WHAT IS CLAIMED IS:

1. A method for transmission of extended reality and multimedia service data, performed by a core network device, comprising:

determining an application function (AF) session request, wherein the session request comprises a common identifier for identifying an extended reality and multimedia (XRM) service data flow (SDF) group; and

performing a policy decision for the AF session request according to a time threshold and the common identifier.

2. The method according to claim 1, wherein the time threshold comprises:

a time threshold determined according to a timer locally set in the core network device;

a time threshold determined according to a time value or a time window comprised in the AF session request;

a time threshold determined according to a timer or a time window in an operator policy;

a time threshold determined according to a default timer or time window in subscription information; or

a time threshold determined according to a priority of a timer locally set in the core network device, a time value or a time window comprised in the AF session request, a timer or a time window in an operator policy, and a default timer or time window in subscription information.

3. The method according to claim 1 or 2, wherein performing the policy decision for the AF session request according to the time threshold and the common identifier comprises:

determining the common identifier with a same value received before the time threshold is reached, wherein the common identifier with the same value is configured to identify that a plurality of XRM service data flows (SDF) belong to a same group of service data flows; and

performing the policy decision for the AF session request identified by the common identifier with the same value.

4. The method according to any one of claims 1 to 3, wherein the policy decision comprises:

authorizing a same quality of service (QoS) to the SDFs in the SDF group;

generating a same QoS for each SDF according to subscription information and/or an operator policy corresponding to each SDF in the SDF group; or

generating for each SDF a respective policy control and charging (PCC) rule, and generating for each SDF a respective QoS, according to subscription information and/or an operator policy

corresponding to each SDF in the SDF group.

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

in response to receiving an AF session request comprising the common identifier after the time threshold, performing a policy decision for the AF session request received after the time threshold according to a policy decision performed for an AF session request received before the time threshold.

6. A method for transmission of extended reality and multimedia service data, performed by a policy control function (PCF) entity in a core network device, comprising:

receiving an application function (AF) session request, wherein the AF session request comprises a common identifier for identifying an extended reality and multimedia (XRM) service data flow (SDF) group; and

performing a policy decision for the AF session request according to a time threshold and the common identifier.

7. The method according to claim 6, wherein the time threshold comprises:

a time threshold determined according to a timer locally set in the PCF entity;

a time threshold determined according to a time value or a time window comprised in the AF session request;

a time threshold determined according to a timer or a time window in an operator policy;

a time threshold determined according to a default timer or time window in subscription information; or

a time threshold determined according to a priority of a timer locally set in the PCF, a time value or a time window comprised in the AF session request, a timer or a time window in an operator policy, and a default timer or time window in subscription information.

8. The method according to claim 6 or 7, wherein performing the policy decision for the AF session request according to the time threshold and the common identifier comprises:

determining the common identifier with a same value received before the time threshold is reached, wherein the common identifier with the same value is configured to identify that a plurality of XRM service data flows (SDF) belong to a same group of service data flows; and

performing the policy decision for the AF session request identified by the common identifier with the same value.

9. The method according to any one of claims 6 to 8, wherein the policy decision comprises:

authorizing a same quality of service (QoS) to the SDFs in the SDF group;

generating a same QoS for each SDF according to subscription information and/or an operator policy corresponding to each SDF in the SDF group; or

generating for each SDF a respective policy control and charging (PCC) rule, and generating for each SDF a respective QoS, according to subscription information and/or an operator policy corresponding to each SDF in the SDF group.

10. The method according to any one of claims 6 to 9, further comprising:

in response to receiving an AF session request comprising the common identifier after the time threshold, performing a policy decision for the AF session request received after the time threshold according to a policy decision performed for an AF session request received before the time threshold.

11. The method according to any one of claims 6 to 10, wherein receiving the AF session request comprises:

receiving the AF session request from at least one of: an AF entity, a network exposure function (NEF) entity, or a time sensitive communication and time synchronization function (TSCTSF) entity.

12. A method for transmission of extended reality and multimedia service data, performed by an application function (AF) entity in a core network device, comprising:

sending an AF session request, wherein the AF session request comprises a time threshold and a common identifier for identifying an extended reality and multimedia (XRM) service data flow (SDF) group, and the AF session request is configured for a policy control function (PCF) entity to perform a policy decision for the AF session request according to the common identifier and the time threshold.

13. The method according to claim 12, wherein sending the AF session request comprises:

sending the AF session request to at least one of: the policy control function (PCF) entity, a network exposure function (NEF) entity, or a time sensitive communication and time synchronization function (TSCTSF) entity.

14. A method for transmission of extended reality and multimedia service data, performed by a core network function network element in a core network device, comprising:

receiving an application function (AF) session request, wherein the AF session request comprises a time threshold and a common identifier for identifying an extended reality and multimedia (XRM) service data flow (SDF) group; and

sending the AF session request to a policy control function (PCF) entity, wherein the AF session request is configured for the PCF entity to perform a policy decision for the AF session request according to the common identifier and the time threshold.

15. A method for transmission of extended reality and multimedia service data, comprising:

sending, by an application function (AF) entity, an AF session request, wherein the AF session request comprises a common identifier for identifying an extended reality and multimedia (XRM) service data flow (SDF) group;

receiving, by a policy control function (PCF) entity, the AF session request; and

performing, by the PCF entity, a policy decision for the AF session request according to a time threshold and the common identifier.

16. The method according to claim 15, wherein performing, by the PCF entity, the policy decision for the AF session request according to the time threshold and the common identifier comprises:

determining, by the PCF entity, the common identifier with a same value received before the time threshold is reached, wherein the common identifier with the same value is configured to identify that a plurality of XRM service data flows (SDF) belong to a same group of service data flows; and

performing, by the PCF entity, the policy decision for the AF session request identified by the common identifier with the same value.

17. The method according to claim 15 or 16, further comprising:

in response to receiving an AF session request comprising the common identifier after the time threshold, performing, by the PCF entity, a policy decision for the AF session request received after the time threshold according to a policy decision performed for an AF session request received before the time threshold.

18. A device for transmission of extended reality and multimedia service data, comprising:

a processor; and

a memory for storing instructions executable by the processor;

wherein the processor is configured to perform: the method according to any one of claims 1

to 5, the method according to any one of claims 6 to 11, the method according to any one of claims 12 to 13, the method according to claim 14, or the method according to any one of claims 15 to 17.

19. A storage medium, having stored therein instructions, wherein the instructions, when executed by a processor of a core network device, cause the core network device to perform the method according to any one of claims 1 to 5,

the instructions, when executed by a processor of a policy control function (PCF) entity, cause the PCF entity to perform the method according to any one of claims 6 to 11,

the instructions, when executed by a processor of an application function (AF) entity, cause the AF entity to perform the method according to any one of claims 12 to 13,

the instructions, when executed by a processor of a core network function network element, cause the core network function network element to perform the method according to claim 14, or

the instructions, when executed by processors of a PCF entity and an AF entity in the core network device, cause the PCF entity and the AF entity to perform the method according to any one of claims 15 to 17.

20. A communication system, comprising:

a policy control function (PCF) entity for performing the method according to any one of claims 6 to 11;

an application function (AF) entity for performing the method according to any one of claims 12 to 13; and

a core network function network element, configured to perform the method according to claim 14.