

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0214304 A1 Pandey et al.

(43) **Pub. Date:**

Jun. 27, 2024

(54) COMMUNICATION INTERFACE AND METHOD FOR SEAMLESS DATA COMMUNICATION OVER MULTILANE **COMMUNICATION LINK**

(71) Applicant: HUAWEI TECHNOLOGIES CO., LTD., Shenzhen (CN)

(72)Inventors: Sujan Pandey, Leuven (BE); Yumeng Yang, Nanjing (CN)

Appl. No.: 18/598,914

(22) Filed: Mar. 7, 2024

Related U.S. Application Data

(63) Continuation of application No. PCT/CN2021/ 117006, filed on Sep. 7, 2021.

Publication Classification

(51) Int. Cl. H04L 45/24 (2022.01)H04L 12/40 (2006.01) (52) U.S. Cl. CPC H04L 45/24 (2013.01); H04L 12/4013 (2013.01); H04L 2012/40273 (2013.01)

(57)ABSTRACT

A communication interface for use at a first end of a communication link including a number of communication lanes greater or equal to two. The communication interface includes a logic configured to cooperate with another communication interface at a second end of the communication link to send a data frame to the second end over the communication lanes. The logic is configured to store a communication lane status for each of the communication lanes, and when detecting that the communication lane status for a specific communication lane has changed to a determined status. The logic is configured to send the changed communication lane status for the specific communication lane to the communication interface at the second end and split a data frame accordingly. The communication interface provides seamless data communication between the first end and the second end of the communication link, even in case of a lane failure.



