Title (en)
A NEW INTERPOLATION ALGORITHM FOR PILOT-BASED CHANNEL ESTIMATION IN OFDM SYSTEMS

Title (de)
NEUER INTERPOLATIONSALGORITHMUS ZUR PILOTBASIERTEN KANALSCHÄTZUNG IN OFDM-SYSTEMEN

Title (fr)
NOUVEL ALGORITHME D'INTERPOLATION POUR UNE ESTIMATION DE CANAL À BASE DE PILOTES DANS DES SYSTÈMES OFDM

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EP 2926514 A1 20151007 (EN)

Application
EP 13759260 A 20130910

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- EP 12306117 A 20120917
- EP 13368026 A 20130902
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- EP 13759260 A 20130910

Abstract (en)
[origin: WO2014041006A1] An OFDM receiver (1) such as a WiFi receiver receives data via a plurality of data subcarriers and a plurality of pilot subcarriers. The data and pilot signals are processed through a conventional demultiplexer (2) and DFT(3) before delivering each pilot signal to a transfer function estimation module (4). The transfer function estimation module (4) includes a Cartesian to polar coordinate conversion module (5) to convert each pilot signal to polar form and facilitate separate calculation of amplitude and phase transfer functions. An amplitude phase transfer function and phase transfer function is then calculated for each data subcarrier and used to form a complex transfer function for each subcarrier. The complex transfer function is then applied to each respective subcarrier via an equaliser to equalise each data subcarrier and correct for data signal corruption caused by attenuation noise or other factors.

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