(54) **Title:** COMMUNICATION AND MESSAGE ROUTE OPTIMIZATION AND MESSAGING IN A MESH NETWORK

FIG 1A
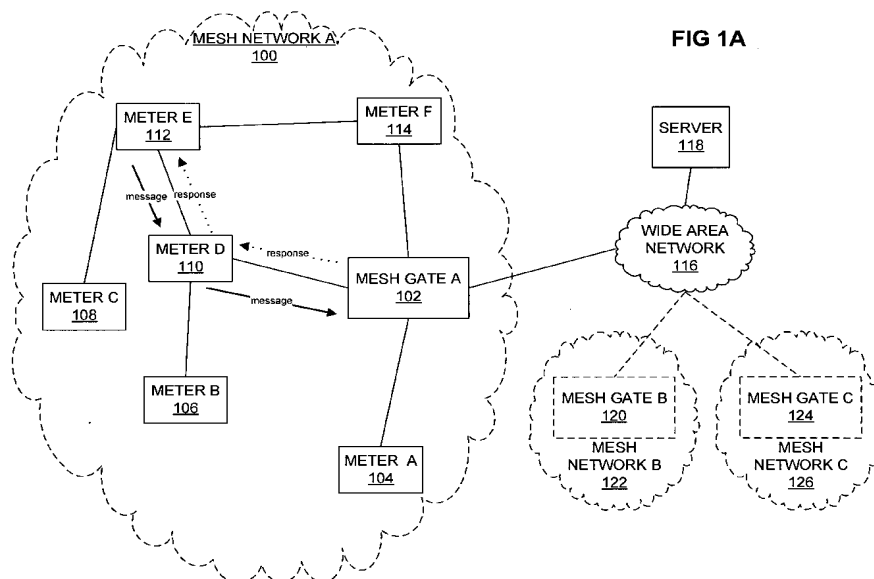
(57) **Abstract:** A method and system facilitate communications between an unassociated device and a server via a mesh network and a wide area network. The method may include receiving transmissions from candidate proxy devices, wherein each candidate proxy device is associated with a mesh network. The method may include selecting a proxy device from the candidate proxy devices. The method may include communicating with a server via the proxy device and the associated mesh network.

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ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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COMMUNICATION AND MESSAGE ROUTE OPTIMIZATION AND MESSAGING IN A MESH NETWORK

CROSS REFERENCE TO RELATED APPLICATIONS

[0001]   This application claims the benefit of priority to the following United States provisional patent applications which are incorporated herein by reference in their entirety:

- serial number 60/989,957 entitled "Point-to-Point Communication within a Mesh Network", filed November 25, 2007 (TR0004-PRO);

- serial number 60/989,967 entitled "Efficient And Compact Transport Layer And Model For An Advanced Metering Infrastructure (AMI) Network," filed November 25, 2007 (TR0003-PRO);

- serial number 60/989,958 entitled "Creating And Managing A Mesh Network Including Network Association," filed November 25, 2007 (TR0005-PRO);

- serial number 60/989,964 entitled "Route Optimization Within A Mesh Network," filed November 25, 2007 (TR0007-PRO);

- serial number 60/989,950 entitled "Application Layer Device Agnostic Collector Utilizing ANSI C12.22," filed November 25, 2007 (TR0009-PRO);

- serial number 60/989,953 entitled "System And Method For Real Time Event Report Generation Between Nodes And Head End Server In A Meter Reading Network Including From Smart And Dumb Meters," filed November 25, 2007 (TR0010-PRO);

- serial number 60/989,975 entitled "System and Method for Network (Mesh) Layer And Application Layer Architecture And Processes," filed November 25, 2007 (TR0014-PRO);

- serial number 60/989,959 entitled "Tree Routing Within a Mesh Network," filed November 25, 2007 (TR0017-PRO);

- serial number 60/989,961 entitled "Source Routing Within a Mesh Network," filed November 25, 2007 (TR0019-PRO);

- serial number 60/989,962 entitled "Creating and Managing a Mesh Network," filed November 25, 2007 (TR0020-PRO);

- serial number 60/989,951 entitled "Network Node And Collector Architecture For Communicating Data And Method Of Communications," filed November 25, 2007 (TR0021-PRO);

- serial number 60/989,955 entitled "System And Method For Recovering From Head End Data Loss And Data Collector Failure In An Automated Meter Reading Infrastructure," filed November 25, 2007 (TR0022-PRO);

- serial number 60/989,952 entitled "System And Method For Assigning Checkpoints To A Plurality Of Network Nodes In Communication With A Device Agnostic Data Collector," filed November 25, 2007 (TR0023-PRO);

- serial number 60/989,954 entitled "System And Method For Synchronizing Data In An Automated Meter Reading Infrastructure," filed November 25, 2007 (TR0024-PRO);

- serial number 60/992,312 entitled "Mesh Network Broadcast," filed December 4, 2007 (TR0027-PRO);

- serial number 60/992,313 entitled "Multi Tree Mesh Networks", filed December 4, 2007 (TR0028-PRO);

- serial number 60/992,315 entitled "Mesh Routing Within a Mesh Network," filed December 4, 2007 (TR0029-PRO);

- serial number 61/025,279 entitled "Point-to-Point Communication within a Mesh Network", filed January 31, 2008 (TR0030-PRO), and which are incorporated by reference.

- serial number 61/025,270 entitled "Application Layer Device Agnostic Collector Utilizing Standardized Utility Metering Protocol Such As ANSI C12.22," filed January 31, 2008 (TR0031-PRO);

- serial number 61/025,276 entitled "System And Method For Real-Time Event Report Generation Between Nodes And Head End Server In A Meter Reading Network Including Form Smart And Dumb Meters," filed January 31, 2008 (TR0032-PRO);

- serial number 61/025,282 entitled "Method And System for Creating And Managing Association And Balancing Of A Mesh Device In A Mesh Network," filed January 31, 2008 (TR0035-PRO);

- serial number 61/025,271 entitled "Method And System for Creating And Managing Association And Balancing Of A Mesh Device In A Mesh Network," filed January 31, 2008 (TR0037-PRO);

- serial number 61/025,287 entitled "System And Method For Operating Mesh Devices In Multi-Tree Overlapping Mesh Networks", filed January 31, 2008 (TR0038-PRO);

- serial number 61/025,278 entitled "System And Method For Recovering From Head End Data Loss And Data Collector Failure In An Automated Meter Reading Infrastructure," filed January 31, 2008 (TR0039-PRO);

- serial number 61/025,273 entitled "System And Method For Assigning Checkpoints to A Plurality Of Network Nodes In Communication With A Device-Agnostic Data Collector," filed January 31, 2008 (TR0040-PRO);

- serial number 61/025,277 entitled "System And Method For Synchronizing Data In An Automated Meter Reading Infrastructure," filed January 31, 2008 (TR0041-PRO); and

- serial number 61/094,116 entitled "Message Formats and Processes for Communication Across a Mesh Network," filed September 4, 2008 (TR0049-PRO).

[0002]   This application hereby references and incorporates by reference each of the following United States patent applications filed contemporaneously herewith:

- serial number _____ entitled "Point-to-Point Communication within a Mesh Network", filed November 21, 2008 (TR0004-US);

- serial number _____ entitled "Efficient And Compact Transport Layer And Model For An Advanced Metering Infrastructure (AMI) Network," filed November 21, 2008 (TR0003-US);

- serial number _____ entitled "COLLECTOR DEVICE AND SYSTEM UTILIZING STANDARDIZED UTILITY METERING PROTOCOL," filed November 21, 2008 (TR0009-US);

- serial number _____ entitled "METHOD AND SYSTEM FOR CREATING AND MANAGING ASSOCIATION AND BALANCING OF A MESH DEVICE IN A MESH NETWORK," filed November 21, 2008 (TR0020-US); and

- serial number _____ entitled "System And Method For Operating Mesh Devices In Multi-Tree Overlapping Mesh Networks", filed November 21, 2008 (TR0038-US).

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