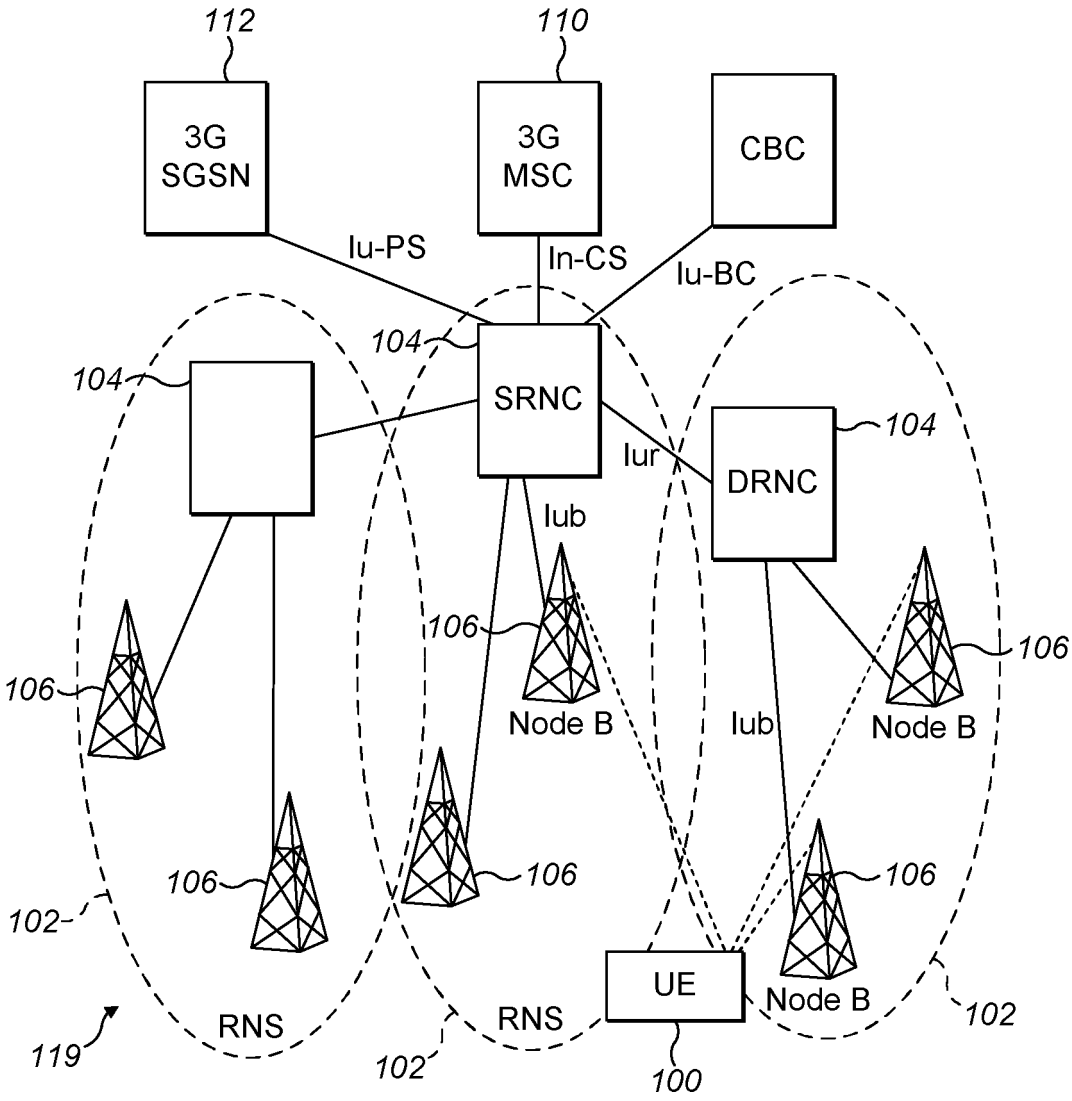
112
110
3G SGSN
3G MSC
CBC
Iu-PS
In-CS
Iu-BC
104
104
SRNC
104
Iur
DRNC
Iub
Iub
106
106
106
Node B
Node B
106
106
106
102
UE
Node B
102
RNS
RNS
119
102
100

FIG. 1A

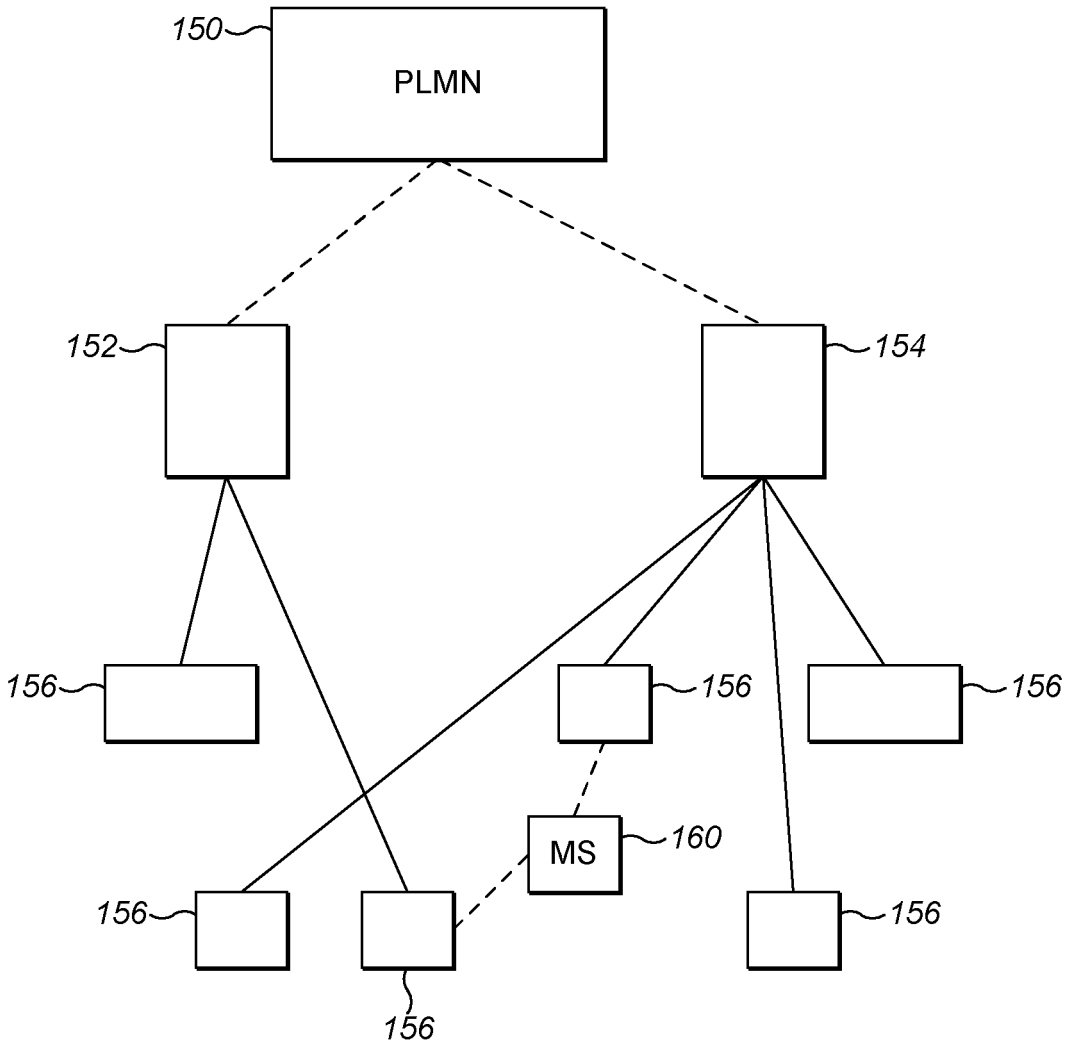

FIG. 1B

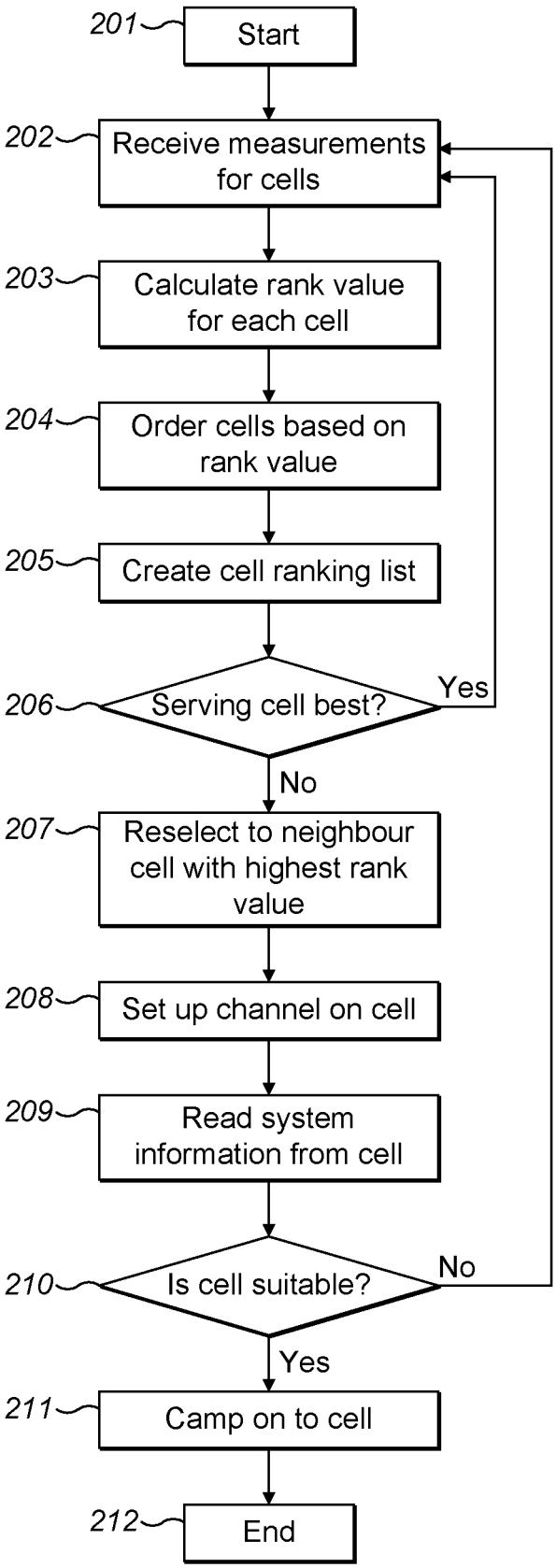
201
Start
202
Receive measurements for cells
203
Calculate rank value for each cell
204
Order cells based on rank value
205
Create cell ranking list
206
Serving cell best?
Yes
No
207
Reselect to neighbour cell with highest rank value
208
Set up channel on cell
209
Read system information from cell
210
Is cell suitable?
No
Yes
211
Camp on to cell
212
End

FIG. 2

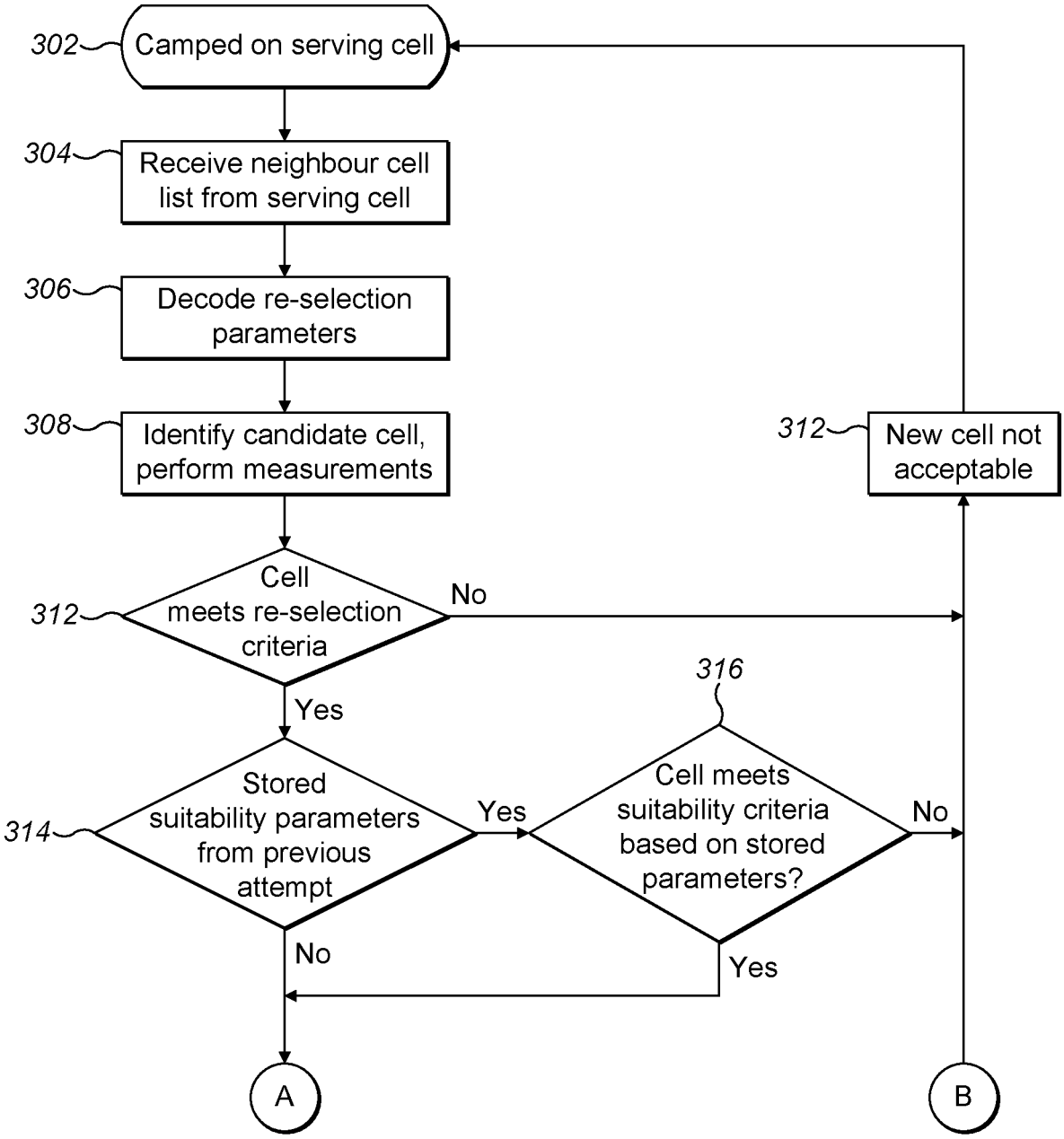
302
Camped on serving cell
304
Receive neighbour cell list from serving cell
306
Decode re-selection parameters
308
Identify candidate cell, perform measurements
312
Cell meets re-selection criteria
No
Yes
316
Cell meets suitability criteria based on stored parameters?
No
Yes
314
Stored suitability parameters from previous attempt
Yes
No
312
New cell not acceptable
A
B

FIG. 3

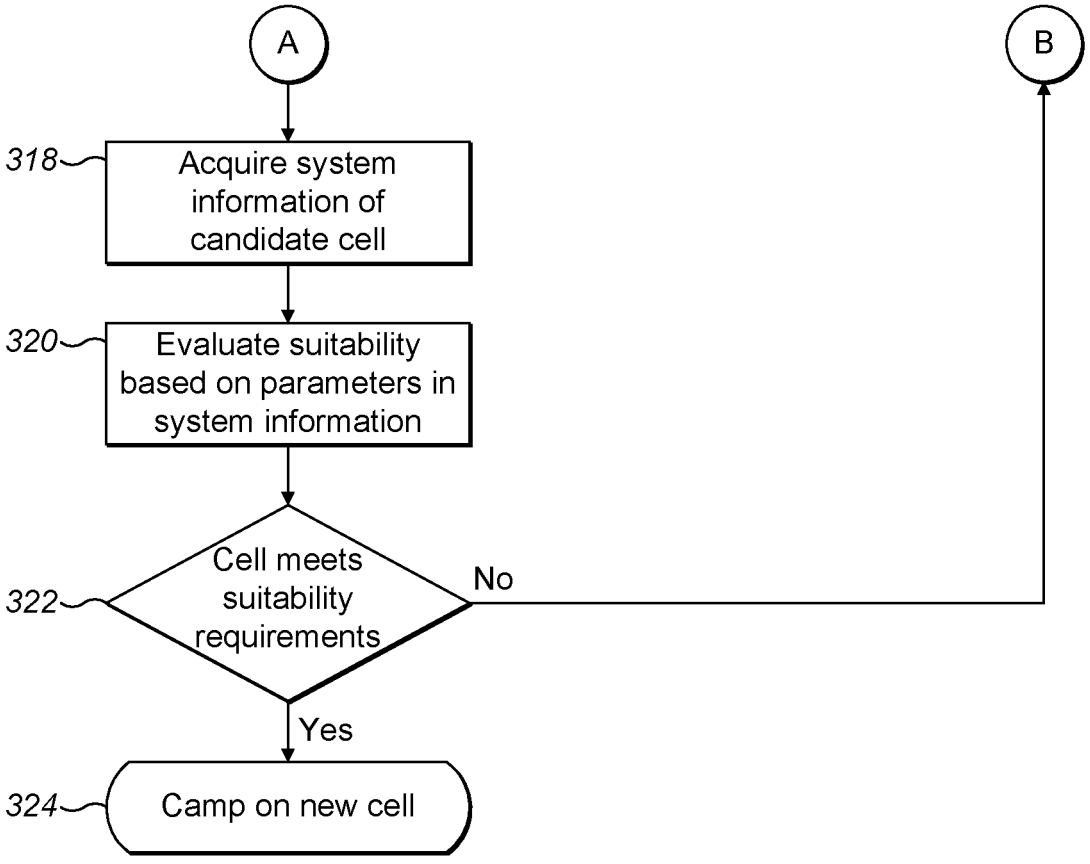
A
B
318
Acquire system information of candidate cell
320
Evaluate suitability based on parameters in system information
322
Cell meets suitability requirements
No
Yes
324
Camp on new cell

FIG. 3 Cont'd

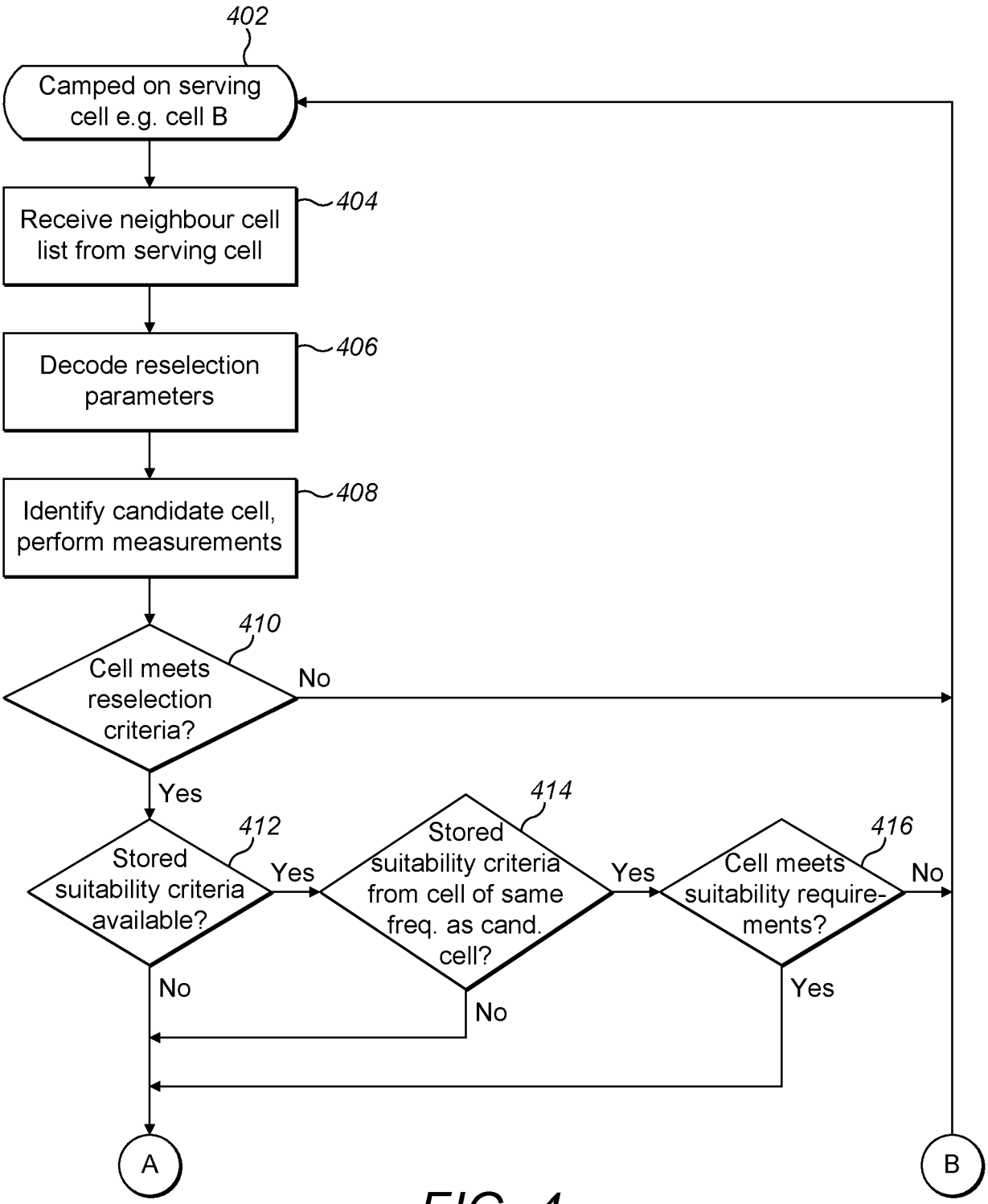
402
Camped on serving cell e.g. cell B
Receive neighbour cell list from serving cell
404
Decode reselection parameters
406
Identify candidate cell, perform measurements
408
Cell meets reselection criteria?
410
No
Yes
Stored suitability criteria available?
412
Yes
Stored suitability criteria from cell of same freq. as cand. cell?
414
Yes
Cell meets suitability require-ments?
416
No
No
No
Yes
A
B

FIG. 4

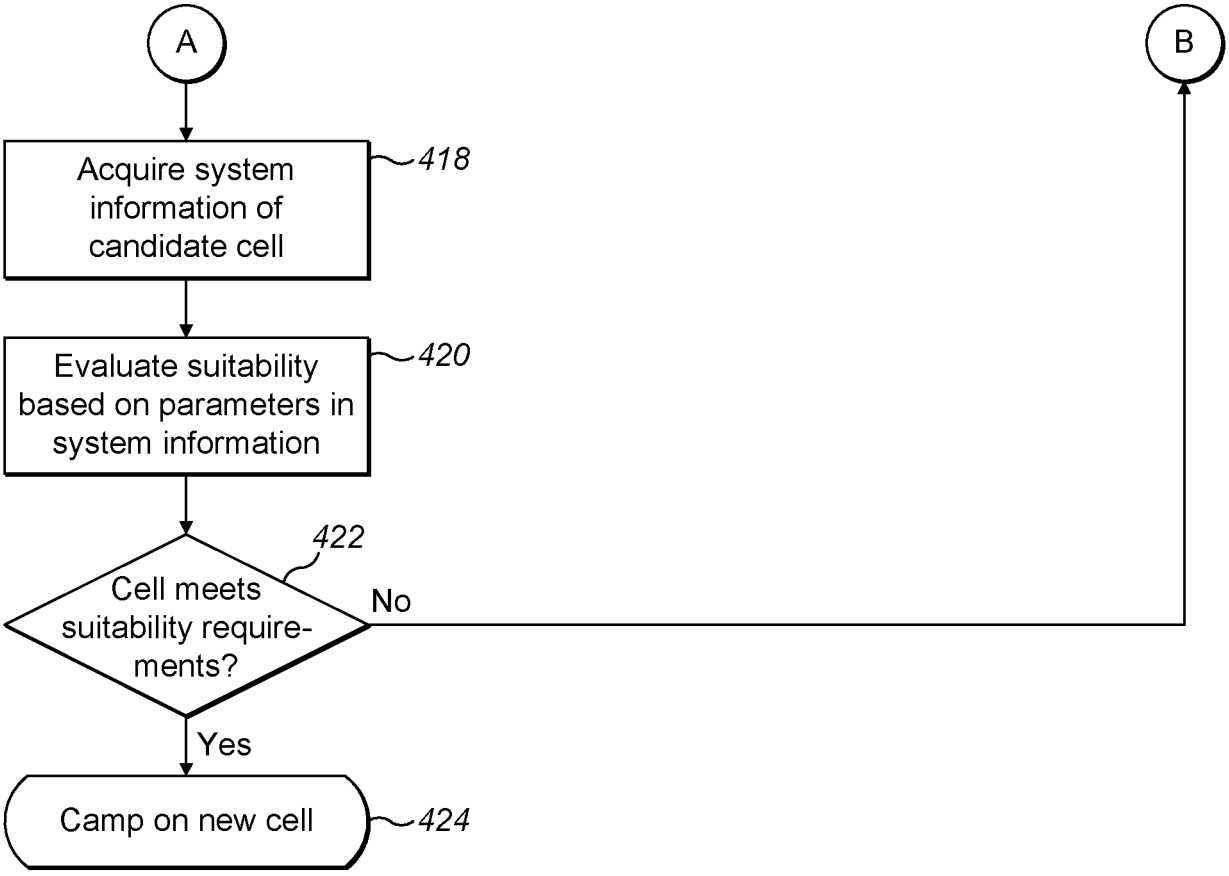
A
B
Acquire system information of candidate cell
418
Evaluate suitability based on parameters in system information
420
422
Cell meets suitability require-ments?
No
Yes
Camp on new cell
424

FIG. 4 Cont'd

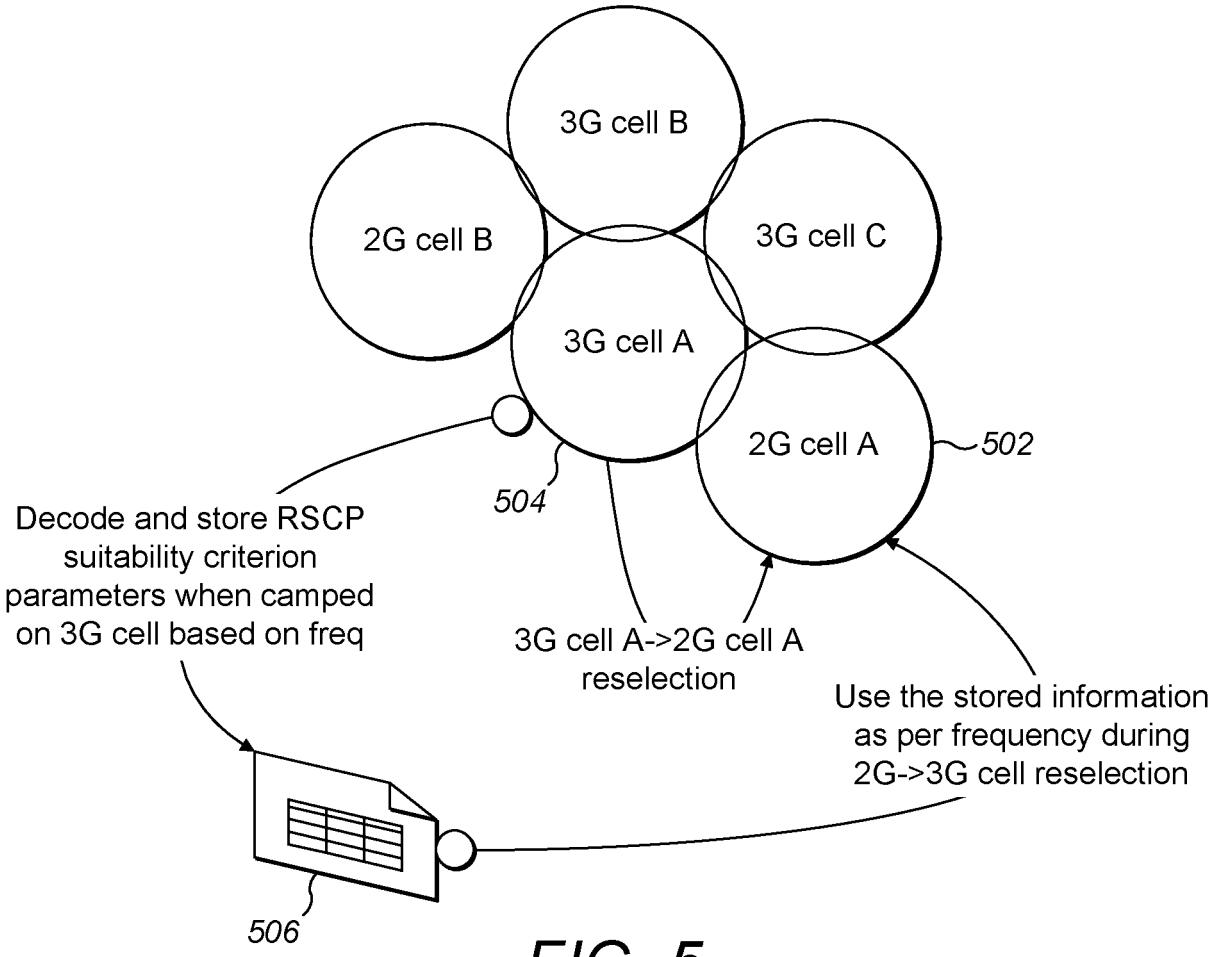
3G cell B
2G cell B
3G cell C
3G cell A
2G cell A
502
504
Decode and store RSCP suitability criterion parameters when camped on 3G cell based on freq
3G cell A->2G cell A reselection
Use the stored information as per frequency during 2G->3G cell reselection
506

FIG. 5

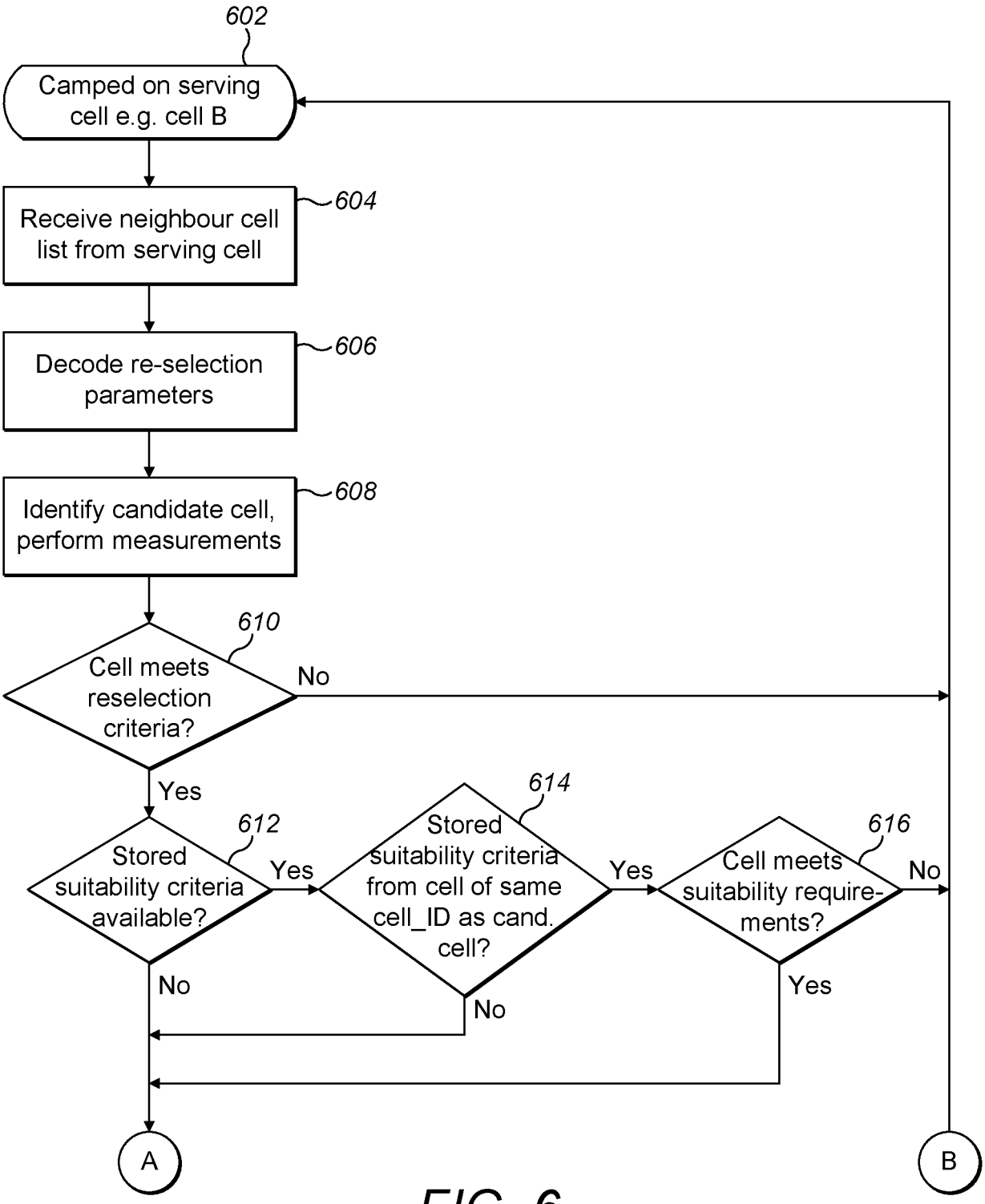
602
Camped on serving cell e.g. cell B
Receive neighbour cell list from serving cell
604
Decode re-selection parameters
606
Identify candidate cell, perform measurements
608
610
Cell meets reselection criteria?
No
Yes
612
Stored suitability criteria available?
Yes
614
Stored suitability criteria from cell of same cell_ID as cand. cell?
Yes
616
Cell meets suitability require-ments?
No
No
No
Yes
A
B

FIG. 6

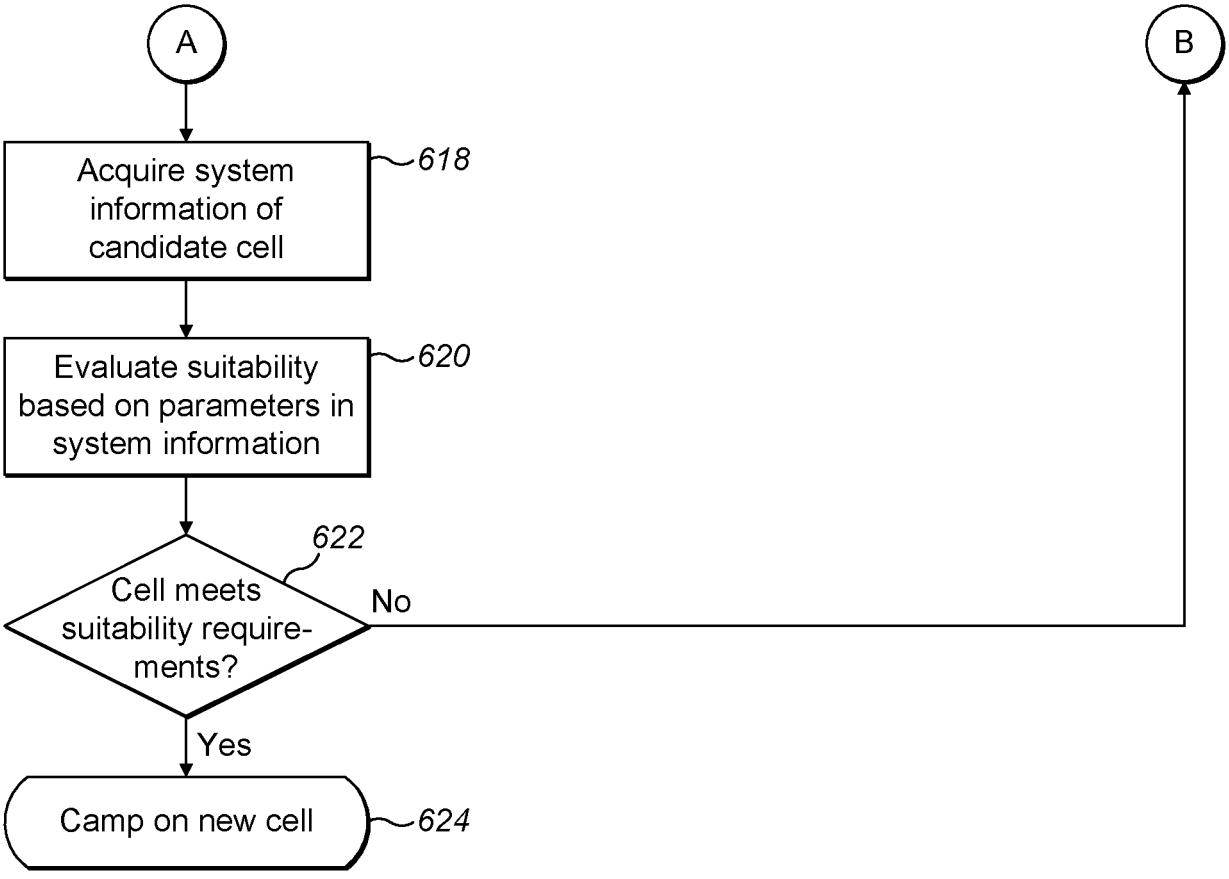
A
B
Acquire system information of candidate cell
618
Evaluate suitability based on parameters in system information
620
622
Cell meets suitability require-ments?
No
Yes
Camp on new cell
624

FIG. 6 Cont'd

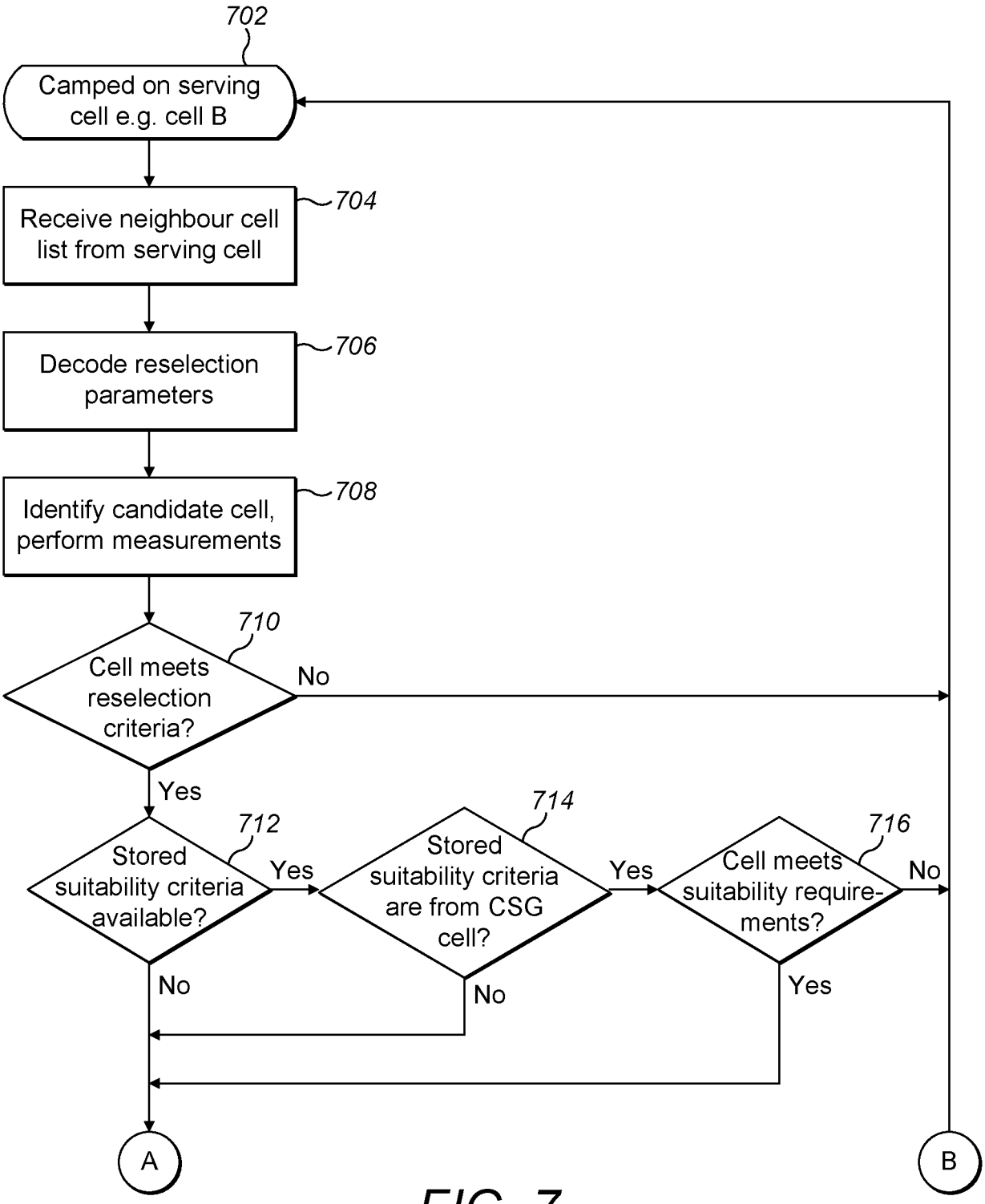
702
Camped on serving cell e.g. cell B
Receive neighbour cell list from serving cell
704
Decode reselection parameters
706
Identify candidate cell, perform measurements
708
710
Cell meets reselection criteria?
No
Yes
712
Stored suitability criteria available?
Yes
No
714
Stored suitability criteria are from CSG cell?
Yes
No
716
Cell meets suitability require-ments?
No
Yes
A
B

FIG. 7

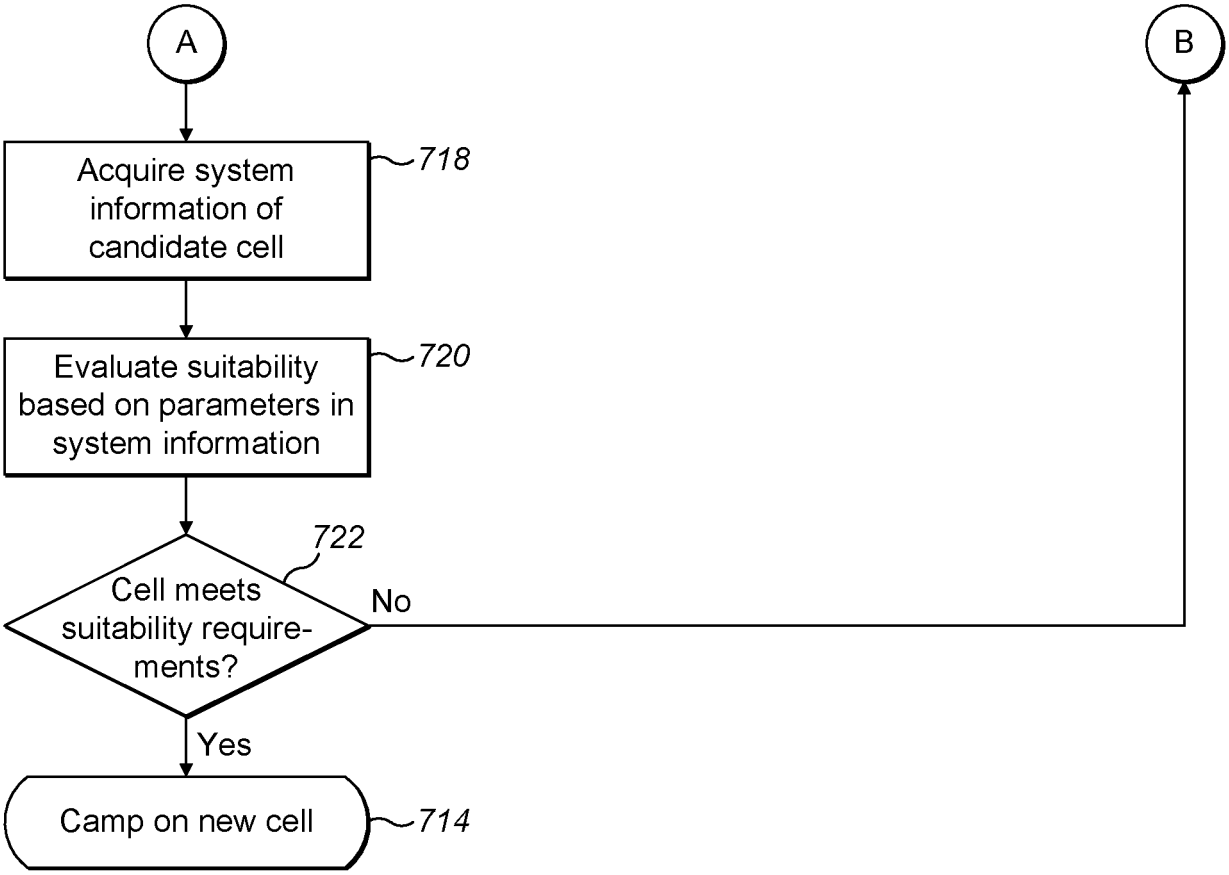
A
B
Acquire system information of candidate cell
718
Evaluate suitability based on parameters in system information
720
722
Cell meets suitability require-ments?
No
Yes
Camp on new cell
714

FIG. 7 Cont'd

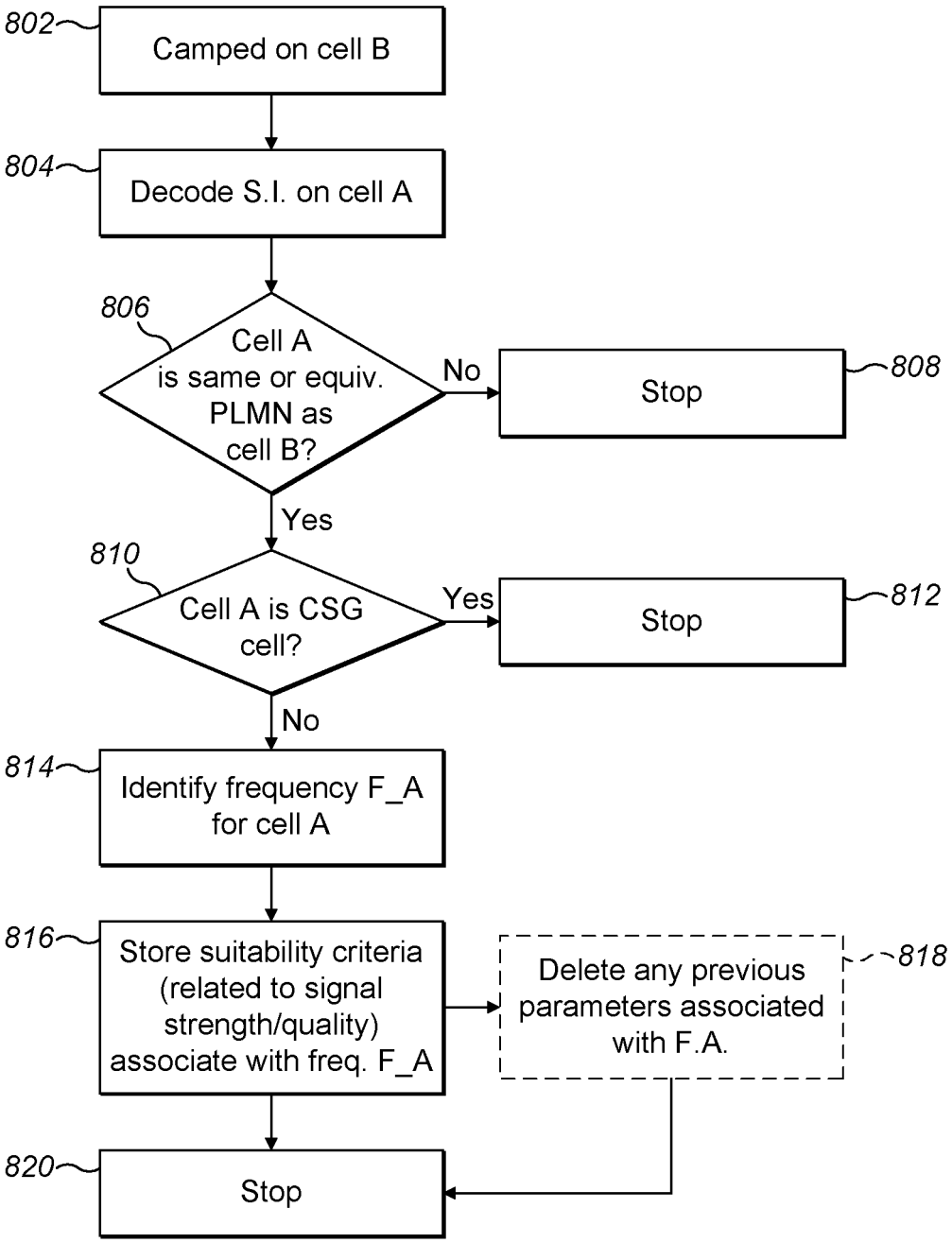
802
Camped on cell B
804
Decode S.I. on cell A
806
Cell A is same or equiv. PLMN as cell B?
No
808
Stop
Yes
810
Cell A is CSG cell?
Yes
812
Stop
No
814
Identify frequency F_A for cell A
816
Store suitability criteria (related to signal strength/quality) associate with freq. F_A
818
Delete any previous parameters associated with F.A.
820
Stop

FIG. 8

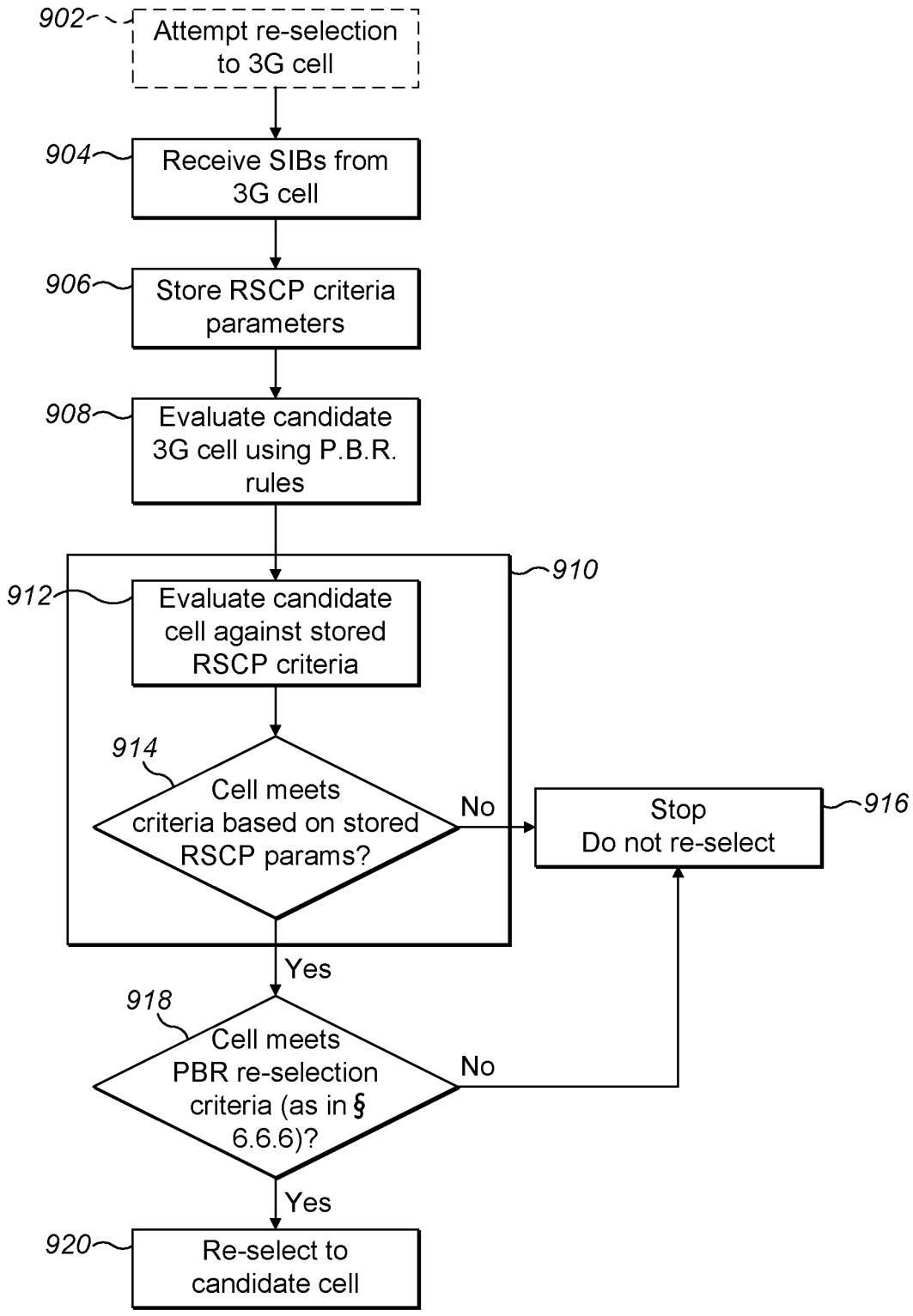
902
Attempt re-selection to 3G cell
904
Receive SIBs from 3G cell
906
Store RSCP criteria parameters
908
Evaluate candidate 3G cell using P.B.R. rules
910
912
Evaluate candidate cell against stored RSCP criteria
914
Cell meets criteria based on stored RSCP params?
No
916
Stop
Do not re-select
Yes
918
Cell meets PBR re-selection criteria (as in § 6.6.6)?
No
Yes
920
Re-select to candidate cell

FIG. 9

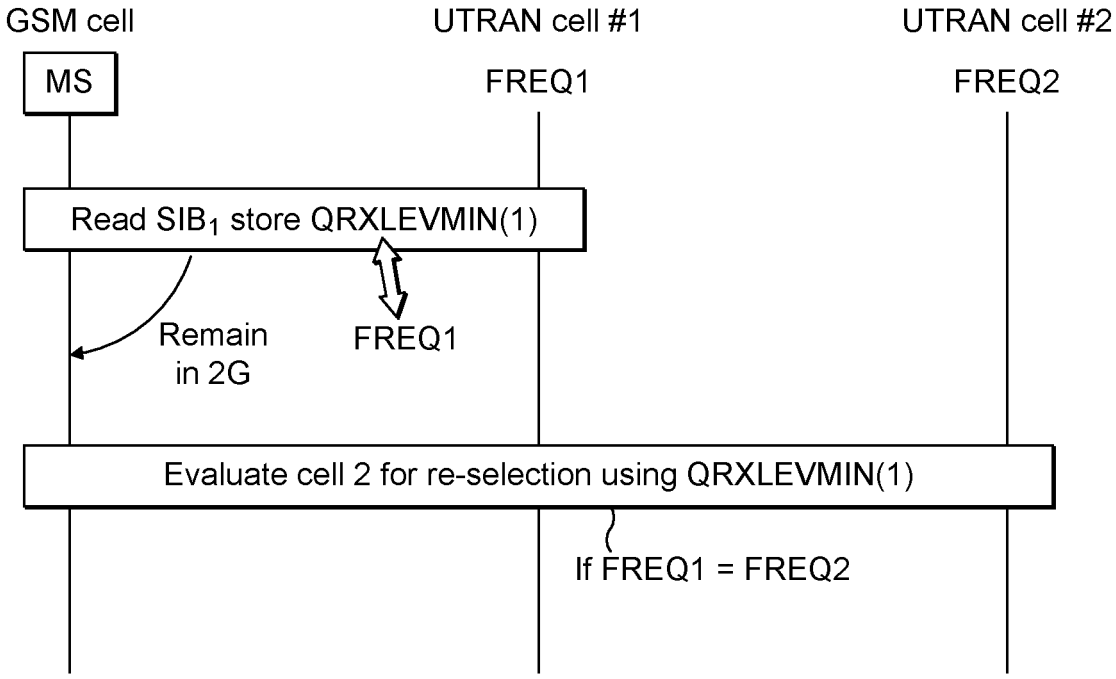
GSM cell
UTRAN cell #1
UTRAN cell #2
MS
FREQ1
FREQ2
Read SIB1 store QRXLEVMIN(1)
Remain in 2G
FREQ1
Evaluate cell 2 for re-selection using QRXLEVMIN(1)
If FREQ1 = FREQ2

FIG. 10

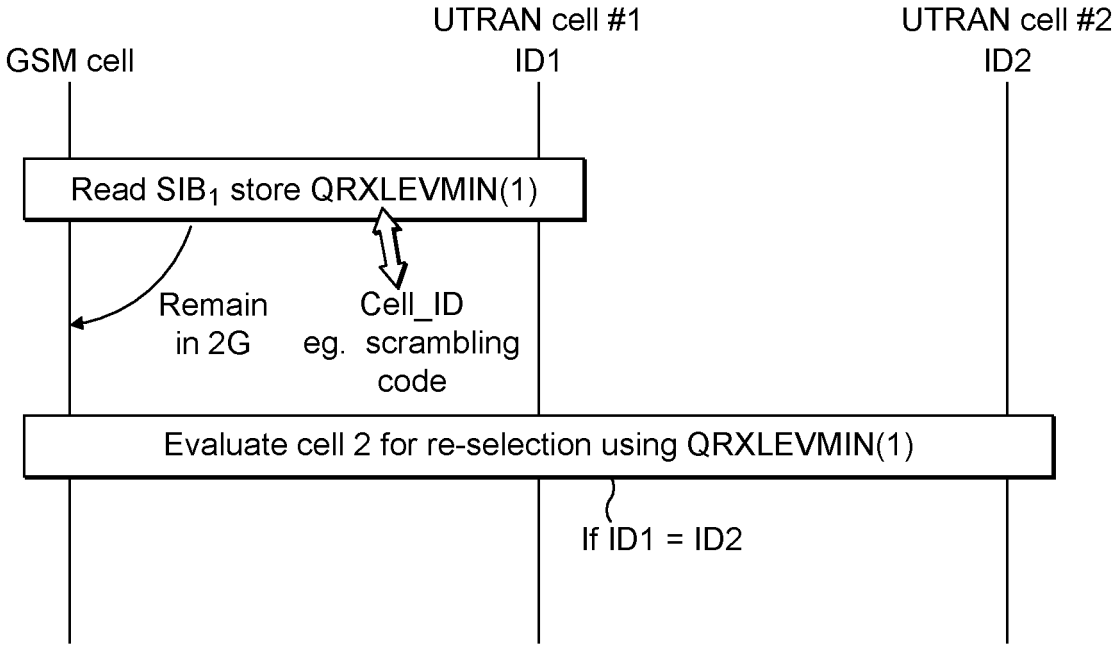
GSM cell
UTRAN cell #1
ID1
UTRAN cell #2
ID2
Read SIB1 store QRXLEVMIN(1)
Remain in 2G
Cell_ID eg. scrambling code
Evaluate cell 2 for re-selection using QRXLEVMIN(1)
If ID1 = ID2

FIG. 11

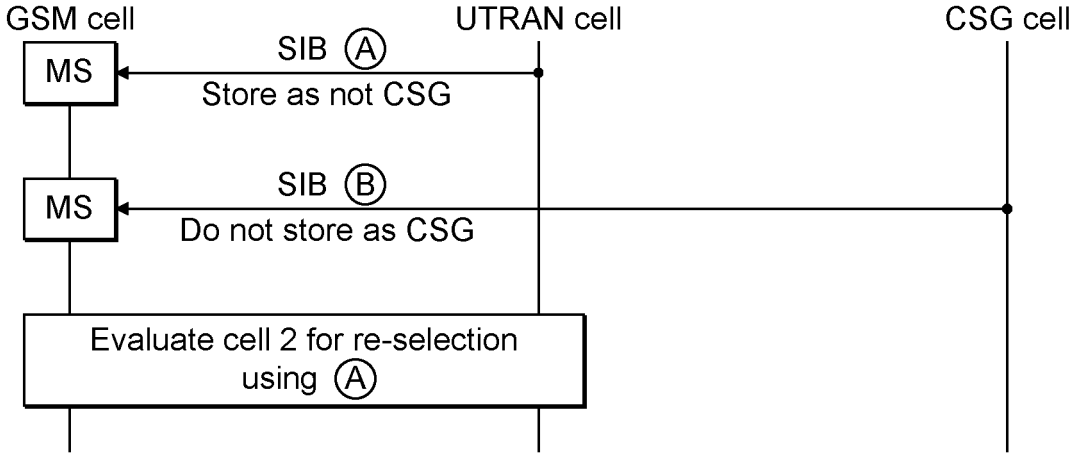

FIG. 12

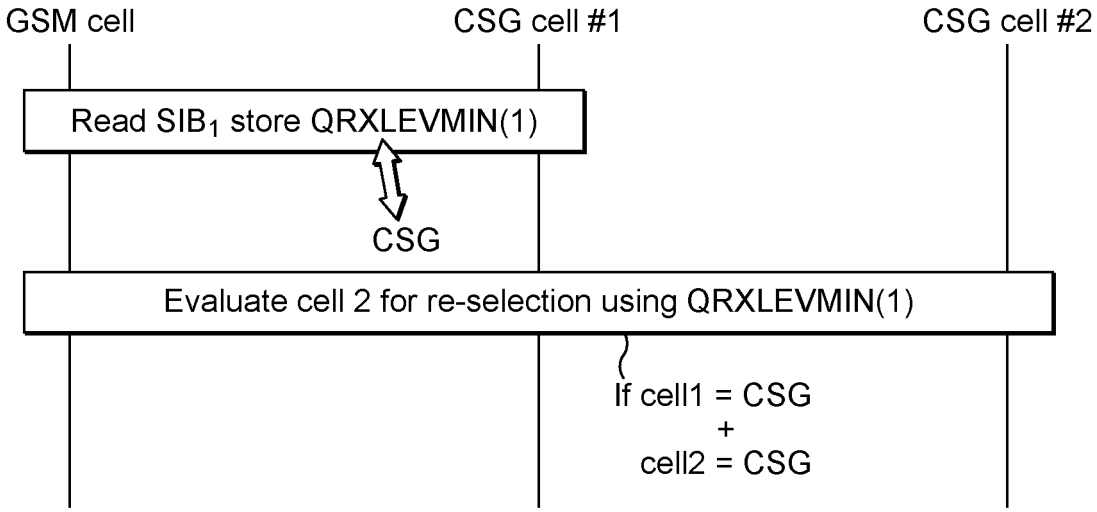

FIG. 13

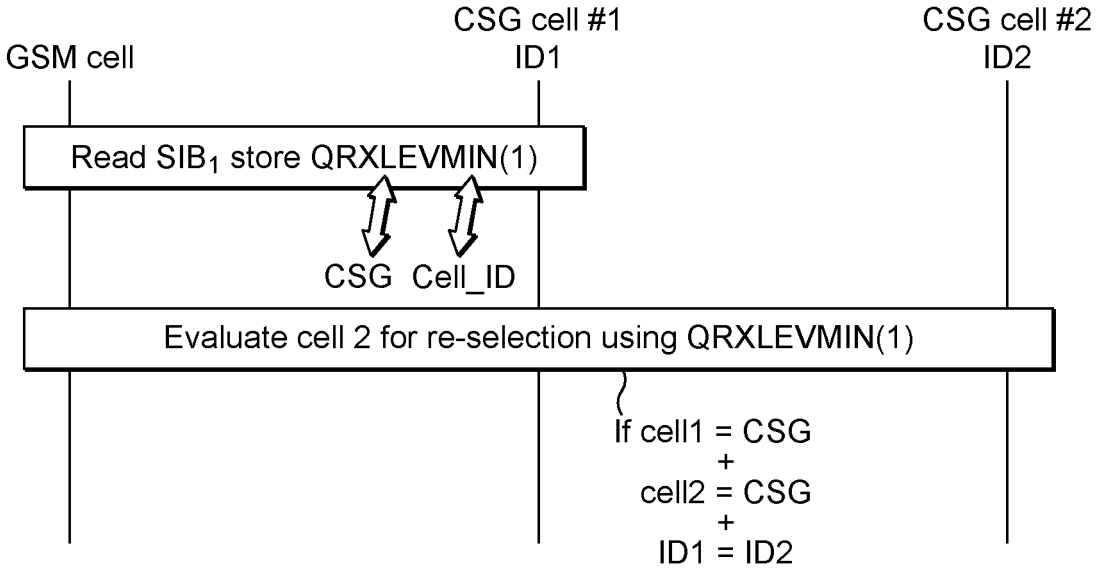

FIG. 14

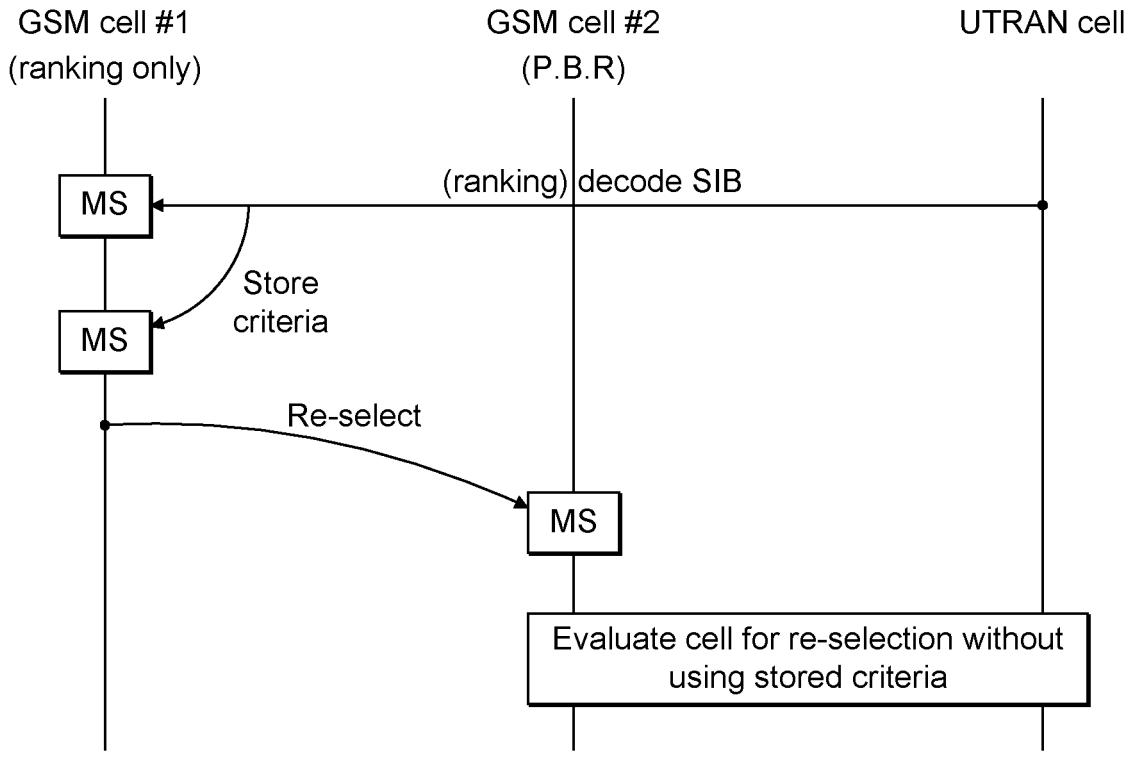
GSM cell #1
(ranking only)
GSM cell #2
(P.B.R)
UTRAN cell
MS
(ranking) decode SIB
Store
criteria
MS
Re-select
MS
Evaluate cell for re-selection without
using stored criteria

FIG. 15

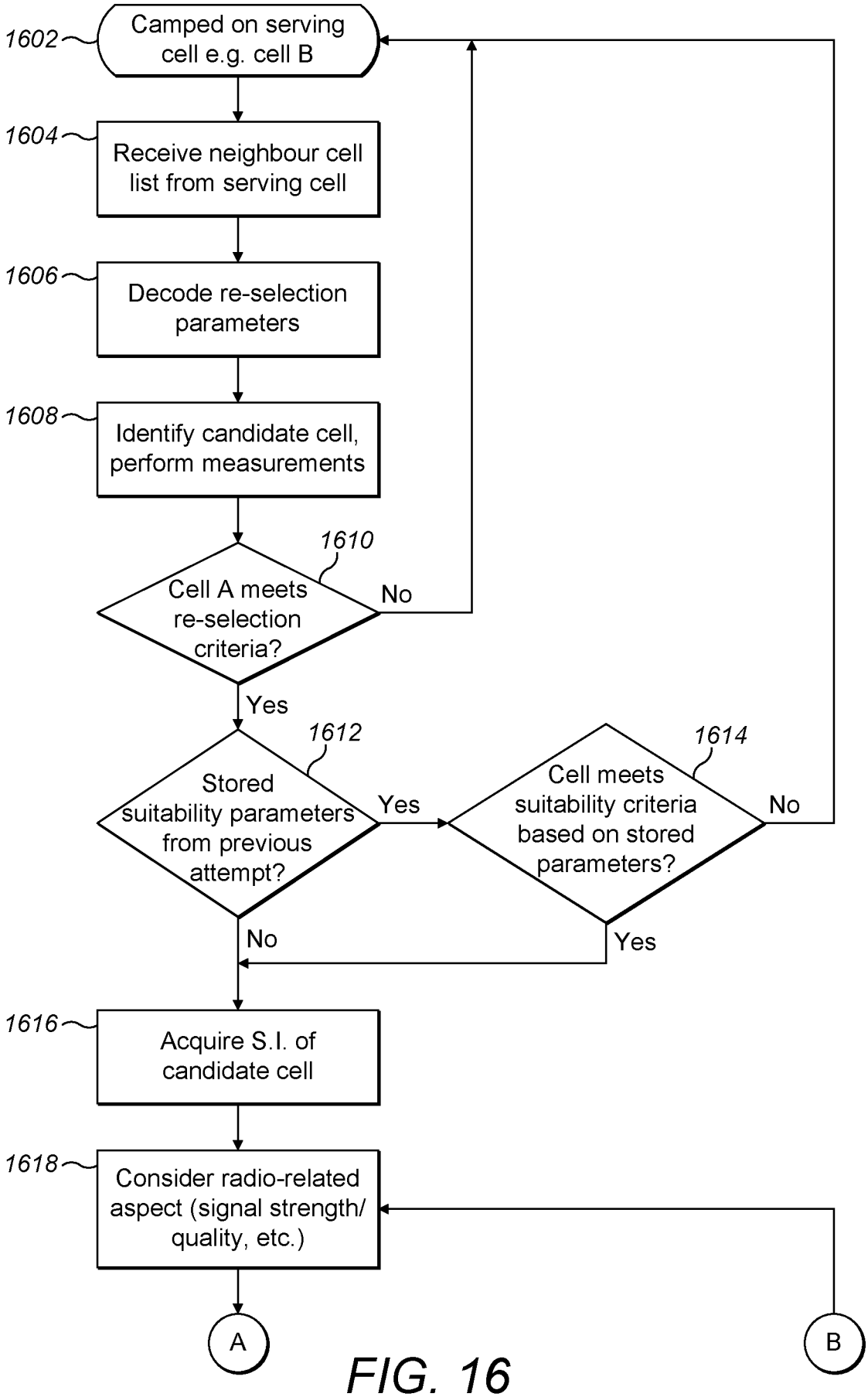
1602
Camped on serving cell e.g. cell B
1604
Receive neighbour cell list from serving cell
1606
Decode re-selection parameters
1608
Identify candidate cell, perform measurements
1610
Cell A meets re-selection criteria?
No
Yes
1612
Stored suitability parameters from previous attempt?
Yes
No
1614
Cell meets suitability criteria based on stored parameters?
No
Yes
1616
Acquire S.I. of candidate cell
1618
Consider radio-related aspect (signal strength/ quality, etc.)
A
B

FIG. 16

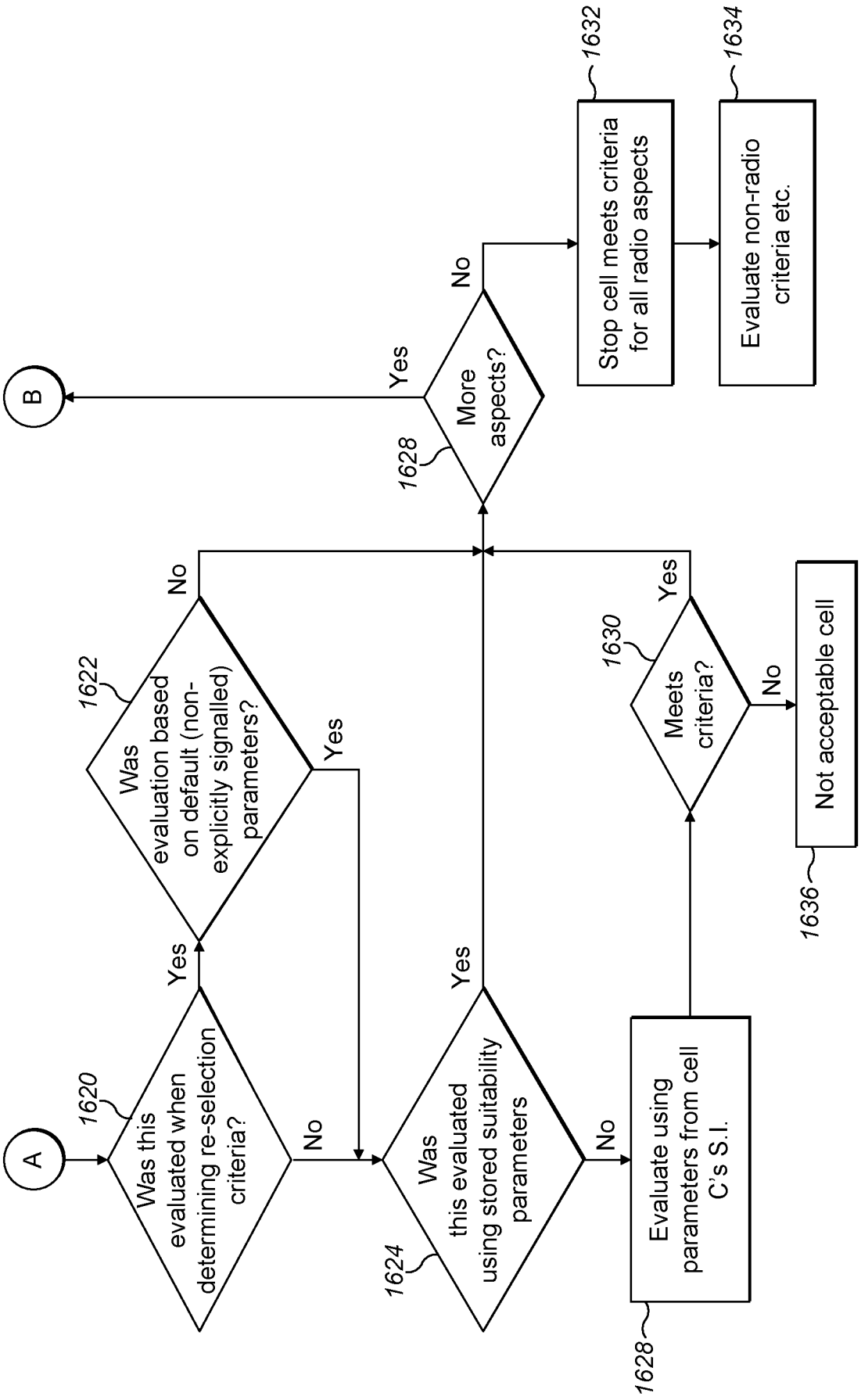
A
1620
Was this evaluated when determining re-selection criteria?
Yes
No
1622
Was evaluation based on default (non-explicitly signalled) parameters?
No
Yes
1624
Was this evaluated using stored suitability parameters
Yes
No
1628
Evaluate using parameters from cell C's S.I.
1630
Meets criteria?
Yes
No
1636
Not acceptable cell
1628
More aspects?
No
Yes
B
1632
Stop cell meets criteria for all radio aspects
1634
Evaluate non-radio criteria etc.

FIG. 16 Cont'd