

## (19) United States

## (12) Patent Application Publication (10) Pub. No.: US 2023/0232201 A1 MIAO et al.

Jul. 20, 2023 (43) **Pub. Date:** 

(54) METHODS FOR COMMUNICATION, TERMINAL DEVICE, NETWORK DEVICE, AND COMPUTER READABLE MEDIA

(71) Applicant: **NEC CORPORATION**, Tokyo (JP)

(72) Inventors: Zhaobang MIAO, Beijing (CN); Gang WANG, Beijing (CN)

(73) Assignee: NEC CORPORATION, Tokyo (JP)

(21) Appl. No.: 17/925,215

(22) PCT Filed: May 15, 2020

(86) PCT No.: PCT/CN2020/090667

§ 371 (c)(1),

(2) Date: Nov. 14, 2022

## **Publication Classification**

(51) Int. Cl. H04W 8/00 (2006.01)H04W 24/10 (2006.01)H04W 72/25 (2006.01)

(52) U.S. Cl. CPC ...... H04W 8/005 (2013.01); H04W 24/10 (2013.01); H04W 72/25 (2023.01)

(57)**ABSTRACT** 

Embodiments of the present disclosure provide for sidelink communications. In a method for communications, a first terminal device receives information about an identity related to a relay feature of at least one second terminal device via a sidelink channel. The first terminal device determines a relay terminal device of the first terminal device based on the information about the identity. Embodiments of the present disclosure provides a more flexible and feasible communication mechanism for relay discovery and selection without requirements for a specific resource pool for sidelink discovery or performing cyclic redundancy check on resources of the sidelink channel. The identity dedicated to the relay feature can not only be used to distinguish different terminal devices but also enable the terminal device to determine whether they are to be discovered as a candidate relay terminal device by the remote terminal device, and thereby enhancing the relay discovery and selection procedure.

400-

410

RECEIVE INFORMATION ABOUT AN IDENTITY RELATED TO A RELAY FEATURE OF AT LEAST ONE SECOND TERMINAL DEVICE VIA A SIDELINK CHANNEL

420

DETERMINE A RELAY TERMINAL DEVICE BASED ON THE INFORMATION ABOUT THE IDENTITY