CLAIMS

1. A method for wireless communication, comprising:

receiving, by a terminal, a first message including a pre-configured transmission resource configuration from a communication node, the first message further including a pre-configured transmission resource release instance including a counter configured to count a number of continuous inactivity of a pre-configured transmission resource associated with the pre-configured transmission resource configuration;

determining, by the terminal, that a timing advance (TA) is valid based on a Reference Signal Received Power (RSRP) change threshold and a TA validity timer; and

transmitting, by the terminal, a physical uplink shared channel message on using a pre-configured transmission resource associated with the pre-configured transmission resource configuration based on the determining that the TA is valid, and

wherein the determining is further based on a RSRP change and the determining comprises:

setting a RSRP of a serving cell as a reference RSRP, in response to receiving at least one of the pre-configured transmission resource configuration and a TA update indication; and

determining the RSRP change based on a difference between a measured RSRP value of the serving cell and the reference RSRP, and

wherein the method further comprises:

making, by the terminal, a comparison between the number of continuous inactivity of the pre-configured transmission resource and the pre-configured transmission resource release instance; and

releasing, by the terminal, the pre-configured transmission resource based on the comparison.

2. The method of claim 1, wherein the determining determines that the TA is valid due to determining that (1) the RSRP change threshold is included within the pre-configured transmission resource configuration message and (2) a reference signal received power (RSRP) change does not exceed the RSRP change threshold.

3. The method of claim 1, wherein the determining determines that the TA is valid due to determining that (1) the TA validity timer is included within the pre-configured transmission resource configuration message and (2) the TA validity timer has not expired.

4. The method of claim 1, wherein the determining determines that the TA is valid due to determining that (1) the RSRP change threshold and the TA validity timer are included within the pre-configured transmission resource configuration message, (2) the TA validity timer has not expired, and (3) the RSRP change does not exceed the RSRP change threshold.

5. The method of claim 1, wherein the determining determines that the TA is valid based on another determination that the TA validity timer and the RSRP change threshold are not included within the pre-configured transmission resource configuration.

6. The method of claim 1, wherein the determining determines that the TA is valid due to determining that (1) the TA validity timer is not included within the pre-configured transmission resource configuration and the RSRP change threshold is included within the pre-configured transmission resource configuration, and (2) the RSRP change does not exceed the RSRP change threshold.

7. The method of claim 1, wherein the determining determines that the TA is invalid due to determining that (1) the TA validity timer is included within the pre-configured transmission resource configuration and that the RSRP change threshold is not included within the pre-configured transmission resource configuration, and (2) the TA validity timer expired.

8. The method of claim 1, wherein the determining determines that the TA is valid due to determining that (1) the TA validity timer is included within the pre-configured transmission resource configuration and the RSRP change threshold is not included within the pre-configured transmission resource configuration, and (2) the TA validity timer has not expired.

9. The method of claim 1, wherein the determining determines that the TA is invalid due to determining that (1) the RSRP change threshold and the TA validity timer are included within the pre-configured transmission resource configuration message and (2) the TA validity timer

has expired or (2) a RSRP change exceeds the RSRP change threshold.

10. The method of claim 1, wherein the counter is incremented based on an unsuccessful delivery of an uplink data message by the terminal using the pre-configured transmission resource at a pre-configured transmission resource time domain location included within the pre-configured transmission resource configuration.

11. The method of claim 1, further comprising:

resetting, by the terminal, the counter based on successfully transmitting an uplink data message using the pre-configured transmission resource at a pre-configured transmission resource time domain location included within the pre-configured transmission resource configuration.

12. The method of claim 1, the pre-configured transmission resource based on the counter exceeding a predetermined counter value.

13. An apparatus for wireless communication comprising a processor that is configured to carry out a method recited in any one of claims above.