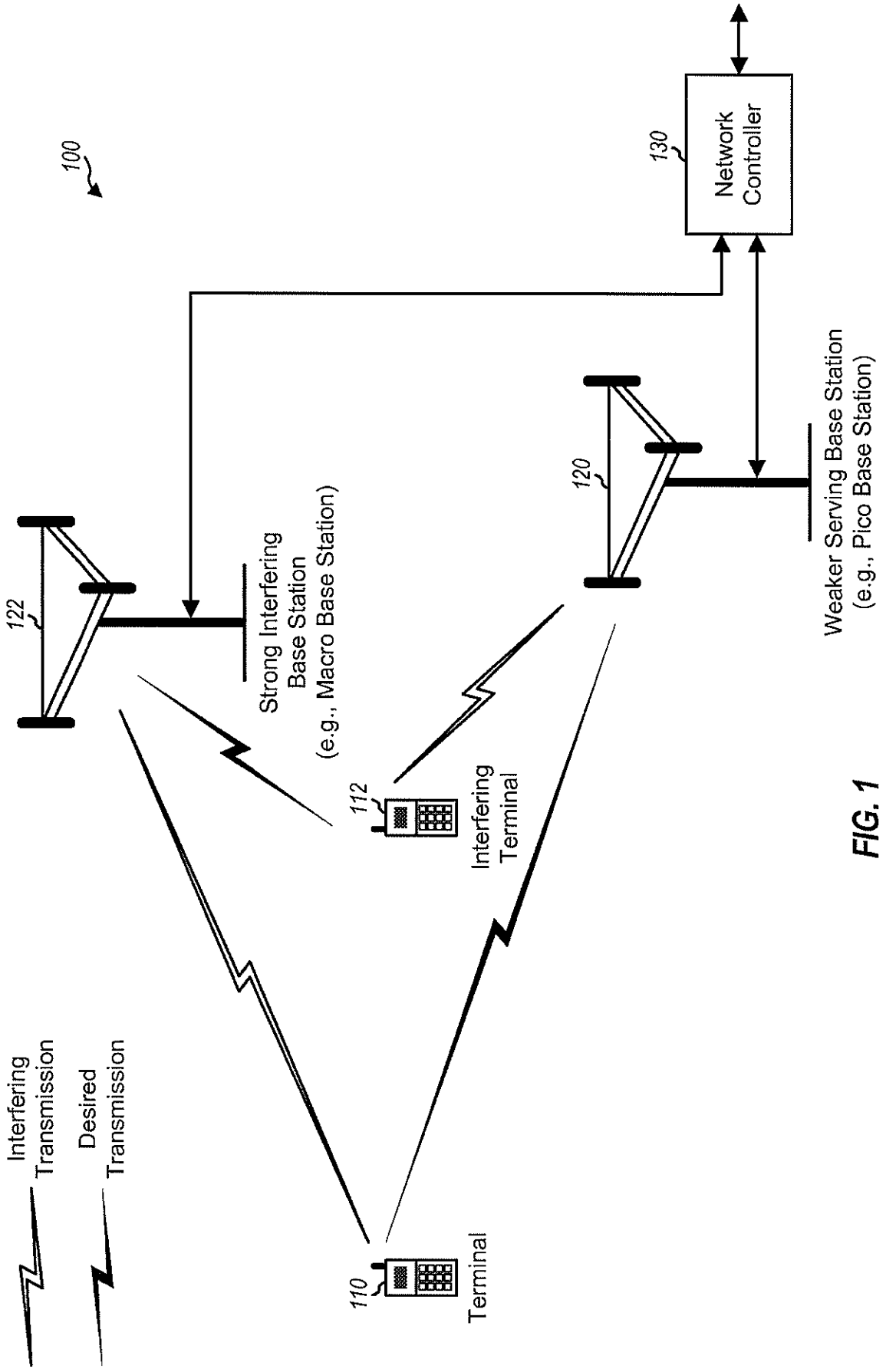

100
130
Network Controller
122
Strong Interfering Base Station (e.g., Macro Base Station)
120
Weaker Serving Base Station (e.g., Pico Base Station)
112
Interfering Terminal
110
Terminal
Interfering Transmission
Desired Transmission

FIG. 1

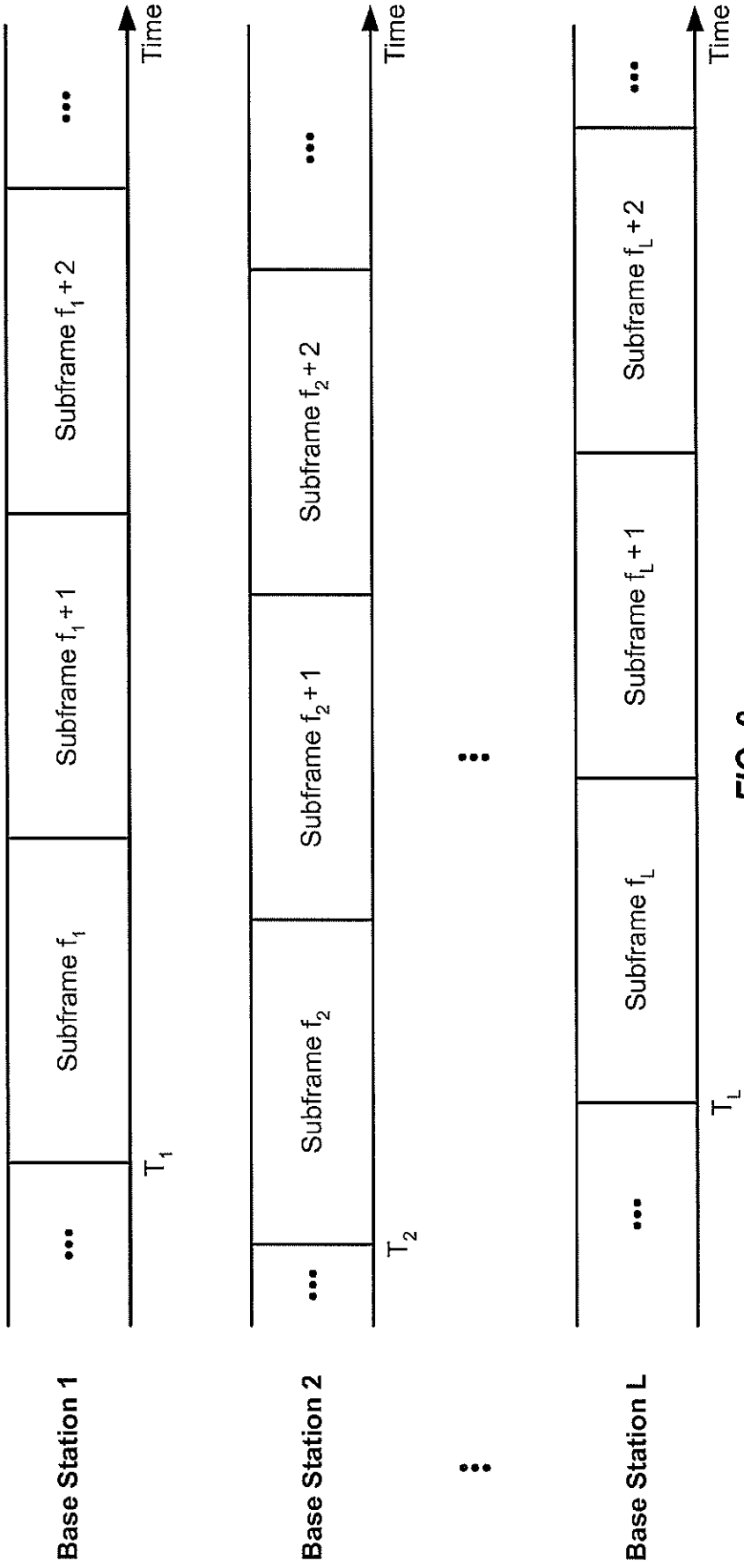

Base Station 1
Base Station 2
Base Station L
Time
Subframe f_1
Subframe f_1+1
Subframe f_1+2
Subframe f_2
Subframe f_2+1
Subframe f_2+2
Subframe f_L
Subframe f_L+1
Subframe f_L+2
T_1
T_2
T_L

FIG. 2

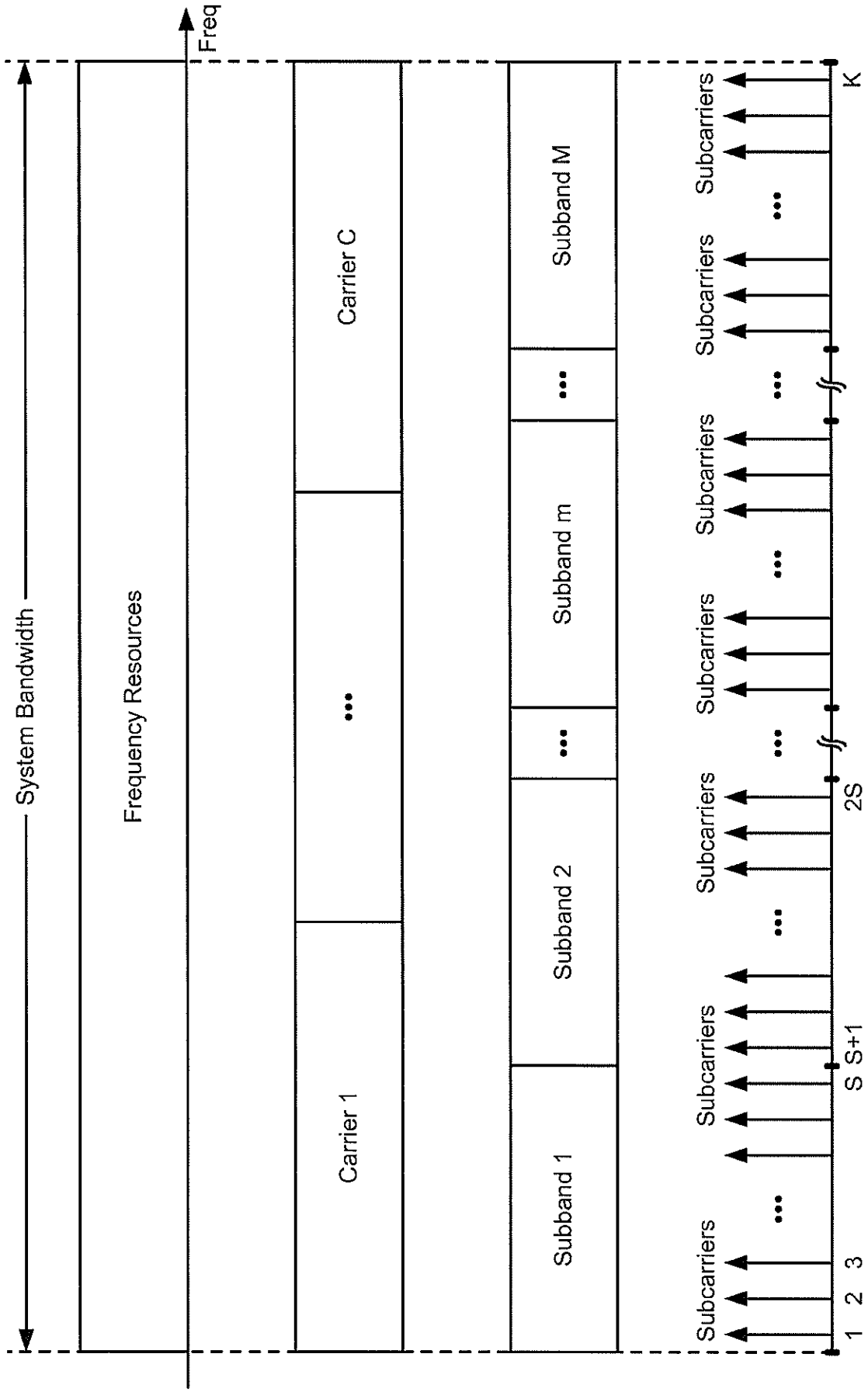

Freq
System Bandwidth
Frequency Resources
Carrier 1
Carrier C
Subband 1
Subband 2
Subband m
Subband M
Subcarriers
1
2
3
S
S+1
2S
K

FIG. 3

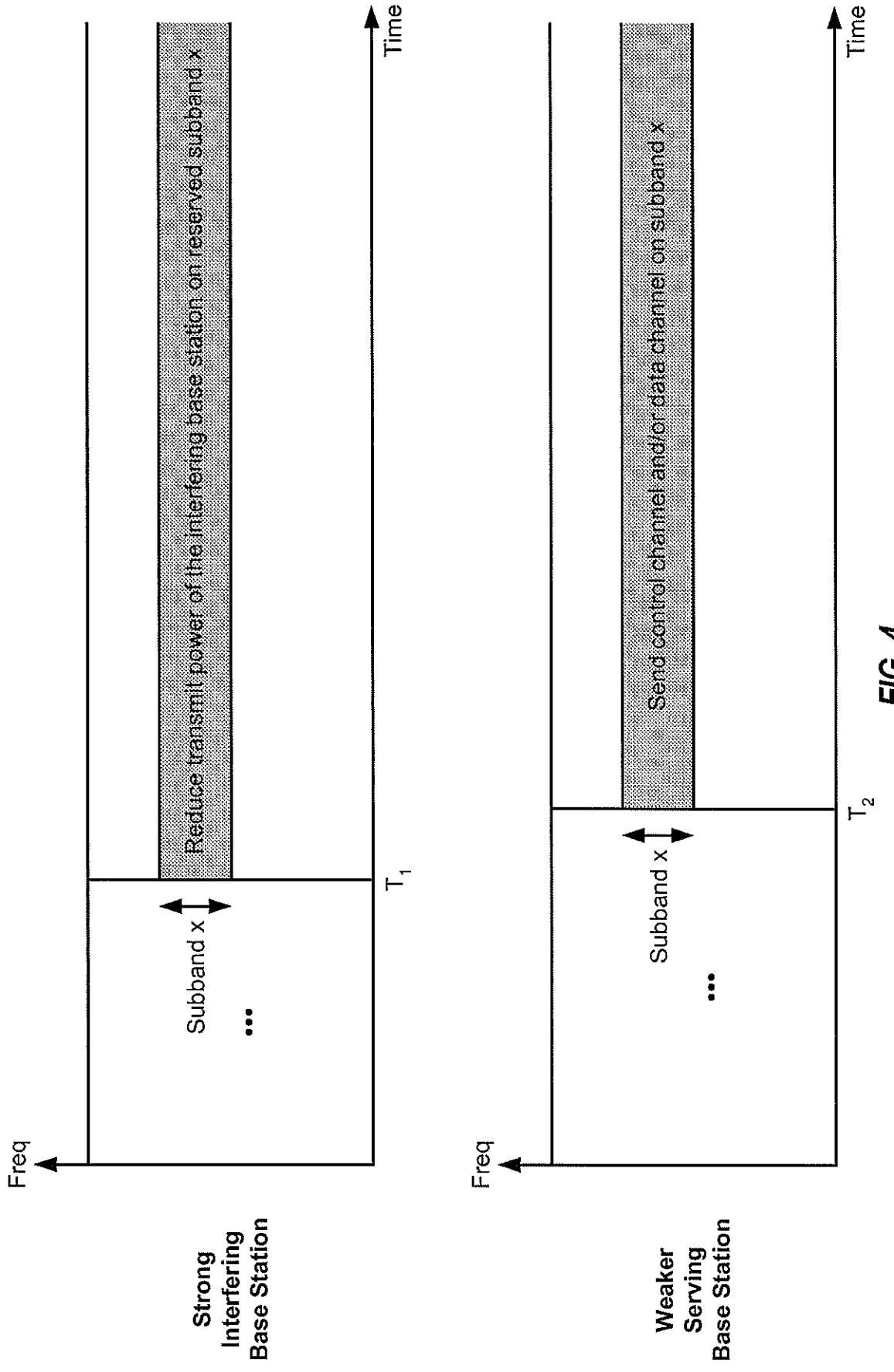

Strong Interfering Base Station
Freq
Time
Subband x
Reduce transmit power of the interfering base station on reserved subband x
T1
Weaker Serving Base Station
Freq
Time
Subband x
Send control channel and/or data channel on subband x
T2

FIG. 4

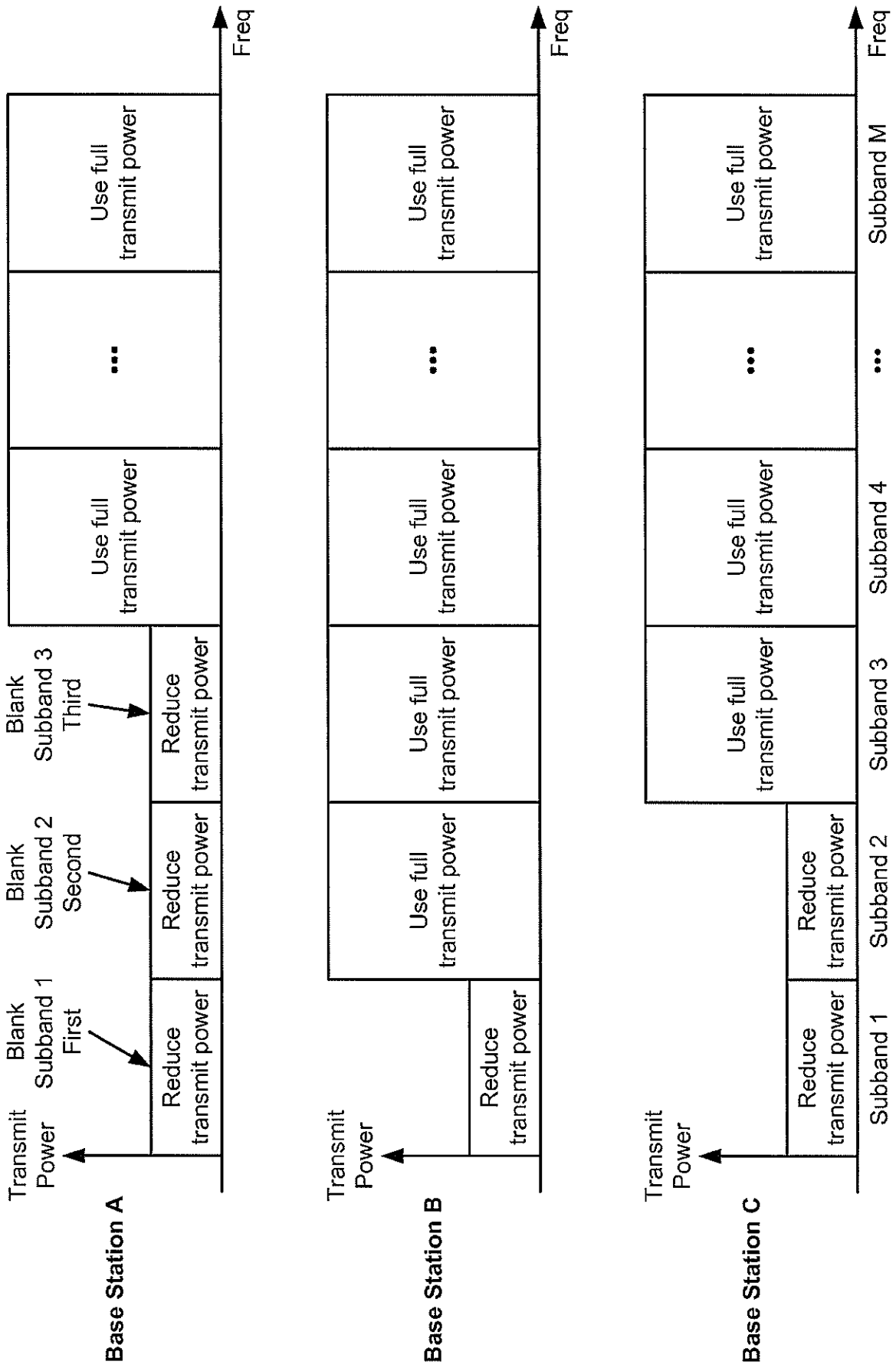

Base Station A
Transmit Power
Reduce transmit power
Blank Subband 1 First
Reduce transmit power
Blank Subband 2 Second
Reduce transmit power
Blank Subband 3 Third
Use full transmit power
...
Use full transmit power
Freq
Base Station B
Transmit Power
Reduce transmit power
Use full transmit power
Use full transmit power
Use full transmit power
...
Use full transmit power
Freq
Base Station C
Transmit Power
Reduce transmit power
Use full transmit power
Use full transmit power
Use full transmit power
...
Use full transmit power
Freq
Subband 1
Subband 2
Subband 3
Subband 4
...
Subband M

FIG. 5

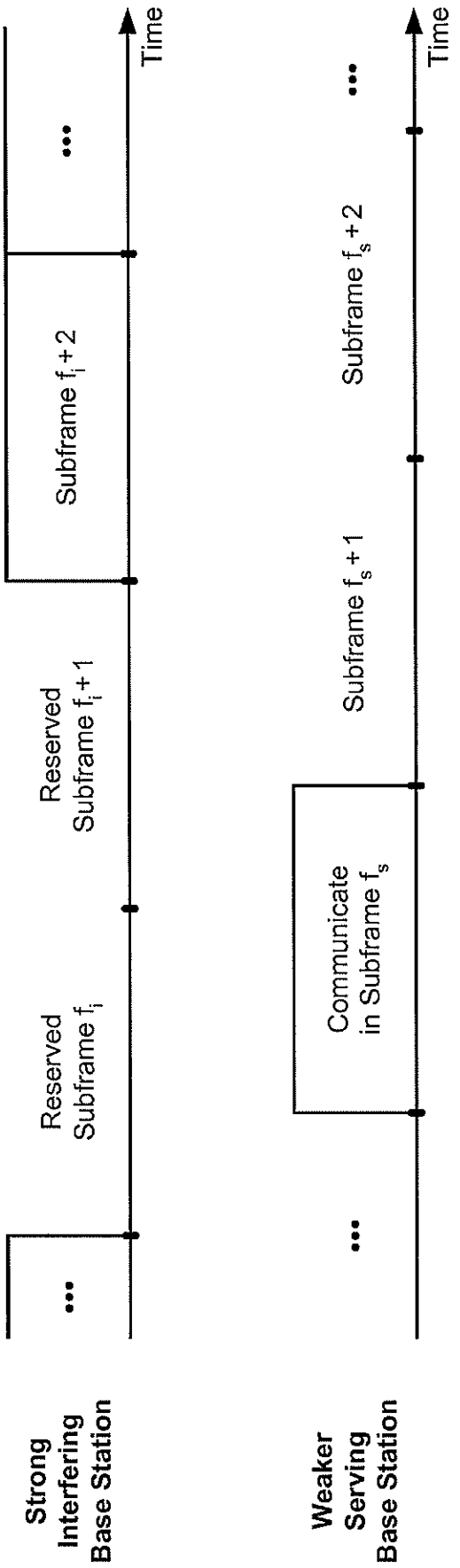

Strong Interfering Base Station
Weaker Serving Base Station
Time
Time
...
Reserved Subframe f_i
Reserved Subframe $f_i + 1$
Subframe $f_i + 2$
...
Communicate in Subframe f_s
Subframe $f_s + 1$
Subframe $f_s + 2$
...

FIG. 6

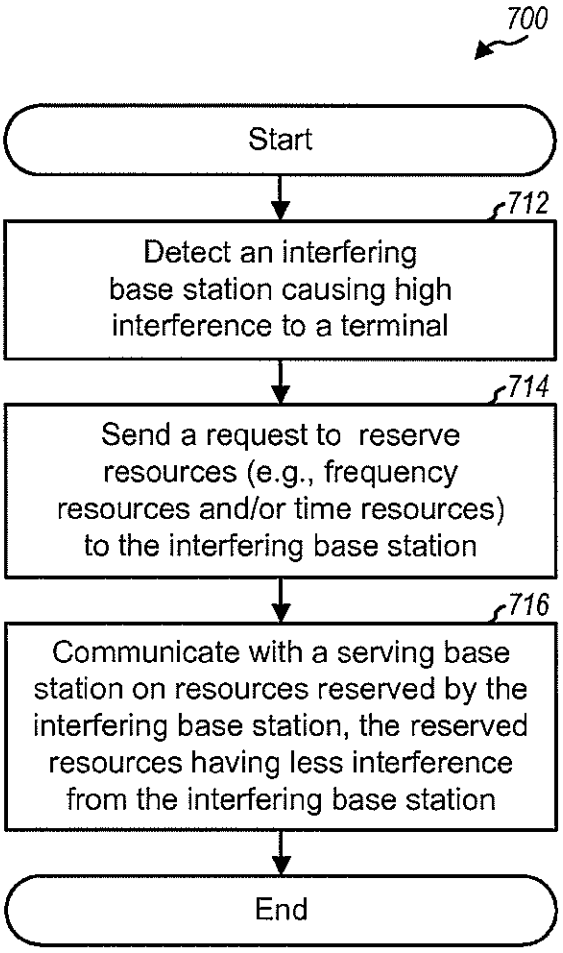

700
Start
712
Detect an interfering base station causing high interference to a terminal
714
Send a request to reserve resources (e.g., frequency resources and/or time resources) to the interfering base station
716
Communicate with a serving base station on resources reserved by the interfering base station, the reserved resources having less interference from the interfering base station
End

FIG. 7

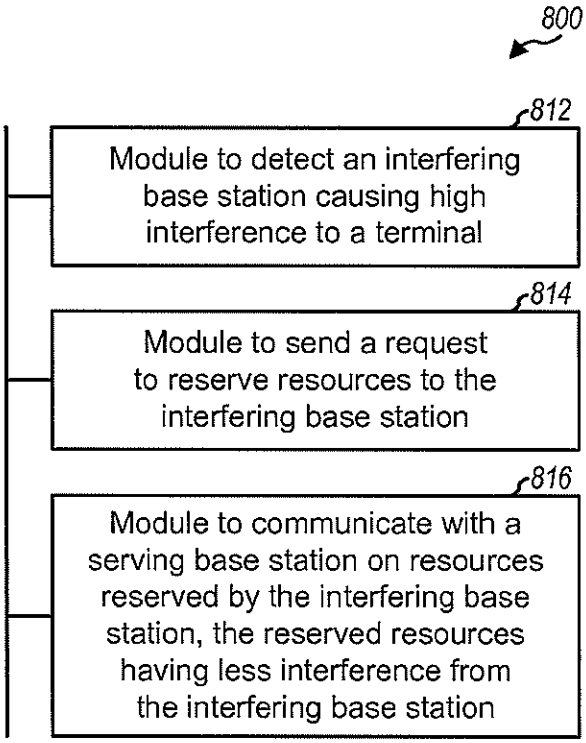

800
812
Module to detect an interfering base station causing high interference to a terminal
814
Module to send a request to reserve resources to the interfering base station
816
Module to communicate with a serving base station on resources reserved by the interfering base station, the reserved resources having less interference from the interfering base station

FIG. 8

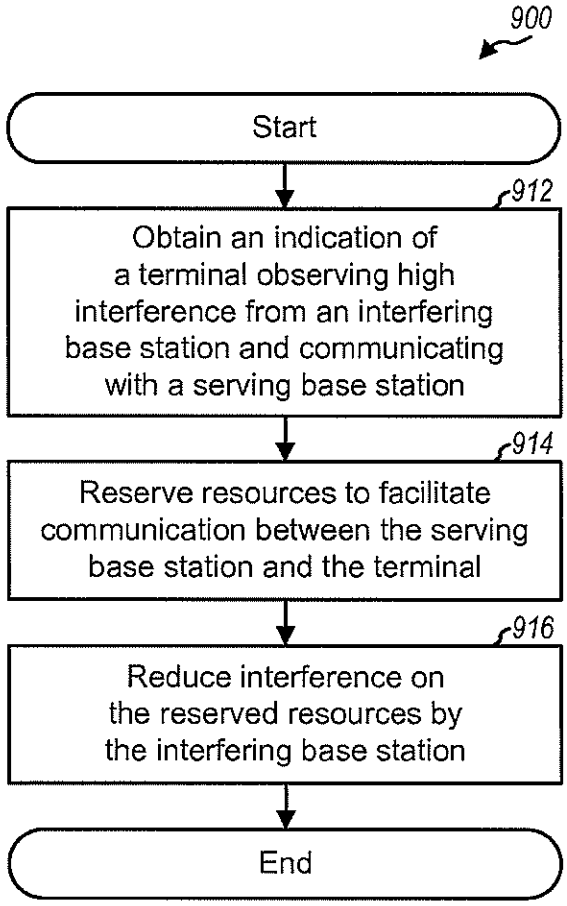


FIG. 9

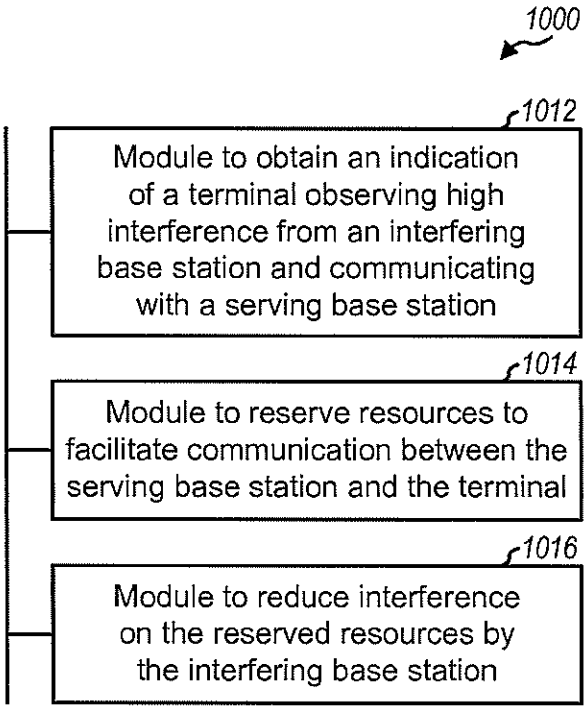


FIG. 10

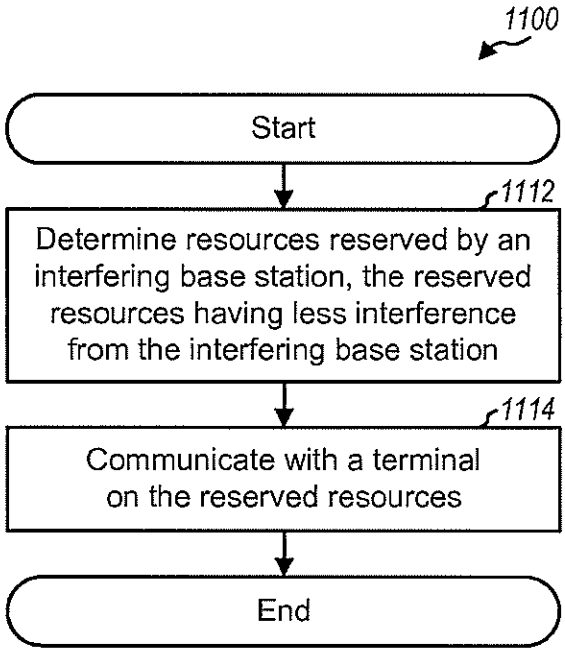


FIG. 11

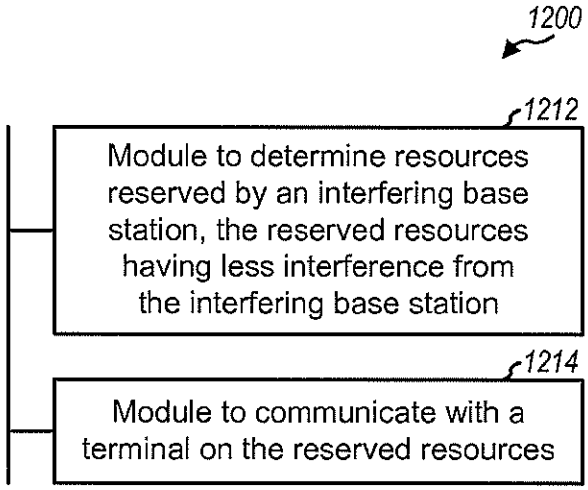


FIG. 12

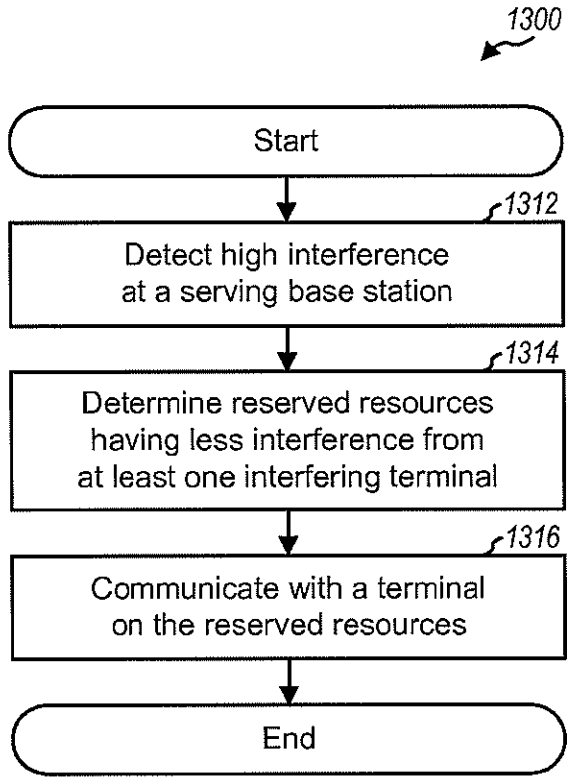

1300
Start
1312
Detect high interference at a serving base station
1314
Determine reserved resources having less interference from at least one interfering terminal
1316
Communicate with a terminal on the reserved resources
End

FIG. 13

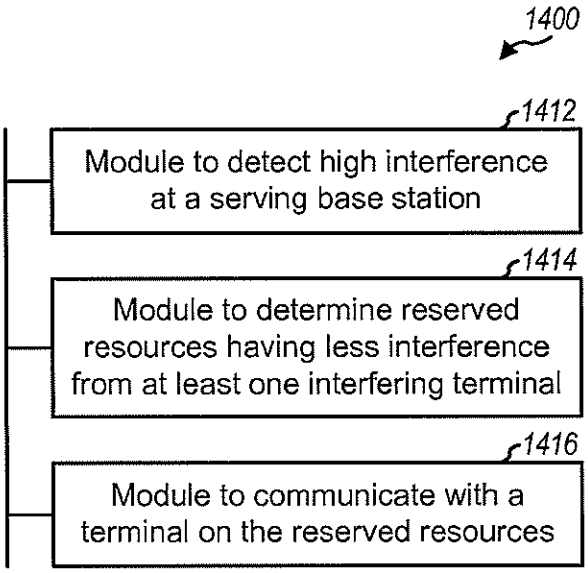

1400
1412
Module to detect high interference at a serving base station
1414
Module to determine reserved resources having less interference from at least one interfering terminal
1416
Module to communicate with a terminal on the reserved resources

FIG. 14

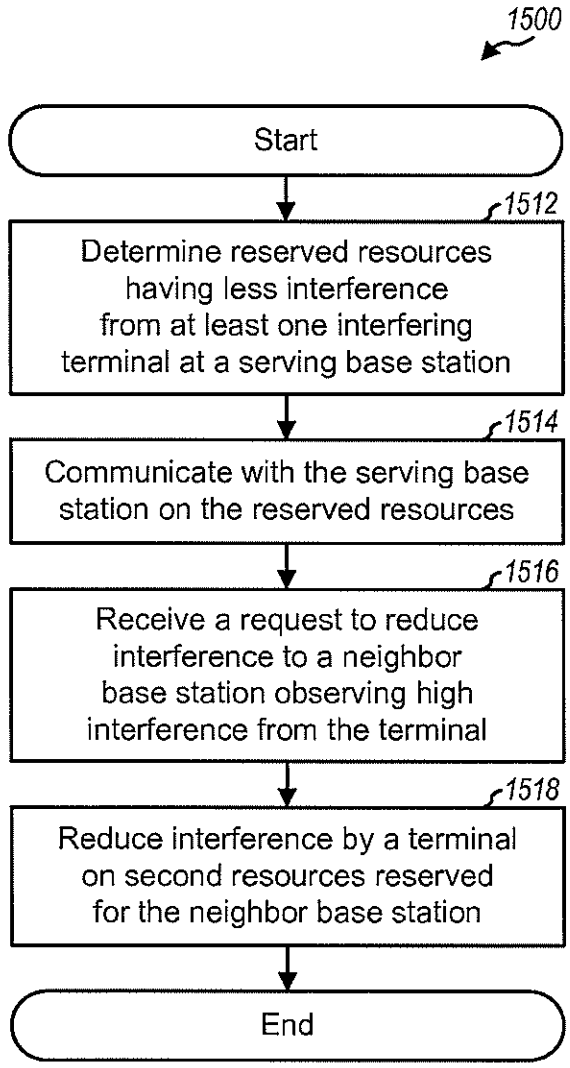

1500
Start
1512
Determine reserved resources having less interference from at least one interfering terminal at a serving base station
1514
Communicate with the serving base station on the reserved resources
1516
Receive a request to reduce interference to a neighbor base station observing high interference from the terminal
1518
Reduce interference by a terminal on second resources reserved for the neighbor base station
End

FIG. 15

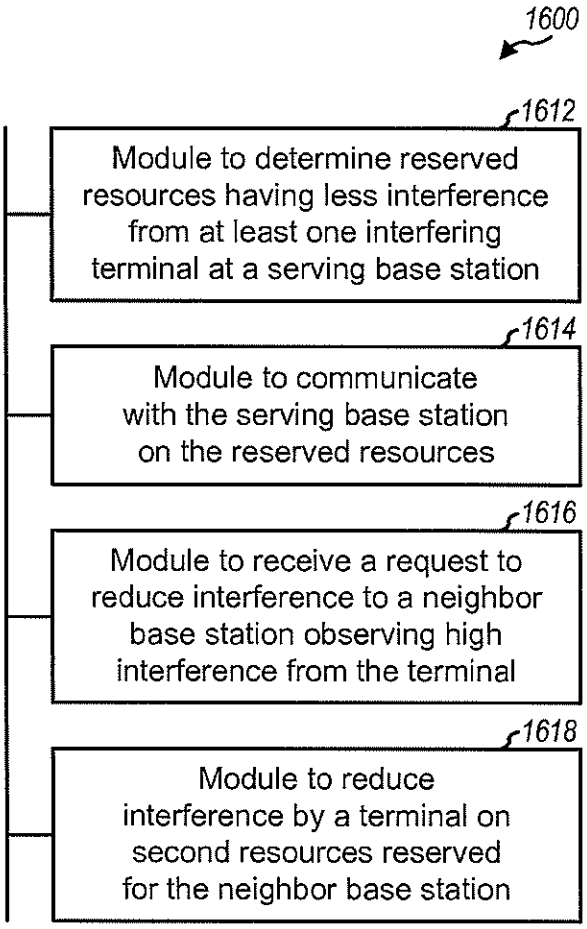

1600
1612
Module to determine reserved resources having less interference from at least one interfering terminal at a serving base station
1614
Module to communicate with the serving base station on the reserved resources
1616
Module to receive a request to reduce interference to a neighbor base station observing high interference from the terminal
1618
Module to reduce interference by a terminal on second resources reserved for the neighbor base station

FIG. 16

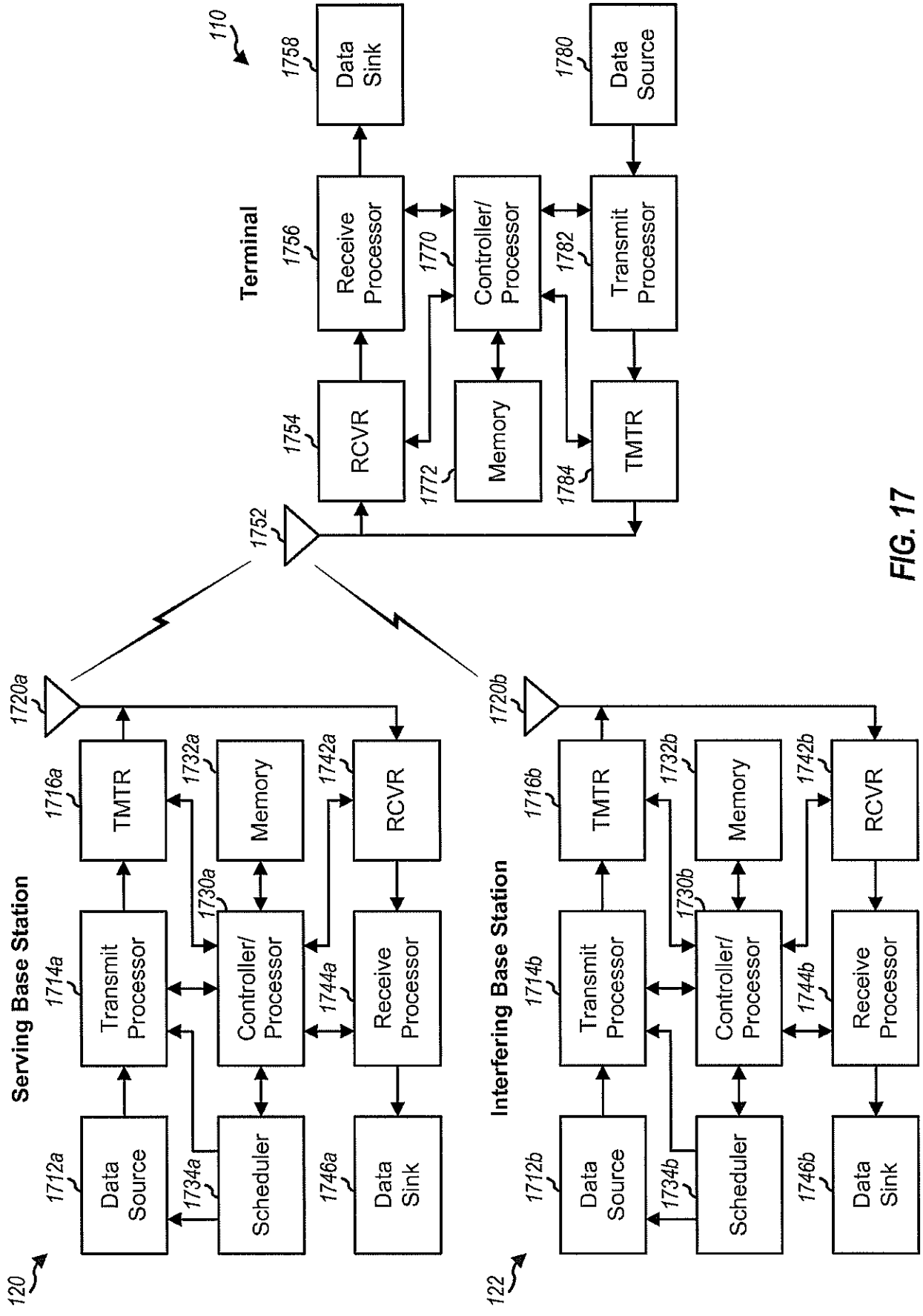

110
Terminal
1758
Data Sink
1780
Data Source
1756
Receive Processor
1770
Controller/ Processor
1782
Transmit Processor
1754
RCVR
1772
Memory
1784
TMTR
1752
1720a
1720b
Serving Base Station
1716a
TMTR
1732a
Memory
1742a
RCVR
1714a
Transmit Processor
1730a
Controller/ Processor
1744a
Receive Processor
1712a
Data Source
1734a
Scheduler
1746a
Data Sink
120
Interfering Base Station
1716b
TMTR
1732b
Memory
1742b
RCVR
1714b
Transmit Processor
1730b
Controller/ Processor
1744b
Receive Processor
1712b
Data Source
1734b
Scheduler
1746b
Data Sink
122

FIG. 17