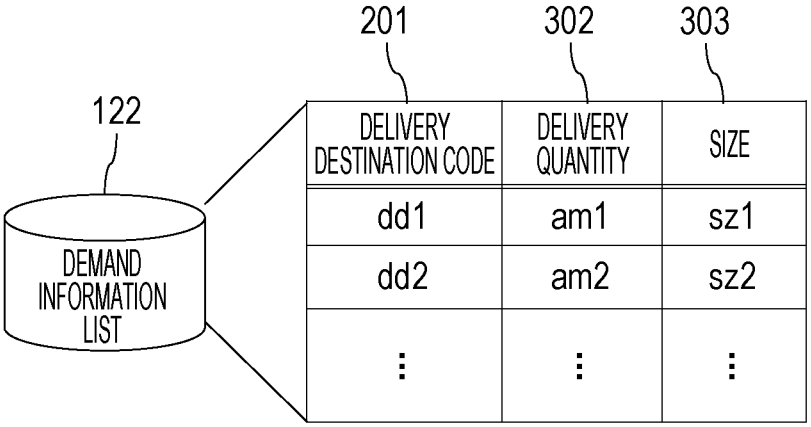

201
302
303
122
DEMAND INFORMATION LIST
DELIVERY DESTINATION CODE
DELIVERY QUANTITY
SIZE
dd1
am1
sz1
dd2
am2
sz2

FIG. 4

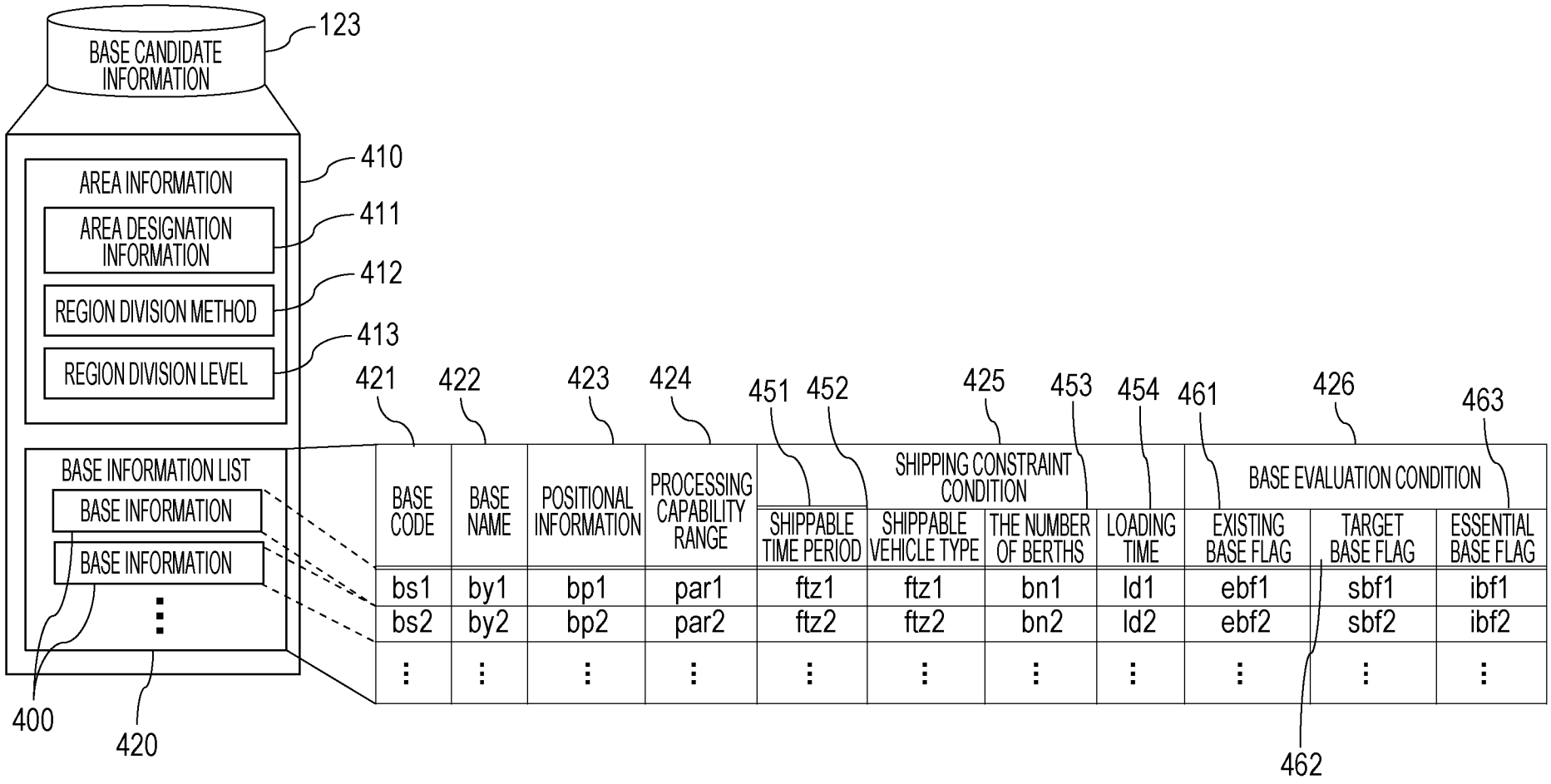

BASE CANDIDATE INFORMATION
123
AREA INFORMATION
410
AREA DESIGNATION INFORMATION
411
REGION DIVISION METHOD
412
REGION DIVISION LEVEL
413
BASE INFORMATION LIST
BASE INFORMATION
BASE INFORMATION
400
420
421
422
423
424
451
452
425
453
454
461
426
463
462
BASE CODE
BASE NAME
POSITIONAL INFORMATION
PROCESSING CAPABILITY RANGE
SHIPPING CONSTRAINT CONDITION
SHIPPABLE TIME PERIOD
SHIPPABLE VEHICLE TYPE
THE NUMBER OF BERTHS
LOADING TIME
BASE EVALUATION CONDITION
EXISTING BASE FLAG
TARGET BASE FLAG
ESSENTIAL BASE FLAG
bs1 by1 bp1 par1 ftz1 ftz1 bn1 ld1 ebf1 sbf1 ibf1
bs2 by2 bp2 par2 ftz2 ftz2 bn2 ld2 ebf2 sbf2 ibf2

FIG. 5

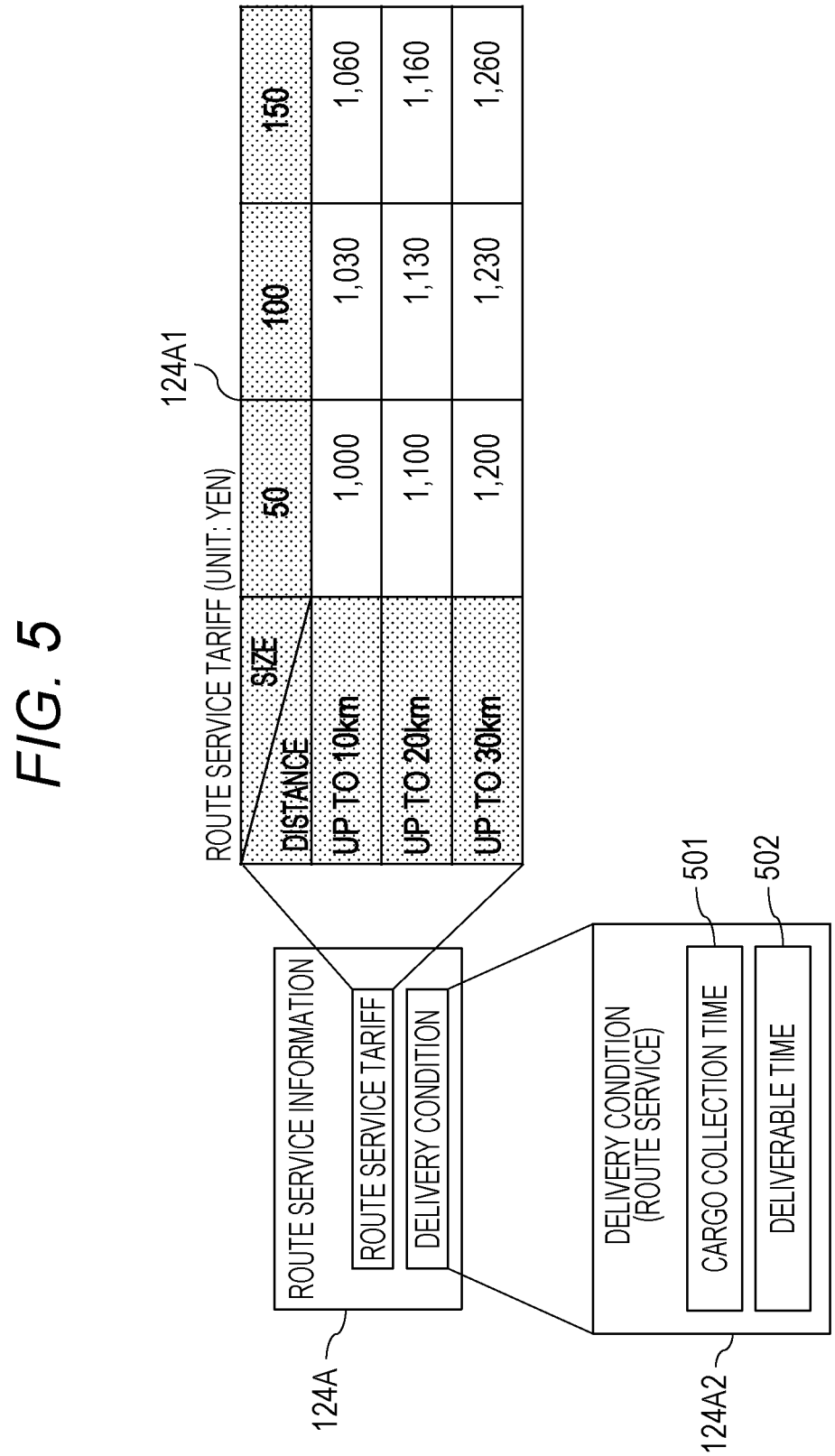

ROUTE SERVICE TARIFF (UNIT: YEN)
124A1
SIZE
DISTANCE
50
100
150
UP TO 10km
1,000
1,030
1,060
UP TO 20km
1,100
1,130
1,160
UP TO 30km
1,200
1,230
1,260
ROUTE SERVICE INFORMATION
ROUTE SERVICE TARIFF
DELIVERY CONDITION
124A
DELIVERY CONDITION (ROUTE SERVICE)
CARGO COLLECTION TIME
DELIVERABLE TIME
501
502
124A2

FIG. 6

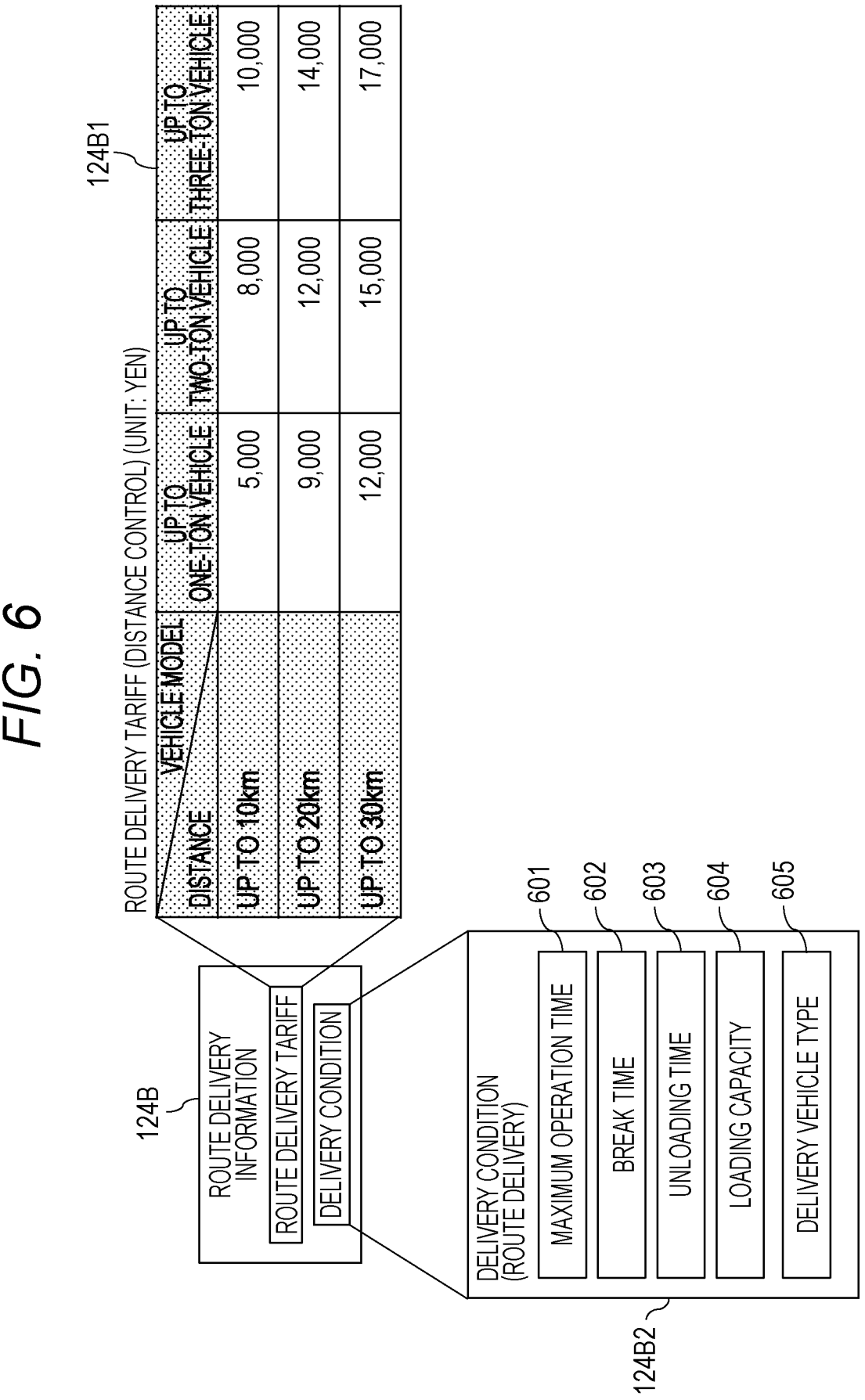

124B1
ROUTE DELIVERY TARIFF (DISTANCE CONTROL) (UNIT: YEN)
VEHICLE MODEL
DISTANCE
UP TO ONE-TON VEHICLE
UP TO TWO-TON VEHICLE
UP TO THREE-TON VEHICLE
UP TO 10km
5,000
8,000
10,000
UP TO 20km
9,000
12,000
14,000
UP TO 30km
12,000
15,000
17,000
124B
ROUTE DELIVERY INFORMATION
ROUTE DELIVERY TARIFF
DELIVERY CONDITION
DELIVERY CONDITION (ROUTE DELIVERY)
601
MAXIMUM OPERATION TIME
602
BREAK TIME
603
UNLOADING TIME
604
LOADING CAPACITY
605
DELIVERY VEHICLE TYPE
124B2

FIG. 7

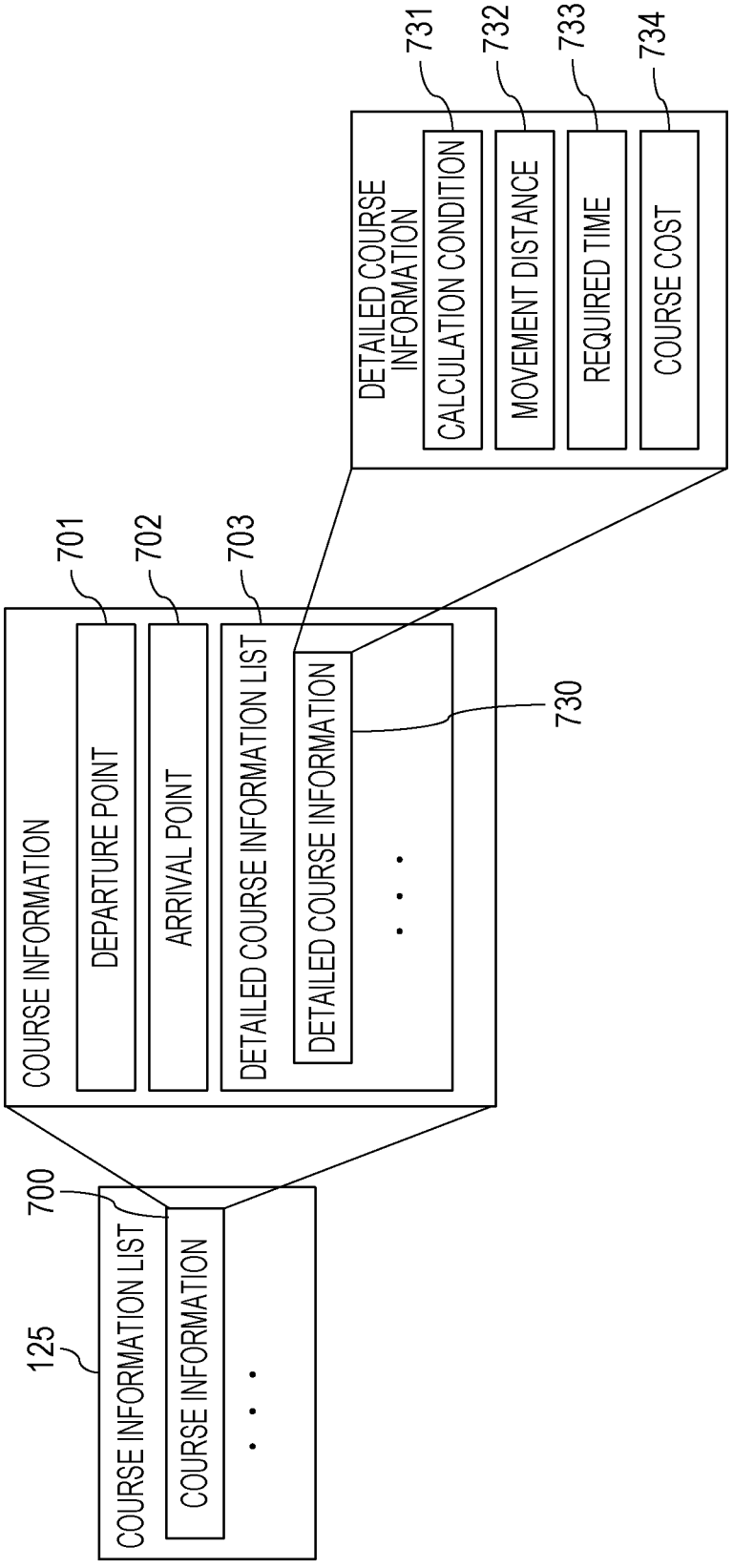

125
COURSE INFORMATION LIST
COURSE INFORMATION
700
COURSE INFORMATION
DEPARTURE POINT
ARRIVAL POINT
DETAILED COURSE INFORMATION LIST
DETAILED COURSE INFORMATION
701
702
703
730
DETAILED COURSE INFORMATION
CALCULATION CONDITION
MOVEMENT DISTANCE
REQUIRED TIME
COURSE COST
731
732
733
734

FIG. 8

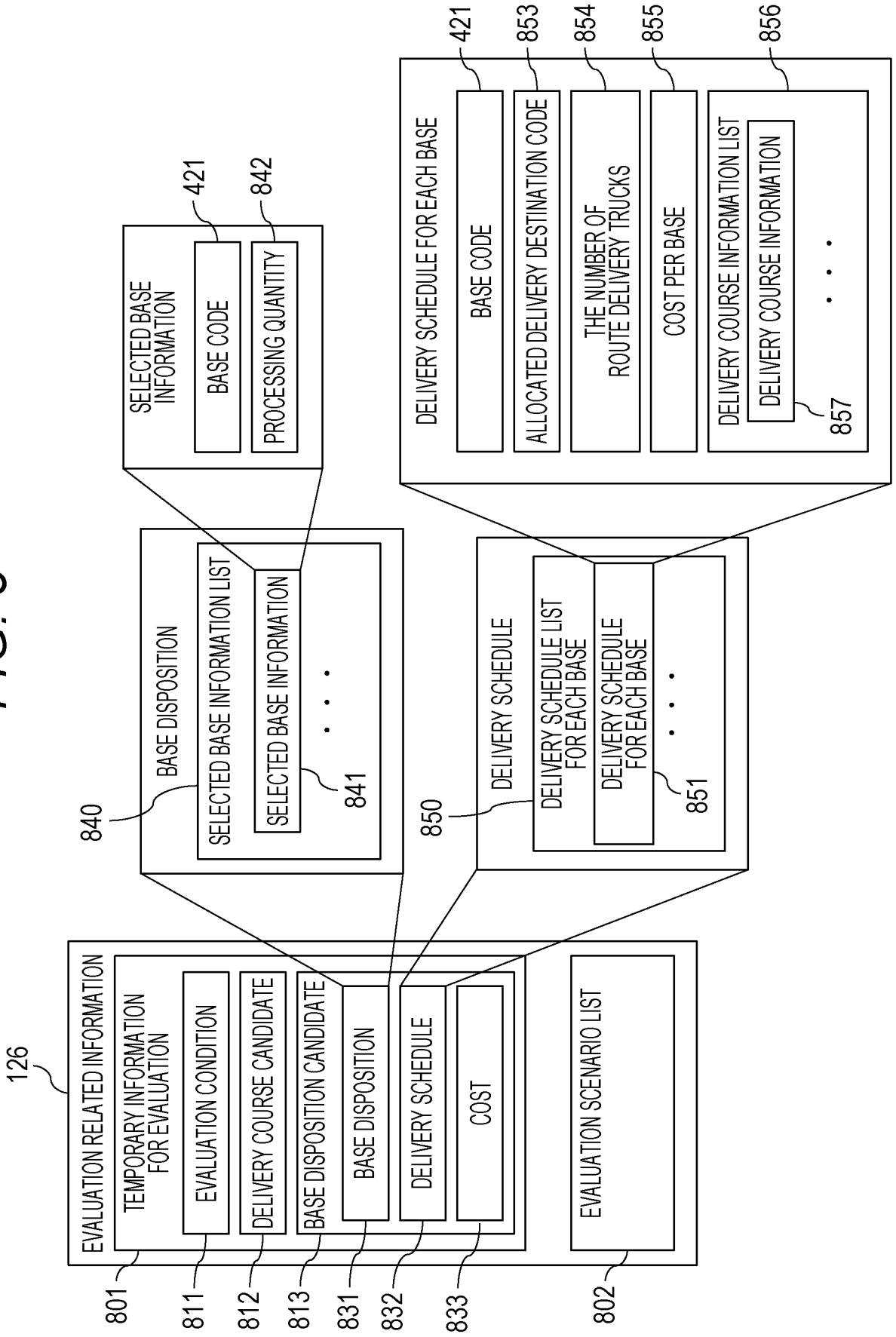

126
EVALUATION RELATED INFORMATION
TEMPORARY INFORMATION FOR EVALUATION
EVALUATION CONDITION
DELIVERY COURSE CANDIDATE
BASE DISPOSITION CANDIDATE
BASE DISPOSITION
DELIVERY SCHEDULE
COST
EVALUATION SCENARIO LIST
801
811
812
813
831
832
833
802
840
BASE DISPOSITION
SELECTED BASE INFORMATION LIST
SELECTED BASE INFORMATION
841
SELECTED BASE INFORMATION
421
BASE CODE
842
PROCESSING QUANTITY
850
DELIVERY SCHEDULE
DELIVERY SCHEDULE LIST FOR EACH BASE
DELIVERY SCHEDULE FOR EACH BASE
851
DELIVERY SCHEDULE FOR EACH BASE
421
BASE CODE
853
ALLOCATED DELIVERY DESTINATION CODE
854
THE NUMBER OF ROUTE DELIVERY TRUCKS
855
COST PER BASE
856
DELIVERY COURSE INFORMATION LIST
DELIVERY COURSE INFORMATION
857

FIG. 9

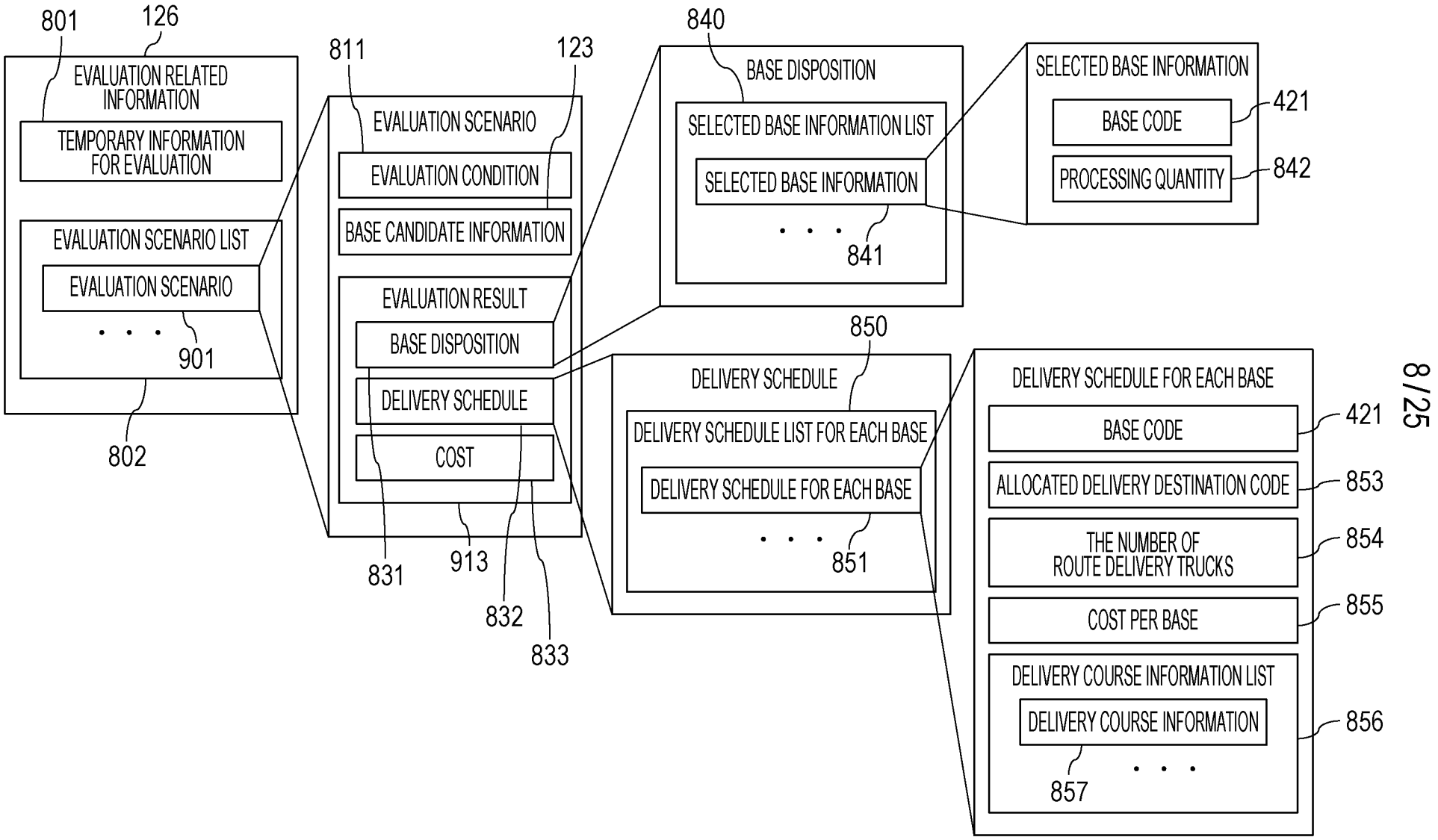

801
126
EVALUATION RELATED INFORMATION
TEMPORARY INFORMATION FOR EVALUATION
EVALUATION SCENARIO LIST
EVALUATION SCENARIO
901
802
811
123
EVALUATION SCENARIO
EVALUATION CONDITION
BASE CANDIDATE INFORMATION
EVALUATION RESULT
BASE DISPOSITION
DELIVERY SCHEDULE
COST
831
913
832
833
840
BASE DISPOSITION
SELECTED BASE INFORMATION LIST
SELECTED BASE INFORMATION
841
SELECTED BASE INFORMATION
BASE CODE
421
PROCESSING QUANTITY
842
850
DELIVERY SCHEDULE
DELIVERY SCHEDULE LIST FOR EACH BASE
DELIVERY SCHEDULE FOR EACH BASE
851
DELIVERY SCHEDULE FOR EACH BASE
BASE CODE
421
ALLOCATED DELIVERY DESTINATION CODE
853
THE NUMBER OF ROUTE DELIVERY TRUCKS
854
COST PER BASE
855
DELIVERY COURSE INFORMATION LIST
DELIVERY COURSE INFORMATION
856
857

FIG. 10

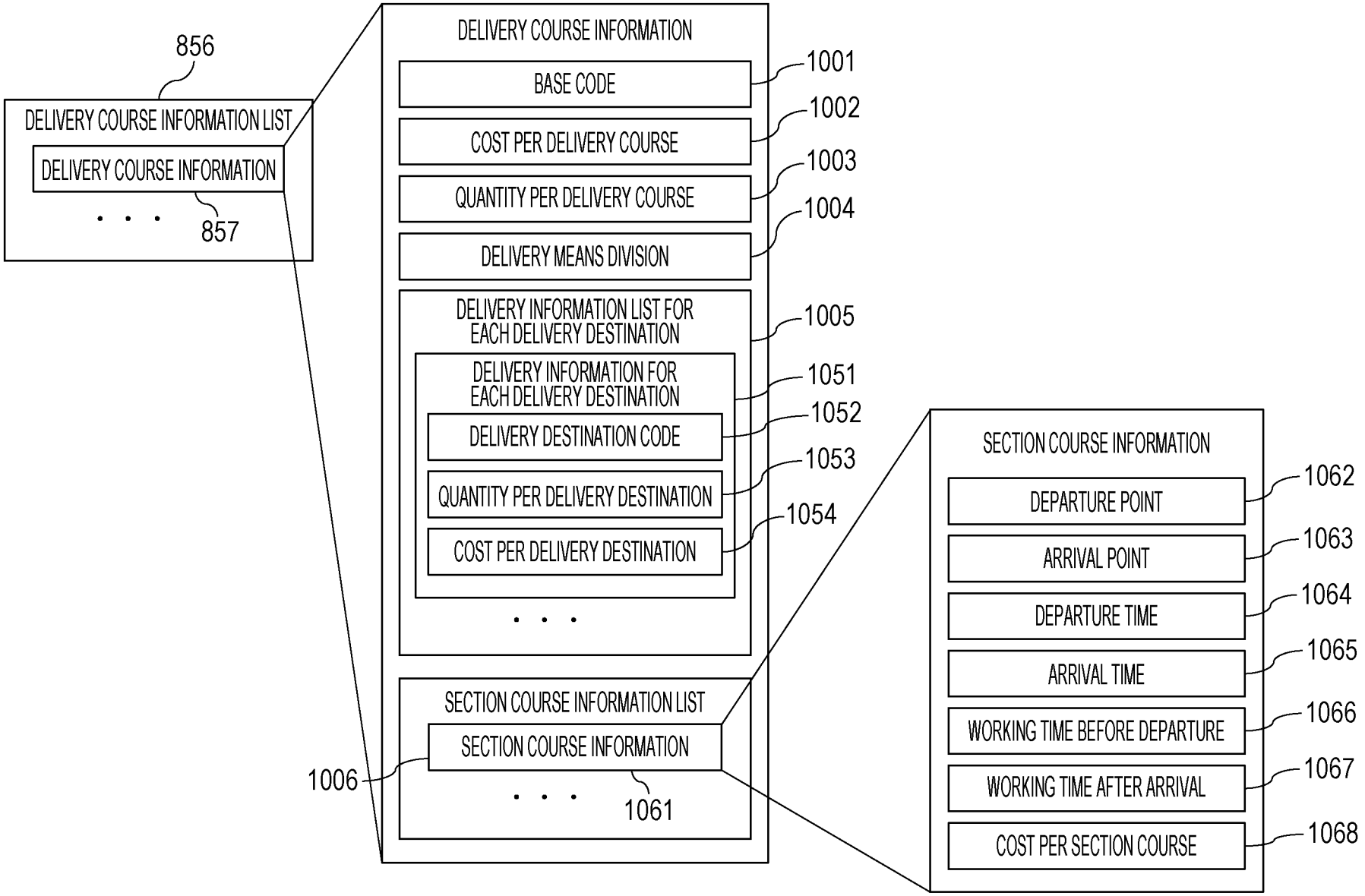

856
DELIVERY COURSE INFORMATION LIST
DELIVERY COURSE INFORMATION
857
DELIVERY COURSE INFORMATION
BASE CODE
1001
COST PER DELIVERY COURSE
1002
QUANTITY PER DELIVERY COURSE
1003
DELIVERY MEANS DIVISION
1004
DELIVERY INFORMATION LIST FOR EACH DELIVERY DESTINATION
1005
DELIVERY INFORMATION FOR EACH DELIVERY DESTINATION
1051
DELIVERY DESTINATION CODE
1052
QUANTITY PER DELIVERY DESTINATION
1053
COST PER DELIVERY DESTINATION
1054
SECTION COURSE INFORMATION LIST
SECTION COURSE INFORMATION
1006
1061
SECTION COURSE INFORMATION
DEPARTURE POINT
1062
ARRIVAL POINT
1063
DEPARTURE TIME
1064
ARRIVAL TIME
1065
WORKING TIME BEFORE DEPARTURE
1066
WORKING TIME AFTER ARRIVAL
1067
COST PER SECTION COURSE
1068

FIG. 11

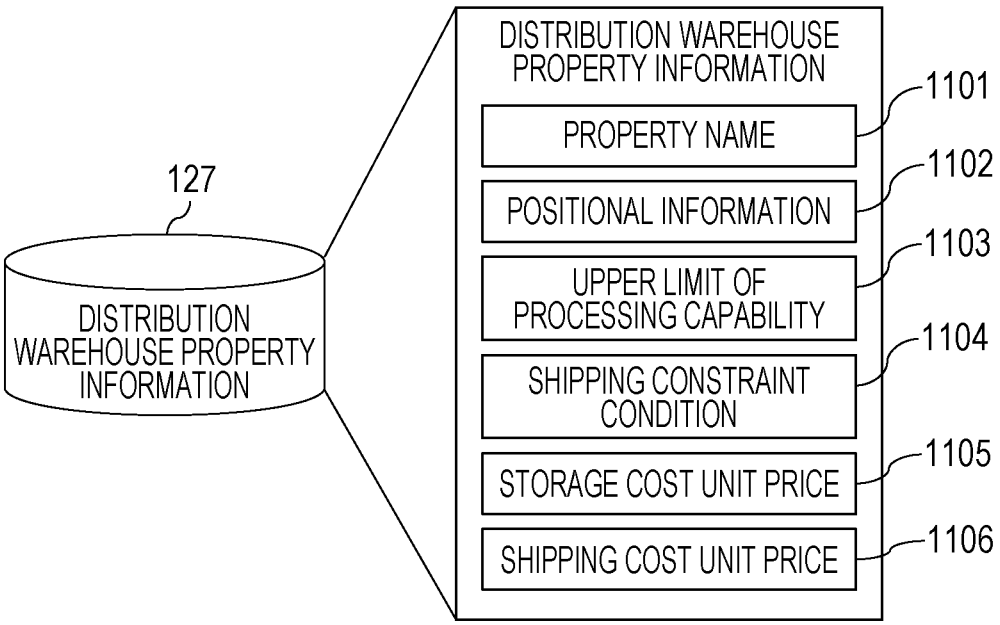

127
DISTRIBUTION WAREHOUSE PROPERTY INFORMATION
DISTRIBUTION WAREHOUSE PROPERTY INFORMATION
PROPERTY NAME
POSITIONAL INFORMATION
UPPER LIMIT OF PROCESSING CAPABILITY
SHIPPING CONSTRAINT CONDITION
STORAGE COST UNIT PRICE
SHIPPING COST UNIT PRICE
1101
1102
1103
1104
1105
1106

FIG. 12

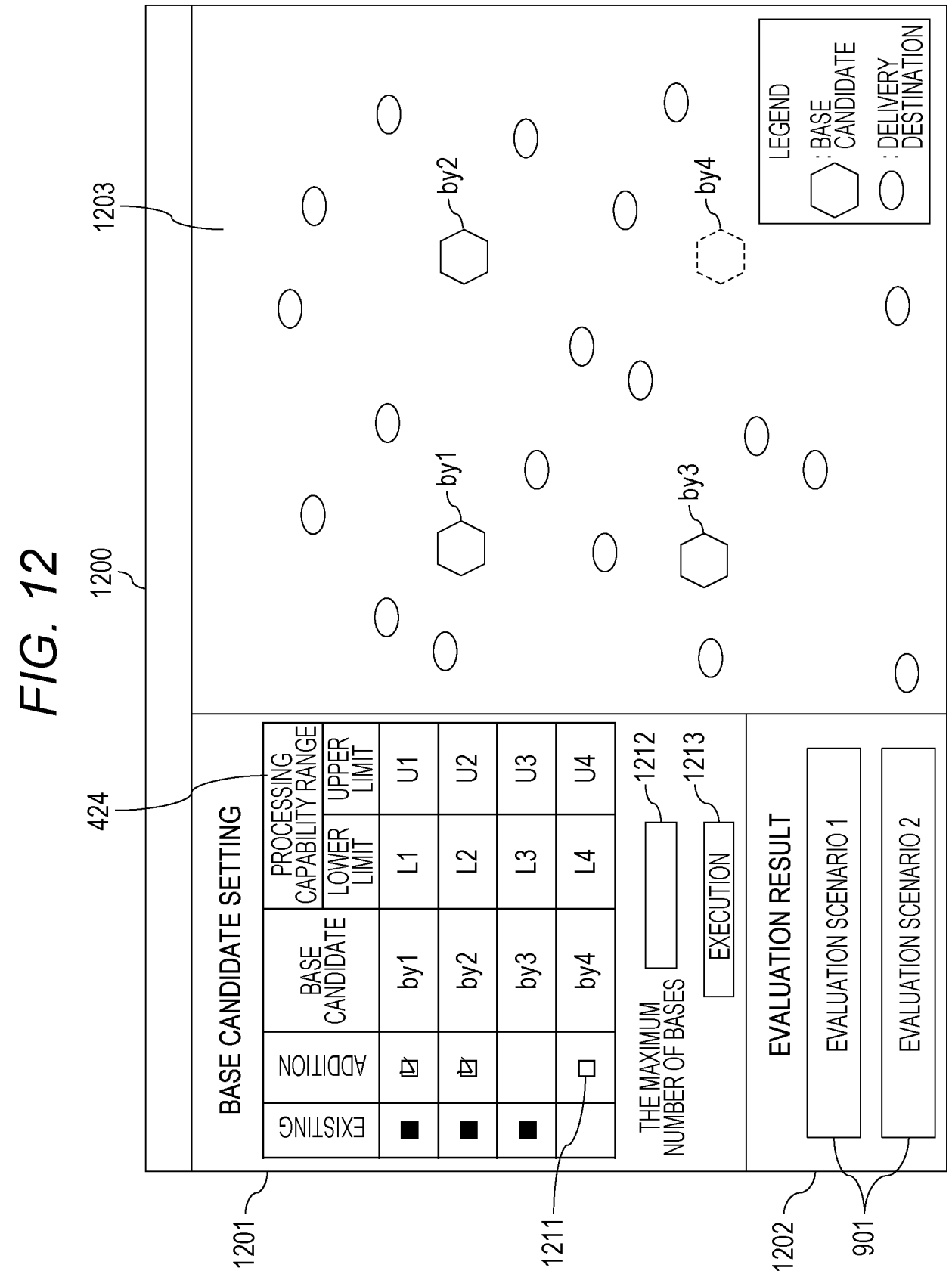

1203
1200
424
1201
1211
1202
901
BASE CANDIDATE SETTING
EXISTING
ADDITION
BASE CANDIDATE
PROCESSING CAPABILITY RANGE
LOWER LIMIT
UPPER LIMIT
by1
L1
U1
by2
L2
U2
by3
L3
U3
by4
L4
U4
THE MAXIMUM NUMBER OF BASES
1212
EXECUTION
1213
EVALUATION RESULT
EVALUATION SCENARIO 1
EVALUATION SCENARIO 2
by1
by2
by3
by4
LEGEND
: BASE CANDIDATE
: DELIVERY DESTINATION

FIG. 13

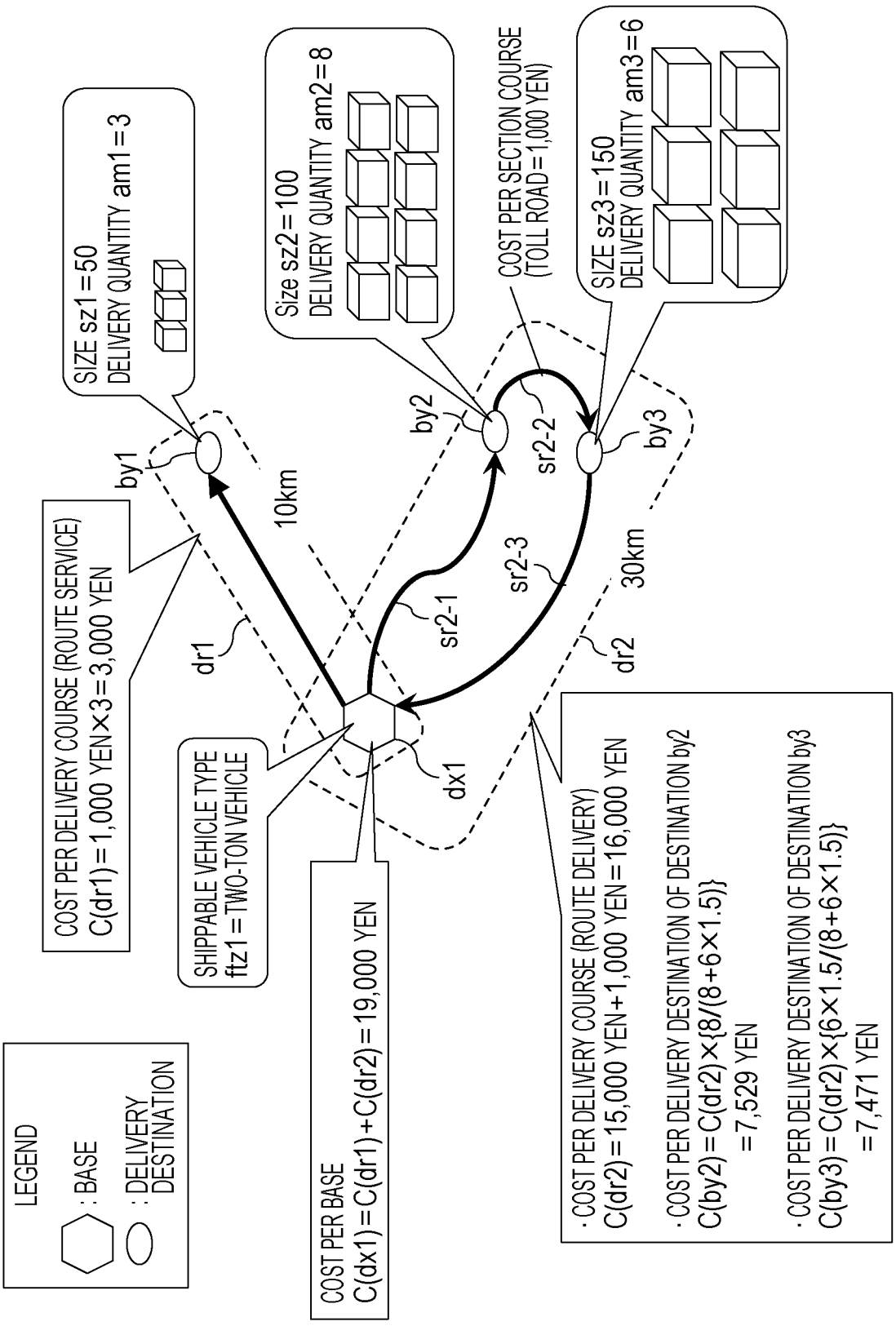

LEGEND
: BASE
: DELIVERY DESTINATION
COST PER DELIVERY COURSE (ROUTE SERVICE)
C(dr1)=1,000 YEN×3=3,000 YEN
SHIPPABLE VEHICLE TYPE
ftz1=TWO-TON VEHICLE
COST PER BASE
C(dx1)=C(dr1)+C(dr2)=19,000 YEN
SIZE sz1=50
DELIVERY QUANTITY am1=3
Size sz2=100
DELIVERY QUANTITY am2=8
SIZE sz3=150
DELIVERY QUANTITY am3=6
COST PER SECTION COURSE
(TOLL ROAD=1,000 YEN)
by1
by2
by3
dx1
dr1
dr2
10km
30km
sr2-1
sr2-2
sr2-3
·COST PER DELIVERY COURSE (ROUTE DELIVERY)
C(dr2)=15,000 YEN+1,000 YEN=16,000 YEN
·COST PER DELIVERY DESTINATION OF DESTINATION by2
C(by2)=C(dr2)×{8/(8+6×1.5)}
=7,529 YEN
·COST PER DELIVERY DESTINATION OF DESTINATION by3
C(by3)=C(dr2)×{6×1.5/(8+6×1.5)}
=7,471 YEN

FIG. 14

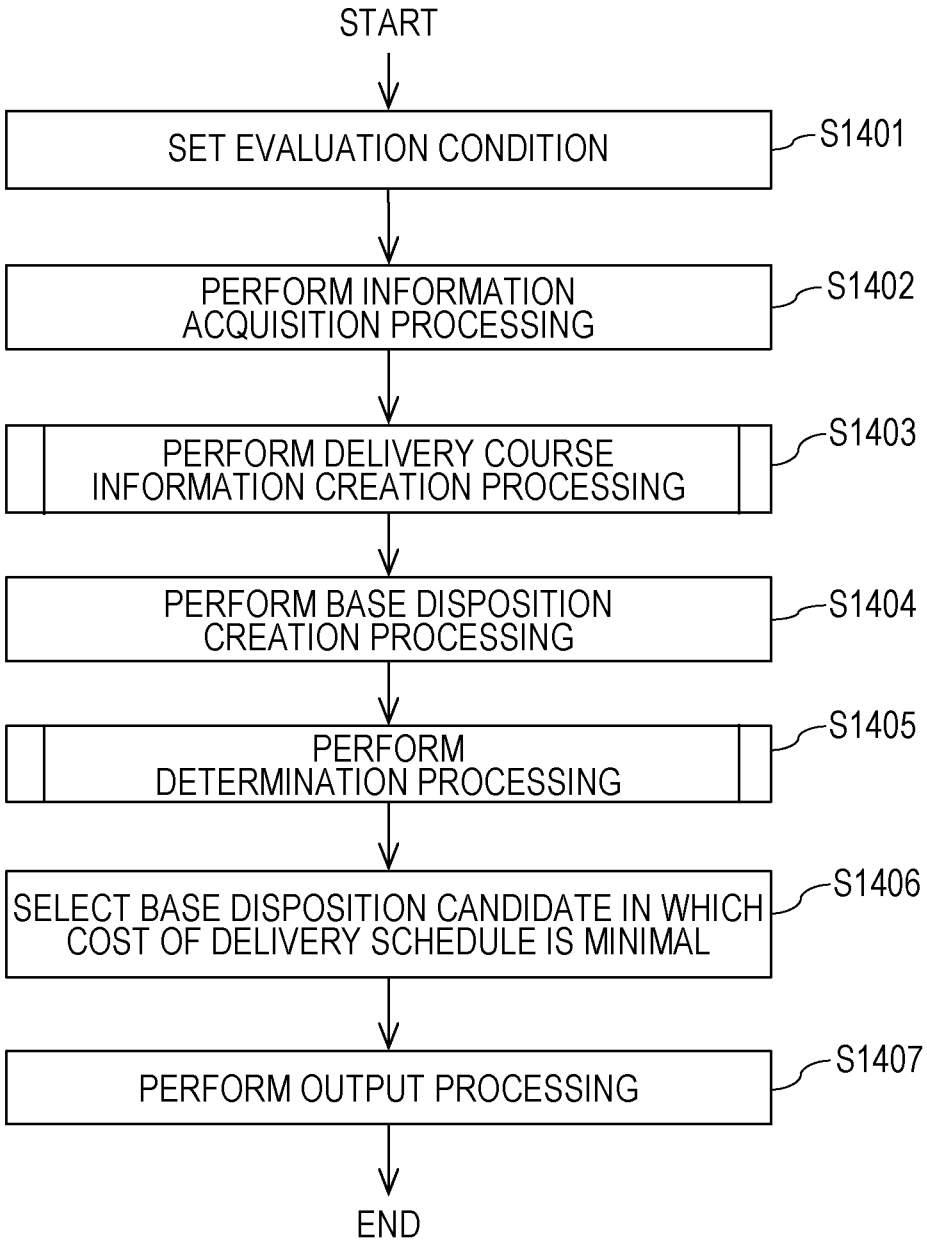

START
SET EVALUATION CONDITION
S1401
PERFORM INFORMATION ACQUISITION PROCESSING
S1402
PERFORM DELIVERY COURSE INFORMATION CREATION PROCESSING
S1403
PERFORM BASE DISPOSITION CREATION PROCESSING
S1404
PERFORM DETERMINATION PROCESSING
S1405
SELECT BASE DISPOSITION CANDIDATE IN WHICH COST OF DELIVERY SCHEDULE IS MINIMAL
S1406
PERFORM OUTPUT PROCESSING
S1407
END

FIG. 15

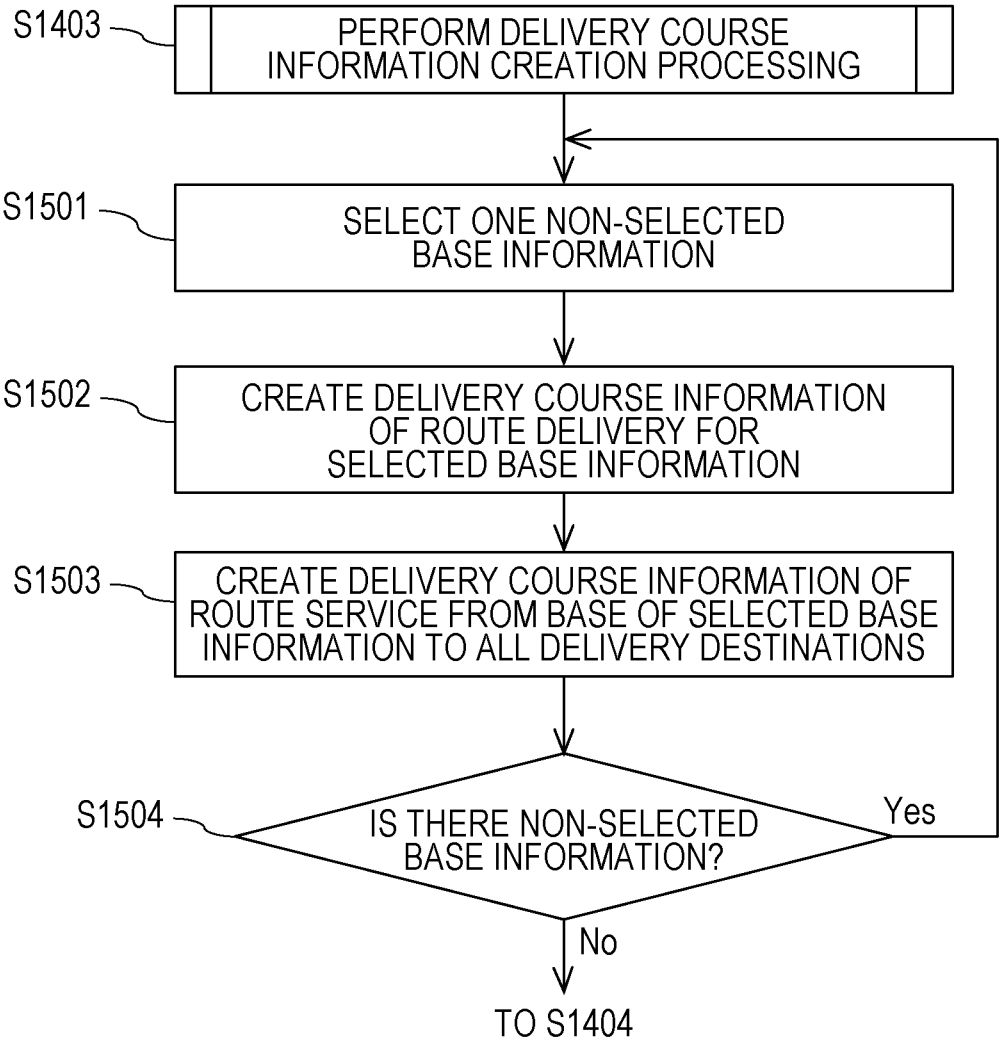

S1403
PERFORM DELIVERY COURSE INFORMATION CREATION PROCESSING
S1501
SELECT ONE NON-SELECTED BASE INFORMATION
S1502
CREATE DELIVERY COURSE INFORMATION OF ROUTE DELIVERY FOR SELECTED BASE INFORMATION
S1503
CREATE DELIVERY COURSE INFORMATION OF ROUTE SERVICE FROM BASE OF SELECTED BASE INFORMATION TO ALL DELIVERY DESTINATIONS
S1504
IS THERE NON-SELECTED BASE INFORMATION?
Yes
No
TO S1404

FIG. 16

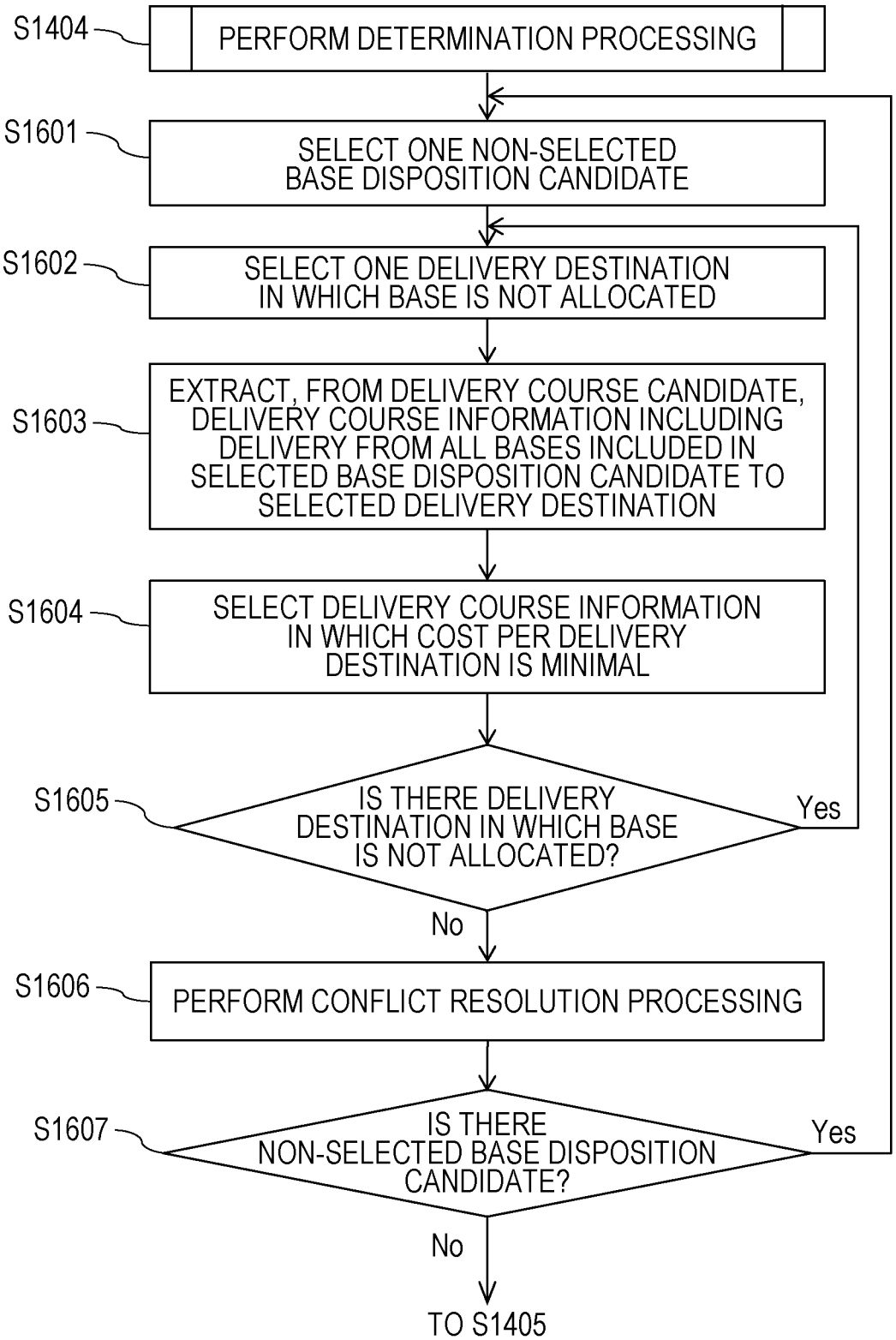

S1404
PERFORM DETERMINATION PROCESSING
S1601
SELECT ONE NON-SELECTED BASE DISPOSITION CANDIDATE
S1602
SELECT ONE DELIVERY DESTINATION IN WHICH BASE IS NOT ALLOCATED
S1603
EXTRACT, FROM DELIVERY COURSE CANDIDATE, DELIVERY COURSE INFORMATION INCLUDING DELIVERY FROM ALL BASES INCLUDED IN SELECTED BASE DISPOSITION CANDIDATE TO SELECTED DELIVERY DESTINATION
S1604
SELECT DELIVERY COURSE INFORMATION IN WHICH COST PER DELIVERY DESTINATION IS MINIMAL
S1605
IS THERE DELIVERY DESTINATION IN WHICH BASE IS NOT ALLOCATED?
Yes
No
S1606
PERFORM CONFLICT RESOLUTION PROCESSING
S1607
IS THERE NON-SELECTED BASE DISPOSITION CANDIDATE?
Yes
No
TO S1405

FIG. 17

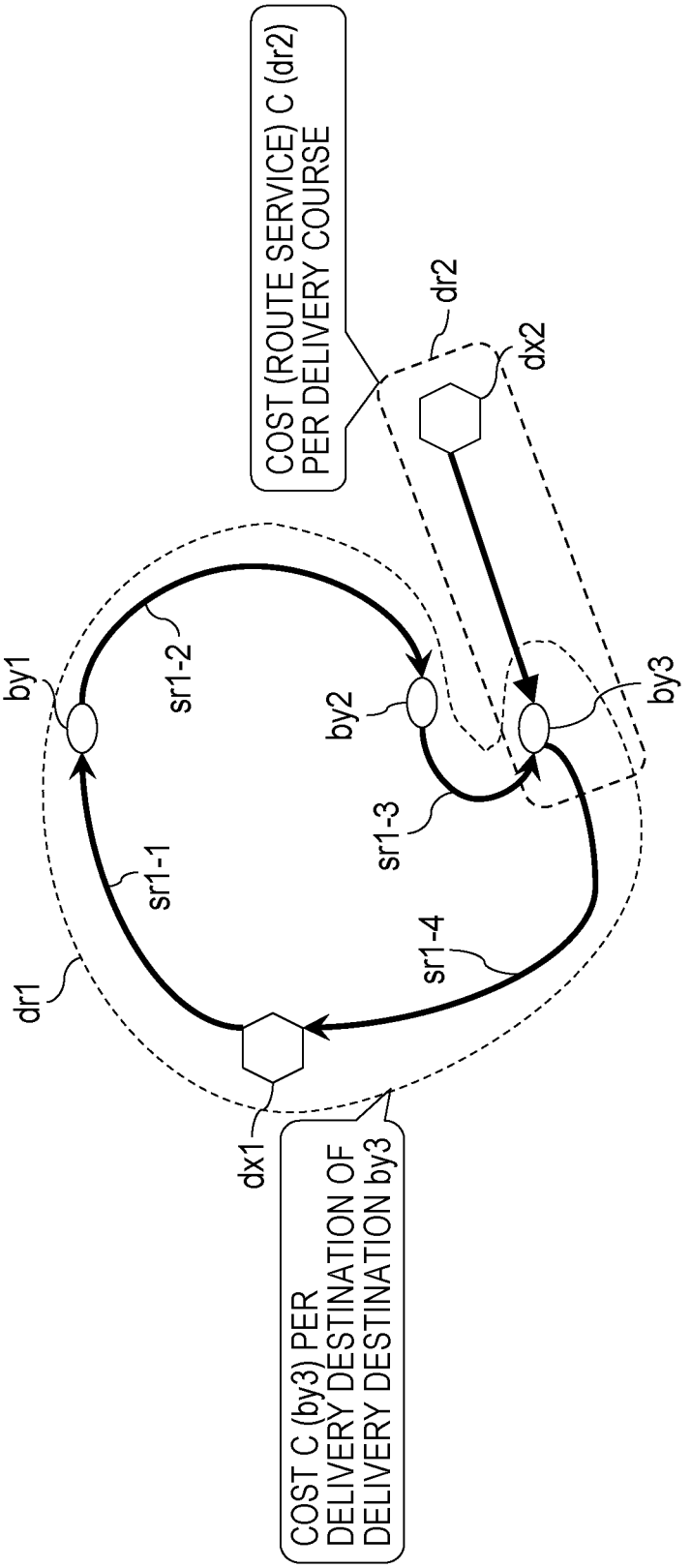

COST (ROUTE SERVICE) C (dr2)
PER DELIVERY COURSE
dr2
dx2
by1
sr1-2
by2
by3
sr1-3
sr1-1
sr1-4
dr1
dx1
COST C (by3) PER
DELIVERY DESTINATION OF
DELIVERY DESTINATION by3

FIG. 18

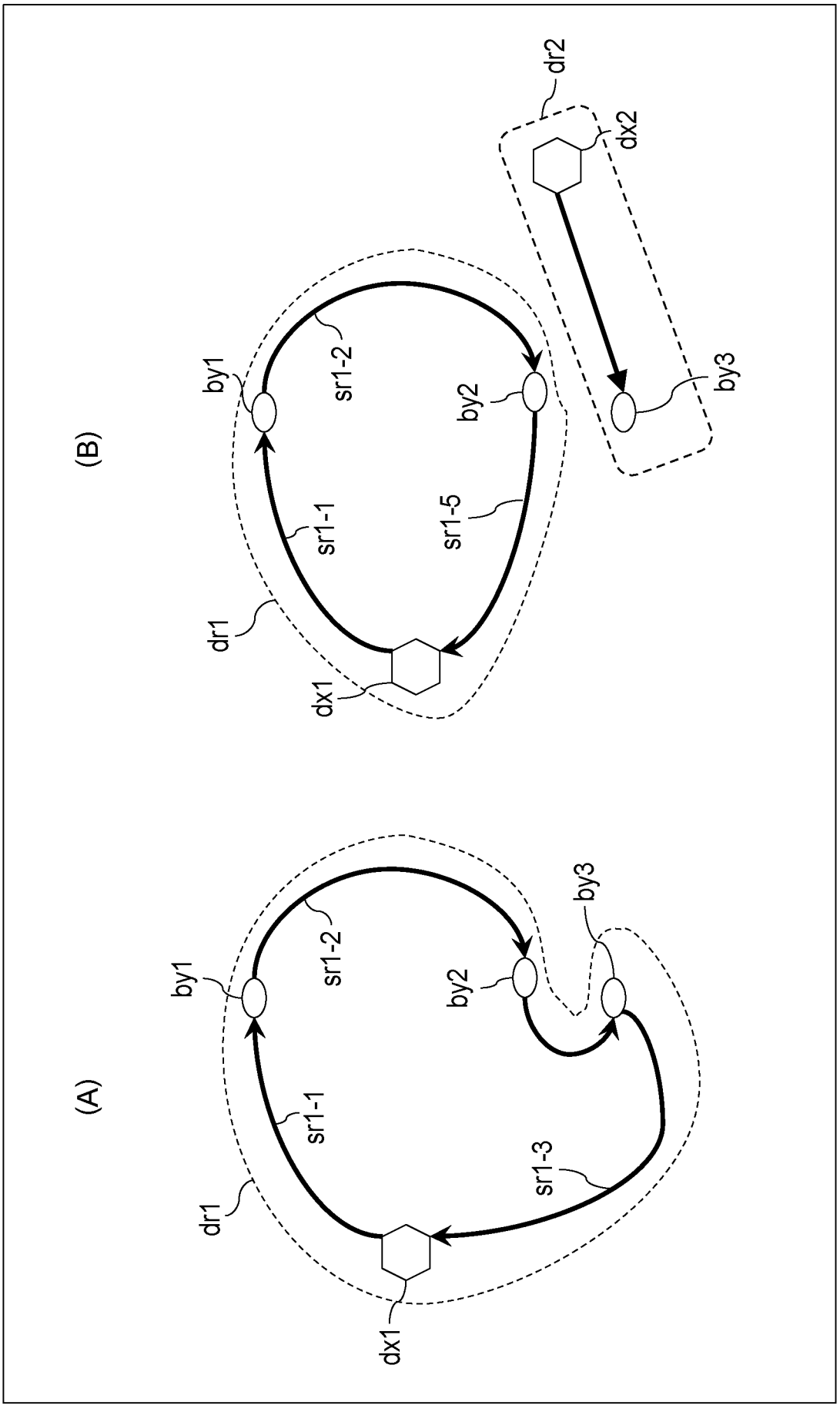

(A)
dr1
by1
sr1-2
by2
by3
sr1-1
sr1-3
dx1
(B)
dr1
by1
sr1-2
by2
sr1-1
sr1-5
dx1
dr2
dx2
by3

FIG. 19

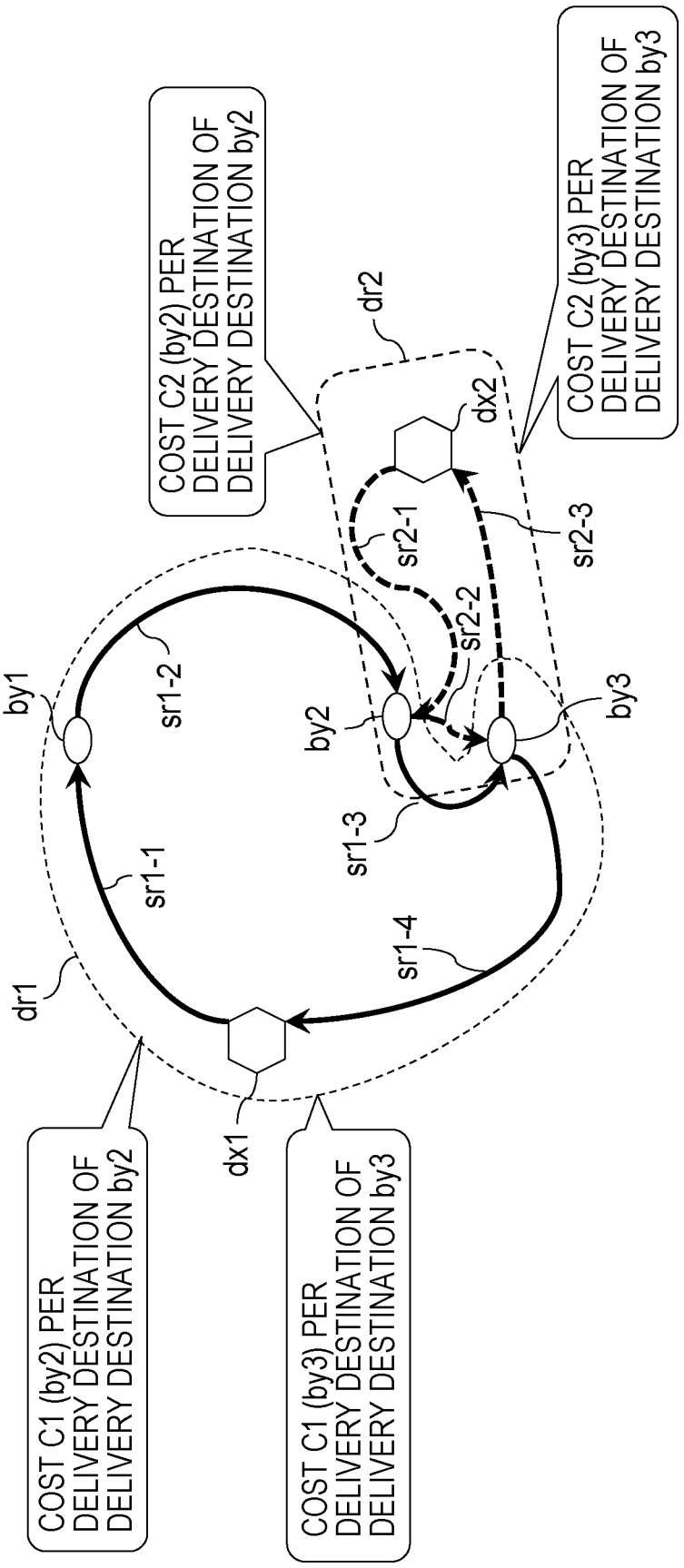

COST C2 (by2) PER DELIVERY DESTINATION OF DELIVERY DESTINATION by2
COST C2 (by3) PER DELIVERY DESTINATION OF DELIVERY DESTINATION by3
dr2
dx2
sr2-1
sr2-2
sr2-3
by1
sr1-2
by2
by3
sr1-3
sr1-1
sr1-4
dr1
dx1
COST C1 (by2) PER DELIVERY DESTINATION OF DELIVERY DESTINATION by2
COST C1 (by3) PER DELIVERY DESTINATION OF DELIVERY DESTINATION by3

FIG. 20

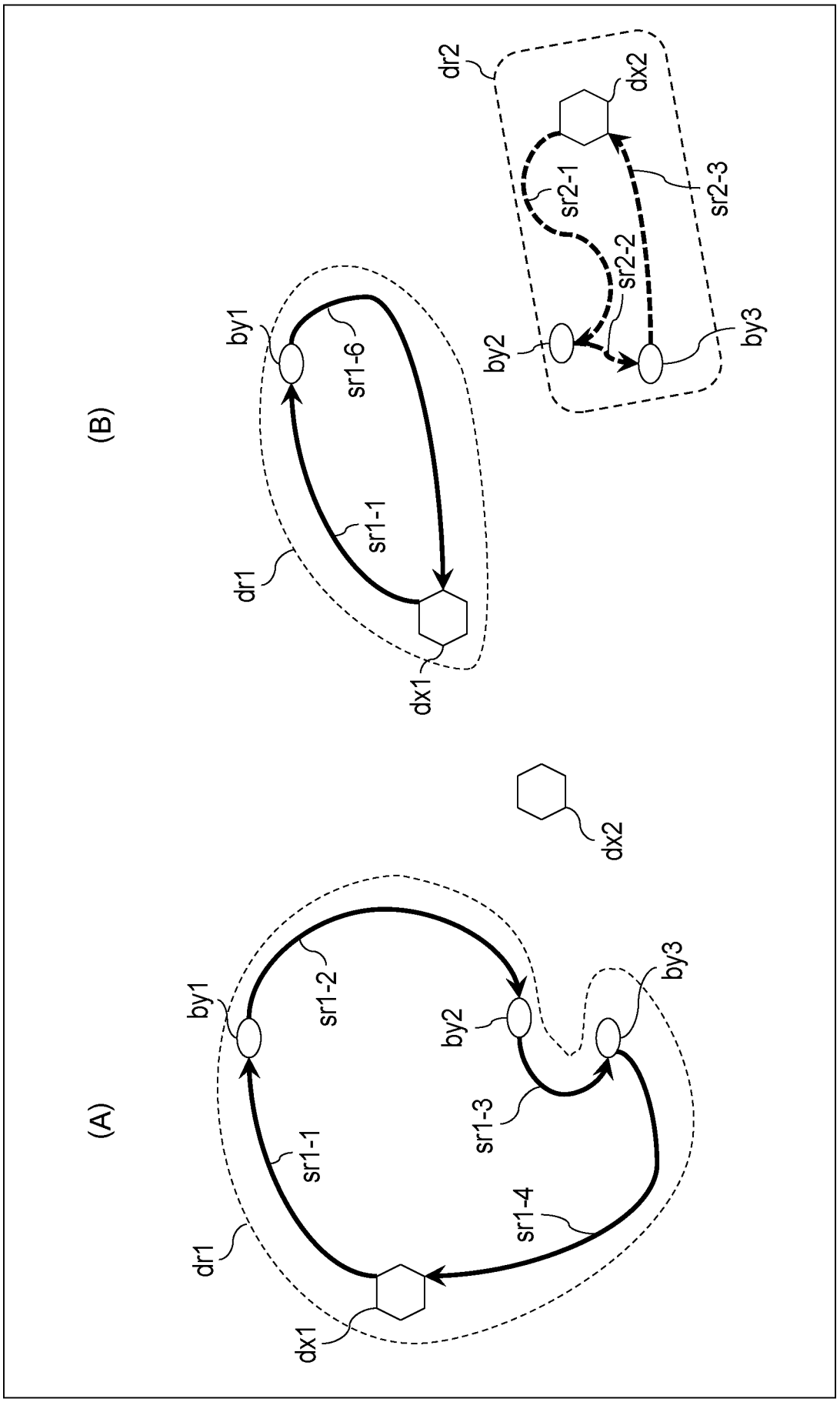

(A)
dr1
by1
sr1-1
sr1-2
by2
sr1-3
by3
sr1-4
dx1
dx2
(B)
dr1
by1
sr1-6
sr1-1
dx1
dr2
dx2
sr2-1
sr2-3
sr2-2
by2
by3

FIG. 21

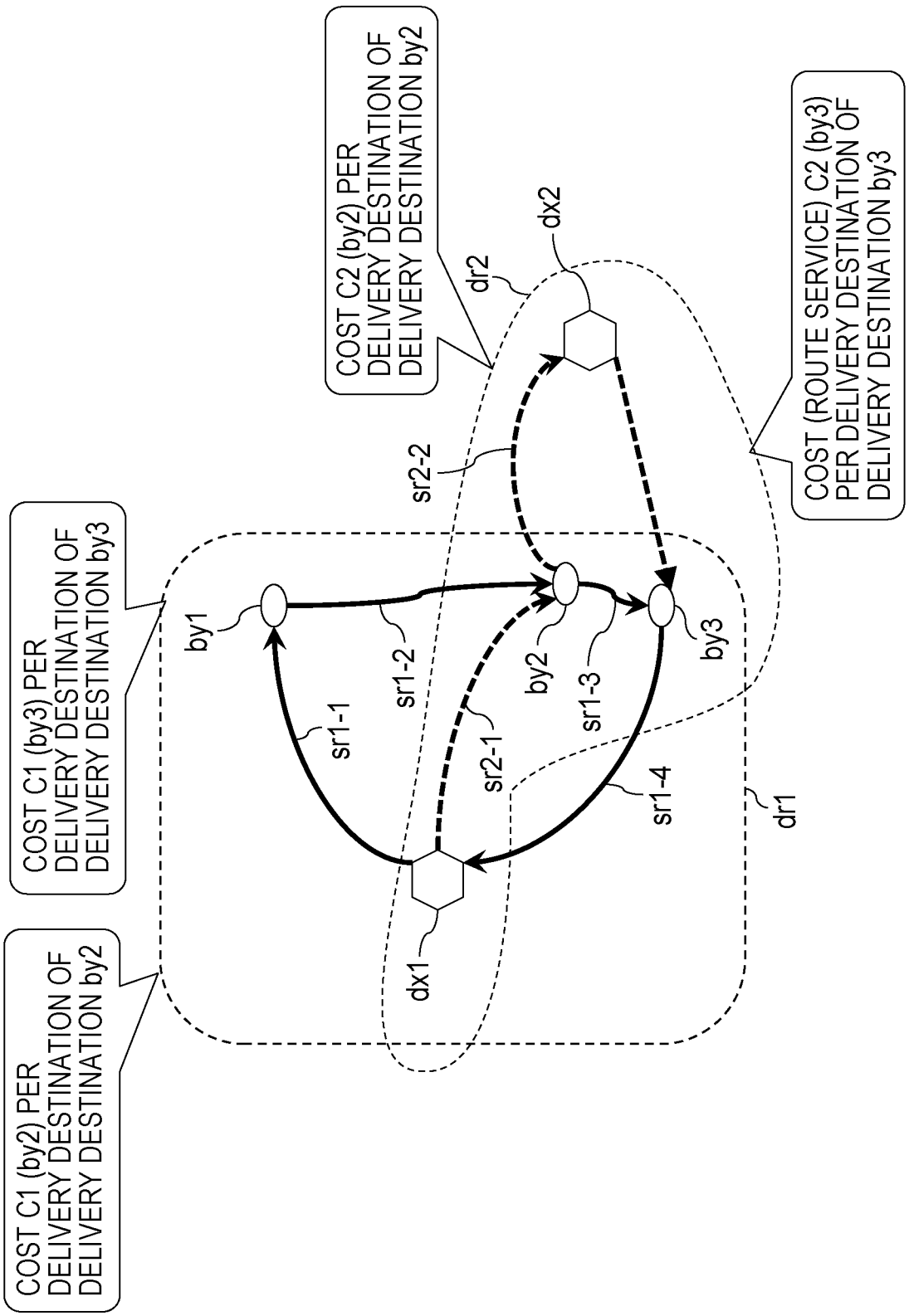

COST C1 (by2) PER DELIVERY DESTINATION OF DELIVERY DESTINATION by2
COST C1 (by3) PER DELIVERY DESTINATION OF DELIVERY DESTINATION by3
COST C2 (by2) PER DELIVERY DESTINATION OF DELIVERY DESTINATION by2
COST (ROUTE SERVICE) C2 (by3) PER DELIVERY DESTINATION OF DELIVERY DESTINATION by3
by1
by2
by3
dx1
dx2
dr1
dr2
sr1-1
sr1-2
sr1-3
sr1-4
sr2-1
sr2-2

FIG. 22

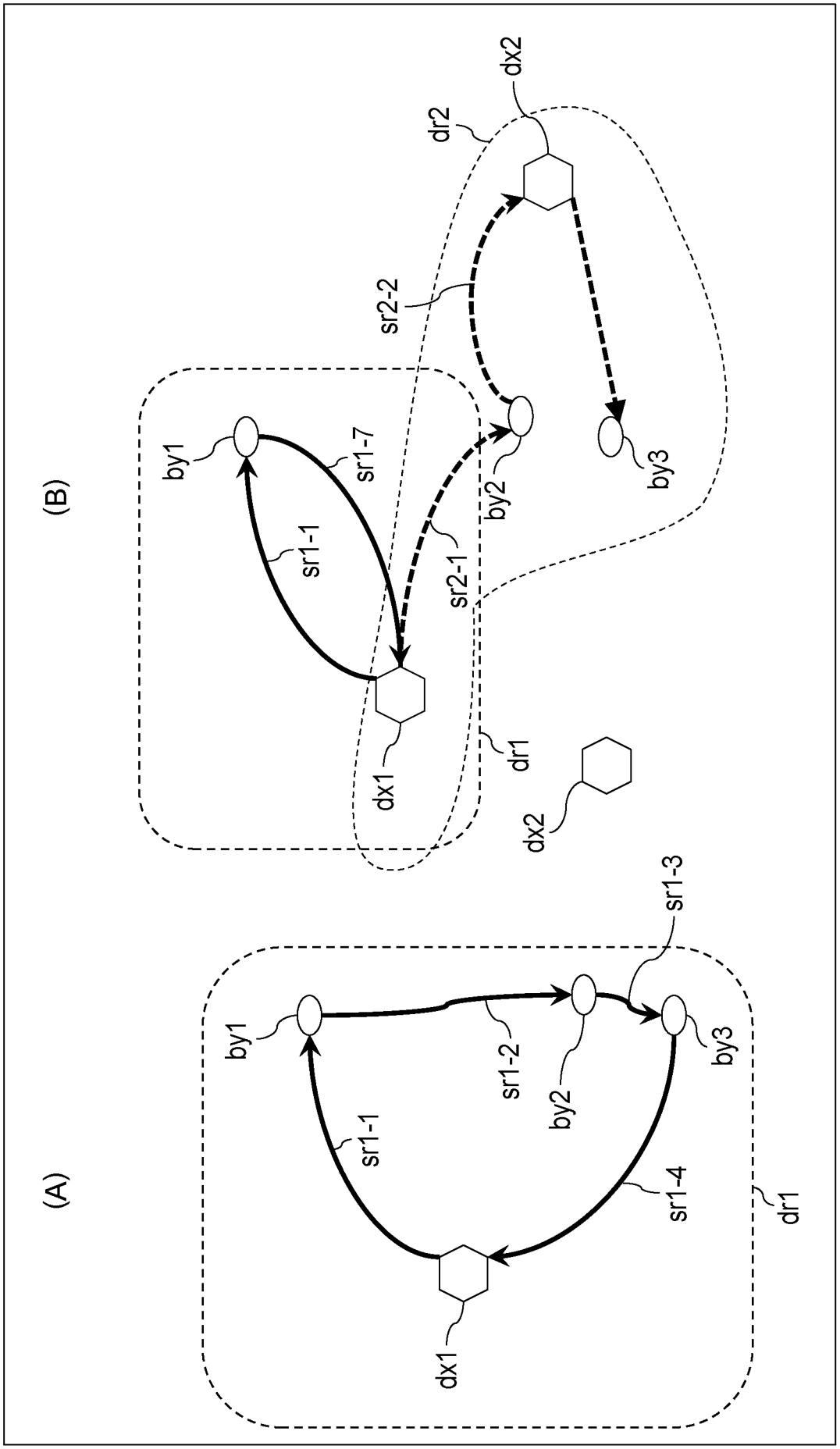

(A)
by1
sr1-1
sr1-2
sr1-3
sr1-4
by2
by3
dx1
dr1
(B)
by1
sr1-1
sr1-7
sr2-1
sr2-2
by2
by3
dx1
dr1
dr2
dx2
dx2

FIG. 23

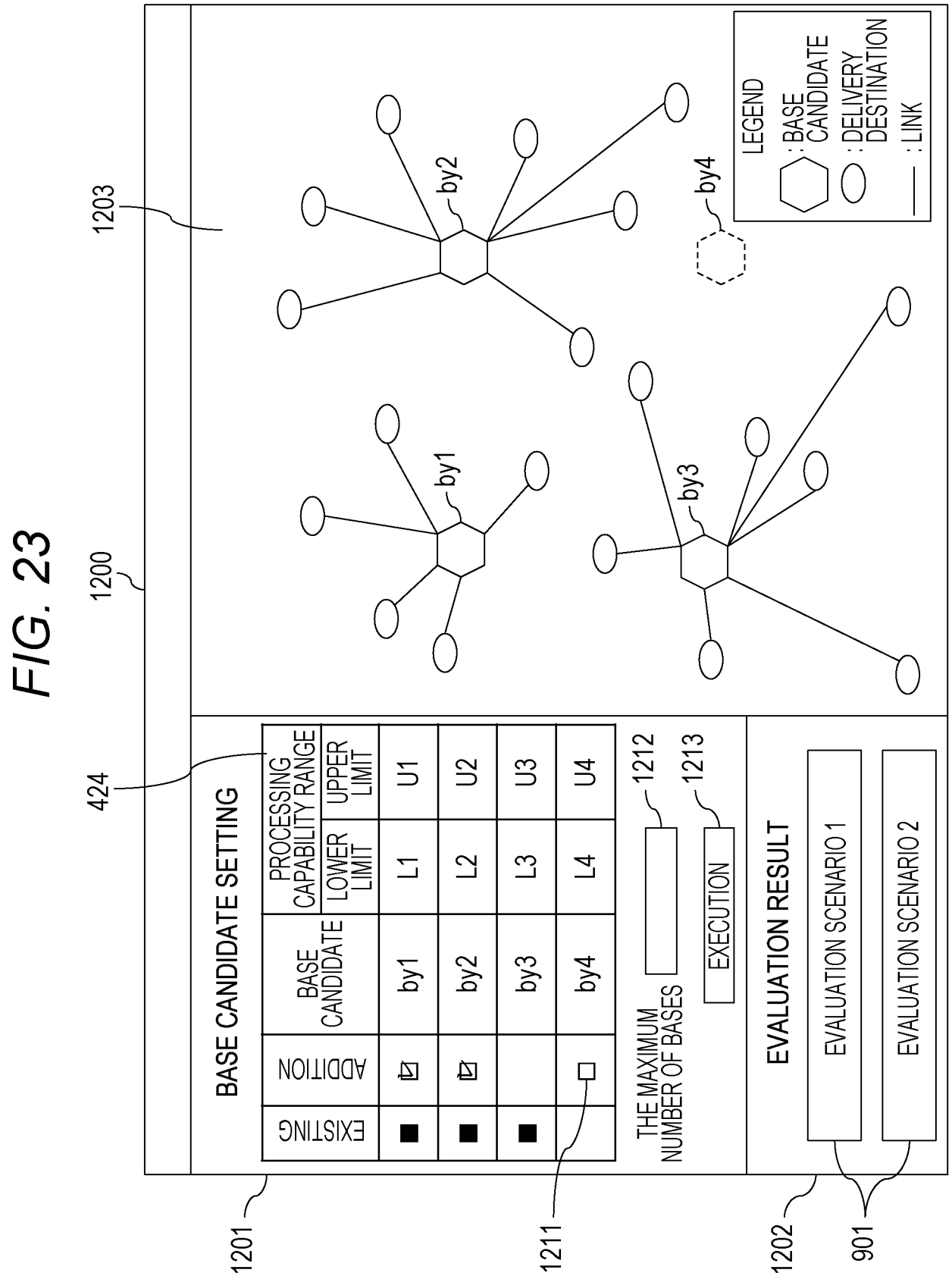

1201
1200
1203
424
1211
1202
901
BASE CANDIDATE SETTING
EXISTING
ADDITION
BASE CANDIDATE
PROCESSING CAPABILITY RANGE
LOWER LIMIT
UPPER LIMIT
by1
L1
U1
by2
L2
U2
by3
L3
U3
by4
L4
U4
THE MAXIMUM NUMBER OF BASES
1212
EXECUTION
1213
EVALUATION RESULT
EVALUATION SCENARIO 1
EVALUATION SCENARIO 2
by1
by2
by3
by4
LEGEND
: BASE CANDIDATE
: DELIVERY DESTINATION
: LINK

FIG. 24

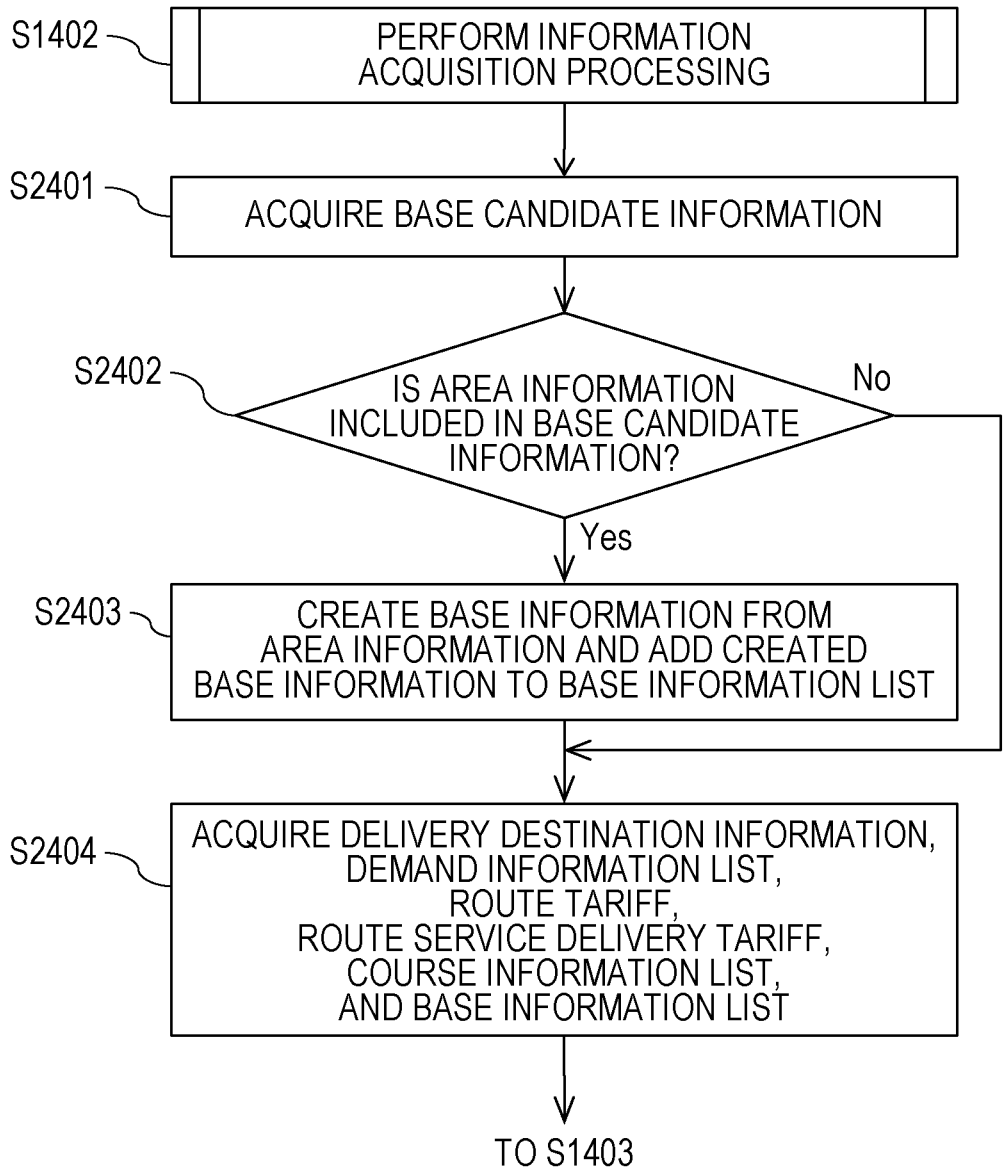

S1402
PERFORM INFORMATION ACQUISITION PROCESSING
S2401
ACQUIRE BASE CANDIDATE INFORMATION
S2402
IS AREA INFORMATION INCLUDED IN BASE CANDIDATE INFORMATION?
No
Yes
S2403
CREATE BASE INFORMATION FROM AREA INFORMATION AND ADD CREATED BASE INFORMATION TO BASE INFORMATION LIST
S2404
ACQUIRE DELIVERY DESTINATION INFORMATION, DEMAND INFORMATION LIST, ROUTE TARIFF, ROUTE SERVICE DELIVERY TARIFF, COURSE INFORMATION LIST, AND BASE INFORMATION LIST
TO S1403

FIG. 25

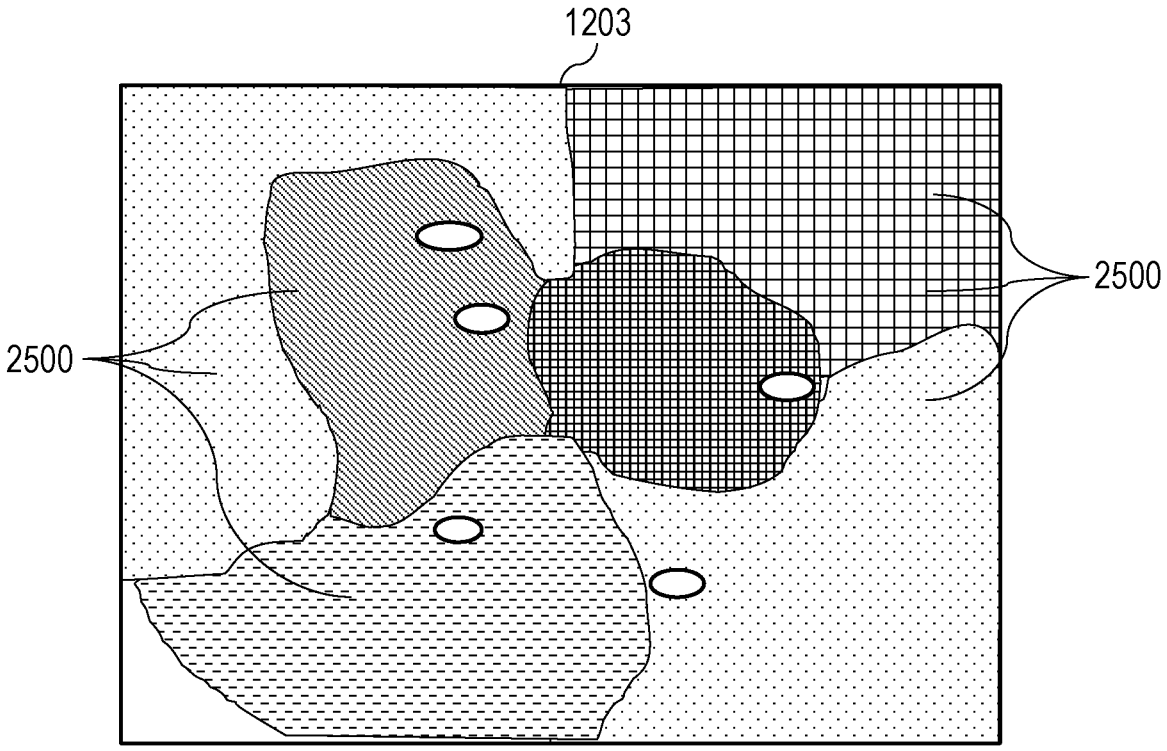

1203
2500
2500

FIG. 26

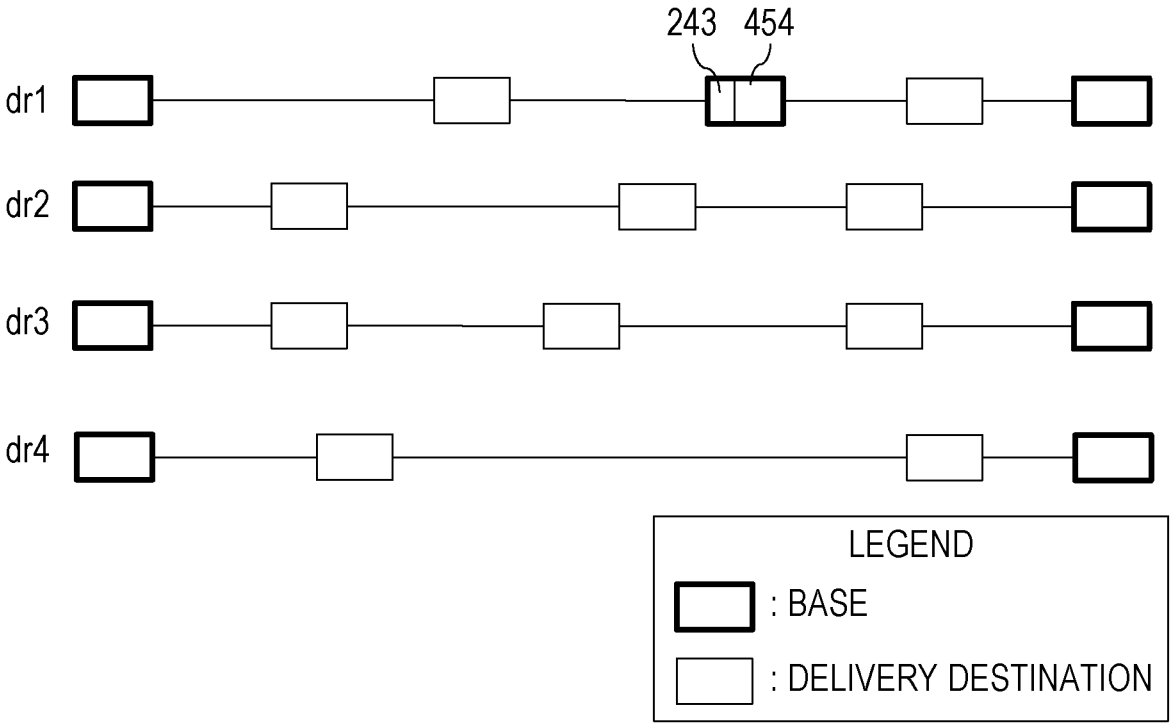

243
454
dr1
dr2
dr3
dr4
LEGEND
: BASE
: DELIVERY DESTINATION

FIG. 27

COMBINATION OF BASE	dx1	dx2	dx3	dx1,dx2	dx1,dx3	dx2,dx3	dx1,dx2,dx3
FIRST DEMAND INFORMATION LIST	w1 × C1_1	w1 × C1_2	w1 × C1_3	w1 × C1_12	w1 × C1_3	w1 × C1_23	w1 × C1_123
SECOND DEMAND INFORMATION LIST	w2 × C2_1	w2 × C2_2	w2 × C2_3	w2 × C2_12	w2 × C2_3	w2 × C2_23	w2 × C2_123
TOTAL	T1	T2	T3	T12	T13	T23	T123