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(54) **ADAPTIVE MACHINE LEARNING FOR DYNAMIC WIRELESS COMMUNICATION CONFIGURATION**

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(57) **ABSTRACT**

A method includes obtaining a set of wireless statistics of a wireless communication device and a set of hardware-related information of the wireless communication device. The method further includes determining a set of test results of a testbed system based on the set of wireless statistics and the set of hardware-related information by configuring the testbed system based on the set of wireless statistics and the set of hardware-related information. The method further includes updating a set of decision parameters of a wireless configuration decision model using a machine learning model based on the set of test results. The method further includes sending the updated set of decision parameters to the wireless communication device, wherein the wireless communication device configures a wireless configuration parameter based on an instance of the wireless configuration decision model configured with the updated set of decision parameters.