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(54) Title: WAVELENGTH MANAGEMENT IN MULTIPLE-WAVELENGTH PASSIVE OPTICAL NETWORKS

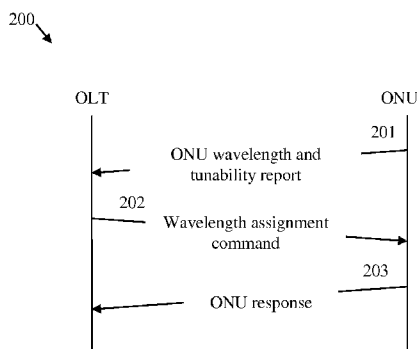


FIG. 2

(57) Abstract: A system for supporting wavelength management in a passive optical network (PON), comprising an optical line terminal (OLT) configured to send a wavelength assignment for optical network unit (ONU) communications based on a wavelength tunability capability, and an ONU coupled to the OLT and configured to send the wavelength tunability capability to the OLT, wherein the wavelength assignment and the wavelength tunability capability are sent in media access control (MAC) messages. Also disclosed is an apparatus of an OLT for supporting wavelength management, comprising one or more component configured to couple to an ONU and exchange a wavelength assignment for transmission with the ONU based on a wavelength tunability of the ONU, wherein the wavelength indication and the wavelength tunability are exchanged via MAC layer frames.

