

Title (en)

SYSTEMS AND METHODS FOR ENHANCED RF MIMO SYSTEM PERFORMANCE

Title (de)

SYSTEME UND VERFAHREN FÜR VERBESSERTE HF-MIMO-SYSTEMLEISTUNG

Title (fr)

SYSTÈMES ET PROCÉDÉS POUR AMÉLIORER LES PERFORMANCES DE SYSTÈMES MIMO RF

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Application

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- US 201261665600 P 20120628
- US 201261665592 P 20120628
- US 201261671417 P 20120713
- US 201261671416 P 20120713
- US 201213630146 A 20120928
- US 201313762159 A 20130207
- US 201313762191 A 20130207
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Abstract (en)

[origin: WO2013181219A2] Systems and methods for enhancing performance of a multiple-input-multiple-output (MIMO) receiving system are provided herein. The performance enhancement is achieved by connecting a radio distributed network (RDN) of beamformers having M antennas to a MIMO system having N branches, wherein $M > N$. A control module is configured to tune the antennas based on channel estimation metrics of the beamformed signals. As the antennas outnumber the MIMO channels, embodiments of the present invention provide means for distinguishing between the antenna signals so the control module may assess their individual contribution. Other embodiments, when the MIMO class includes multiple layers, use the channel estimation metrics to pick a single weight setting for each beamformer that provides best phase and amplitude matching, to optimize the total receive power. Another embodiment uses the channel estimation and weight selection for antennas swapping for increasing the probability of achieving better phase and amplitude matches.

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