

Title (en)
TRANSCIVER ARCHITECTURE FOR MULTIPLE ANTENNA SYSTEMS

Title (de)
SENDER/-EMPFÄNGERARCHITEKTUR FÜR MEHRFACHANTENNENSYSTEME

Title (fr)
ARCHITECTURE D'ÉMETTEUR-RÉCEPTEUR POUR DES SYSTÈMES À ANTENNES MULTIPLES

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EP 3207642 A4 20180404 (EN)

Application
EP 15860843 A 20151117

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Abstract (en)
[origin: WO2016078565A1] A transceiver architecture with combined digital beamforming and analog/hybrid beamforming is proposed. Digital beamforming is used for beam training with reduced overhead (switching time). It is beneficial to estimate all UE's angle of arrival (AoA) at the same time. In addition, the pilot/training signals are transmitted in a narrow band to reduce complexity. Analog/hybrid beamforming is used for data transmission with high directive gain and low complexity. The value of beamforming weights (phase shifter values) in analog domain can be based on the estimation of AoA from beam training. By using digital beamforming for beam training, combined with analog/hybrid beamforming for data transmission, effective beamforming is achieved with reduced overhead, complexity, and cost.

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Citation (search report)
• [XYI] US 2012033761 A1 20120209 - GUO YINGJIE JAY [AU], et al
• [XI] US 2013039445 A1 20130214 - HWANG DUCK-DONG [KR]
• [Y] US 2013002487 A1 20130103 - HOSOYA KENICHI [JP], et al
• See references of WO 2016078565A1

Designated contracting state (EPC)
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WO 2016078565 A1 20160526; BR 112017009539 A2 20180703; CN 105814808 A 20160727; CN 105814808 B 20200721;
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