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(54) **SYSTEM AND METHOD FOR OPERATING A TRANSMISSION NETWORK**

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(57) **ABSTRACT**

Various embodiments are described herein for systems and methods that can be used to operate a media transmission network. In at least one embodiment, the media transmission network comprises a plurality of media processing devices configured to receive and process media streams based on control data. The media transmission network also comprises a controller coupled to the plurality of media processing devices and configured to generate a control signal for some or all of the media processing devices in the network. The controller is configured to determine the timing at which to transmit the control signal to a respective media processing device in order for the instructions in the control signal to be executed at the same time as the media data is received. The controller determines the transmission timing of each control signal by determining the latencies and delays of the network and the devices, such as, for example, network latency, processing delay, and/or control delay.