



US 20230232410A1

(19) **United States**(12) **Patent Application Publication**
Zhou et al.(10) **Pub. No.: US 2023/0232410 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **DOWNLINK CONTROL CHANNEL
SKIPPING****Publication Classification**(71) Applicant: **Ofinno, LLC**, Reston, VA (US)(72) Inventors: **Hua Zhou**, Vienna, VA (US); **Yunjung Yi**, Vienna, VA (US); **Esmael Hejazi Dinan**, McLean, VA (US); **Ali Cagatay Cirik**, Chantilly, VA (US); **Hyongsuk Jeon**, Centreville, VA (US); **Kai Xu**, Great Falls, VA (US)(51) **Int. Cl.****H04W 72/23** (2006.01)**H04W 72/0457** (2006.01)**H04L 27/26** (2006.01)**H04W 76/28** (2006.01)(52) **U.S. Cl.**CPC **H04W 72/23** (2023.01); **H04W 72/0457** (2023.01); **H04L 27/26025** (2021.01); **H04W 76/28** (2018.02)(73) Assignee: **Ofinno, LLC**, Reston, VA (US)(21) Appl. No.: **18/125,013**(22) Filed: **Mar. 22, 2023****Related U.S. Application Data**

(63) Continuation of application No. PCT/US2022/020706, filed on Mar. 17, 2022.

(60) Provisional application No. 63/162,286, filed on Mar. 17, 2021.

(57)

ABSTRACT

A wireless device receives configuration parameters indicating duration values for skipping physical downlink control channel (PDCCH) monitoring on a bandwidth part (BWP). The duration values are from: first values in response to the BWP having a first subcarrier spacing (SCS) and second values in response to the BWP having a second SCS, with each value of the second values being equal to multiplication of a respective value, of the first values, and a same granularity value. The wireless device may receive a downlink control information (DCI) indicating skipping PDCCH monitoring on the BWP for a time duration based on a duration value of the duration values. The wireless device may skip monitoring the PDCCH on the BWP for the time duration, based on the DCI.

DCI format	Usage
0_0	Scheduling of PUSCH in one cell
0_1	Scheduling of one or multiple PUSCH in one cell, or indicating CG-DFI for configured grant PUSCH
0_2	Scheduling of PUSCH in one cell
1_0	Scheduling of PDSCH in one cell
1_1	Scheduling of PDSCH in one cell, and/or triggering one shot HARQ-ACK codebook feedback
1_2	Scheduling of PDSCH in one cell
2_0	Notifying a group of UEs of the slot format, available RB sets, COT duration and search space set group switching
2_1	Notifying a group of UEs of the PRB(s) and OFDM symbol(s) where UE may assume no transmission is intended for the UE
2_2	Transmission of TPC commands for PUCCH and PUSCH
2_3	Transmission of a group of TPC commands for SRS transmissions by one or more UEs
2_4	Notifying a group of UEs of the PRB(s) and OFDM symbol(s) where UE cancels the corresponding UL transmission from the UE
2_5	Notifying the availability of soft resources
2_6	Notifying the power saving information outside DRX Active Time for one or more UEs
3_0	Scheduling of NR sidelink in one cell
3_1	Scheduling of LTE sidelink in one cell