CLAIMS

1. A method for service transmission, comprising:

determining, by a transmission device, that at least one first radio access technology in multiple radio access technologies is in an active state; and

performing, by the transmission device, the service transmission by using the at least one first radio access technology;

wherein the multiple radio access technologies support a service to be transmitted by the transmission device;

the active state is a state in which the at least one first radio access technology has established a connection and performs a data transmission;

the multiple radio access technologies further comprise at least one second radio access technology;

wherein the at least one second radio access technology prefetches or caches transmission data of a service,

wherein prefetching or caching the transmission data of the service comprises:

prefetching or caching transmission data of a preset data volume threshold value; or, prefetching or caching transmission data of a preset time length,

wherein the data volume threshold value or the time length is determined by the transmission device according to a service characteristic of the service, a mobility characteristic of a terminal and a network condition;

wherein the method further comprises:

determining, by the transmission device, that the at least one second radio access technology is in a standby state, wherein the standby state refers to that the at least one second radio access technology has established a connection but there is no data transmission, or refers to that the at least one second radio access technology does not establish any connection but can establish a connection within a preset time length.

2. The method according to claim 1, wherein establishing the connection comprises: having a connection Identifier (ID) and a connection context.

3. The method according to claim 1, wherein the at least one second radio access technology shares a connection context of the at least one first radio access technology.

4. The method according to any one of claims 1-3, further comprising:

in a process of the service transmission, monitoring a network state of the at least one second radio access technology; and

when it is detected that network states of one or more of the at least one second radio access technology is degraded and cannot be in the standby state, selecting at least one third radio access technology to replace the one or more of the at least one second radio access technology.

5. The method according to any one of claims 1-3, further comprising:

in a process of the service transmission, monitoring a network state of the at least one first radio access technology; and

when it is detected that network states of one or more of the at least one first radio access technology cannot ensure the service transmission, switching one or more of the at least one second radio access technology into the active state and performing service transmission by using the one or more of the at least one second radio access technology,

wherein the condition that the network states of the one or more of the at least one first radio access technology cannot ensure the service transmission comprises that:

the one or more of the at least one first radio access technology causes a service interruption due to coverage or a failure;

or,

signal quality of the one or more of the at least one first radio access technology is lower than a preset quality threshold value;

or,

the at least one first radio access technology has a Radio Link Failure (RLF);

or,

the at least one first radio access technology has an RLF, and fails in radio link recovery;

or,

the transmission device predicts that the at least one first radio access technology is about to fail.

6. The method according to claim 5, further comprising:

notifying an opposite device of the transmission device of state changes of the one or more of the at least one second radio access technology,

wherein the transmission device is a terminal, and the opposite device is a network device; or,

the transmission device is a network device, and the opposite device is a terminal; or,

the transmission device is a terminal, and the opposite device is another terminal.

7. The method according to any one of claims 1-6, before determining that the at least one first radio access technology in the multiple radio access technologies is in the active state, further comprising:

selecting the multiple radio access technologies for the service.

8. A transmission device, comprising:

a determination unit, configured to determine that at least one first radio access technology in multiple radio access technologies is in an active state; and

a transmission unit, configured to perform service transmission by using the at least one first radio access technology determined by the determination unit;

wherein the multiple radio access technologies support a service to be transmitted by the transmission device;

the active state is a state in which the at least one first radio access technology has established a connection and performs a data transmission;

the multiple radio access technologies further comprise at least one second radio access technology;

wherein the determination unit is further configured to: determine that the at least one second radio access technology prefetches or caches transmission data of a service,

wherein the determination unit is specifically configured to:

prefetch or cache transmission data of a preset data volume threshold value; or, prefetch or cache transmission data of a preset time length,

wherein the data volume threshold value or the time length is determined by the transmission device according to a service characteristic of the service, a mobility

characteristic of a terminal and a network condition;

wherein the determination unit is further configured to:

determine that the at least one second radio access technology is in a standby state, wherein the standby state refers to that the at least one second radio access technology has established a connection but there is no data transmission, or refers to that the at least one second radio access technology does not establish any connection but can establish a connection within a preset time length.

9. The transmission device according to claim 8, wherein establishing the connection comprises: having a connection Identifier (ID) and a connection context.

10. The transmission device according to claim 8, wherein the at least one second radio access technology shares a connection context of the at least one first radio access technology.

11. The transmission device according to any one of claims 8-10, wherein the transmission unit is further configured to:

in a process of the service transmission, monitor a network state of the at least one second radio access technology; and

when detecting that network states of one or more of the at least one second radio access technology is degraded and cannot be in the standby state, select at least one third radio access technology to replace the one or more of the at least one second radio access technology.

12. The transmission device according to any one of claims 8-10, wherein the transmission unit is further configured to:

in a process of the service transmission, monitor a network state of the at least one first radio access technology; and

when detecting that network states of one or more of the at least one first radio access technology cannot ensure the service transmission, switch one or more of the at least one second radio access technology into the active state and perform service transmission by using the one or more of the at least one second radio access technology,

wherein the condition that the network states of the one or more of the at least one first radio access technology cannot ensure the service transmission comprises that:

the one or more of the at least one first radio access technology causes a service interruption due to coverage or a failure;

or,

signal quality of the one or more of the at least one first radio access technology is lower than a preset quality threshold value;

or,

the at least one first radio access technology has a Radio Link Failure (RLF);

or,

the at least one first radio access technology has an RLF, and fails in radio link recovery;

or,

the transmission device predicts that the at least one first radio access technology is about to fail.

13. The transmission device according to claim 12, further comprising a sending unit, configured to notify an opposite device of the transmission device of state changes of the one or more of the at least one second radio access technology, wherein

the transmission device is a terminal, and the opposite device is a network device; or,

the transmission device is a network device, and the opposite device is a terminal; or,

the transmission device is a terminal, and the opposite device is another terminal.

14. The transmission device according to claim 13, further comprising a selection unit, configured to select the multiple radio access technologies for the service.