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(54) **APPARATUS AND METHODS FOR OPERATING MULTI-LINK DEVICES IN WIRLESS NETWORKS**

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(57) **ABSTRACT**

Apparatus and methods for operating multiple link premises devices in a wireless network. In one embodiment, premises devices such as a wireless gateway, Access Point (AP) or user devices use Wireless Local Area Network (WLAN) technology for the transmission of data on multiple links operating on different frequencies. The disclosed apparatus and methods provide a solution to share channel statistic or similar data across the different links, such as for link performance improvement via more optimal MIMO operation. In one implementation, large-scale channel statistics are shared via the pre-amble or mid-amble of a frame across multiple links between an AP and a user device to enhance receiver performance. In another embodiment, the channel statistics are shared between multiple AP devices which can coordinate with each other, and/or are made specific to individual client devices, in order to enhance receiver performance.