CLAIMS

1. A method for performing cell reselection implemented in a wireless transmit receive unit (WTRU), the method comprising:

receiving, from a current cell associated with a current radio access technology (RAT), inter-RAT priority information , wherein the inter-RAT priority information is indicative of a relative cell reselection priority between an inter-RAT cell associated with a candidate RAT and the current cell associated with the current RAT ;

determining whether the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT based on the inter-RAT priority information;

determining a quality value of the current cell, wherein the quality value of the current cell corresponds to a received power level of the current cell;

determining to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT, wherein the quality measurements of the inter-RAT cell are performed irrespective of the quality value of the current cell due to the inter-RAT cell associated with the candidate RAT having a higher priority than the current cell associated with the current RAT; and

determining to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that the quality value of the current cell is less than or equal to a predetermined threshold, wherein the WTRU considers the quality value of the current cell when determining whether to perform the quality measurements on the inter-RAT cell on condition that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT.

2. The method as in claim 1, wherein one of the current cell or the inter-RAT cell is a long term evolution (LTE) cell in an evolved universal terrestrial radio access network (E-UTRAN).

3. The method as in claim 1, wherein one of the current cell or the inter-RAT cell is a wideband code division multiple access (WCDMA) cell.

4. The method as in claim 1, further comprising:

determining to perform quality measurements of the inter-RAT cell associated with the candidate RAT irrespective of a current state of the WTRU on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT .

5. The method as in claim 1, further comprising reselecting to the inter-RAT cell based on the quality measurement.

6. The method as in claim 1, wherein the quality measurements are evaluated periodically based on a time value signaled by an evolved universal terrestrial radio access network (E-UTRAN).

7. The method as in claim 1, wherein the inter-RAT priority information includes frequency information for the inter-RAT cell.

8. The method as in claim 1, further comprising:

reselecting to the inter-RAT cell based on a signal strength measured for the inter-RAT cell being greater than a configured threshold for a predetermined period of time on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT.

9. The method as in claim 1, further comprising:

reselecting to the inter-RAT cell based at least in part on there being no cells in a higher priority RAT that meet cell reselection requirements on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT.

10. The method as in claim 9, further comprising:

reselecting to the inter-RAT cell based at least in part on the Inter-RAT cell being higher ranked than the current cell on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT .

11. The method as in claim 5, further comprising performing a location update upon reselecting to the inter-RAT cell.

12. The method as in claim 4, wherein the current state of the WTRU comprises a mobility state based on a speed of the WTRU.

13. The method as in claim 1, further comprising:

always determining to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell in the current RAT.

14. A wireless transmit/receive unit (WTRU) for performing cell reselection, the WTRU comprising:

a receiver configured to receive, from a current cell associated with a current radio access technology (RAT), inter-RAT priority information , wherein the inter-RAT priority information is indicative of a relative cell reselection priority between an inter-RAT cell associated with a candidate RAT and the current cell associated with the current RAT ; and

a processor configured to:

determine whether the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT based on the inter-RAT priority information,

determine a quality value of the current cell, wherein the quality value of the current cell corresponds to a received power level of the current cell;

determine to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT, wherein the quality measurements of the inter-RAT cell are performed irrespective of the quality value of the current cell due to the inter-RAT cell associated with the candidate RAT having a higher priority than the current cell associated with the current RAT, and

determine to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that the quality value of the current cell is less than or equal to a predetermined threshold, wherein the WTRU considers the quality value of the current cell when determining whether to perform the quality measurements on the inter-RAT cell on condition that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT.

15. The WTRU as in claim 14, wherein one of the current cell or the inter-RAT cell is a long term evolution (LTE) cell in an evolved universal terrestrial radio access network (E-UTRAN).

16. The WTRU as in claim 14, wherein the processor is configured to determine to perform quality measurements of the inter-RAT cell associated with the candidate RAT irrespective of a current state of the WTRU on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT.

17. The WTRU as in claim 14, wherein the processor is further configured to reselect to the inter-RAT cell based on the quality measurements.

18. The WTRU as in claim 14, wherein the processor is configured to evaluate the quality measurements periodically based on a time value signaled by an evolved universal terrestrial radio access network (E-UTRAN).

19. The WTRU as in claim 14, wherein the inter-RAT priority information includes frequency information for the inter-RAT cell.

20. The WTRU as in claim 14, wherein the processor is further configured to reselect to the inter-RAT cell based on a signal strength measured for the inter-RAT cell being greater than a configured threshold for a predetermined period of time on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT.

21. The WTRU as in claim 14, wherein the processor is further configured to reselect to the inter-RAT cell based at least in part on there being no cells in a higher priority RAT that meet cell reselection requirements on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT.

22. The WTRU as in claim 21, wherein the processor is further configured to reselect to the inter-RAT cell based at least in part on the inter-RAT cell being higher ranked than the current cell on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT.

23. The WTRU as in claim 17, wherein the processor is further configured to perform a location update upon reselecting to the inter-RAT cell.

24. The WTRU as in claim 14, wherein the processor is configured to always determine to perform quality measurements on the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT.

25. The WTRU as in claim 16, wherein the current state of the WTRU comprises a mobility state based on a speed of the WTRU.

Claims

1. A method for performing cell reselection implemented in a wireless transmit receive unit (WTRU), the method comprising:

receiving priority information in a current cell associated with a current radio access technology (RAT) wherein the priority information is indicative of a cell reselection priority of an inter-RAT cell associated with a candidate RAT relative to the current cell associated with the current RAT;

determining whether the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT based on the priority information;

determining a cell selection value of the current cell;

determining to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT, wherein the quality measurements of the inter-RAT cell are performed irrespective of the cell selection value of the current cell based on the inter-RAT cell associated with the candidate RAT having a higher priority than the current cell associated with the current RAT; and

determining to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell in the current RAT and that the cell selection value of the current cell is less than or equal to a predetermined threshold, wherein the WTRU considers the cell selection value of the current cell when determining whether to perform the quality measurements on the inter-RAT cell based on the inter-RAT cell associated with the candidate RAT not having a higher priority than the current cell associated with the current RAT.

2. The method as in claim 1, wherein one of the current cell or the inter-RAT cell is a long term evolution (LTE) cell in an evolved universal terrestrial radio access network (E-UTRAN).

3. The method as in claim 1, wherein one of the current cell or the inter-RAT cell is a wideband code division multiple access (WCDMA) cell.

4. The method as in claim 1, further comprising:

determining to perform quality measurements of the inter-RAT cell associated with the candidate RAT irrespective of a current state of the WTRU on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT .

5. The method as in claim 4, wherein the current state of the WTRU comprises a mobility state based on a speed of the WTRU.

6. The method as in claim 1, further comprising reselecting to the inter-RAT cell based on the quality measurement.

7. The method as in claim 6, further comprising performing a location update upon reselecting to the inter-RAT cell.

8. The method as in claim 1, wherein the quality measurements are evaluated periodically based on a time value signaled by an evolved universal terrestrial radio access network (E-UTRAN).

9. The method as in claim 1, wherein the inter-RAT priority information includes frequency information for the inter-RAT cell.

10. The method as in claim 1, further comprising:

reselecting to the inter-RAT cell based on a signal strength measured for the inter-RAT cell being greater than a configured threshold for a predetermined period of time on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT.

11. The method as in claim 1, further comprising:

reselecting to the inter-RAT cell based at least in part on there being no cells in a higher priority RAT that meet cell reselection requirements on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT.

12. The method as in claim 11, further comprising:

reselecting to the inter-RAT cell based at least in part on the inter-RAT cell being higher ranked than the current cell on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT .

13. The method as in claim 1, further comprising:

always determining to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell in the current RAT .

14. A wireless transmit receive unit (WTRU) for performing cell reselection, the WTRU comprising:

a receiver configured to receive priority information in a current cell associated with a current radio access technology (RAT) wherein the priority information is

indicative of a cell reselection priority of an inter-RAT cell associated with a candidate RAT relative to the current cell associated with the current RAT; and

a processor configured to:

determine whether the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT based on the priority information,

determine a cell selection value of the current cell,

determine to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT, wherein the WTRU is configured to perform the quality measurements of the inter-RAT cell irrespective of the cell selection value of the current cell based on the inter-RAT cell associated with the candidate RAT having a higher priority than the current cell associated with the current RAT, and

determine to perform quality measurements of the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority that the current cell associated with the current RAT and that the cell selection value of the current cell is less than or equal to a predetermined threshold, wherein the WTRU is configured to consider the cell selection value of the current cell when determining whether to perform the quality measurements on the inter-RAT cell based on the inter-RAT cell associated with the candidate RAT not having a higher priority than the current cell associated with the current RAT.

15. The WTRU as in claim 14, wherein one of the current cell or the inter-RAT cell is a long term evolution (LTE) cell in an evolved universal terrestrial radio access network (E-UTRAN).

16. The WTRU as in claim 14, wherein the processor is configured to determine to perform quality measurements of the inter-RAT cell associated with the candidate RAT irrespective of a current state of the WTRU on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT.

17. The WTRU as in claim 16, wherein the current state of the WTRU comprises a mobility state based on a speed of the WTRU.

18. The WTRU as in claim 14, wherein the processor is further configured to reselect to the inter-RAT cell based on the quality measurements.

19. The WTRU as in claim 18, wherein the processor is further configured to perform a location update upon reselecting to the inter-RAT cell.

20. The WTRU as in claim 14, wherein the processor is configured to evaluate the quality measurements periodically based on a time value signaled by an evolved universal terrestrial radio access network (E-UTRAN).

21. The WTRU as in claim 14, wherein the priority information includes frequency information for the inter-RAT cell.

22. The WTRU as in claim 14, wherein the processor is further configured to reselect to the inter-RAT cell based on a signal strength measured for the inter-RAT cell being greater than a configured threshold for a predetermined period of time on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT.

23. The WTRU as in claim 14, wherein the processor is further configured to reselect to the inter-RAT cell based at least in part on there being no cells in a higher priority RAT that meet cell reselection requirements on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT.

24. The WTRU as in claim 23, wherein the processor is further configured to reselect to the inter-RAT cell based at least in part on the inter-RAT cell being higher ranked than the current cell on condition that it is determined that the inter-RAT cell associated with the candidate RAT does not have a higher priority than the current cell associated with the current RAT.

25. The WTRU as in claim 14, wherein the processor is configured to always determine to perform quality measurements on the inter-RAT cell associated with the candidate RAT on condition that it is determined that the inter-RAT cell associated with the candidate RAT has a higher priority than the current cell associated with the current RAT.