FIG. 1

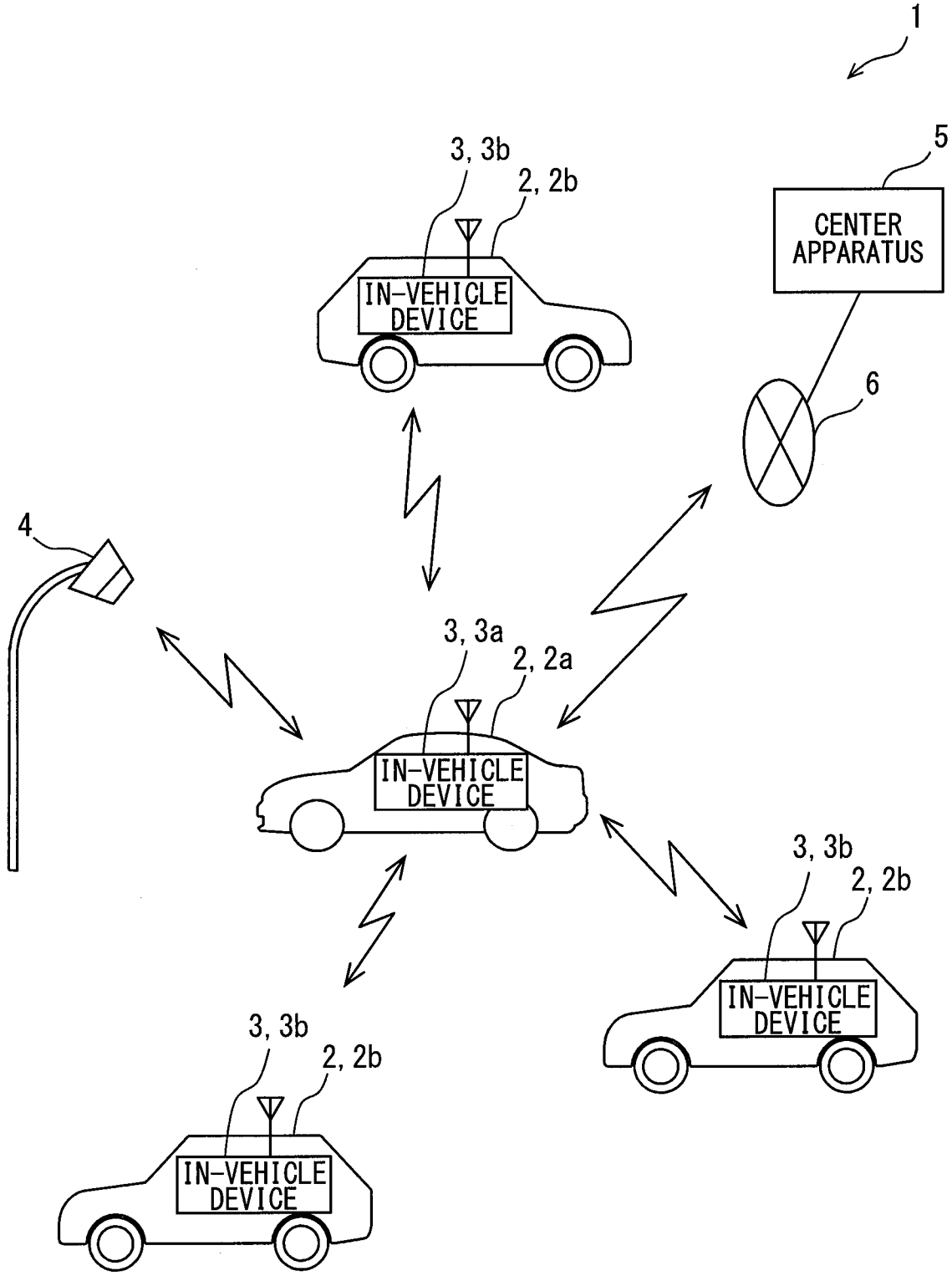

1
3, 3b
2, 2b
IN-VEHICLE DEVICE
5
CENTER APPARATUS
6
4
3, 3a
2, 2a
IN-VEHICLE DEVICE
3, 3b
2, 2b
IN-VEHICLE DEVICE
3, 3b
2, 2b
IN-VEHICLE DEVICE

FIG. 2

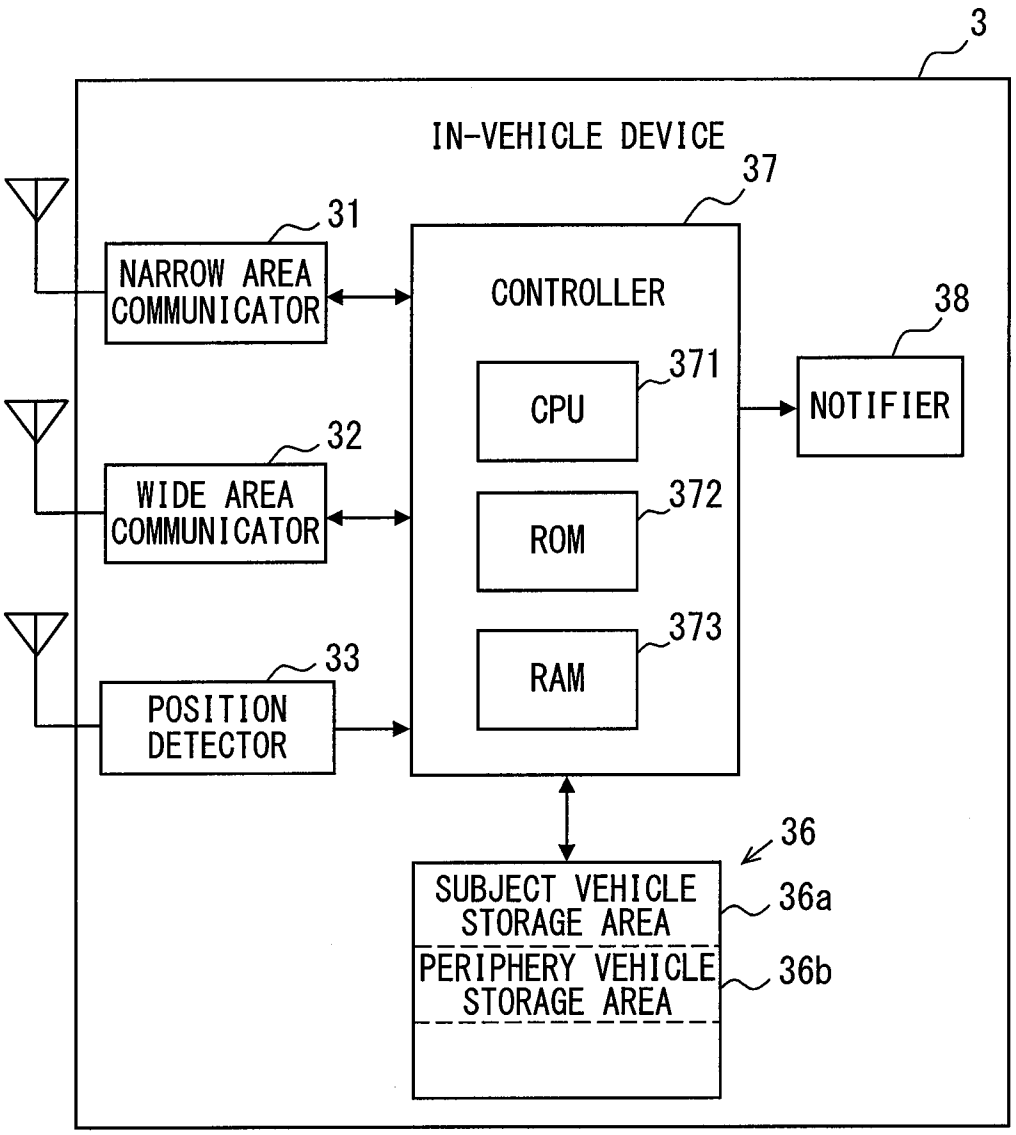

3
IN-VEHICLE DEVICE
37
31
NARROW AREA COMMUNICATOR
CONTROLLER
38
371
CPU
NOTIFIER
32
WIDE AREA COMMUNICATOR
372
ROM
373
RAM
33
POSITION DETECTOR
36
SUBJECT VEHICLE STORAGE AREA
36a
PERIPHERY VEHICLE STORAGE AREA
36b

FIG. 3

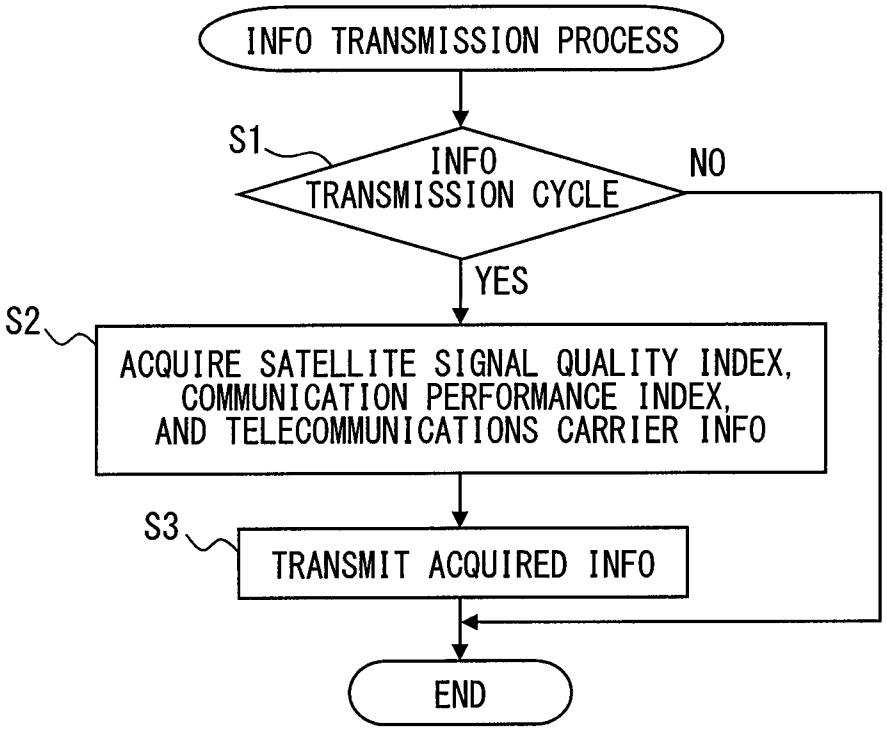

INFO TRANSMISSION PROCESS
S1
INFO TRANSMISSION CYCLE
NO
YES
S2
ACQUIRE SATELLITE SIGNAL QUALITY INDEX, COMMUNICATION PERFORMANCE INDEX, AND TELECOMMUNICATIONS CARRIER INFO
S3
TRANSMIT ACQUIRED INFO
END

FIG. 4

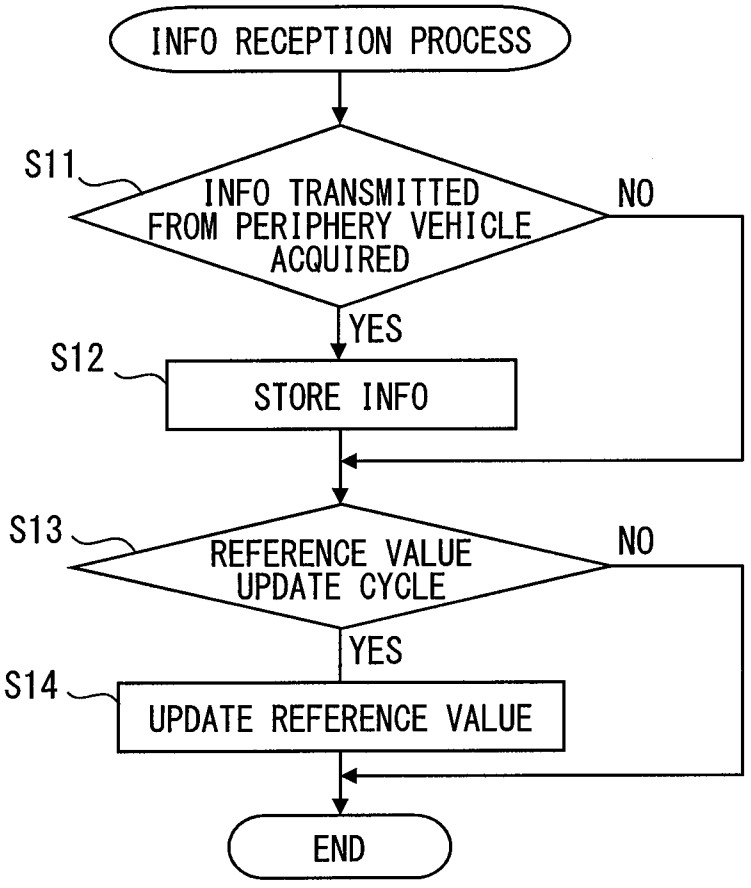

INFO RECEPTION PROCESS
S11
INFO TRANSMITTED FROM PERIPHERY VEHICLE ACQUIRED
NO
YES
S12
STORE INFO
S13
REFERENCE VALUE UPDATE CYCLE
NO
YES
S14
UPDATE REFERENCE VALUE
END

FIG. 5

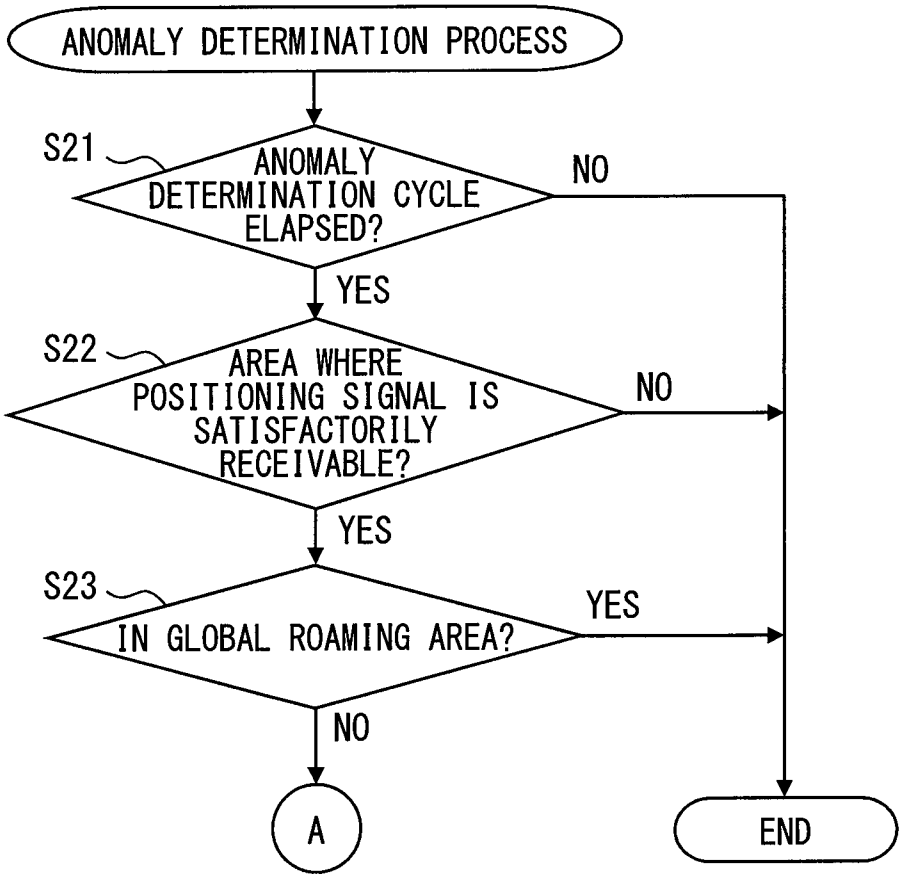

ANOMALY DETERMINATION PROCESS
S21
ANOMALY DETERMINATION CYCLE ELAPSED?
NO
YES
S22
AREA WHERE POSITIONING SIGNAL IS SATISFACTORILY RECEIVABLE?
NO
YES
S23
IN GLOBAL ROAMING AREA?
YES
NO
A
END

FIG. 6

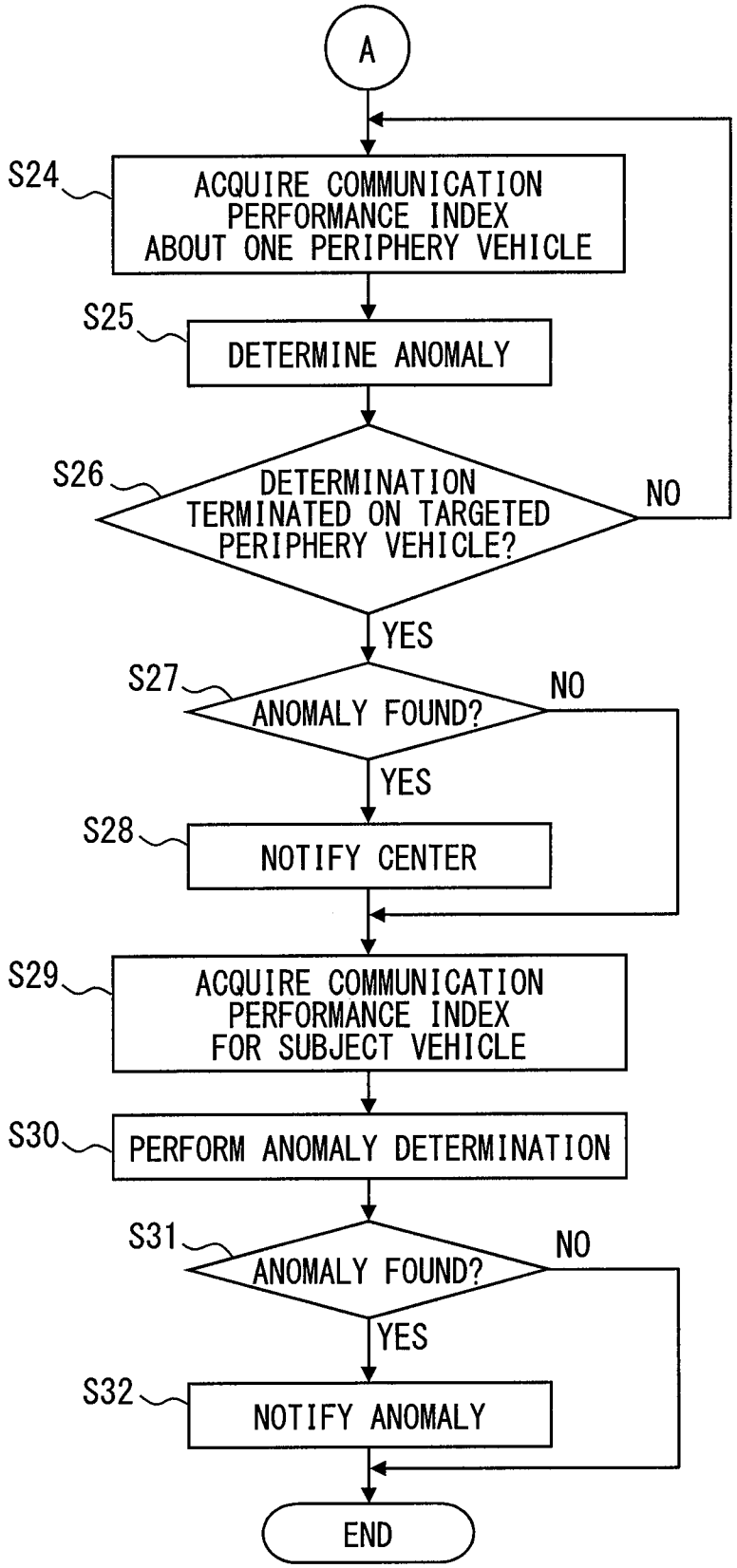
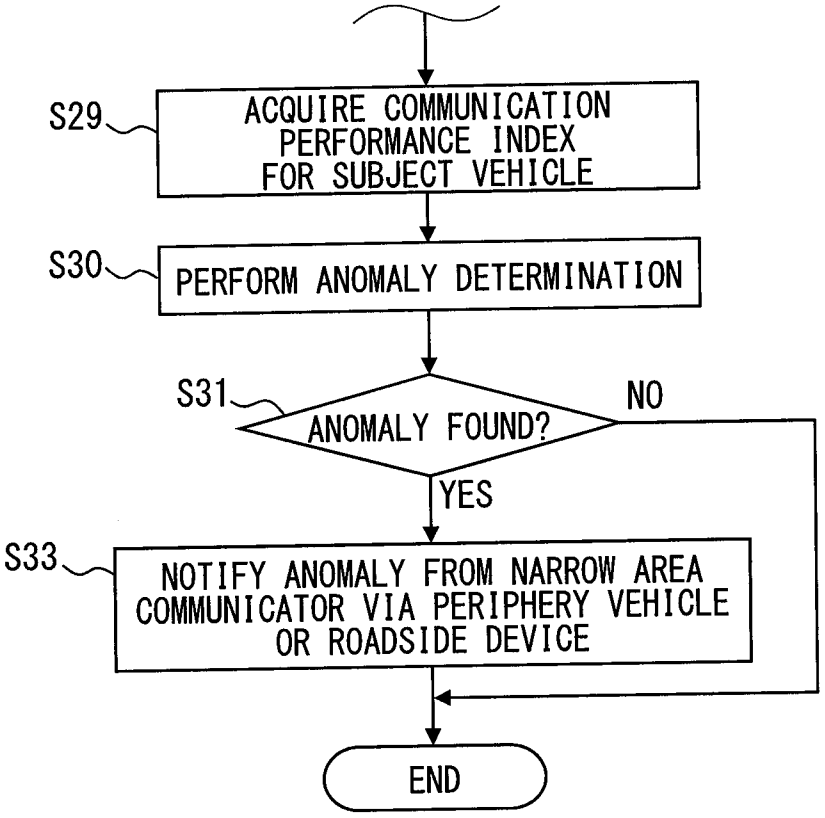

A
S24
ACQUIRE COMMUNICATION PERFORMANCE INDEX ABOUT ONE PERIPHERY VEHICLE
S25
DETERMINE ANOMALY
S26
DETERMINATION TERMINATED ON TARGETED PERIPHERY VEHICLE?
NO
YES
S27
ANOMALY FOUND?
NO
YES
S28
NOTIFY CENTER
S29
ACQUIRE COMMUNICATION PERFORMANCE INDEX FOR SUBJECT VEHICLE
S30
PERFORM ANOMALY DETERMINATION
S31
ANOMALY FOUND?
NO
YES
S32
NOTIFY ANOMALY
END

FIG. 7


S29
ACQUIRE COMMUNICATION PERFORMANCE INDEX FOR SUBJECT VEHICLE
S30
PERFORM ANOMALY DETERMINATION
S31
ANOMALY FOUND?
NO
YES
S33
NOTIFY ANOMALY FROM NARROW AREA COMMUNICATOR VIA PERIPHERY VEHICLE OR ROADSIDE DEVICE
END