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(54) **NON-LEGACY PREAMBLE FOR WIRELESS LOCAL AREA NETWORKS**

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(57) **ABSTRACT**

Method and apparatus for transmission and reception of a Greenfield preamble are provided. In the method and apparatus, the Greenfield preamble may be a single user (SU) preamble or a multi user (MU) preamble. As an MU preamble, the Greenfield preamble includes a short training field (STF), a first long training field (LTF), a first signal (SIG) field, at least one additional LTF, and a second SIG field. Additionally, the Greenfield preamble may be utilized for efficient transmission and reception of control information to wireless devices, whereby the control information may be indicated using the STF, the first LTF, or the first or second SIG fields.