CLAIMS

What is claimed is:

1. A method for determining a security protection mode, comprising:

receiving, by a second terminal device, a first security protection information from a first terminal device,

wherein the first security protection information comprises a first user plane security policy, a protection level of the first user plane security policy is that security protection is required, security protection is preferred, or security protection is not needed;

determining, by the second terminal device, a security protection mode corresponding to a PC5 interface communications mode based on the received first security protection information and a second security protection information,

wherein the second security protection information comprises a second user plane security policy, a protection level of the second user plane security policy is that security protection is required, security protection is preferred, or security protection is not needed;

wherein the PC5 interface is a communication interface between the first terminal device and the second terminal device;

sending, by the second terminal device, the security protection mode corresponding to the PC5 interface communications mode to the first terminal device.

2. The method according to claim 1,

wherein the determining a security protection mode corresponding to the PC5 interface communications mode based on the received first security protection information and a second security protection information comprises:

determining that a protection level of the security protection mode corresponding to the PC5 interface communications mode is not needed when the protection level of the first user plane security policy and the protection level of the second user plane security policy are not needed.

3. The method according to claim 1,

wherein the determining a security protection mode corresponding to the PC5 interface communications mode based on the received first security protection information and a second security protection information comprises:

determining that a protection level of the security protection mode corresponding to the PC5 interface communications mode is required when the protection level of the first user plane security policy and the protection level of the second user plane security policy are required.

4. The method according to claim 1,

wherein the determining a security protection mode corresponding to the PC5 interface communications mode based on the received first security protection information and a second security protection information comprises:

determining, by the second terminal device, a protection level of the security protection mode corresponding to the PC5 interface communications mode based on a security protection capability of the second terminal device when the protection level of the first user plane security policy and the protection level of the second user plane security policy are preferred.

5. The method according to claim 1,

wherein the determining a security protection mode corresponding to the PC5 interface communications mode based on the received first security protection information and a second security protection information comprises:

determining, by the second terminal device, a protection level of the security protection mode corresponding to the PC5 interface communications mode based on the protection level of the first user plane security policy and the protection level of the second user plane security policy,

wherein the protection level of the security protection mode corresponding to the PC5 interface communications mode is not lower than the protection level of the first user plane security policy and the second user plane security policy.

6. The method according to any one of claims 1 to 5,

wherein the second security protection information is stored in the second terminal device, and the method further comprises:

receiving, by the second terminal device, an application identifier from the first terminal device; and

determining, by the second terminal device, the second security protection information based on the application identifier.

7. The method according to any one of claims 1 to 5,

wherein the second security protection information is stored in the second terminal device, and the method further comprises:

receiving, by the second terminal device, a service identifier from the first terminal device; and

determining, by the second terminal device, the second security protection information based on the service identifier.

8. A second terminal device, comprising:

a transceiver configured to receive a first security protection information from a first terminal device, wherein the first security protection information comprises a first user plane security policy, a protection level of the first user plane security policy is that security protection is required, security protection is preferred, or security protection is not needed;

a processor configured to determine a security protection mode corresponding to a PC5 interface communications mode based on the received first security protection information and a second security protection information,

wherein the second security protection information comprises a second user plane security policy, a protection level of the second user plane security policy is that security protection is required, security protection is preferred, or security protection is not needed;

wherein the PC5 interface is a communication interface between the first terminal device and the second terminal device;

the transceiver further configured to send the security protection mode corresponding to the PC5 interface communications mode to the first terminal device.

9. The second terminal device according to claim 8,

wherein the determining a security protection mode corresponding to the PC5 interface communications mode based on the received first security protection information and a second security protection information comprises:

determining that a protection level of the security protection mode corresponding to the PC5 interface communications mode is not needed when both a protection level of the first user plane security policy and a protection level of the second user plane security policy are not needed.

10. The second terminal device according to claim 8,

wherein the determining a security protection mode corresponding to the PC5 interface communications mode based on the received first security protection information and a second security protection information comprises:

determining that a protection level of the security protection mode corresponding to the PC5 interface communications mode is required when both a protection level of the first user plane security policy and a protection level of the second user plane security policy are required.

11. The second terminal device according to claim 8,

wherein the determining a security protection mode corresponding to the PC5 interface communications mode based on the received first security protection information and a second security protection information comprises:

determining a protection level of the security protection mode corresponding to the PC5 interface communications mode based on a security protection capability of the second terminal device when both a protection level of the first user plane security policy and a protection level of the second user plane security policy are preferred.

12. The second terminal device according to claim 8,

wherein the determining a security protection mode corresponding to the PC5 interface communications mode based on the received first security protection information and a second security protection information comprises:

determining a protection level of the security protection mode corresponding to the PC5 interface communications mode based on a protection level of the first user plane security policy and a protection level of the second user plane security policy,

wherein the protection level of the security protection mode corresponding to the PC5 interface communications mode is not lower than the protection level of the first user plane security policy and the second user plane security policy.

13. The second terminal device according to any one of claims 8 to 12,

wherein the second security protection information is stored in the second terminal device, the transceiver further configured to receive an application identifier from the first terminal device; and the processor further

configured to determine the second security protection information based on the application identifier.

14. The second terminal device according to any one of claims 8 to 12,

wherein the second security protection information is stored in the second terminal device, the transceiver further configured to receive a service identifier from the first terminal device; and the processor further configured to determine the second security protection information based on the service identifier.

15. A computer storage medium,

wherein the computer storage medium stores a computer program, and when the computer program is executed by a processor of a second terminal device, the processor is caused to perform any one of claims 1 to 7.