

Title (en)

COMMUNICATION ARRANGEMENT AND METHOD OF OPERATING A DIGITALLY CONTROLLABLE SCATTERER

Title (de)

KOMMUNIKATIONSANORDNUNG UND VERFAHREN ZUM BETRIEB EINES DIGITAL STEUERBAREN STREUERS

Title (fr)

SYSTÈME DE COMMUNICATION ET PROCÉDÉ DE FONCTIONNEMENT D'UN DIFFUSEUR À COMMANDE NUMÉRIQUE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2023093987A1] A communication arrangement for communication over a plurality of frequency resources and a method for the operation thereof are disclosed. The communication arrangement includes a plurality of digitally controllable scatterers, DCSs, configured for frequency shifting electromagnetic radiation upon reflection thereon, assignment circuitry and channel estimation circuitry. The assignment circuitry is configured for assigning a respective frequency shift to each DCS of an active subset of the DCSs, and for assigning least one first frequency resource to one or more first communication nodes, CNs, for transmission of a respective pilot signal. The frequency shifts assigned to the DCSs of the active subset of DCSs are different from each other. The at least one first frequency resource and the frequency shifts are selected such that upon reflection of each pilot signal at each DCS of the active subset of DCSs, a reflected pilot signal having a frequency within a respective second frequency resource is obtained. The channel estimation circuitry is configured to obtain reception information from one or more second CNs and to perform a channel estimation on the basis thereof. The reception information is based on a reception of the reflected pilot signals by the one or more second CNs in the plurality of second frequency resources.

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