

# (19) United States

# (12) Patent Application Publication (10) Pub. No.: US 2024/0214042 A1 ZHU et al.

### Jun. 27, 2024 (43) **Pub. Date:**

# (54) DATA PROCESSING METHOD AND **APPARATUS**

(71) Applicant: HUAWEI TECHNOLOGIES CO.,

LTD., Shenzhen (CN)

(72) Inventors: Huiying ZHU, Shanghai (CN);

Pengpeng DONG, Shanghai (CN); Zhiyuan TAN, Shanghai (CN)

- (21) Appl. No.: 18/398,385
- (22) Filed: Dec. 28, 2023

## Related U.S. Application Data

- (63) Continuation of application No. PCT/CN2022/ 100546, filed on Jun. 22, 2022.
- (30)Foreign Application Priority Data

(CN) ...... 202110727292.9 Jun. 29, 2021

### **Publication Classification**

(51) Int. Cl. H04B 7/0456

(2006.01)

U.S. Cl.

CPC ...... *H04B 7/0482* (2013.01)

(57)ABSTRACT

A data processing method and apparatus are disclosed, which may be applied to communication systems such as 5G and 6G. The method includes: obtaining an extended first codebook based on a second codebook by increasing a quantity of codewords or lengths of codewords, and performing first network coding or decoding based on the first codebook. Linear independence between codewords in the extended first codebook may be ensured as much as possible, so as to generate more valid redundant packets or check packets, thereby improving system reliability. Alternatively, flexible block lengths are supported, so as to perform efficient network coding or decoding on more original data packets, thereby improving system spectral efficiency. This application may be applied to an extended reality XR service or another low-delay service.

