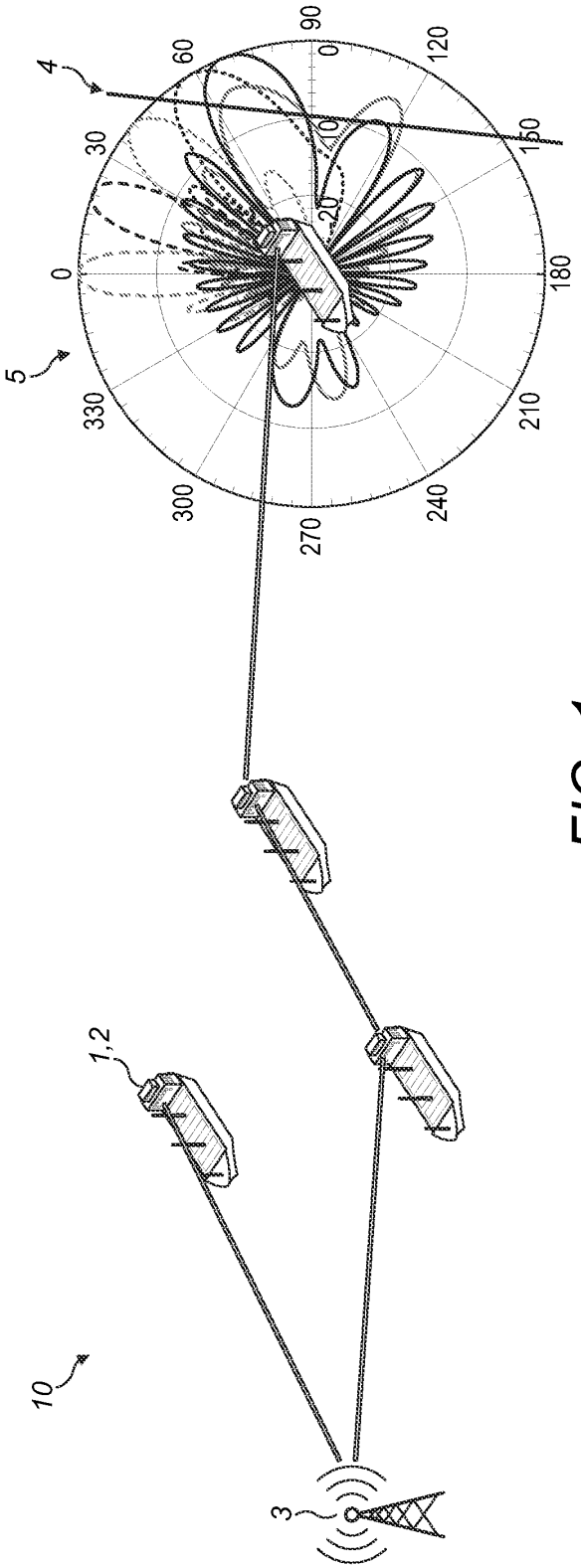


FIG. 1

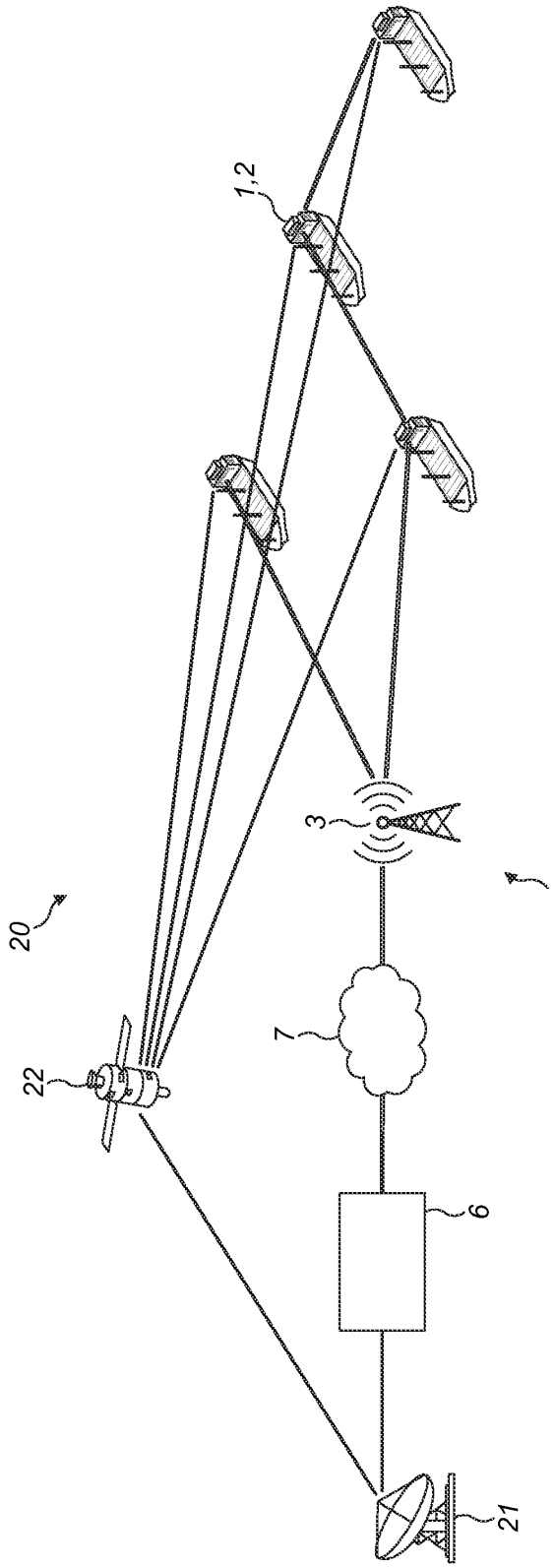


FIG. 2

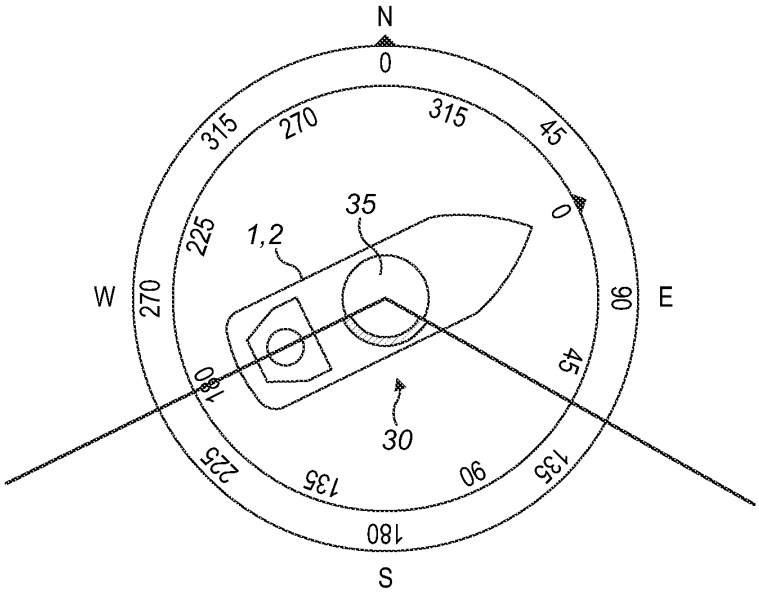

N
0
315
270
315
45
225
1,2
35
0
W
270
90
E
45
0
30
225
135
90
135
180
S

FIG. 3

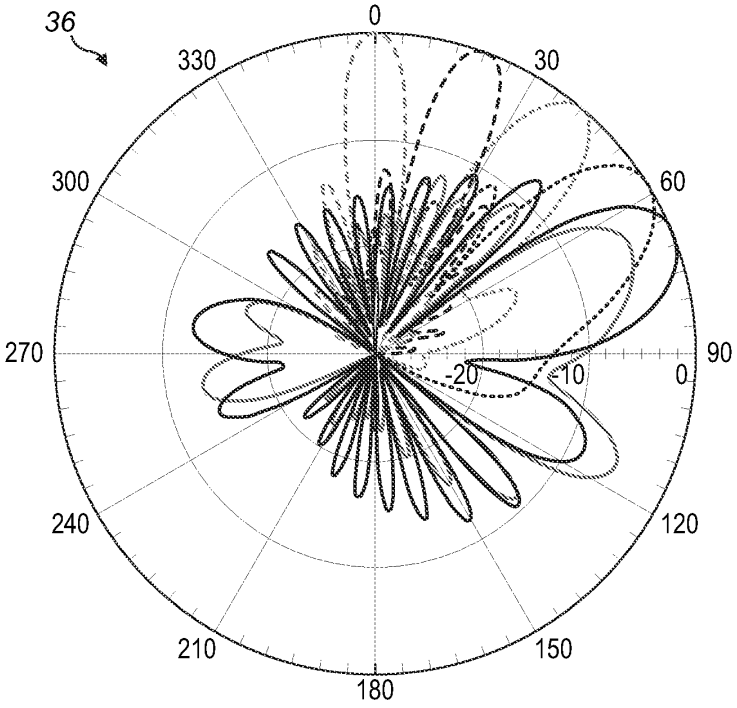

36
0
330
30
300
60
270
90
-20
-10
0
240
120
210
150
180

FIG. 4

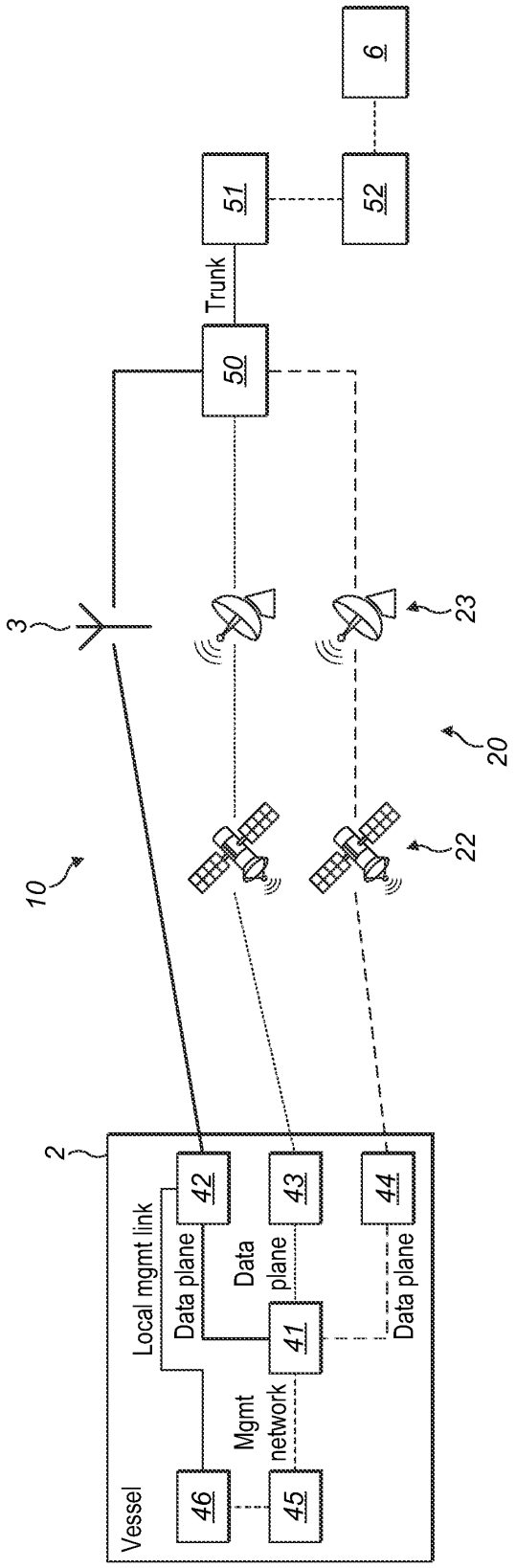

6
51
52
Trunk
50
3
23
20
22
10
2
Local mgmt link
42
Data plane
43
Data plane
44
Data plane
41
Mgmt network
46
45
Vessel

FIG. 5

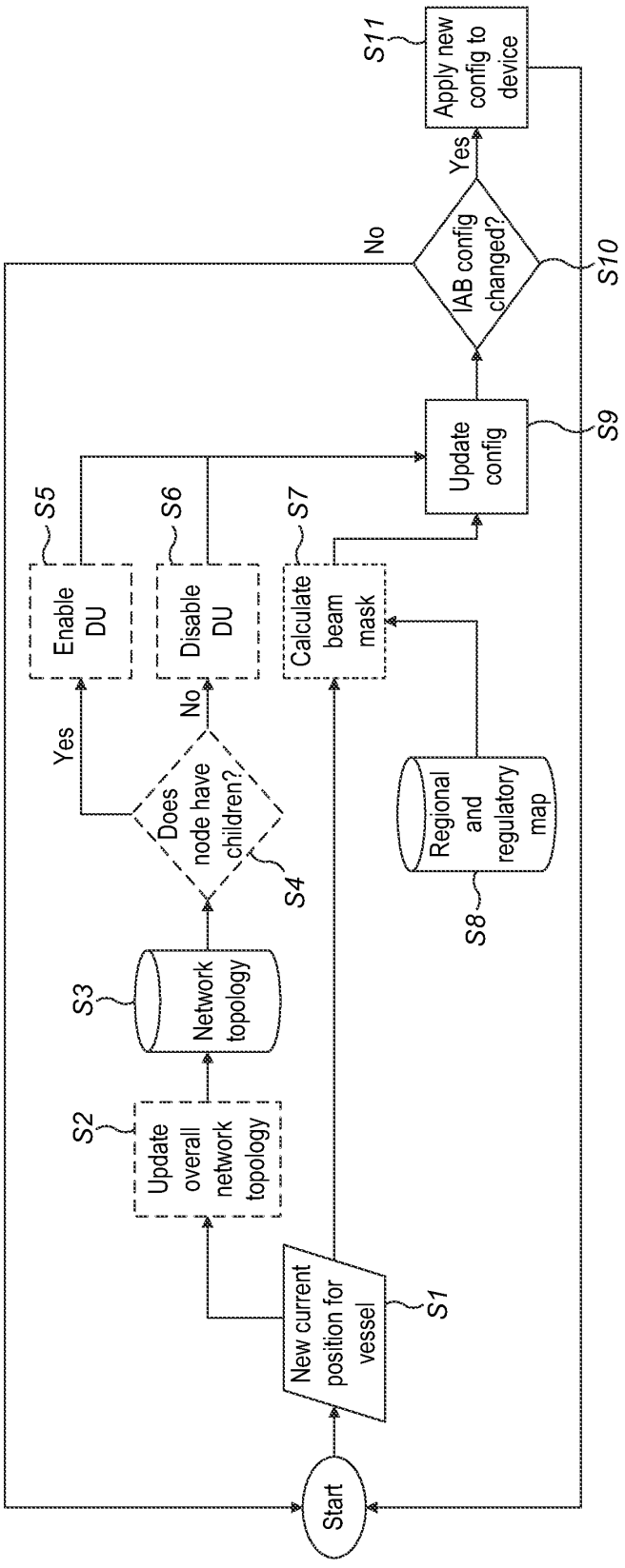

Start
New current position for vessel
S1
Update overall network topology
S2
Network topology
S3
Does node have children?
S4
Yes
No
Enable DU
S5
Disable DU
S6
Calculate beam mask
S7
Regional and regulatory map
S8
Update config
S9
IAB config changed?
S10
Yes
No
Apply new config to device
S11

FIG. 6

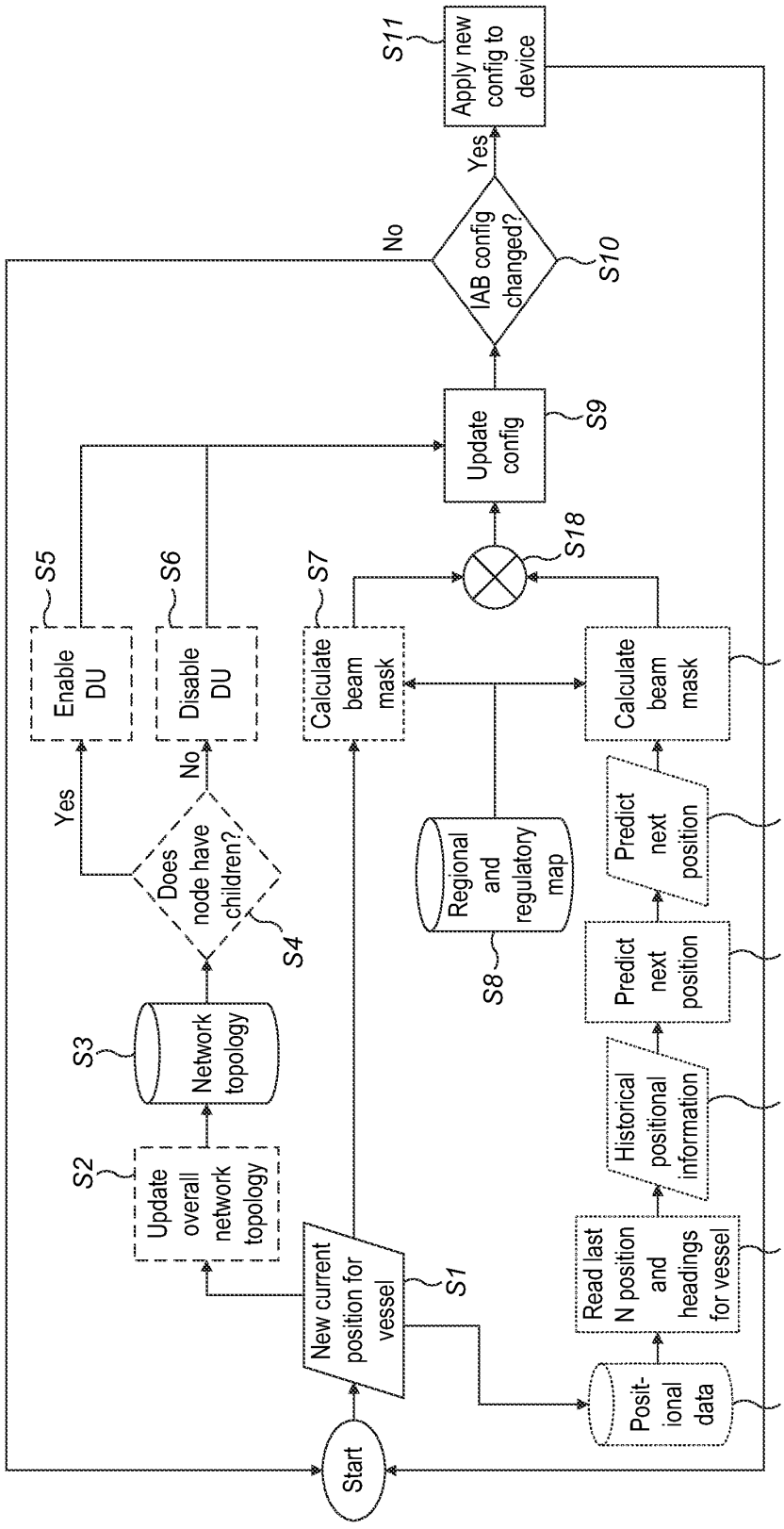

Start
New current position for vessel
S1
Update overall network topology
S2
Network topology
S3
Does node have children?
S4
Yes
No
Enable DU
S5
Disable DU
S6
Calculate beam mask
S7
Regional and regulatory map
S8
Update config
S9
IAB config changed?
S10
Yes
No
Apply new config to device
S11
Positional data
S12
Read last N position and headings for vessel
S13
Historical positional information
S14
Predict next position
S15
Predict next position
S16
Calculate beam mask
S17
S18

FIG. 7

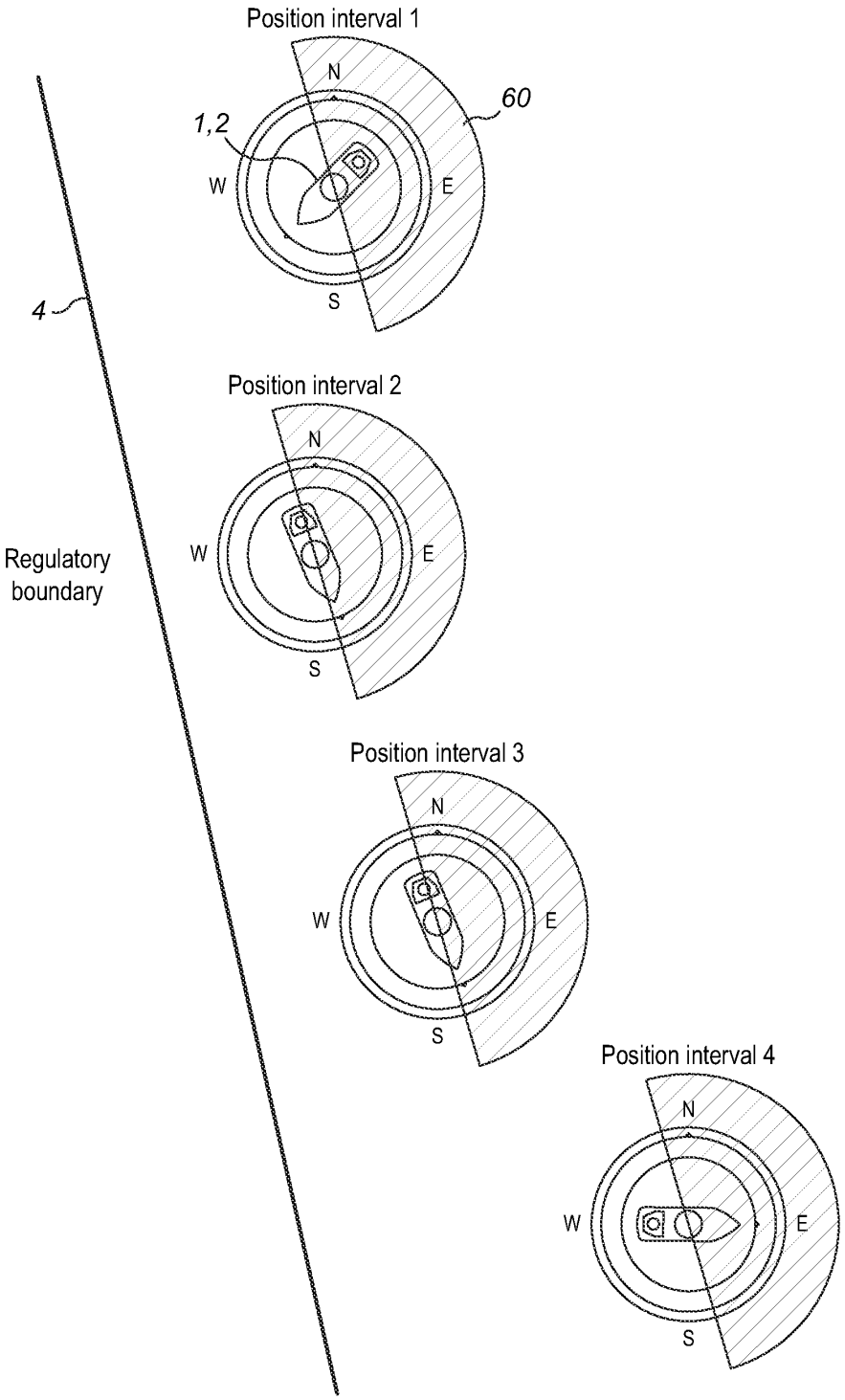

Position interval 1
N
60
1,2
W
E
S
4
Position interval 2
N
W
E
S
Regulatory boundary
Position interval 3
N
W
E
S
Position interval 4
N
W
E
S

FIG. 8

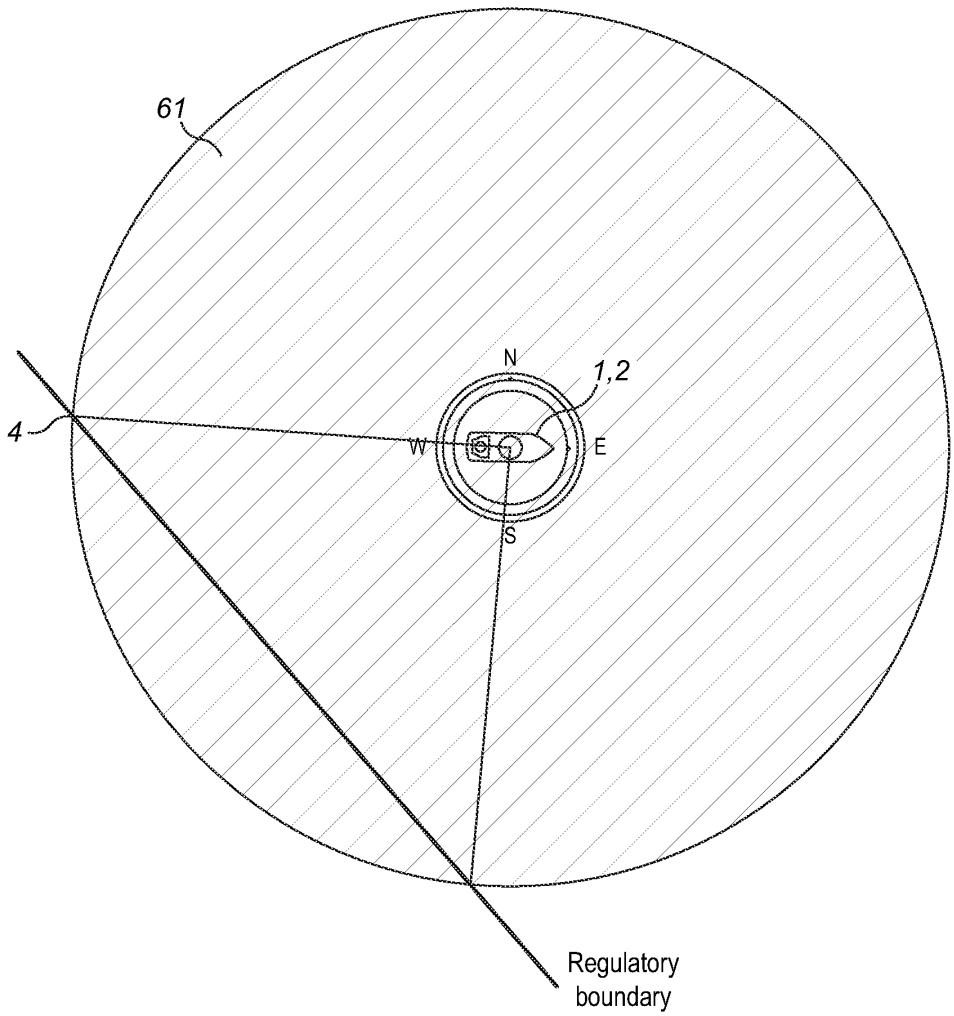


FIG. 9

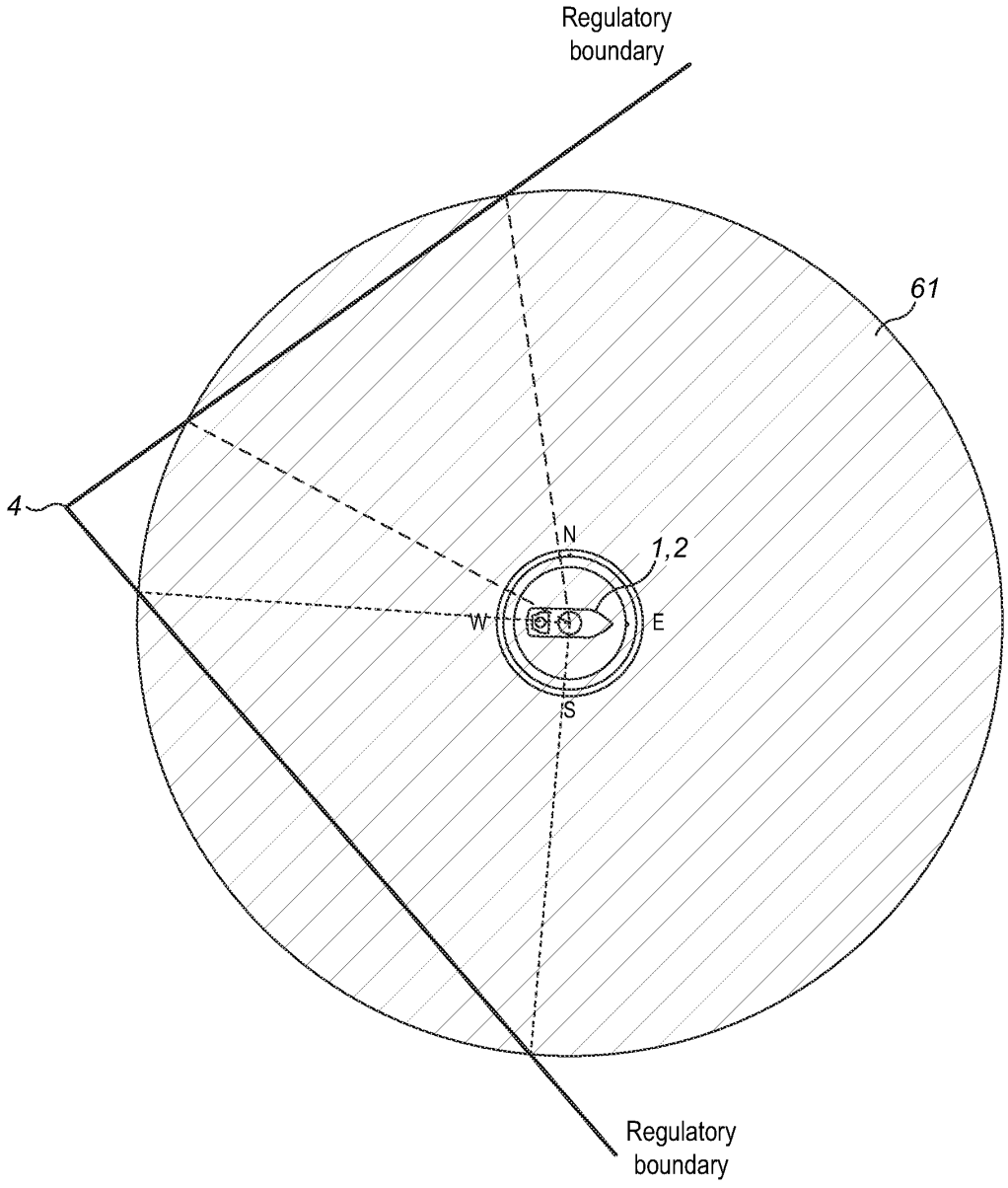


FIG. 10

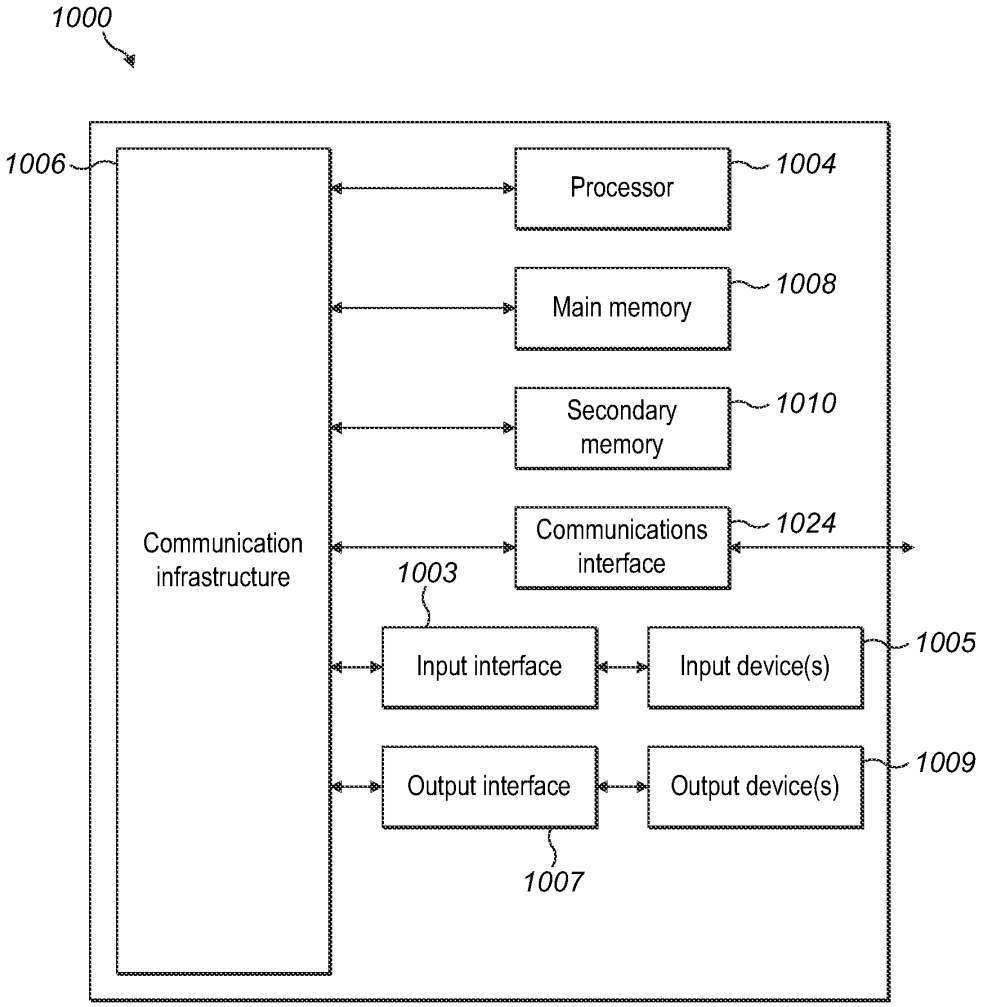

1000
1006
Communication infrastructure
Processor
1004
Main memory
1008
Secondary memory
1010
Communications interface
1024
1003
Input interface
Input device(s)
1005
Output interface
Output device(s)
1009
1007

FIG. 11