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van der Tuijn et al.

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(54) **BLUETOOTH COMMUNICATION UNITS, WIRELESS COMMUNICATION SYSTEMS, WIRELESS COMMUNICATION DEVICES, BLUETOOTH COMMUNICATIONS METHODS, AND WIRELESS COMMUNICATION METHODS**

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(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(52) **U.S. Cl.** 370/458

(58) **Field of Search** 370/449, 342-346, 370/329, 310-315, 367, 389-395, 458-466, 354, 493, 229, 412; 375/322, 133, 222, 304; 455/519, 450-454, 62; 343/853, 824, 893; 379/102.03, 102.01, 93.17, 93.01, 93.28; 341/137; 345/89

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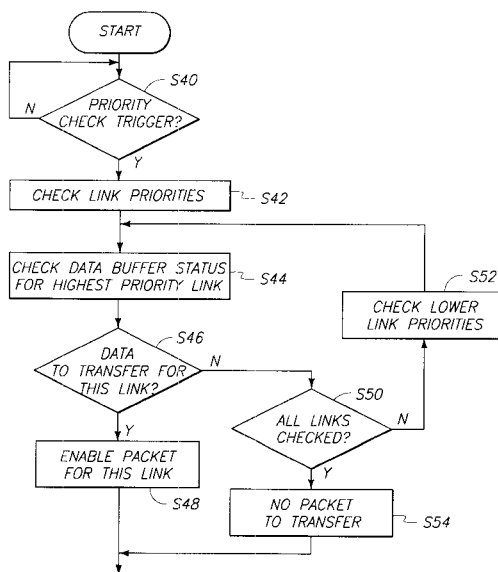
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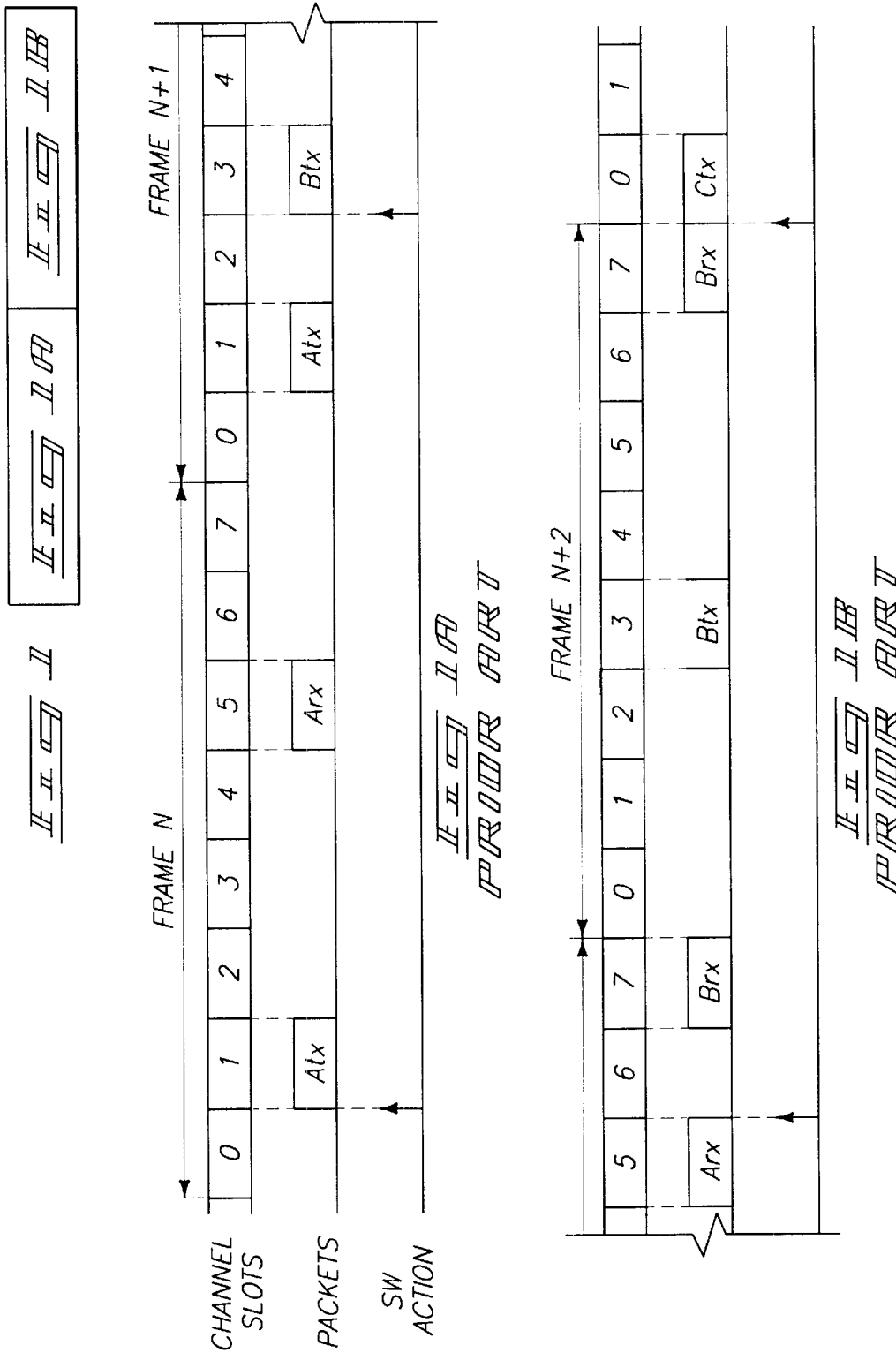
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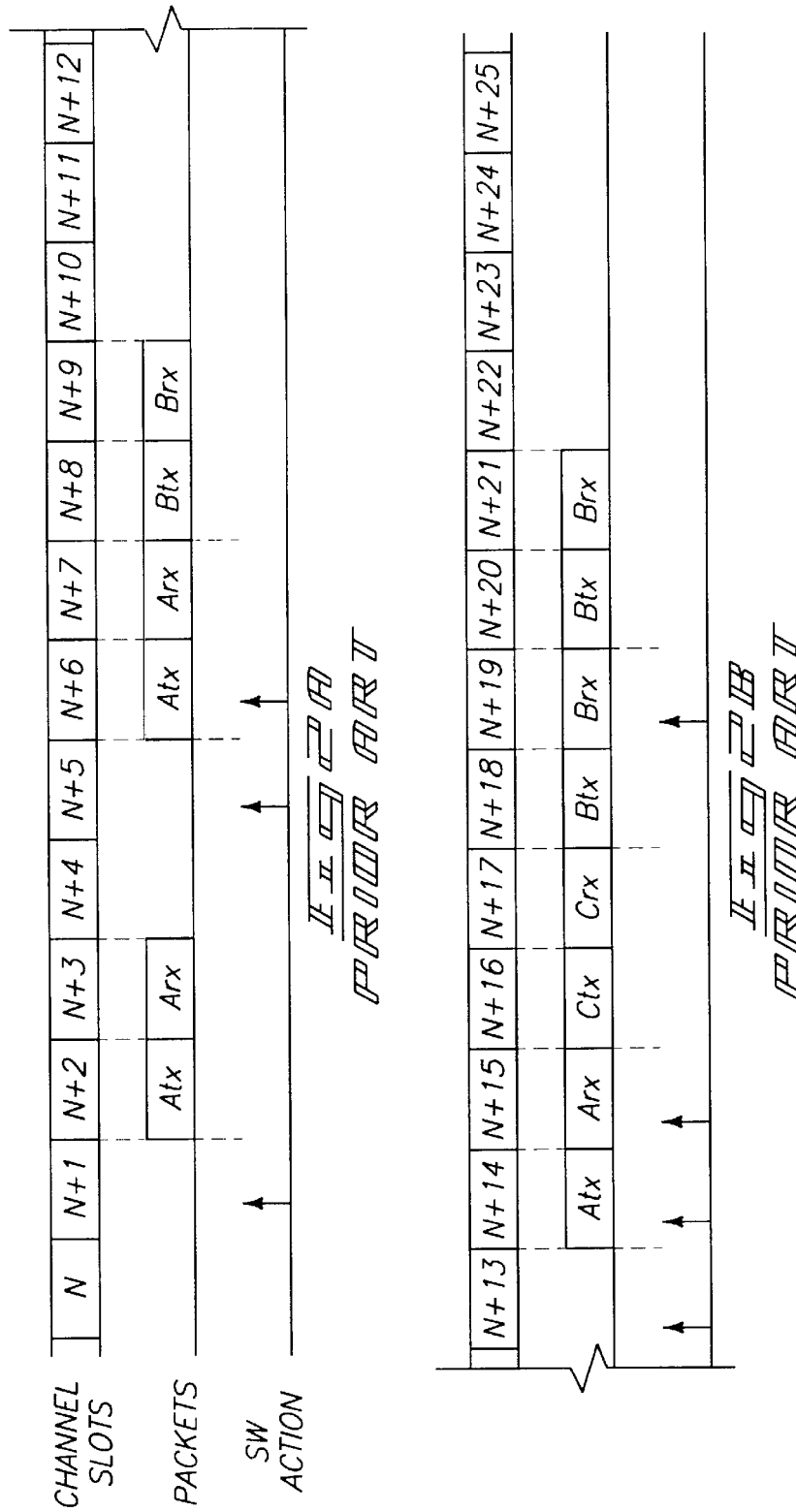
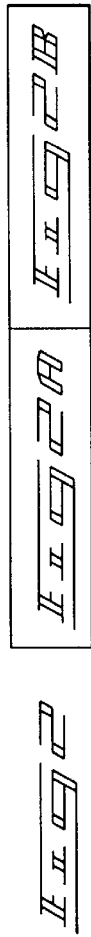
(57) **ABSTRACT**

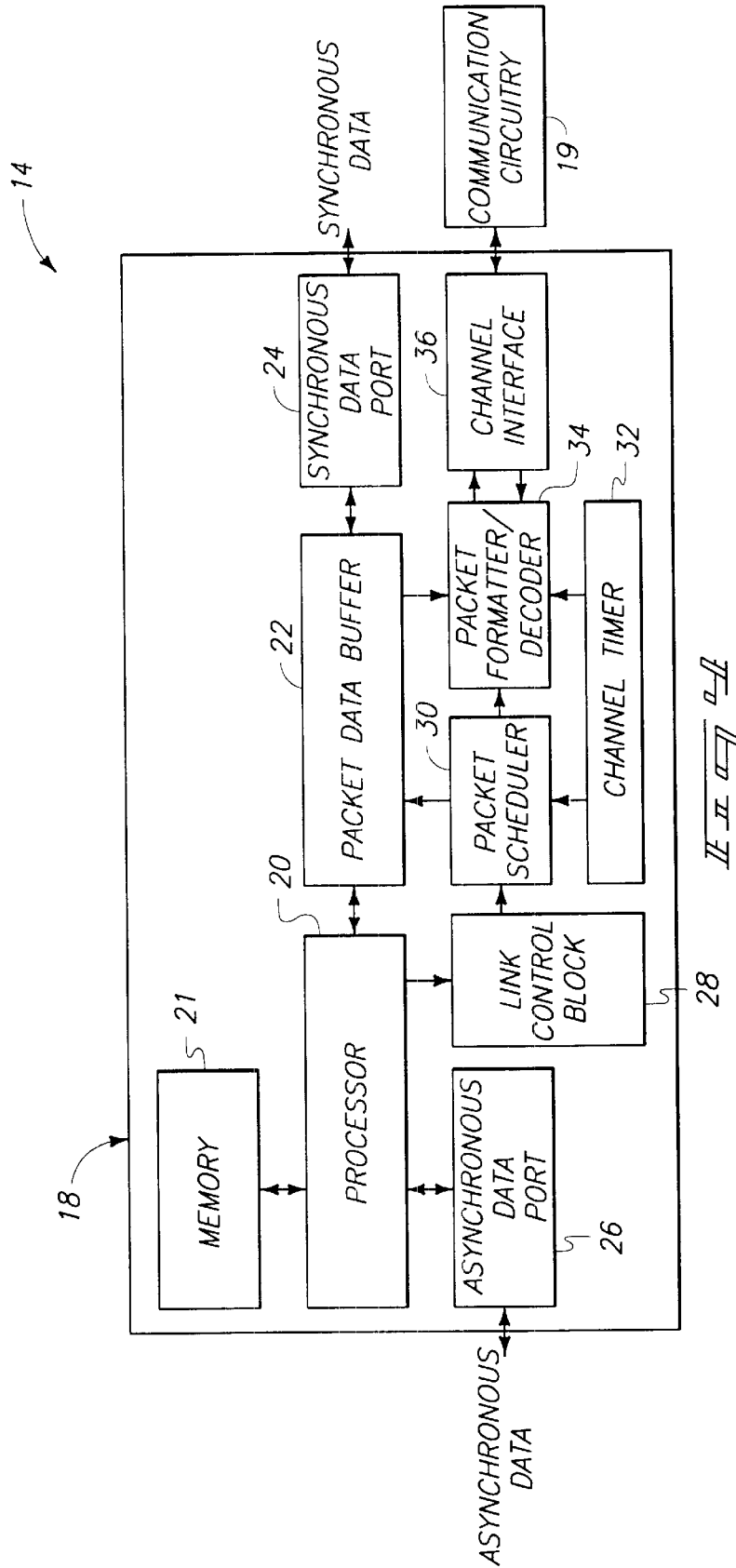
Bluetooth communication units, wireless communication systems, wireless communication devices, Bluetooth communication methods, and wireless communication methods are provided. One aspect of the invention provides a Bluetooth communication unit including communication circuitry configured to communicate wireless signals using a plurality of communication links of a piconet according to a Bluetooth communication protocol; and processing circuitry coupled with the communication circuitry and configured to at least one of provide data into packets to be communicated in slots using the communication links and retrieve data from packets communicated in slots using the communication links, the processing circuitry being further configured to analyze the communication links of the piconet and to prioritize an order of communication of the packets responsive to the analysis.

5 Claims, 8 Drawing Sheets









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