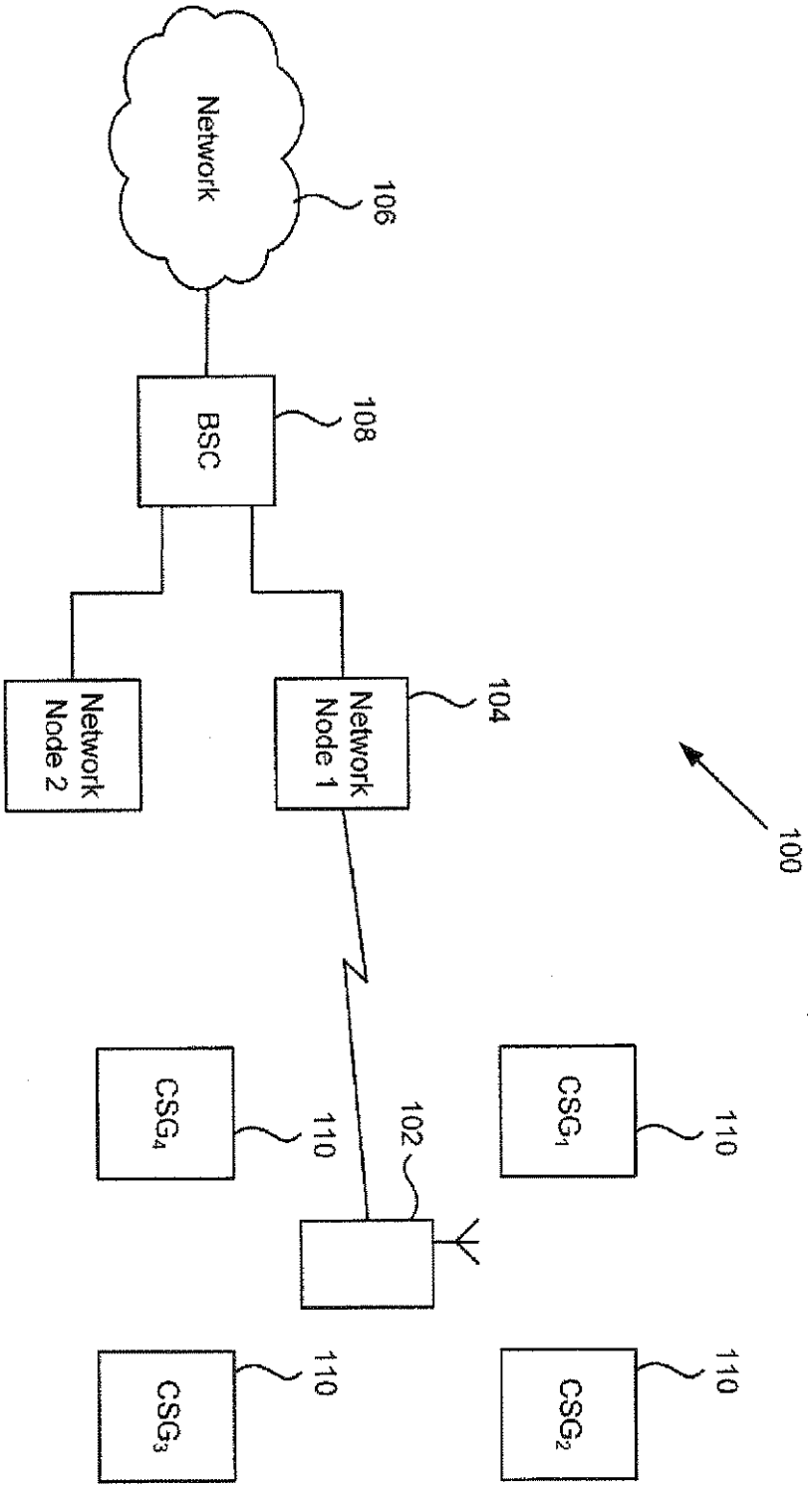

Network
106
BSC
108
Network Node 2
Network Node 1
104
100
CSG4
110
102
CSG1
110
CSG3
110
CSG2
110

Figure 1

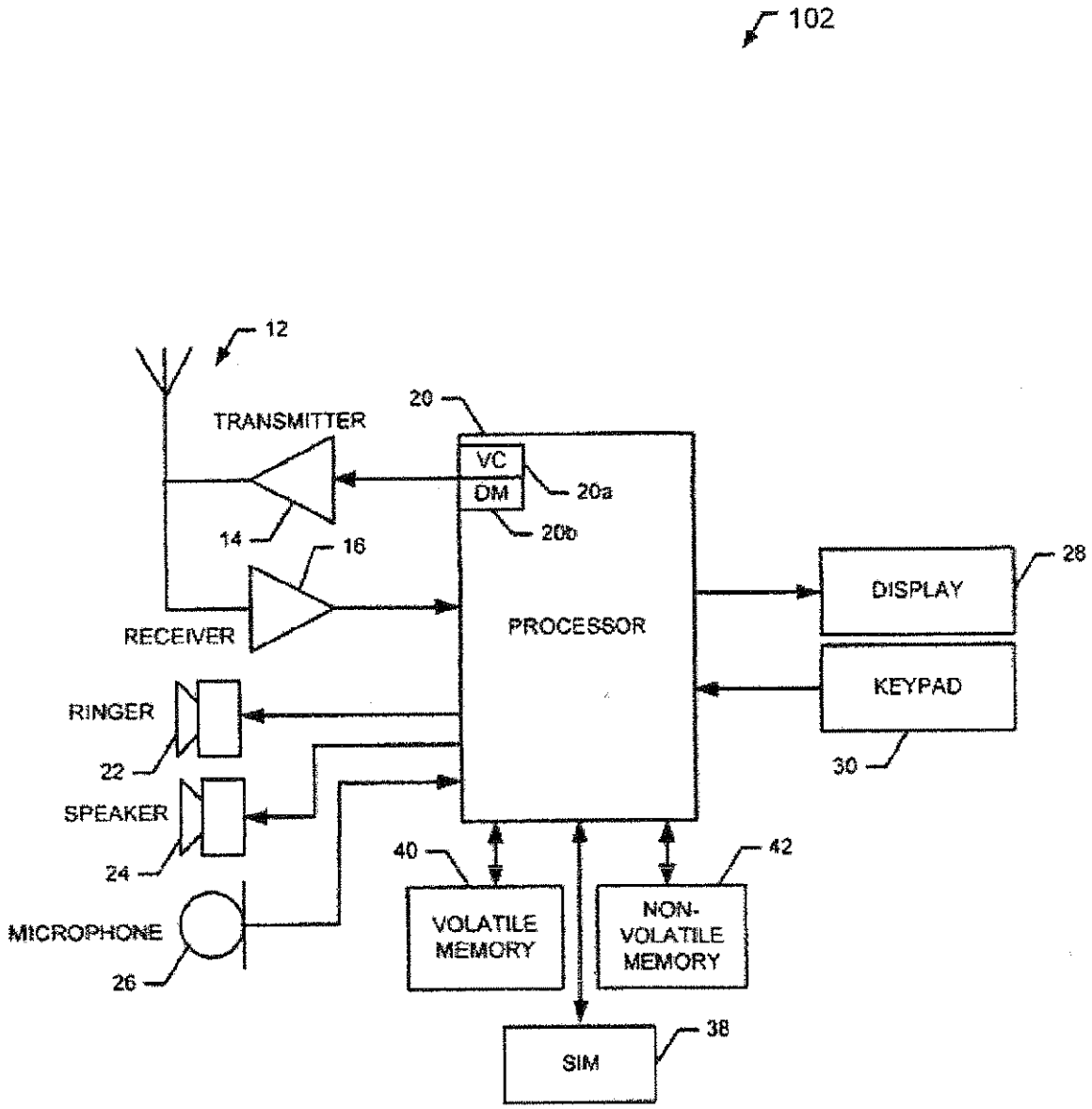

102
12
TRANSMITTER
20
VC
DM
20a
20b
14
16
RECEIVER
PROCESSOR
DISPLAY
28
KEYPAD
30
RINGER
22
SPEAKER
24
MICROPHONE
26
40
42
VOLATILE MEMORY
NON-VOLATILE MEMORY
SIM
38

Figure 2

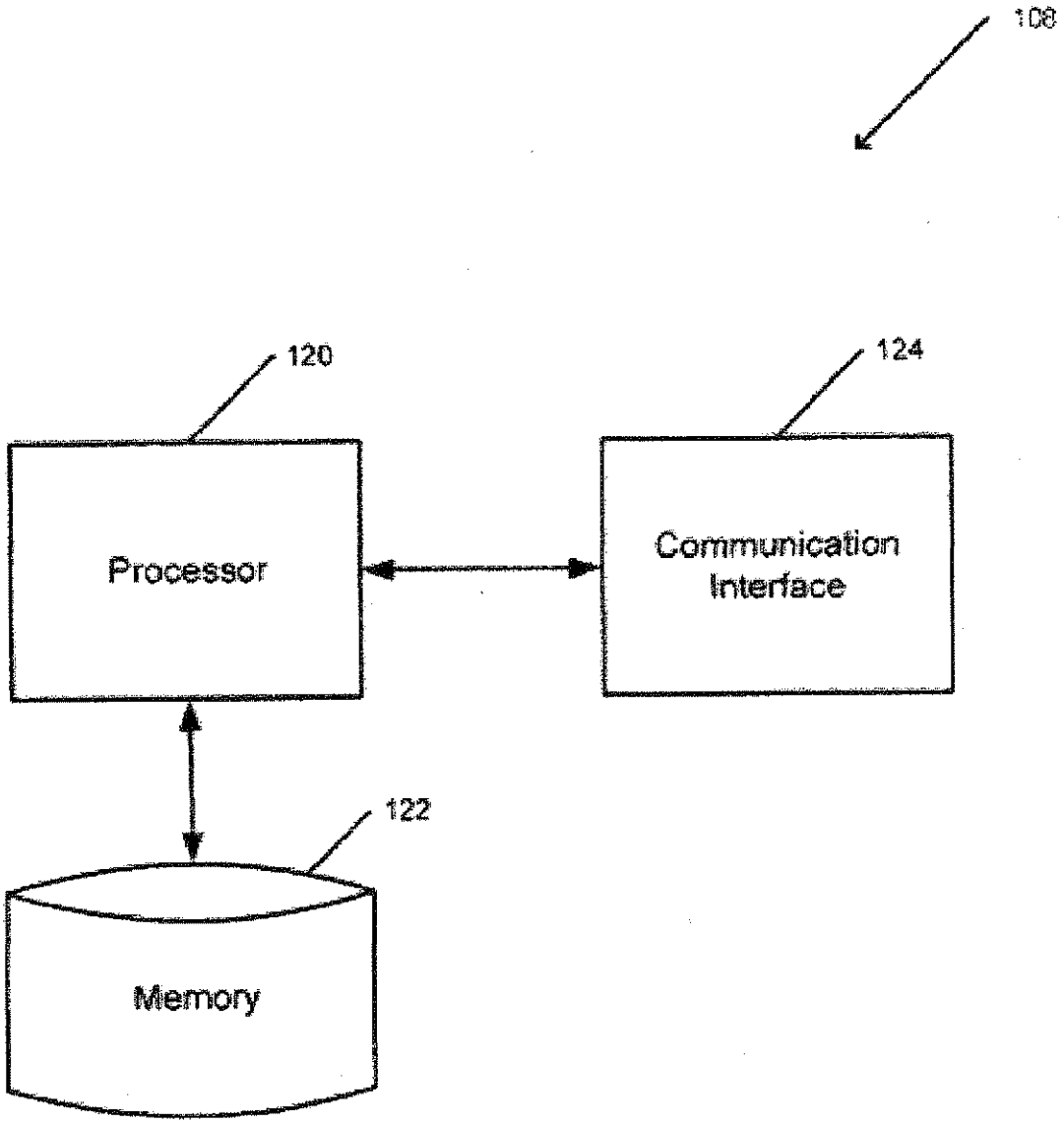


Figure 3

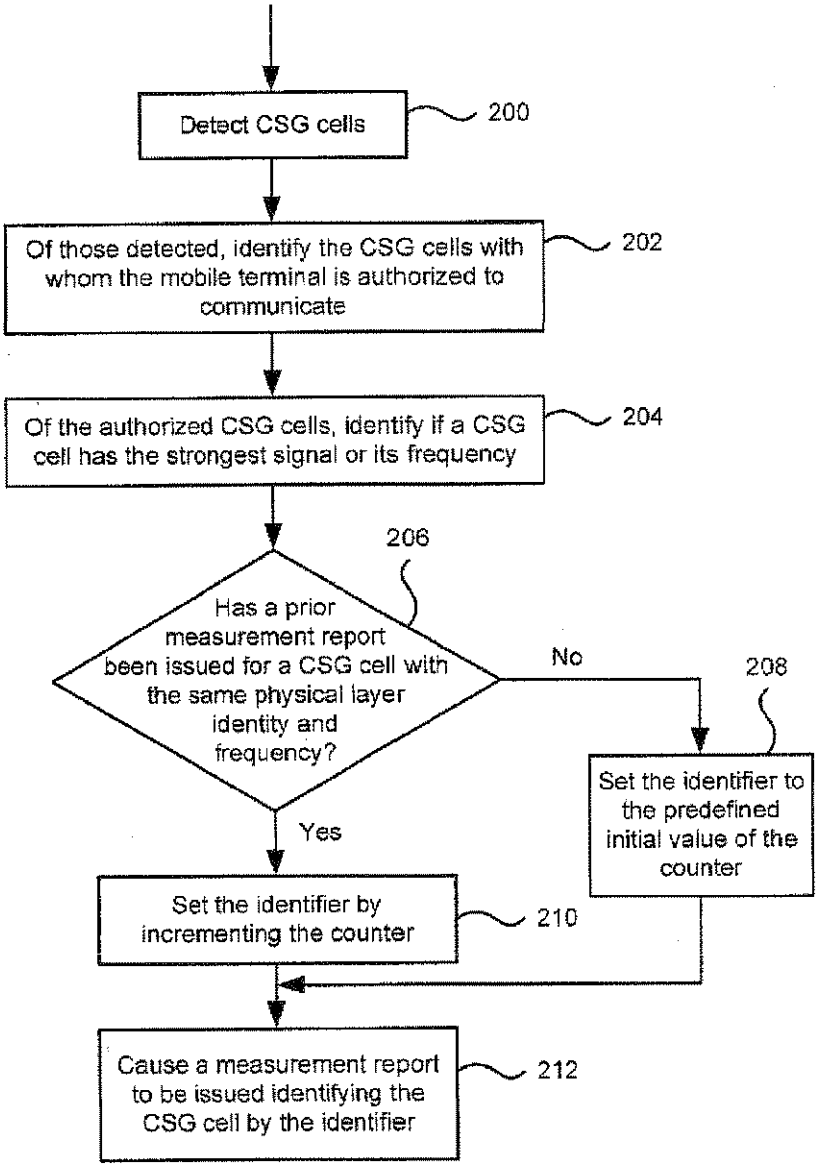

Detect CSG cells
200
Of those detected, identify the CSG cells with whom the mobile terminal is authorized to communicate
202
Of the authorized CSG cells, identify if a CSG cell has the strongest signal or its frequency
204
206
Has a prior measurement report been issued for a CSG cell with the same physical layer identity and frequency?
No
208
Set the identifier to the predefined initial value of the counter
Yes
Set the identifier by incrementing the counter
210
Cause a measurement report to be issued identifying the CSG cell by the identifier
212

Figure 4

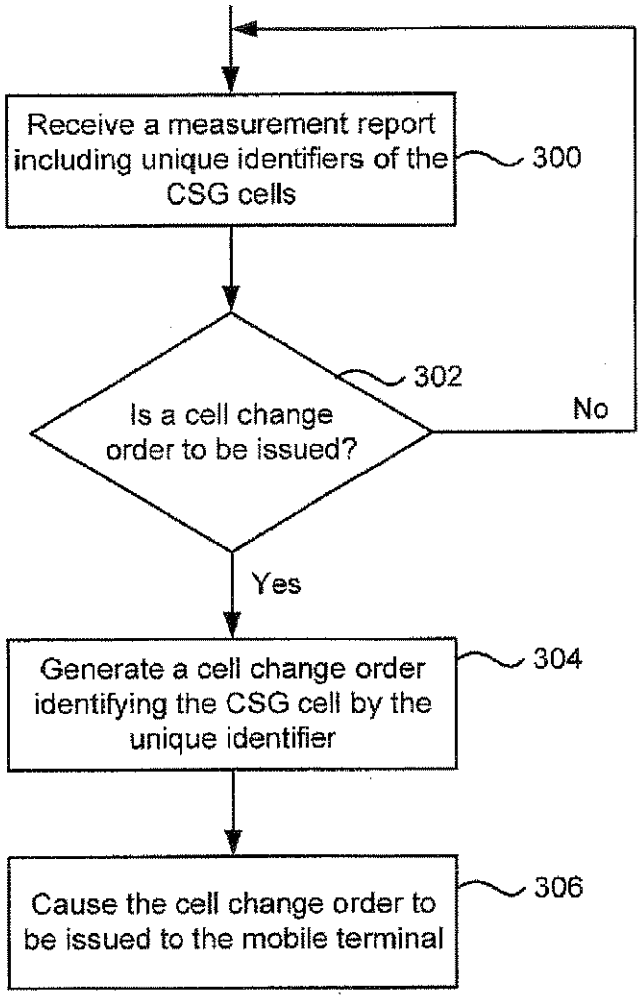

Receive a measurement report including unique identifiers of the CSG cells
300
Is a cell change order to be issued?
302
No
Yes
Generate a cell change order identifying the CSG cell by the unique identifier
304
Cause the cell change order to be issued to the mobile terminal
306

Figure 5

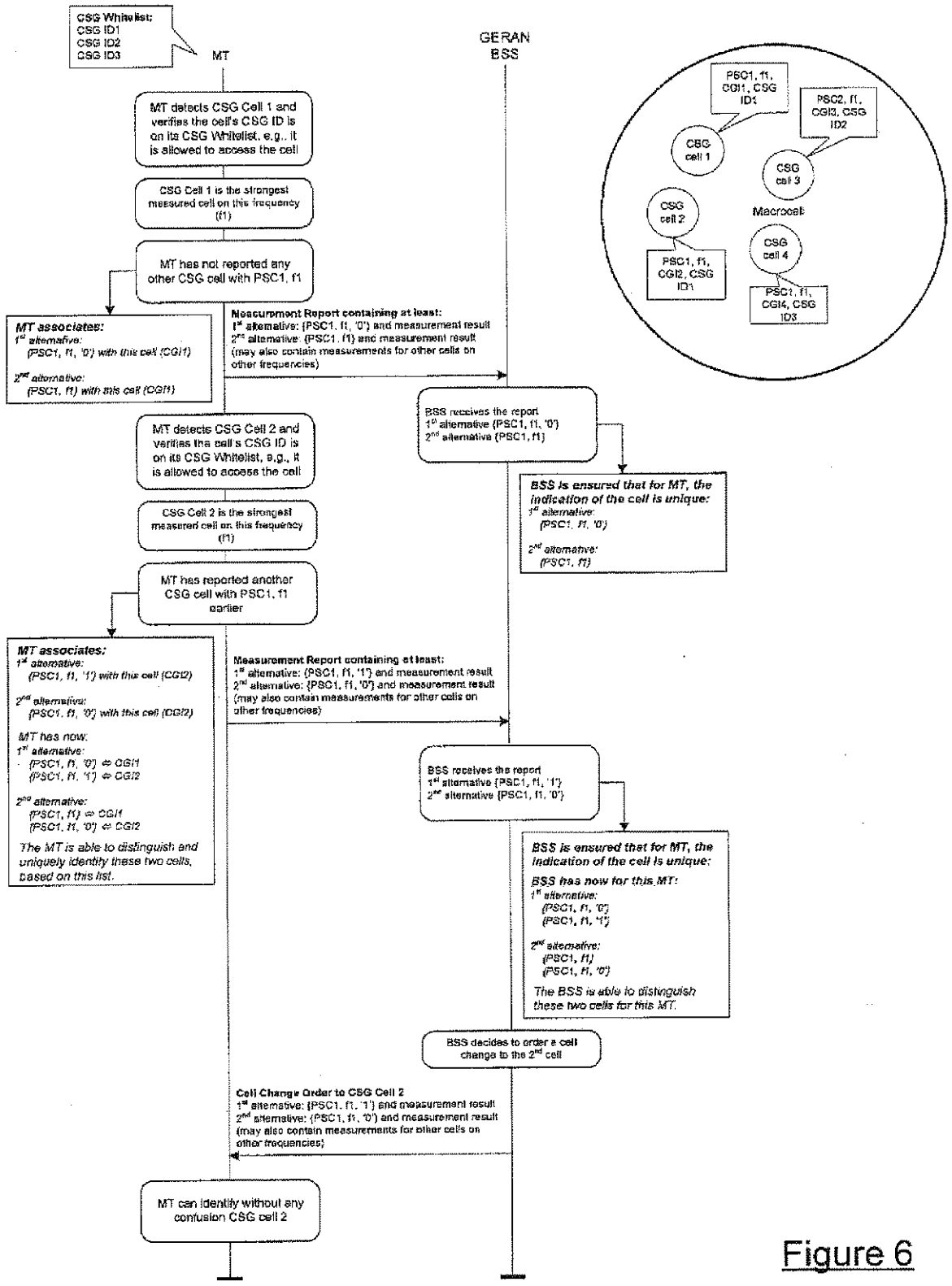

CSG Whitelist:
CSG ID1
CSG ID2
CSG ID3
MT
GERAN
BSS
PSC1, f1, CGI1, CSG ID1
PSC2, f1, CGI3, CSG ID2
CSG cell 1
CSG cell 3
CSG cell 2
Macrocell
CSG cell 4
PSC1, f1, CGI2, CSG ID1
PSC1, f1, CGI4, CSG ID3
MT detects CSG Cell 1 and verifies the cell's CSG ID is on its CSG Whitelist, e.g., it is allowed to access the cell
CSG Cell 1 is the strongest measured cell on this frequency (f1)
MT has not reported any other CSG cell with PSC1, f1
MT associates:
1st alternative:
(PSC1, f1, '0') with this cell (CGI1)
2nd alternative:
(PSC1, f1) with this cell (CGI1)
Measurement Report containing at least:
1st alternative: (PSC1, f1, '0') and measurement result
2nd alternative: (PSC1, f1) and measurement result
(may also contain measurements for other cells on other frequencies)
BSS receives the report
1st alternative (PSC1, f1, '0')
2nd alternative (PSC1, f1)
BSS is ensured that for MT, the indication of the cell is unique:
1st alternative:
(PSC1, f1, '0')
2nd alternative:
(PSC1, f1)
MT detects CSG Cell 2 and verifies the cell's CSG ID is on its CSG Whitelist, e.g., it is allowed to access the cell
CSG Cell 2 is the strongest measured cell on this frequency (f1)
MT has reported another CSG cell with PSC1, f1 earlier
MT associates:
1st alternative:
(PSC1, f1, '1') with this cell (CGI2)
2nd alternative:
(PSC1, f1, '0') with this cell (CGI2)
MT has now:
1st alternative:
(PSC1, f1, '0') ⇔ CGI1
(PSC1, f1, '1') ⇔ CGI2
2nd alternative:
(PSC1, f1) ⇔ CGI1
(PSC1, f1, '0') ⇔ CGI2
The MT is able to distinguish and uniquely identify these two cells, based on this list.
Measurement Report containing at least:
1st alternative: (PSC1, f1, '1') and measurement result
2nd alternative: (PSC1, f1, '0') and measurement result
(may also contain measurements for other cells on other frequencies)
BSS receives the report
1st alternative (PSC1, f1, '1')
2nd alternative (PSC1, f1, '0')
BSS is ensured that for MT, the indication of the cell is unique:
BSS has now for this MT:
1st alternative:
(PSC1, f1, '0')
(PSC1, f1, '1')
2nd alternative:
(PSC1, f1)
(PSC1, f1, '0')
The BSS is able to distinguish these two cells for this MT.
BSS decides to order a cell change to the 2nd cell
Cell Change Order to CSG Cell 2
1st alternative: (PSC1, f1, '1') and measurement result
2nd alternative: (PSC1, f1, '0') and measurement result
(may also contain measurements for other cells on other frequencies)
MT can identify without any confusion CSG cell 2

Figure 6