WHAT IS CLAIMED IS:

1. A method for operating an electronic device within a cellular environment, the method comprising:

determining one or more radio frequency (RF) link parameters associated with a link between the electronic device and a cellular base station at a first point in time;

computing a first estimate for a pseudo-coupling loss (PCL) for the link based on the one or more RF link parameters;

determining that the PCL exceeds a maximum coupling loss (MCL) for the link based on the first estimate; and

delaying transmission of one or more messages from the electronic device over the link until a second point in time that is later than the first point in time.

2. The method of claim 1, further comprising:

determining updated values of the one or more RF link parameters at the second point in time;

computing a second estimate of the PCL for the link based on the updated values;

determining that the PCL does not exceed the MCL for the link based on the second estimate; and

causing the one or more messages to be transmitted from the electronic device over the link.

3. The method of claim 1, further comprising:

determining a coverage enhancement (CE) parameter associated with the link between the electronic device and a cellular base station at the first time; and

computing a second estimate for a signal condition associated with the link based on the CE parameter and the one or more RF link parameters.

4. The method of claim 3, wherein computing the third estimate for the signal condition associated with the link comprises computing a binary value based on a first comparison between the CE parameter and a predetermined CE parameter value, a second comparison between a Signal to Interference and Noise Ratio (SINR) included in the one or more RF link parameters and a first threshold, and a third comparison between a Reference Signal Receive Quality (RSRQ) included in the one or more RF link parameters and a second threshold.

5. The method of claim 1, further comprising:

computing one or more additional estimates of the PCL during transmission of the one or more messages over the link; and

aggregating the first estimate and the one or more additional estimates of the PCL to generate one or more statistics that characterize a signal condition associated with the link.

6. The method of claim 5, further comprising updating the MCL for the link based on the one or more statistics.

7. The method of claim 1, wherein computing the first estimate for the PCL of the link comprises performing one or more computations based on the one or more RF link parameters and one or more constants.

8. The method of claim 7, wherein the one or more constants comprise at least one of a thermal noise floor or a noise figure associated with the cellular base station.

9. The method of claim 1, wherein the one or more RF link parameters comprise at least one of a path loss (PL), a SINR, and a Reference Signal Received Power (RSRP).

10. The method of claim 1, wherein the second point in time is a predetermined period of time after the first point in time.

11. A non-transitory computer readable medium storing instructions that, when executed by a processor, cause the processor to perform the steps of:

determining one or more radio frequency (RF) link parameters associated with a link between the electronic device and a cellular base station at a first point in time;

computing a first estimate for a pseudo-coupling loss (PCL) for the link based on the one or more RF link parameters;

determining that the PCL exceeds a maximum coupling loss (MCL) for the link based on the first estimate; and

delaying transmission of one or more messages from the electronic device over the link until a second point in time that is later than the first point in time.

12. The non-transitory computer readable medium of claim 11, wherein the instructions further cause the processor to perform the steps of:

determining updated values of the one or more RF link parameters at the second point in time;

computing a second estimate of the PCL for the link based on the updated values;

determining that the PCL does not exceed the MCL for the link based on the second estimate; and

causing the one or more messages to be transmitted from the electronic device over the link.

13. The non-transitory computer readable medium of claim 11, wherein the instructions further cause the processor to perform the steps of:

determining a coverage enhancement (CE) parameter associated with the link between the electronic device and a cellular base station at the first time; and

computing a second estimate for a signal condition associated with the link based on the CE parameter and the one or more RF link parameters.

14. The non-transitory computer readable medium of claim 13, wherein computing the third estimate for the signal condition associated with the link comprises:

computing a first binary value based on a first comparison of the CE parameter with a predetermined CE parameter value;

computing a second binary value based on a second comparison of a SINR included in the one or more RF link parameters to a threshold; and

computing a third binary value based on a third comparison of a Reference Signal Received Quality (RSRQ) included in the one or more RF link parameters to a threshold.

15. The non-transitory computer readable medium of claim 11, wherein the instructions further cause the processor to perform the steps of:

computing one or more additional estimates of the PCL during transmission of the one or more messages over the link; and

aggregating the first estimate and the one or more additional estimates of the PCL into one or more statistics associated with signal conditions for the link.

16. The non-transitory computer readable medium of claim 15, wherein the one or more statistics comprises at least one of a minimum, a maximum, a mean, a median, a quantile, a standard deviation, a variance, a skew, or a kurtosis.

17. The non-transitory computer readable medium of claim 11, wherein computing the first estimate for the PCL for the link comprises performing one or more computations based on the one or more RF link parameters and one or more constants.

18. The non-transitory computer readable medium of claim 17, wherein the one or more constants comprise at least one of a thermal noise floor or a noise figure associated with the cellular base station and the one or more RF link parameters comprise at least one of a path loss (PL), a SINR, and a Reference Signal Received Power (RSRP).

19. The non-transitory computer readable medium of claim 17, wherein the one or more computations comprise at least one of summing a first RF link parameter and a second RF link parameter included in the one or more RF link parameters or subtracting a constant from the one or more RF link parameters.

20. A system, comprising:

a memory that stores instructions, and

a processor that is coupled to the memory and, when executing the instructions, is configured to:

determine one or more radio frequency (RF) link parameters associated with a link between the electronic device and a cellular base station at a first point in time;

compute a first estimate for a pseudo-coupling loss (PCL) for the link based on the one or more RF link parameters;

determine that the PCL exceeds a maximum coupling loss (MCL) for the link based on the first estimate; and

delay transmission of one or more messages from the electronic device over the link until a second point in time that is later than the first point in time.

WHAT IS CLAIMED IS:

1. A method comprising:

determining, by an electronic device, one or more signal characteristics of a link between the electronic device and a base station;

estimating, by the electronic device, a coupling loss for the link based on the one or more signal characteristics;

determining, by the electronic device, whether the coupling loss exceeds a maximum coupling loss (MCL) for the link; and

in response to determining that the coupling loss exceeds the MCL, delaying, by the electronic device, transmission of one or more messages from the electronic device over the link to the base station.

2. The method of claim 1, further comprising:

determining, by the electronic device, updated values of the one or more signal characteristics of the link;

re-estimating, by the electronic device, the coupling loss for the link based on the updated values;

determining, by the electronic device, whether the re-estimated coupling loss exceeds the MCL for the link; and

in response to determining that the re-estimated coupling loss does not exceed the MCL, transmitting, by the electronic device, the one or more messages from the electronic device to the base station over the link.

3. The method of claim 1, wherein the one or more signal characteristics include one or more of a path loss, a reference signal received quality (RSRQ), or a signal to interference noise ratio (SINR).

4. The method of claim 1, wherein determining the one or more signal characteristics comprises applying a propagation model of a signal between the electronic device and the base station.

5. The method of claim 1, wherein the estimating of the coupling loss is further based on at least one of a bandwidth constant or an environment constant.

6. The method of claim 1, wherein the estimating of the coupling loss is further based on at least one of a thermal noise floor associated with the base station or a noise figure associated with the base station.

7. The method of claim 1, further comprising determining, by the electronic device, the MCL for the link based on one or more of a transmission power or a noise tolerance for the link.

8. The method of claim 7, wherein the determining the MCL for the link is further based on at least one of a bandwidth constant or an environment constant.

9. A network device comprising:

one or more processors; and

a memory storing instructions that when executed by the one or more processors causes the network device to perform operations comprising:

measuring one or more signal parameters of a wireless link coupling the network device to a base station;

determining a first estimate of a coupling loss for the wireless link based on the one or more signal parameters; and

in response to determining that the first estimate of the coupling loss is greater than a maximum coupling loss (MCL) that can be tolerated for transmissions using the wireless link, postponing transmission of one or more messages from the network device to the base station using the wireless link.

10. The network device of claim 9, wherein the operations further comprise:

measuring updated values of the one or more signal parameters of the wireless link;

determining a second estimate of the coupling loss for the wireless link based on the updated values; and

in response to determining that the second estimate of the coupling loss is not greater than the MCL, transmitting the one or more messages from the network device to the base station over the wireless link.

11. The network device of claim 9, wherein the one or more signal parameters include one or more of a path loss, a reference signal received quality (RSRQ), or a signal to interference noise ratio (SINR).

12. The network device of claim 9, wherein measuring the one or more signal parameters comprises applying a propagation model of a signal between the network device and the base station.

13. The network device of claim 9, wherein the first estimate of the coupling loss is further based on at least one of a bandwidth constant, an environment constant, a thermal noise floor associated with the base station, or a noise figure associated with the base station.

14. The network device of claim 9, wherein the operations further comprise:

determining one or more additional estimates of the coupling loss during transmission of the one or more messages using the wireless link;

determining a signal condition profile for the wireless link based on the one or more additional estimates of the coupling loss; and

updating the MCL for the wireless link based on the signal condition profile.

15. The network device of claim 9, wherein the operations further comprise determining the MCL for the wireless link based on one or more of a transmission power, a noise tolerance for the wireless link, a bandwidth constant or an environment constant.

16. A non-transitory computer-readable medium storing instructions that, when executed by an electronic device, cause the electronic device to perform operations comprising:

determining one or more characteristics of a radio-frequency (RF) link coupling the electronic device to a cellular base station;

estimating a coupling loss between the electronic device and the cellular base station based on the one or more characteristics of the RF link; and

in response to determining that the estimated coupling loss is greater than a maximum coupling loss (MCL) for the RF link, delaying transmission of one or more messages to the cellular base station until a re-estimate of the coupling loss is not greater than the MCL.

17. The non-transitory computer-readable medium of claim 16, wherein the operations further comprise in response to the re-estimate of the coupling loss being not greater than the MCL, transmitting the one or more messages to the cellular base station using the RF link.

18. The non-transitory computer-readable medium of claim 16, wherein the one or more characteristics of the RF link include one or more of a path loss, a reference signal received quality (RSRQ), or a signal to interference noise ratio (SINR).

19. The non-transitory computer-readable medium of claim 16, wherein the estimated coupling loss is further based on at least one of a bandwidth constant, an environment constant, a thermal noise floor associated with the cellular base station, or a noise figure associated with the cellular base station.

20. The non-transitory computer readable medium of claim 16, wherein estimating the coupling loss comprises at least one of:

summing a first characteristic of the RF link included in the one or more characteristics of the RF link and a second characteristic of the RF link included in the one or more characteristics of the RF link; or

subtracting a constant from the one or more characteristics of the RF link.