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(54) Title: MULTI-BAND CHANNEL CAPACITY FOR METER NETWORK

(57) Abstract: A communication system that relays data messages from or to a plurality of remote endpoints via RF gateways to a data accumulation site over one of a series of communication channels. The communication system monitors the signal-to-noise ratio of communication from each individual endpoint, which can be utility meters and related control or monitoring points, to a gateway. Based upon a quality of service and/or the signal-to-noise ratio of the communication of the endpoints to the gateways, the system assigns a desired communication channel to the endpoint. Each of the desired communication channels have varying data transmission rate and required SNR and each channel is selected based upon the signal-to-noise ratio of the transmissions from the endpoint to the gateways. If the signal-to-noise ratio changes for an endpoint, the system dynamically reassigns a different channel to the meter based upon the updated signal-to-noise ratio.

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