US 20230232430A1

(19) United States
(12) Patent Application Publication (10) Pub. No.: US 2023/0232430 A1
Zhou et al. (43) Pub. Date: Jul. 20, 2023

(54) **SEMI-PERSISTENT SCHEDULING OF MULTICAST AND BROADCAST SERVICES**

(71) Applicant: **Ofinno, LLC**, Reston, VA (US)

(72) Inventors: **Hua Zhou**, Vienna, VA (US); **Esmael Hejazi Dinan**, McLean, VA (US); **Yunjung Yi**, Vienna, VA (US); **Ali Cagatay Cirik**, Chantilly, VA (US); **Jonghyun Park**, Syosset, NY (US); **Hyoungsuk Jeon**, Centreville, VA (US); **Hyukjin Chae**, San Diego, CA (US); **Kai Xu**, Great Falls, VA (US)

(73) Assignee: **Ofinno, LLC**, Reston, VA (US)

(21) Appl. No.: **18/122,894**

(22) Filed: **Mar. 17, 2023**

**Related U.S. Application Data**

(63) Continuation of application No. PCT/US2021/060058, filed on Nov. 19, 2021.

(60) Provisional application No. 63/115,850, filed on Nov. 19, 2020.

**Publication Classification**

(51) **Int. Cl.**

| | |
|---|---|
| ***H04W 72/30*** | (2006.01) |
| ***H04L 1/1812*** | (2006.01) |
| ***H04L 12/18*** | (2006.01) |
| ***H04W 72/11*** | (2006.01) |

(52) **U.S. Cl.**

CPC ..... ***H04W 72/30*** (2023.01); ***H04L 1/1819*** (2013.01); ***H04L 12/1868*** (2013.01); ***H04W 72/11*** (2023.01)

(57) **ABSTRACT**

A wireless device receives receive, from a base station, radio resource control messages comprising configuration parameters of a first semi-persistent scheduling (SPS) for multicast and broadcast services (MBS), wherein the configuration parameters of the first SPS comprise a first hybrid automatic repeat request acknowledgment (HARQ-ACK) codebook index. The wireless device receives a multicast transport block (TB) based on receiving a group common downlink control information (DCI) indicating an activation of the first SPS. The wireless device transmits first feedback for the multicast TB in a first HARQ-ACK codebook, of HARQ-ACK codebooks, indicated by the first HARQ-ACK codebook index.