



US 20230232393A1

(19) **United States**

(12) **Patent Application Publication**  
**GAAL et al.**

(10) **Pub. No.: US 2023/0232393 A1**

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

(54) **UPLINK TRANSMIT SWITCH SCHEDULING  
OF CARRIER AGGREGATION**

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

CPC ... **H04W 72/1268** (2013.01); **H04W 72/0453**  
(2013.01)

(71) Applicant: **QUALCOMM Incorporated**, San  
Diego, CA (US)

(57)

**ABSTRACT**

(72) Inventors: **Peter GAAL**, San Diego, CA (US);  
**Yiqing CAO**, Beijing (CN)

Wireless communications systems and methods related to receiving uplink carrier aggregation transmit chain switch scheduling. A UE may be configured for both inter-band and intra-band CA. When the UE receives uplink scheduling information for UL CA, the UE may analyze multiple component carriers in a frequency band, instead of just one component carrier per frequency band. The UE may derive antenna port configurations from the scheduling information, and map the antenna port configurations to an RF chain case. The RF chain case identifies an RF chain allocation configuration. Once mapped, the UE may determine whether an uplink RF chain switch should occur to accommodate the new RF chain allocation configuration. If different from the current RF chain allocation configuration, the switch is made. Further, the UE may add uplink transmission preparation time in response to the analysis and change if necessary.

(21) Appl. No.: **18/001,197**

(22) PCT Filed: **Aug. 7, 2020**

(86) PCT No.: **PCT/CN2020/107723**

§ 371 (c)(1),

(2) Date: **Dec. 8, 2022**

**Publication Classification**

(51) **Int. Cl.**

**H04W 72/1268** (2006.01)

**H04W 72/0453** (2006.01)

900

