

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0214111 A1 POPE et al.

Jun. 27, 2024 (43) **Pub. Date:**

(54) NETWORK INTERFACE DEVICE WITH FRAME SEQUENCE VALUE CHECKING

(71) Applicant: XILINX, INC., San Jose, CA (US)

(72) Inventors: Steven Leslie POPE, Cambridge (GB); Derek Edward ROBERTS, Cambridge (GB); David James RIDDOCH, Cambridgeshire (GB); Ripduman Singh SOHAN, San Jose, CA (US)

(21) Appl. No.: 18/086,528

(22) Filed: Dec. 21, 2022

Publication Classification

(51) Int. Cl. H04L 1/00 (2006.01)H04L 1/1829 (2006.01)

(52) U.S. Cl.

H04L 1/0083 (2013.01); H04L 1/0045 CPC (2013.01); H04L 1/1858 (2013.01)

(57)**ABSTRACT**

A network interface device comprises circuitry to add a frame check sequence value a data packet to be transmitted onto a network. The data packet with the frame check sequence value is stored in memory. Media access control layer circuitry reads the data packet from the memory and determines if the frame check sequence value is correct. When it is note correct, it is determined that the data in the data packet is corrupted.

Receiving a data packet to be transmitted onto a network 500

Adding a frame check sequence value to the data packet 502

Storing in a memory the data packet with the frame check sequence value 504

Reading the data packet with the frame check sequence value from the memory 506

Determining if the frame check sequence value is correct for data in the data packet read from the memory 508

When the frame check sequence value is not correct for the data in the data packet read from the memory, determining that the data in the data packet is unexpected 510