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(54) Title: METHOD AND SYSTEM FOR PROVIDING NETWORK AND ROUTING PROTOCOLS FOR UTILITY SERVICES

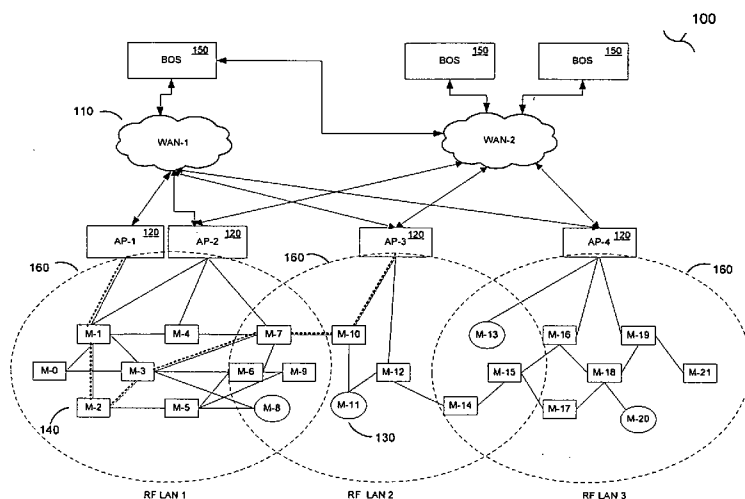


FIGURE 1A

(57) Abstract: A method and system for providing a network and routing protocol for utility services are disclosed. In one embodiment, a computer-implemented method comprises discovering a utility network, wherein a utility device (for example, a constant powered meter) sends network discovery messages to find the utility network. Neighboring meters are discovered and the device listens for advertised routes for one or more networks from the neighbors. The device is then registered with one or more utility networks, receiving a unique address for each network registration. Also illustrated in this invention disclosure is how each device of a class of devices (for example, battery powered meter) finds and associates itself with another device (for example, constant powered meter). The constant powered meter also registers its associate battery powered meter with the utility networks. The constant powered meter registers itself with the

access points and the upstream nodes in the path out of each network. Each upstream node can independently make forwarding decisions on both upstream and downstream packets i.e. choose the next hop according to the best information available to it. The constant powered meter can sense transient link problems, outage problems, and traffic characteristics. It uses the information to find the best route out of and within each network. Each network device thus maintains multi-egress, multi-ingress network routing options both for itself and the device(s) associated with it.



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