CLAIMS

What is claimed is:

1. An integrity protection failure handling method, wherein when a first user equipment performs sidelink communication based on a destination address, the integrity protection failure handling method comprises:

receiving, by the first user equipment, an integrity check failure indication for a sidelink signaling bearer;

performing, by the first user equipment, a security control operation in response to receiving the integrity check failure indication;

wherein the sidelink signaling bearer is at least one of sidelink signaling bearer 2, and sidelink signaling bearer 3, SL-SRB2 is used to transmit PC5-S signaling that requires security protection, and SL-SRB3 is used to transmit PC5 RRC signaling that requires security protection;

wherein the security control operation specifically comprises at least one of the following operations:

releasing a data bearer corresponding to sidelink communication performed by the first user equipment based on the destination address;

releasing a signaling bearer corresponding to sidelink communication performed by the first user equipment based on the destination address;

releasing a sidelink interface radio resource control (PC5 RRC) connection corresponding to sidelink communication performed by the first user equipment based on the destination address;

discarding configuration information corresponding to sidelink communication performed by the first user equipment based on the destination address;

discarding a security key corresponding to sidelink communication performed by the first user equipment based on the destination address; and

stopping a timer corresponding to sidelink communication performed by the first user equipment based on the destination address, or stopping all timers for sidelink communication performed by the first user equipment;

wherein the timer comprises at least T400, and T400 is used for a sidelink RRC reconfiguration procedure and is started at a moment when sidelink UE sends a sidelink RRC reconfiguration message.

2. The integrity protection failure handling method according to claim 1, wherein the integrity check failure indication is received from a packet data convergence protocol PDCP entity.

3. The integrity protection failure handling method according to claim 1, further comprising:

detecting a sidelink radio failure; and

performing a security control operation in response to detecting the sidelink radio failure.

4. The integrity protection failure handling method according to claim 1, wherein the sidelink signaling bearer further comprises sidelink signaling bearer 1;

wherein the SL-SRB1 is used to transmit PC5 Signaling (PC5-S) signaling that activates security.

5. The handling method according to any one of claims 1 to 4, after performing, by the first user equipment, a security control operation in response to receiving the integrity check failure indication, further comprising:

sending an RRC message to a network-side device, wherein the RRC message is used to report that the sidelink communication with the destination address by the first user equipment fails.

6. The handling method according to claim 5, wherein the RRC message is further used to indicate that a cause of the sidelink communication failure is integrity check failure.

7. The handling method according to any one of claims 1 to 4, after performing, by the first user equipment, a security control operation in response to receiving the integrity check failure indication, further comprising:

sending indication information to an upper-layer entity of the first user equipment, wherein the indication information is used to notify that a PC5 RRC connection has been released.

8. The handling method according to claim 7, wherein the indication information is further used to notify that a cause of the PC5 RRC connection being released is integrity check failure or failure of the PC5 RRC connection.

9. The handling method according to any one of claims 1 to 4, further comprising:

sending a PC5 RRC message to second user equipment corresponding to the destination address, wherein the PC5 RRC message is used to indicate the second user equipment to stop sidelink communication performed based on the destination address.

10. The handling method according to claim 9, wherein the PC5 RRC message carries a sidelink configuration reset indication.

11. User equipment, comprising a processor, a memory, and a program or instructions stored in the memory and capable of running on the processor, wherein when the program or the instructions are executed by the processor, the steps of the integrity protection failure handling method according to any one of claims 1 to 10 are implemented.

12. A readable storage medium, wherein a program or instructions are stored in the readable storage medium, and when the program or instructions are executed by a processor, the steps of the integrity protection failure handling method according to any one of claims 1 to 10 are implemented.