What is claimed is:

1. A link state notification method, comprising:

transmitting, by a first communication node, link state information to a second communication node,

wherein the second communication node is a child node of the first communication node, and the link state information comprises at least one of:

a Radio Link Failure (RLF) indication;

a Radio Resource Control (RRC) reconfiguration failure indication;

an RRC integrity check failure indication;

a mobility failure indication;

a synchronous reconfiguration failure indication; and

a timer timeout indication,

performing, by the first communication node, link recovery; and

transmitting, by the first communication node, link state recovery indication information to the second communication node if the link recovery is successful.

~~2. The method of claim 1, wherein the link state information comprises at least one of:~~

~~a Radio Link Failure (RLF) indication;~~

~~a Radio Resource Control (RRC) reconfiguration failure indication;~~

~~an RRC integrity check failure indication;~~

~~a mobility failure indication;~~

~~a synchronous reconfiguration failure indication; and~~

~~a timer timeout indication.~~

~~3~~2. The method of claim 1, wherein the first communication node transmits the link state information to the second communication node under one of the following conditions:

the first communication node enters an RRC idle state;

the first communication node starts an RRC connection reestablishment procedure; and

the first communication node detects a timer timeout.

43. The method of claim 32, wherein the link state information comprises one of:

an indication that the first communication node enters an idle state;

an indication of initiation of RRC connection reestablishment; and

a timer timeout indication.

~~5. The method of claim 2 or 4, wherein the link state information further comprises link state recovery indication information.~~

64. The method of any one of claims 1 to 53, further comprising:

transmitting, by the first communication node, node identification information of the first node to the second communication node.

75. The method of any one of claims 1 to 64, after the step of transmitting the link state information, further comprising:

~~performing, by the first communication node, link recovery; and~~

updating, by the first communication node, a user access control parameter in system information or stopping transmitting a system information block.

86. The method of claim 75, further comprising:

transmitting, by the first communication node, state identification information of the first communication node to the second communication node,

wherein the state identification information is configured to indicate at least one of link recovery time of the first communication node and a node state of the first communication node.

97. A link processing method, comprising:

receiving, by a second communication node, link state information of a first communication node,

wherein the second communication node is a child node of the first communication node, and the link state information comprises at least one of:

a Radio Link Failure (RLF) indication;

a Radio Resource Control (RRC) reconfiguration failure indication;

an RRC integrity check failure indication;

a mobility failure indication;

a synchronous reconfiguration failure indication; and

a timer timeout indication,

setting, by the second communication node, time-out time T for a timer and starting the timer;

stopping, by the second communication node, the timer in response to the second communication node receiving link state recovery indication information transmitted by the first communication node; and

determining, by the second communication node, that an RLF occurs in response to the timer being timed out.

~~10~~8. The method of claim ~~9~~7, wherein the link state information comprises one of:

an indication that the first communication node enters an idle state;

an indication of initiation of RRC connection reestablishment; and

a timer timeout indication.

~~11. The method of claim 9, after the step of receiving, by the second communication node, the link state information of the first communication node, further comprising:~~

~~setting, by the second communication node, time-out time T for a timer and starting the timer.~~

~~12. The method of claim 11, after the step of starting the timer, further comprising:~~

~~stopping, by the second communication node, the timer in response to the second communication node receiving link state recovery indication information transmitted by the first communication node.~~

~~13. The method of claim 11, after the step of starting the timer, further comprising:~~

~~determining, by the second communication node, that an RLF occurs in response to the timer being timed out.~~

~~14~~9. The method of claim ~~11~~7, after the step of starting the timer, further comprising:

initiating, by the second communication node, connection reestablishment or conditional handover when the time-out time of the timer is out.

~~15~~10. The method of any one of claims ~~11~~ 7 to ~~14~~9, wherein T is carried in one of: a system message, an RRC reconfiguration message and a cell group configuration message.

~~16~~11. The method of claim ~~9~~7, after the step of receiving, by the second communication node, the link state information of the first communication node, further comprising:

transmitting, by the second communication node, a link state information acknowledgement message to the first communication node.

~~17~~12. The method of claim ~~9~~7, further comprising:

receiving, by the second communication node, node identification information of the first communication node.

~~18~~13. The method of claim ~~17~~12, after the step of receiving, by the second communication node, the node identification information of the first communication node, further comprising:

starting, by the second communication node, a cell group failure procedure to report a cell group link failure.

~~19~~14. The method of claim ~~18~~13, further comprising:

setting, by the second communication node, a failure type in cell group failure information as a link failure of service node.

~~20~~15. The method of claim ~~19~~14, wherein the node identification information of the first communication node is carried in the cell group failure information.

~~21~~16. The method of claim ~~17~~12, further comprising:

transmitting, by the second communication node, the link state information and the node identification information of the first communication node to a third communication node,

wherein the third communication node comprises a child node of the second communication node.

~~22~~17. The method of claim ~~9~~7, after receiving, by the second communication node, the link state information of the first communication node, further comprising:

performing, by the second communication node, measurement on a non-service cell.

~~23~~18. A link state notification device located at a first communication node, comprising:

a transmitting module configured to transmit link state information to a second communication node,

wherein the second communication node is a child node of the first communication node, and the link state information comprises at least one of:

a Radio Link Failure (RLF) indication;

a Radio Resource Control (RRC) reconfiguration failure indication;

an RRC integrity check failure indication;

a mobility failure indication;

a synchronous reconfiguration failure indication; and

a timer timeout indication,

perform link recovery; and

transmit link state recovery indication information to the second communication node if the link recovery is successful.

~~24~~19. A link processing device located at a second communication node, comprising:

a receiving module configured to receive link state information of a first communication node,

wherein the second communication node is a child node of the first communication node, and the link state information comprises at least one of:

a Radio Link Failure (RLF) indication;

a Radio Resource Control (RRC) reconfiguration failure indication;

an RRC integrity check failure indication;

a mobility failure indication;

a synchronous reconfiguration failure indication; and

a timer timeout indication,

set time-out time T for a timer and starting the timer;

stop the timer in response to the second communication node receiving link state recovery indication information transmitted by the first communication node; and

determine that an RLF occurs in response to the timer being timed out.

~~25~~20. A storage medium having a computer program stored therein, wherein the computer program is configured to, when being executed, perform the link state notification method of any one of claims 1 to ~~8~~6, or perform the link processing method of any one of claims ~~9~~ 7 to ~~22~~17.

~~26~~21. An electronic device, comprising a memory having a computer program stored therein, and a processor configured to execute the computer program to perform the link state notification method of any one of claims 1 to ~~8~~6, or perform the link processing method of any one of claims ~~9~~ 7 to ~~22~~17.