CLAIMS

What is claimed is:

1. A method, comprising:

at a mobile wireless communication device, wherein when the mobile wireless communication device is connected in a first configuration mode to a wireless network,

receiving a control message at a local receive time from a radio network subsystem in the wireless network;

extracting from the received control message a time indication for when to start a configuration mode change; and

reconfiguring the mobile wireless communication device to a second configuration mode at a local start time based on the extracted time indication and the local receive time.

2. The method as recited in claim 1, further comprising:

comparing the extracted time indication to the local receive time; and

reconfiguring the mobile wireless communication device to the second configuration mode immediately when the extracted time indication precedes the local receive time.

3. The method as recited in claim 1, further comprising:

determining a time interval value from a set of parameters extracted from the received control message; and

reconfiguring the mobile wireless communication device back to the first configuration mode at a local end time based on the determined time interval value and the local receive time.

4. The method as received in claim 3, wherein the local end time precedes the local start time plus the determined time interval value.

5. The method as recited in claim 1, wherein the mobile wireless communication device transmits and receives messages as a series of consecutive frames, and the second configuration mode includes transmitting or receiving at least one compressed frame having a transmission gap and at least one uncompressed frame having no transmission gaps.

6. The method as recited in claim 5, further comprising:

at the mobile wireless communication device,

maintaining a local frame counter based on a system frame counter provided by the radio network subsystem in the wireless network;

wherein the extracted time indication to start the configuration mode change indicates a value for the local frame counter, and the value for the local frame counter is calculated modulo an integer N.

7. The method as recited in claims 5 or 6, wherein the control message includes a plurality of frames; and the local receive time is a value for the local frame counter when the final frame of the control message is correctly received by the mobile wireless communication device.

8. The method as recited in any of claims 5 - 7, further comprising:

at the mobile wireless communication device,

determining a first extended local frame counter value based on the system frame counter for a first received frame in the received control message;

determining a second extended local frame counter value based on the system frame counter for a last received frame in the received control message; and

configuring the mobile wireless communication device to the second configuration mode at a time earlier than indicated by the extracted time indication when the difference between the second and first extended local frame counter values is at least equal to the integer value N.

9. The method as recited in any of claims 5 - 8, further comprising:

at the mobile wireless communication device,

determining a first extended local frame counter value based on the system frame counter for a first received frame in the received control message;

determining a second extended local frame counter value based on the system frame counter for a last received frame in the received control message;

determining a third extended local frame counter value based on the extracted time indication, the third extended local frame counter value being greater than the second extended local frame counter value; and

configuring the mobile wireless communication device to the second configuration mode at a time earlier than indicated by the third extended local frame counter value when the difference between the third and first extended local frame counter values is at least equal to the integer value N.

10. A mobile wireless communication device, comprising:

a wireless transceiver arranged to receive a configuration mode change message from a wireless network subsystem at a local receive time, the configuration mode change message including a time indication for the start of a configuration mode change from a first configuration mode to a second configuration mode; and

a processor coupled to the wireless transceiver, the processor arranged to execute instructions for:

extracting the time indication for the start of the configuration mode change from the received configuration mode change message,

comparing the extracted time indication to the local receive time, and

reconfiguring the wireless transceiver to the second configuration mode at a time different than the extracted time indication when the extracted time indication precedes the local receive time.

11. The mobile wireless communication device as recited in claim 10, wherein the local receive time equals a local counter value when the configuration change message is completely received at the mobile wireless communication device.

12. The mobile wireless communication device as recited in claim 10, wherein the configuration mode change message includes a plurality of message units; and

the processor is further arranged to execute instructions for:

determining a first time value when a first message unit of the configuration mode change message is received;

determining a second time value when all of the plurality of message units is received;

calculating a receive time interval based on a difference between the first and second time values; and

initiating the configuration mode change when the receive time interval exceeds a threshold.

13. The mobile wireless communication device as recited in claim 12, wherein the processor is further arranged to execute instructions for:

receiving transmissions from the wireless network subsystem as a series of consecutive frames; and

incrementing a finite length local counter by one counter value for each frame received;

wherein the threshold equals a time for the finite length local counter in the mobile wireless communication device to complete a full cycle of counter values.

14. The mobile wireless communication device as recited in claim 10, wherein the processor is further arranged to execute instructions for:

determining a time interval value from a set of parameters extracted from the received configuration mode change message, the time interval value specifying a time period length for the wireless transceiver to operate in the second configuration mode; and

reconfiguring the wireless transceiver from the second configuration mode back to the first configuration mode after a time interval shorter than specified by the determined time interval value.

15. The mobile wireless communication device as recited in claim 14, wherein the processor is further arranged to execute instructions for:

transmitting and receiving messages between the wireless transceiver and the wireless network subsystem as a series of consecutive frames;

wherein the first configuration mode uses continuous frames with no transmission gaps; and the second configuration mode includes at least one compressed frame having a transmission cap and at least one uncompressed frame having no transmission gaps.

16. The mobile wireless communication device as recited in claims 14 or 15, wherein the processor is further arranged to execute instructions for:

maintaining a finite length local counter based on a system counter provided by the wireless network subsystem; and

incrementing the finite length local counter by one counter value modulo an integer value N for each frame received;

wherein the local receive time corresponds to a value of the finite length local counter for the final frame correctly received in the configuration mode change message.

17. Computer program product encoded in a computer readable medium for reconfiguring a mobile wireless communication device connected to a wireless network, the computer program product comprising:

non-transitory computer program code for receiving a control message at a local receive time from a radio network subsystem in the wireless network;

non-transitory computer program code for extracting a time indication for when to start a configuration mode change from the received control message; and

non-transitory computer program code for reconfiguring the mobile wireless communication device to a second configuration mode at a local start time based on the extracted time indication and the local receive time.

18. The computer program product as recited in claim 17, further comprising:

non-transitory computer program code for comparing the extracted time indication to the local receive time; and

non-transitory computer program code for reconfiguring the mobile wireless communication device to the second configuration mode immediately when the extracted time indication precedes the local receive time.

19. The computer program product as recited in claim 17, further comprising:

non-transitory computer program code for determining a time interval value from a set of parameters extracted from the received control message; and

non-transitory computer program code for reconfiguring the mobile wireless communication device back to the first configuration mode at a local end time based on the determined time interval value and the local receive time.

20. The computer program product as recited in claim 19, wherein the local end time precedes the local start time plus the determined time interval value.

21. The computer program product as recited in claim 17, further comprising:

non-transitory computer program code for controlling a transceiver in the mobile wireless communication device to transmit and receive messages as a series of consecutive frames,

wherein the second configuration mode includes transmitting or receiving at least one compressed frame having a transmission gap and at least one uncompressed frame having no transmission gaps.

22. The computer program product as recited in claim 21, further comprising:

non-transitory computer program code for maintaining a local frame counter based on a system frame counter provided by the radio network subsystem in the wireless network;

wherein the extracted time indication to start the configuration mode change indicates a value for the local frame counter, and the value for the local frame counter is calculated modulo an integer N.

23. The computer program product as recited in claim 22, further comprising:

non-transitory computer program code for determining a first extended local frame counter value based on the system frame counter for a first received frame in the received control message;

non-transitory computer program code for determining a second extended local frame counter value based on the system frame counter for a last received frame in the received control message; and

non-transitory computer program code for configuring the mobile wireless communication device to the second configuration mode at a time earlier than indicated by the extracted time indication when the difference between the second and first extended local frame counter values is at least equal to the integer value N;

wherein values for the extended local frame counter are calculated modulo an integer M > N.

24. The computer program product as recited in claim 22, further comprising:

non-transitory computer program code for determining a first extended local frame counter value based on the system frame counter for a first received frame in the received control message;

non-transitory computer program code for determining a second extended local frame counter value based on the system frame counter for a last received frame in the received control message;

non-transitory computer program code for determining a third extended local frame counter value based on the extracted time indication, the third extended local frame counter value being greater than the second extended local frame counter value; and

non-transitory computer program code for configuring the mobile wireless communication device to the second configuration mode at a time earlier than indicated by the third extended local frame counter value when the difference between the third and first extended local frame counter values is at least equal to the integer value N;

wherein values for the extended local frame counter are calculated modulo an integer M > N.

What is claimed is:

1. A mobile wireless communication device, comprising:

a wireless transceiver arranged to receive a configuration mode change message from a wireless network subsystem at a local receive time, the configuration mode change message including a time indication for the start of a configuration mode change from a first configuration mode to a second configuration mode;

a processor coupled to the wireless transceiver; and

logic coupled to the wireless transceiver and the processor, the logic configured to:

extract the time indication for the start of the configuration mode change from the received configuration mode change message;

compare the extracted time indication to the local receive time; and

reconfigure the wireless transceiver to the second configuration mode at a time different than the extracted time indication when the extracted time indication precedes the local receive time.

2. The mobile wireless communication device as recited in claim 1, wherein: the configuration mode change message includes a plurality of message units; and the logic is further configured to:

determine a first time value when a first message unit of the configuration mode change message is received;

determine a second time value when all of the plurality of message units is received;

calculate a receive time interval based on a difference between the first and second time values; and

initiate the configuration mode change when the receive time interval exceeds a threshold.

3. The mobile wireless communication device as recited in claim 2, wherein the logic is further configured to:

receive transmissions from the wireless network subsystem as a series of consecutive frames; and

increment a finite length local counter by one counter value for each frame received;

wherein the threshold equals a time for the finite length local counter in the mobile wireless communication device to complete a full cycle of counter values.

4. The mobile wireless communication device as recited in claim 1, wherein the logic is further configured to:

determine a time interval value from a set of parameters extracted from the received configuration mode change message, the time interval value specifying a time period length for the wireless transceiver to operate in the second configuration mode; and

reconfigure the wireless transceiver from the second configuration mode back to the first configuration mode after a time interval shorter than specified by the determined time interval value.

5. The mobile wireless communication device as recited in claim 4, wherein the logic is further configured to:

transmit and receiving messages between the wireless transceiver and the wireless network subsystem as a series of consecutive frames; and

wherein:

the first configuration mode uses continuous frames with no transmission gaps; and

the second configuration mode includes at least one compressed frame having a transmission cap and at least one uncompressed frame having no transmission gaps.

6. The mobile wireless communication device as recited in claim 4, wherein the logic is further configured to:

maintain a finite length local counter based on a system counter provided by the wireless network subsystem; and

increment the finite length local counter by one counter value modulo an integer value N for each frame received;

wherein the local receive time corresponds to a value of the finite length local counter for the final frame correctly received in the configuration mode change message.

7. A method for reconfiguring a mobile wireless communication device, the method comprising the mobile wireless communication device:

receiving a control message at a local receive time from a radio network subsystem in the wireless network;

extracting from the received control message a time indication for when to start a configuration mode change;

comparing the extracted time indication to the local receive time; and

reconfiguring the mobile wireless communication device from a first configuration mode to a second configuration mode at a time different than the extracted time indication when the extracted time indication precedes the local receive time.

8. The method as recited in claim 7, further comprising the mobile wireless communication device:

reconfiguring the mobile wireless communication device from the first configuration mode to the second configuration mode immediately when the extracted time indication precedes the local receive time.

9. The method as recited in claim 7, further comprising the mobile wireless communication device:

determining a time interval value from a set of parameters extracted from the received control message; and

reconfiguring the mobile wireless communication device from the second configuration mode back to the first configuration mode at a local end time based on the determined time interval value and the local receive time;

wherein the local end time precedes the local start time plus the determined time interval value.

10. The method as recited in claim 7, wherein the mobile wireless communication device transmits and receives messages as a series of consecutive frames, and the second configuration mode includes transmitting or receiving at least one compressed frame having a transmission gap and at least one uncompressed frame having no transmission gaps.

11. The method as recited in claim 10, further comprising the mobile wireless communication device:

maintaining a local frame counter based on a system frame counter provided by the radio network subsystem in the wireless network;

wherein the extracted time indication to start the configuration mode change indicates a value for the local frame counter, and the value for the local frame counter is calculated modulo an integer N.

12. The method as recited in claims 10, further comprising the mobile wireless communication device:

determining a first extended local frame counter value based on the system frame counter for a first received frame in the received control message;

determining a second extended local frame counter value based on the system frame counter for a last received frame in the received control message; and

configuring the mobile wireless communication device to the second configuration mode at a time earlier than indicated by the extracted time indication when the difference between the second and first extended local frame counter values is at least equal to the integer value N.

13. The method as recited in claim 10, further comprising the mobile wireless communication device:

determining a first extended local frame counter value based on the system frame counter for a first received frame in the received control message;

determining a second extended local frame counter value based on the system frame counter for a last received frame in the received control message;

determining a third extended local frame counter value based on the extracted time indication, the third extended local frame counter value being greater than the second extended local frame counter value; and

configuring the mobile wireless communication device to the second configuration mode at a time earlier than indicated by the third extended local frame counter value when the difference between the third and first extended local frame counter values is at least equal to the integer value N.

14. A non-transitory computer readable medium comprising a plurality of instructions for reconfiguring a mobile wireless communication device connected to a wireless network, the plurality of instructions that when executed by a processor, cause the mobile wireless communication device to:

receive a control message at a local receive time from a radio network subsystem in the wireless network;

extract a time indication for when to start a configuration mode change from the received control message;

compare the extracted time indication to the local receive time; and

reconfigure the mobile wireless communication device from a first configuration mode to a second configuration mode at a time different than the extracted time indication when the extracted time indication precedes the local receive time.

15. The non-transitory computer readable medium as recited in claim 14, the plurality of instructions that when executed by the processor, further cause the mobile wireless communication device to:

compare the extracted time indication to the local receive time; and

reconfigure the mobile wireless communication device from the first configuration mode to the second configuration mode immediately when the extracted time indication precedes the local receive time.

16. The non-transitory computer readable medium as recited in claim 14, the plurality of instructions that when executed by the processor, further cause the mobile wireless communication device to:

determine a time interval value from a set of parameters extracted from the received control message; and

reconfigure the mobile wireless communication device from the second configuration mode back to the first configuration mode at a local end time based on the determined time interval value and the local receive time.

17. The non-transitory computer readable medium as recited in claim 14, the plurality of instructions that when executed by the processor, further cause the mobile wireless communication device to:

control a transceiver in the mobile wireless communication device to transmit and receive messages as a series of consecutive frames,

wherein the second configuration mode includes transmission or reception of at least one compressed frame having a transmission gap and at least one uncompressed frame having no transmission gaps.

18. The non-transitory computer readable medium as recited in claim 17, the plurality of instructions that when executed by the processor, further cause the mobile wireless communication device to:

maintain a local frame counter based on a system frame counter provided by the radio network subsystem in the wireless network;

wherein the extracted time indication to start the configuration mode change indicates a value for the local frame counter, and the value for the local frame counter is calculated modulo an integer N.

19. The non-transitory computer readable medium as recited in claim 18, the plurality of instructions that when executed by the processor, further cause the mobile wireless communication device to:

determine a first extended local frame counter value based on the system frame counter for a first received frame in the received control message;

determine a second extended local frame counter value based on the system frame counter for a last received frame in the received control message; and

configure the mobile wireless communication device to the second configuration mode at a time earlier than indicated by the extracted time indication when the difference between the second and first extended local frame counter values is at least equal to the integer value N;

wherein values for the extended local frame counter are calculated modulo an integer $M > N$.

20. The non-transitory computer readable medium as recited in claim 18, the plurality of instructions that when executed by the processor, further cause the mobile wireless communication device to:

determine a first extended local frame counter value based on the system frame counter for a first received frame in the received control message;

determine a second extended local frame counter value based on the system frame counter for a last received frame in the received control message;

determine a third extended local frame counter value based on the extracted time indication, the third extended local frame counter value being greater than the second extended local frame counter value; and

configure the mobile wireless communication device to the second configuration mode at a time earlier than indicated by the third extended local frame counter value when the difference between the third and first extended local frame counter values is at least equal to the integer value N;

wherein values for the extended local frame counter are calculated modulo an integer $M > N$.