

## (19) United States

# (12) Patent Application Publication (10) Pub. No.: US 2023/0231671 A1

Raghothaman et al.

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

### (54) FRONTHAUL INTERFACE FOR ADVANCED SPLIT-RADIO ACCESS NETWORK (RAN) **SYSTEMS**

(71) Applicant: CommScope Technologies LLC,

Hickory, NC (US)

(72) Inventors: Balaji B Raghothaman, Chester

Springs, PA (US); Calogero Armao, Saronno (IT): Irfaan Ahamed Salahuddeen, Acton, MA (US)

(73) Assignee: CommScope Technologies LLC,

Hickory, NC (US)

Appl. No.: 18/185,744

(22) Filed: Mar. 17, 2023

## Related U.S. Application Data

- Continuation of application No. 17/169,052, filed on Feb. 5, 2021, now Pat. No. 11,612,016.
- Provisional application No. 63/015,271, filed on Apr. 24, 2020, provisional application No. 62/970,564, filed on Feb. 5, 2020.

#### (30)Foreign Application Priority Data

Sep. 18, 2020 (IT) ...... 102020000022141 Dec. 7, 2020 (IT) ...... 102020000022147

#### **Publication Classification**

(51) Int. Cl.

H04L 5/00 (2006.01)H04W 72/121 (2006.01)

U.S. Cl.

CPC ....... H04L 5/0044 (2013.01); H04W 72/121 (2013.01); H04W 92/10 (2013.01)

#### (57)**ABSTRACT**

In one embodiment, a distributed unit (DU) is configured to do the following in connection with wirelessly transmitting user data to a UE using less than all of a plurality of radio units (RUs): include, in one or more user-plane messages for that UE that are communicated to the RUs, common header fields that contain a RU mask field for storing a bit mask comprising a plurality of bit positions. Each bit position is associated with a respective one of the RUs. Each RU is configured to: use the respective RU mask field included in any user-plane messages received by that RU in order to determine if the received user-plane message is intended for that RU and use the received message if the received message is intended for that RU and discard the received message if the received message is not intended for that RU.

