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(54) SYSTEM AND METHOD FOR DISTRIBUTING INFORMATION VIA A COMMUNICATION NETWORK

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(57) **ABSTRACT**

A communication system for distributing information via a network to one or more subscribers includes a multi-port switch, one or more radio frequency (RF) modems coupled to respective ports of the switch, a combiner and a transmitter. The switch forwards source information to the RF modems based on address information. Each RF modem modulates and up converts information from the switch to an RF signal within a respective subscriber channel of the television broadcast spectrum. Each channel is assigned to one or more subscribers, and each subscriber is allocated unshared bandwidth. Each channel may be further divided into unshared bandwidth increments, so that multiple subscribers may share a single channel. The combiner combines modulated information from each RF modem into a combined signal and the transmitter transmits the combined signal to the subscribers via the network. An HFC network including a distribution point and one or more optical nodes is contemplated, each optical node serving a particular geographic area via a corresponding coaxial cable. Each subscriber destination includes a gateway device or the like that is tuned to a corresponding channel to retrieve source information from that channel, and to deliver the information to one or more local subscriber devices. The gateway further includes converters, a modulator and an up converter to receive and transmit subscriber information upstream to the distribution point. The gateways and an address resolution server enforce point to point communications. A bandwidth manager allocates bandwidth and monitors bandwidth usage.