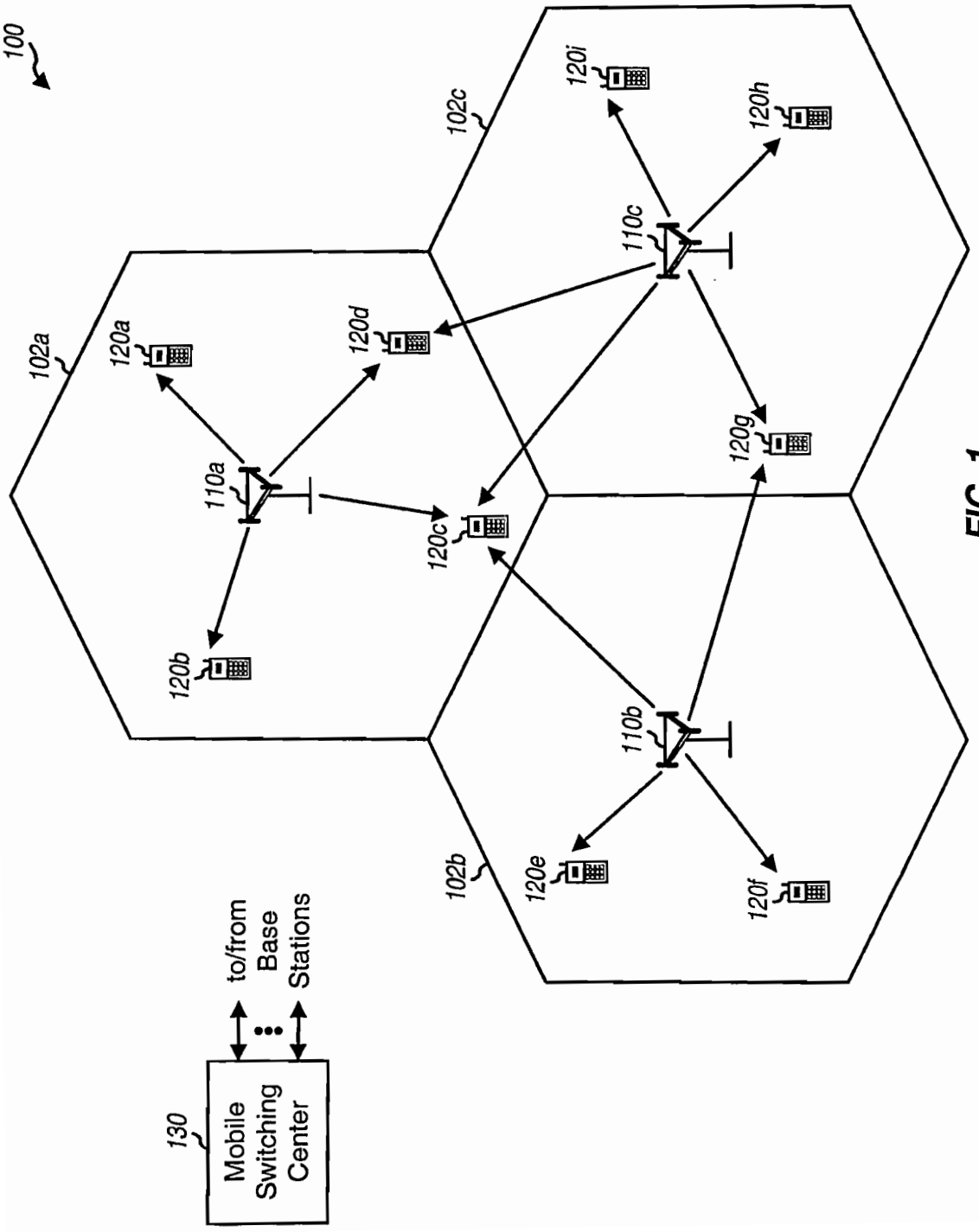

100
102a
102b
102c
110a
110b
110c
120a
120b
120c
120d
120e
120f
120g
120h
120i
130
Mobile Switching Center
to/from Base Stations

FIG. 1

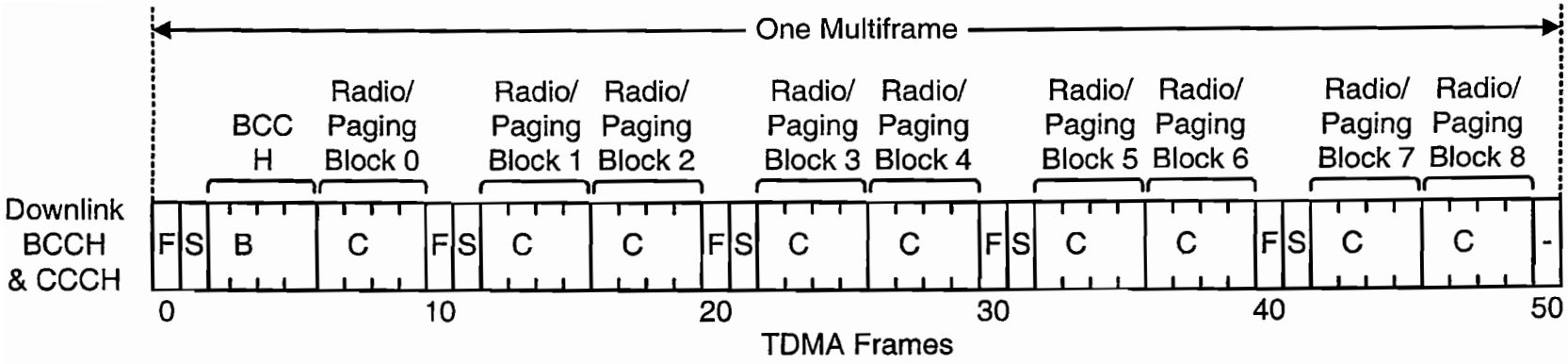


FIG. 2

Prior Art

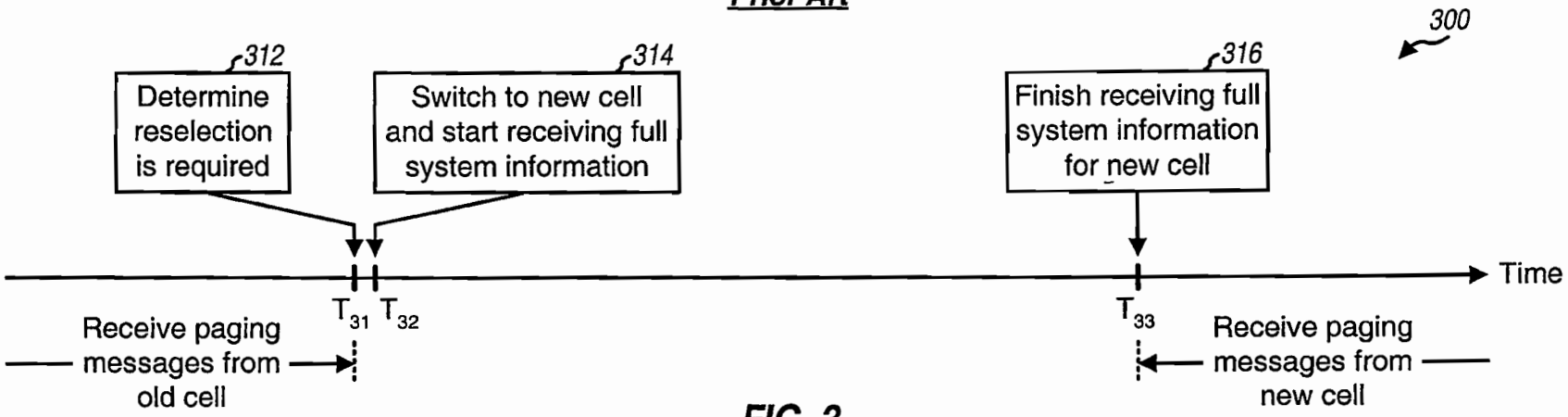


FIG. 3

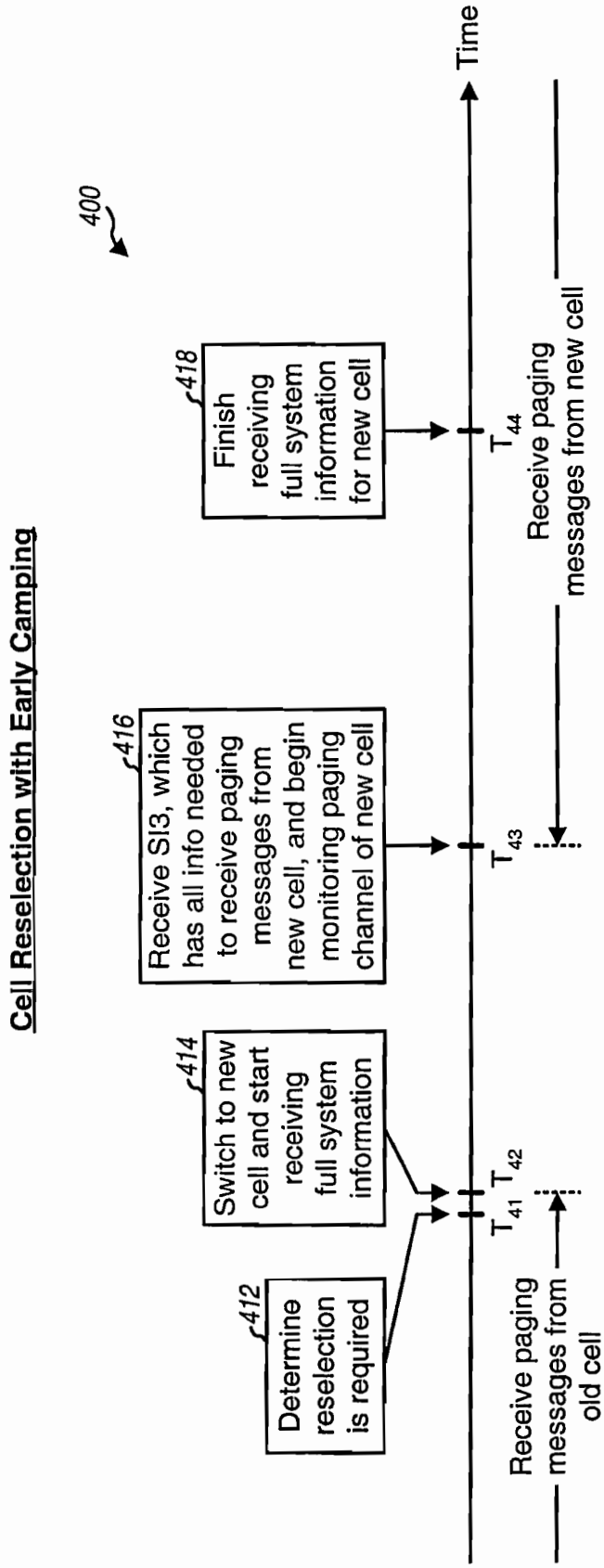

Cell Reselection with Early Camping
400
Time
412
Determine reselection is required
414
Switch to new cell and start receiving full system information
416
Receive SI3, which has all info needed to receive paging messages from new cell, and begin monitoring paging channel of new cell
418
Finish receiving full system information for new cell
T41
T42
T43
T44
Receive paging messages from old cell
Receive paging messages from new cell

FIG. 4

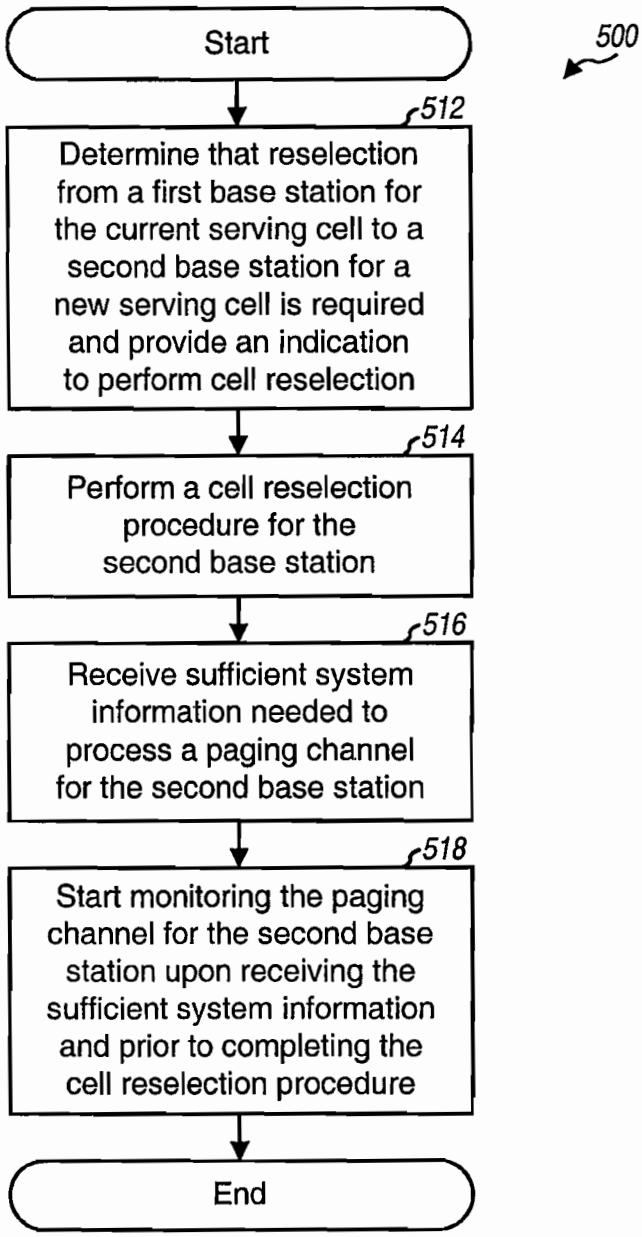

Start
500
512
Determine that reselection from a first base station for the current serving cell to a second base station for a new serving cell is required and provide an indication to perform cell reselection
514
Perform a cell reselection procedure for the second base station
516
Receive sufficient system information needed to process a paging channel for the second base station
518
Start monitoring the paging channel for the second base station upon receiving the sufficient system information and prior to completing the cell reselection procedure
End

FIG. 5

Cell Reselection with Reconfirmation
600
Time
612
Determine reselection is required
614
Begin waiting for BCCH of new cell (background)
616
Receive and decode BCCH of new cell to obtain SI3 or SI4
618
Switch to new cell (foreground) and start receiving full system information
620
Receive SI3 for new cell
622
Finish receiving full system information for new cell
T_{61} T_{62}
T_{63} T_{64}
T_{65}
T_{66}
Receive paging messages from old cell (foreground)
Case 1
(SI3 obtained at time T_{63}): Receive paging messages from new cell
Case 2
(SI4 obtained at time T_{63}): Receive paging messages from new cell

FIG. 6

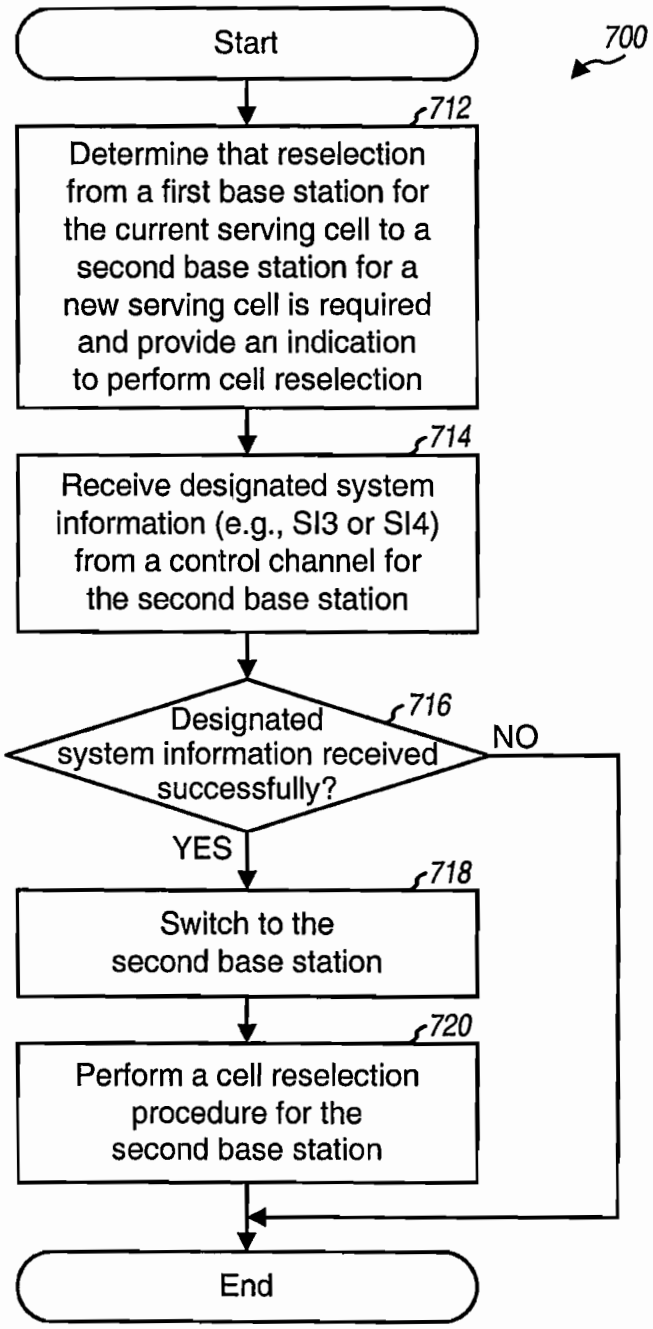

Start
700
712
Determine that reselection from a first base station for the current serving cell to a second base station for a new serving cell is required and provide an indication to perform cell reselection
714
Receive designated system information (e.g., SI3 or SI4) from a control channel for the second base station
716
Designated system information received successfully?
NO
YES
718
Switch to the second base station
720
Perform a cell reselection procedure for the second base station
End

FIG. 7

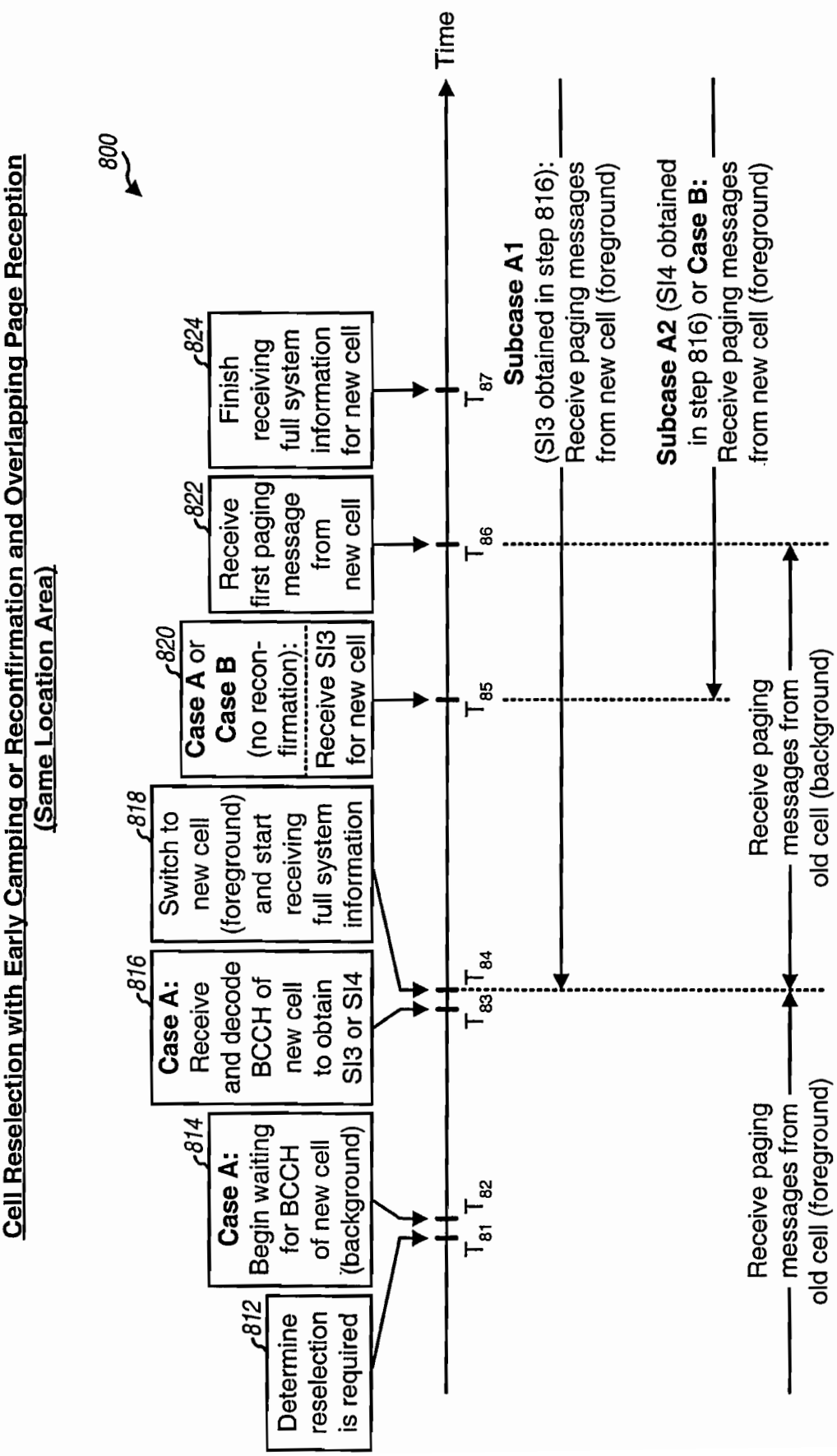

Cell Reselection with Early Camping or Reconfirmation and Overlapping Page Reception
(Same Location Area)
800
Time
812
Determine reselection is required
814
Case A: Begin waiting for BCCH of new cell (background)
816
Case A: Receive and decode BCCH of new cell to obtain SI3 or SI4
818
Switch to new cell (foreground) and start receiving full system information
820
Case A or Case B (no reconfirmation): Receive SI3 for new cell
822
Receive first paging message from new cell
824
Finish receiving full system information for new cell
T81
T82
T83
T84
T85
T86
T87
Subcase A1 (SI3 obtained in step 816): Receive paging messages from new cell (foreground)
Subcase A2 (SI4 obtained in step 816) or Case B: Receive paging messages from new cell (foreground)
Receive paging messages from old cell (foreground)
Receive paging messages from old cell (background)

FIG. 8

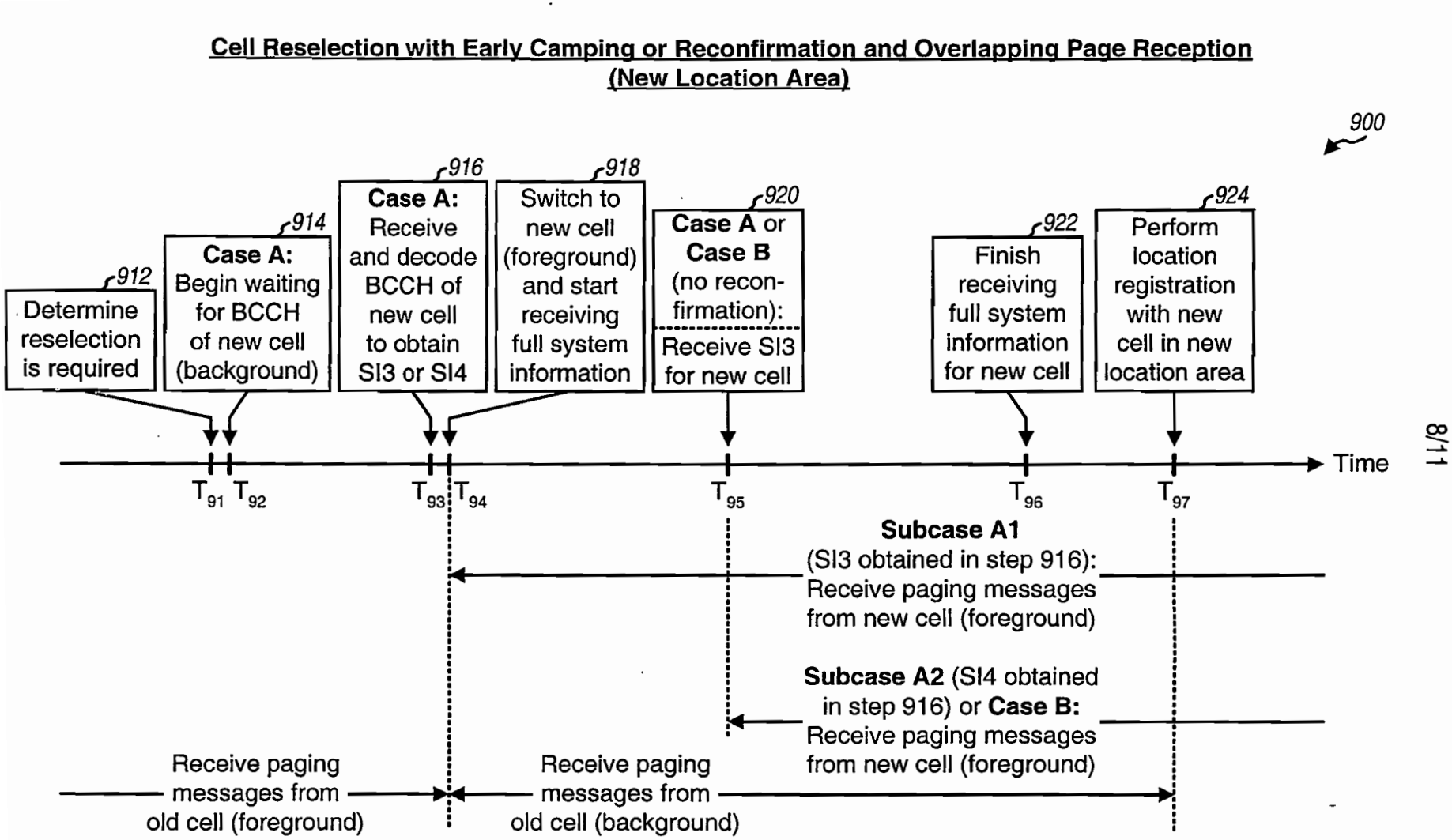

Cell Reselection with Early Camping or Reconfirmation and Overlapping Page Reception
(New Location Area)
900
912
Determine reselection is required
914
Case A: Begin waiting for BCCH of new cell (background)
916
Case A: Receive and decode BCCH of new cell to obtain SI3 or SI4
918
Switch to new cell (foreground) and start receiving full system information
920
Case A or Case B (no recon-firmation): Receive SI3 for new cell
922
Finish receiving full system information for new cell
924
Perform location registration with new cell in new location area
Time
T91 T92 T93 T94 T95 T96 T97
Subcase A1 (SI3 obtained in step 916): Receive paging messages from new cell (foreground)
Subcase A2 (SI4 obtained in step 916) or Case B: Receive paging messages from new cell (foreground)
Receive paging messages from old cell (foreground)
Receive paging messages from old cell (background)

FIG. 9

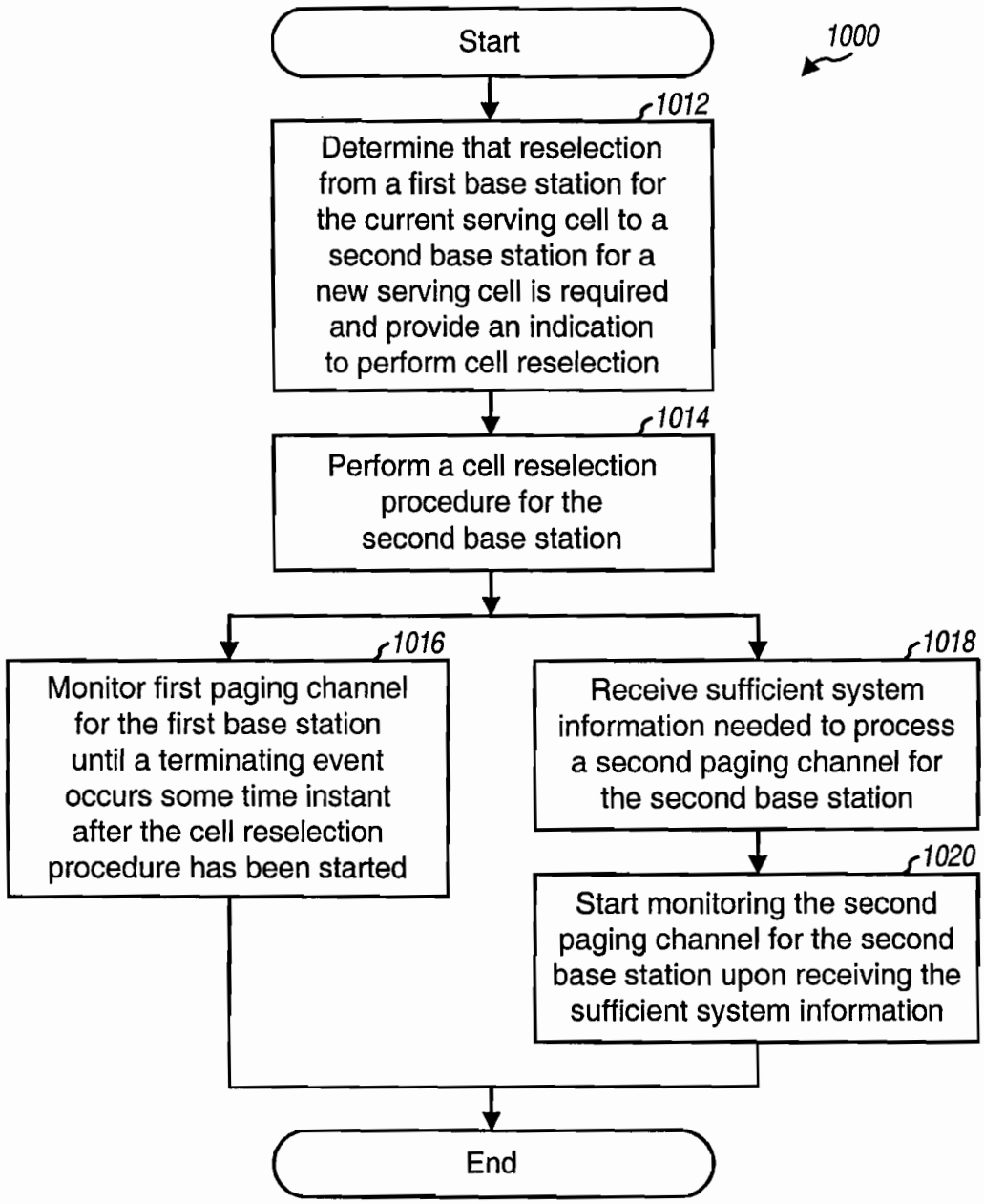

Start
1000
1012
Determine that reselection from a first base station for the current serving cell to a second base station for a new serving cell is required and provide an indication to perform cell reselection
1014
Perform a cell reselection procedure for the second base station
1016
Monitor first paging channel for the first base station until a terminating event occurs some time instant after the cell reselection procedure has been started
1018
Receive sufficient system information needed to process a second paging channel for the second base station
1020
Start monitoring the second paging channel for the second base station upon receiving the sufficient system information
End

FIG. 10

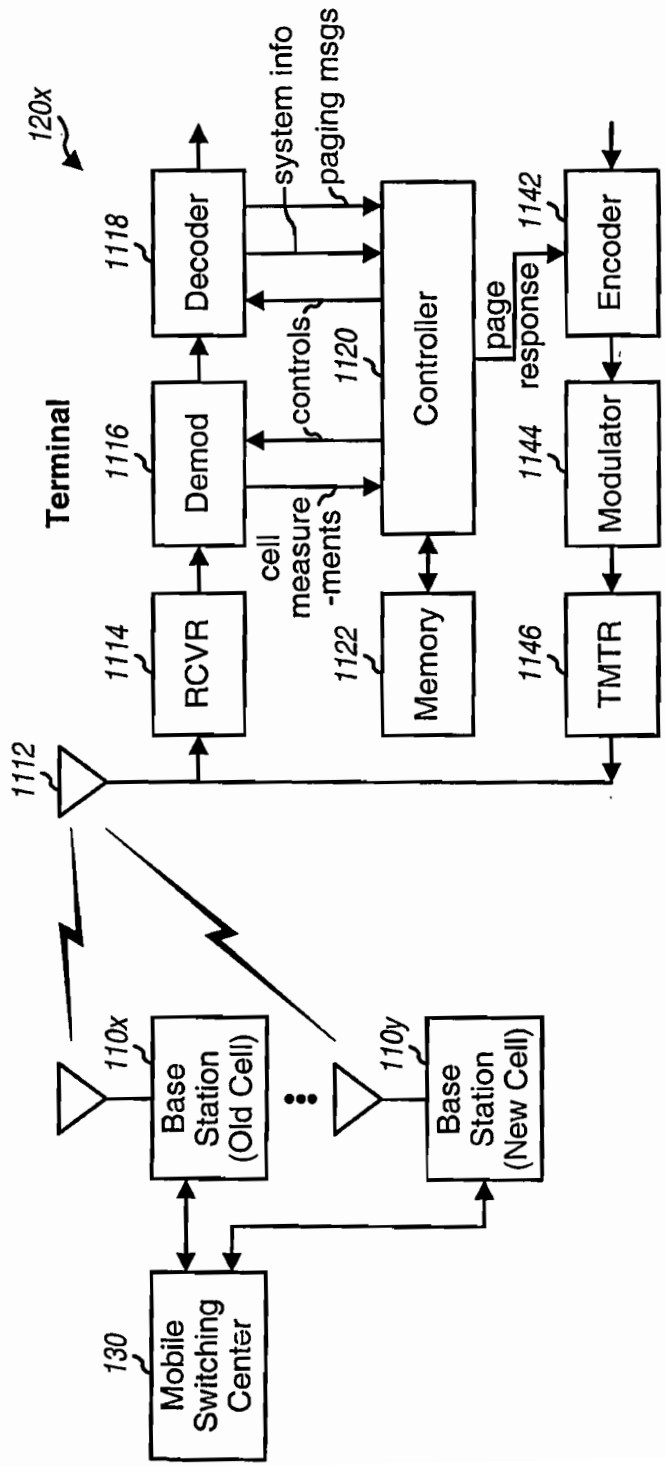

120x
Terminal
1118
Decoder
system info
paging msgs
1116
Demod
controls
1120
Controller
page response
1142
Encoder
cell measure -ments
1144
Modulator
1114
RCVR
1122
Memory
1146
TMTR
1112
110x
Base Station (Old Cell)
110y
Base Station (New Cell)
130
Mobile Switching Center

FIG. 11

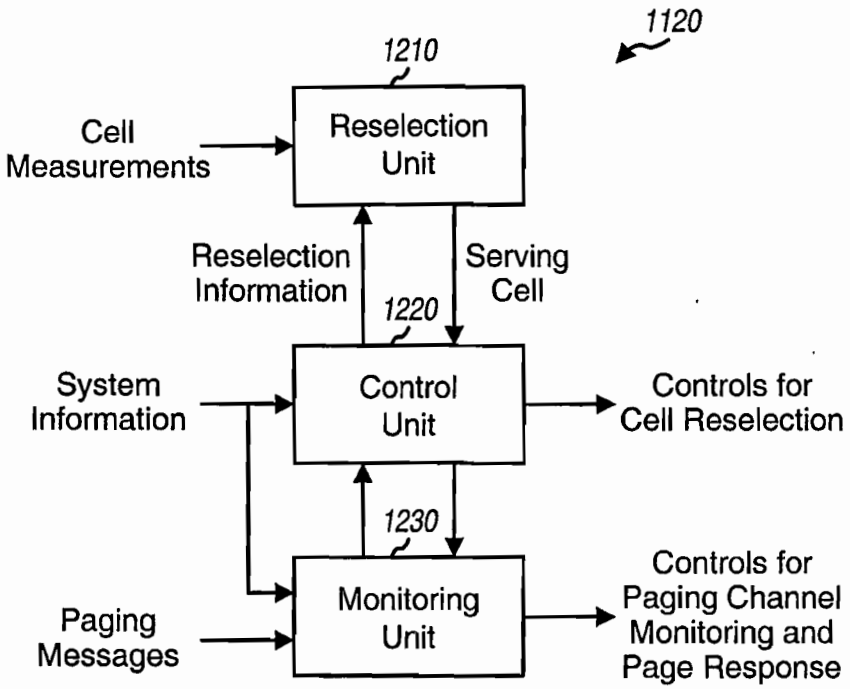

1120
1210
Cell Measurements
Reselection Unit
Reselection Information
Serving Cell
1220
System Information
Control Unit
Controls for Cell Reselection
1230
Paging Messages
Monitoring Unit
Controls for Paging Channel Monitoring and Page Response

FIG. 12