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(54) **METHOD AND APPARATUS FOR REMOTE POWERING OF DEVICE CONNECTED TO NETWORK**

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(52) **U.S. Cl.** **340/10.42**; 340/310.01; 379/22.01; 713/300; 713/310

(58) **Field of Search** 340/10.42, 310.01, 340/825.52, 505, 524, 310.02, 310.06, 310.07, 568.1, 568.4, 571, 572.1, 568.2, 3.51, 333, 310.08, 310.03, 310.04, 310.05, 10.34, 425.2; 713/200, 300; 710/62, 8; 455/522; 379/22.01, 93.36

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Primary Examiner—Brian Zimmerman

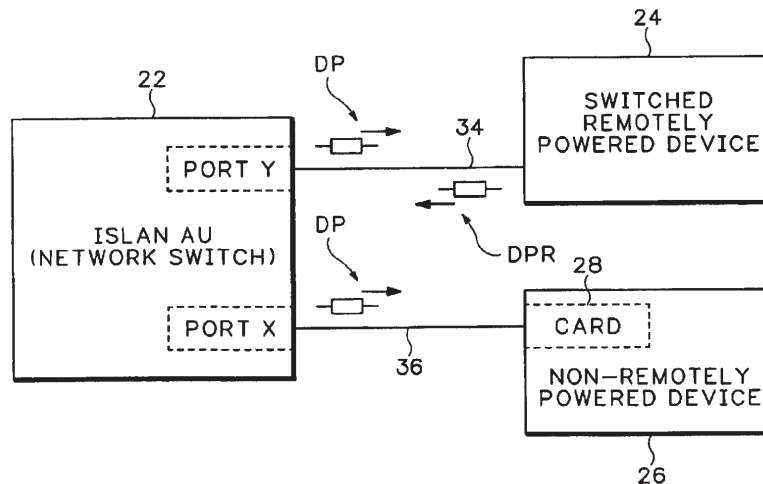
Assistant Examiner—Clara Yang

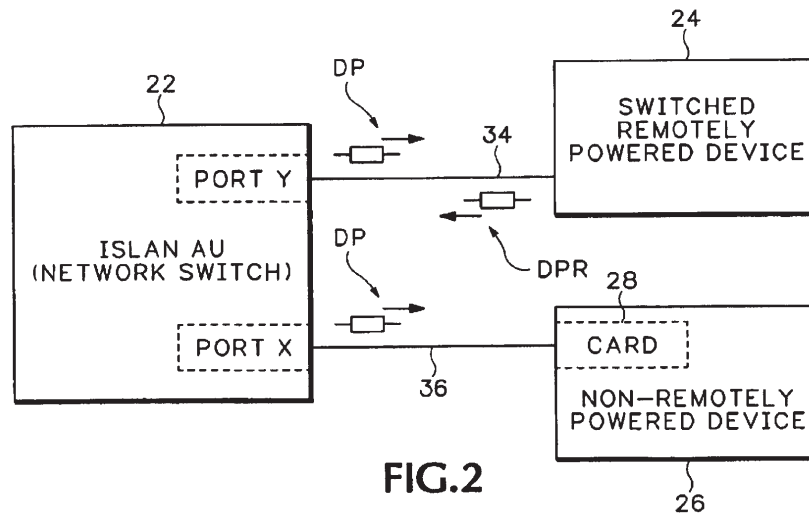
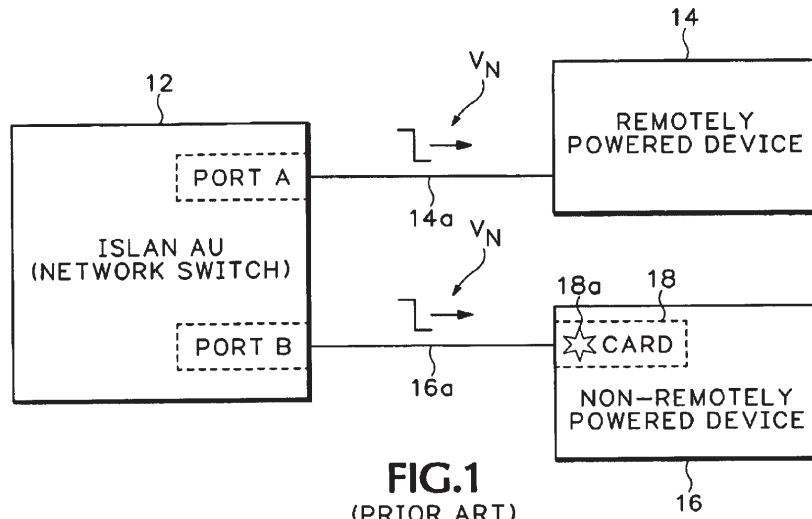
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(57) **ABSTRACT**

A network node determines the suitability of coupled devices for being remotely line powered before actually powering them. The node scan its ports to determine which ports are coupled to devices. The node then interrogates the coupled devices. A unique discovery tone or bit pattern is generated and sent to devices coupled to ports. The node then monitors the port for a return signal. If there is a return signal, it is compared to the transmitted discovery signal. The signal will be identical after allowing for line losses if the coupled device is suitable for remote line powering. If the comparison yields a match, the network node supplies remote line power to the device.

30 Claims, 4 Drawing Sheets





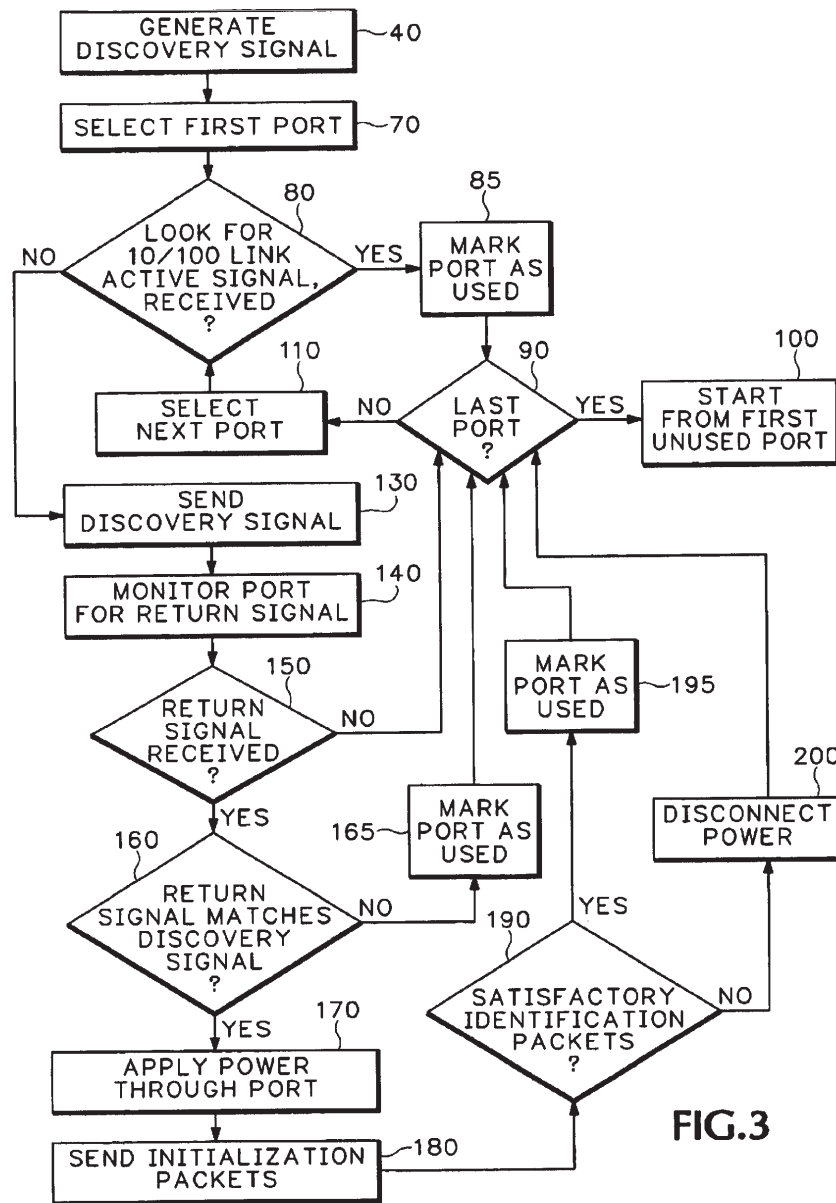
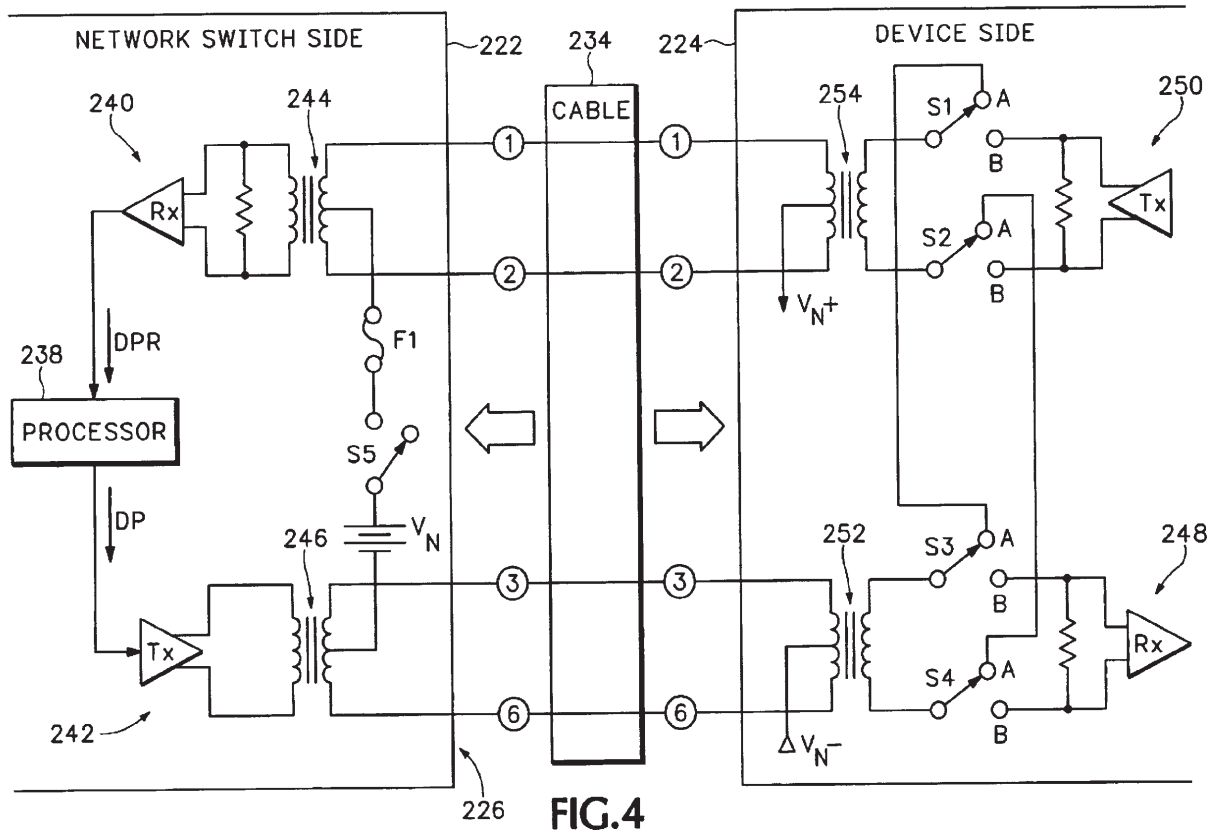


FIG. 3



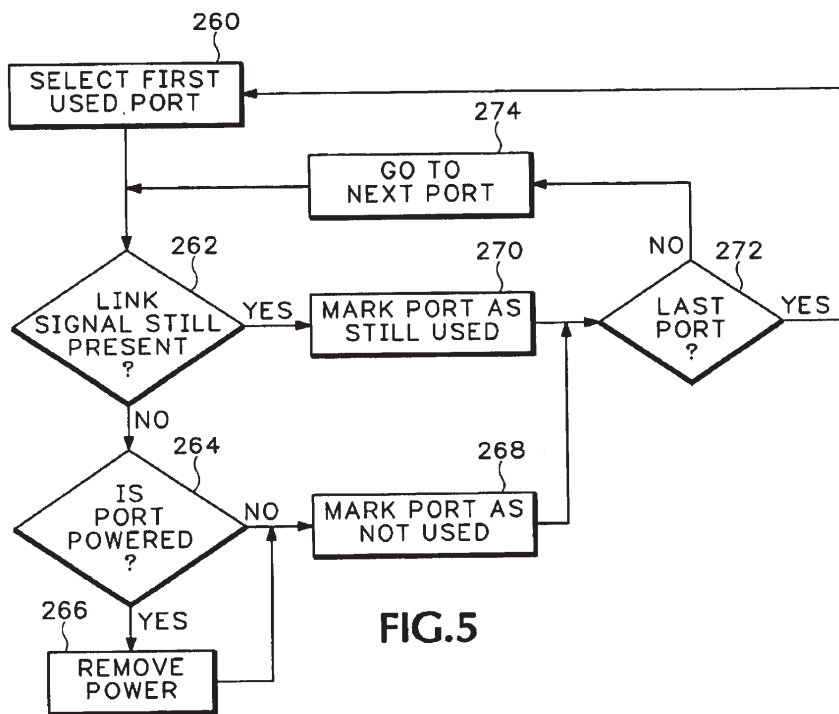


FIG. 5

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