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(54) Title: INTERFERENCE REDUCTION IN SHARED-FREQUENCY WIRELESS COMMUNICATION SYSTEMS

(57) Abstract

An apparatus and method for reducing interference between an uplink transmitter of a fixed satellite service (FSS) system (150) and an uplink or downlink receiver of a local multipoint distribution service (LMDS) system (100) are described. An ordered list of the preferred uplink transmission frequencies is assigned to all FSS uplinks located in a particular cell of the LMDS system (100). Different ordered lists are used in different cells (105-1 - 105-3) of the LMDS system (100), while uplinks located in the same cell can utilize the same order list. Further, the ordered list may be selected by the LMDS service provider such that the impact of interference from FSS uplinks can be readily predicted and minimized. Therefore, the system allows simultaneous access to a shared frequency band for both LMDS and FSS systems (100 and 150).

