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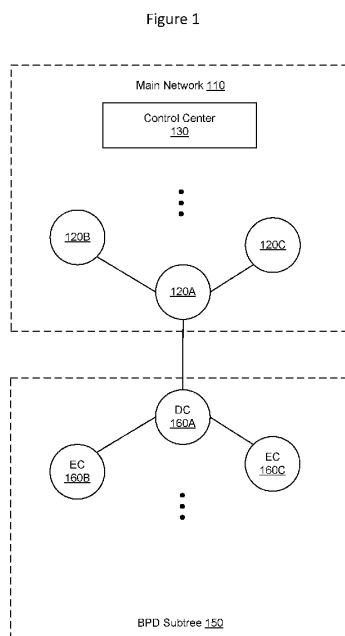
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(54) **Title:** NETWORK PROTOCOL FOR BATTERY POWERED DEVICES WITHIN A WIRELESS NETWORK



(57) **Abstract:** A network system includes a main network implementing a conventional network protocol and a BPD subtree implementing a custom network protocol. The main network comprises a plurality of MPD nodes, the conventional network protocol being configured for MPD nodes. The BPD subtree comprises a plurality of BPD nodes, the custom network protocol being configured for BPD nodes. The custom network protocol defines smaller and simpler subtrees relative to the conventional network protocol. As a result, the custom network protocol defines less complex functions relative to the conventional network protocol, including functions for discovery, messaging, and loop management. A root node of the BPD subtree is connected with an MPD node of the main network and one or more descendant nodes of the BPD subtree. The root node implements the conventional network protocol and the custom network protocol.

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