Análisis del desempeño de la OTFS para mejorar la flexibilidad de la arquitectura para la 6G [

2021

text (article)

Analítica

This article makes a study on the modulation in the orthogonal time-frequency space (OTFS) and its influence on the development of wireless networks, to achieve greater data transmission, flexibility, and reliability for the deployment of the sixth generation (6G), due to the benefits that this modulation can provide for environments with high-frequency dispersion. Offering the possibility of covering localized delays and Doppler degradations, converting the selective time-frequency (TF) channels into an invariant channel in the delay-Doppler domain (DD). This will be possible thanks to the fact that it is a new two-dimensional (2D) modulation scheme, where the information symbols are multiplexed in the DD domain instead of the TF domain, about traditional modulation techniques. Defining the security and privacy challenges that may arise for the new network architecture, applications, and enabling technologies, given the new requirements that will be established for 6G. The study is carried out to improve data transmission, as this is a key technology to address similar problems in future massive multiple-input and multiple-output (MIMO) systems, due to the ability provided by this modulation to transform a channel that randomly fades within the frequency-time slot on a non-random, non-fading stationary channel between the transmitter and receiver
This article makes a study on the modulation in the orthogonal time-frequency space (OTFS) and its influence on the development of wireless networks, to achieve greater data transmission, flexibility, and reliability for the deployment of the sixth generation (6G), due to the benefits that this modulation can provide for environments with high-frequency dispersion. Offering the possibility of covering localized delays and Doppler degradations, converting the selective time-frequency (TF) channels into an invariant channel in the delay-Doppler domain (DD). This will be possible thanks to the fact that it is a new two-dimensional (2D) modulation scheme, where the information symbols are multiplexed in the DD domain instead of the TF domain, about traditional modulation techniques. Defining the security and privacy challenges that may arise for the new network architecture, applications, and enabling technologies, given the new requirements that will be established for 6G. The study is carried out to improve data transmission, as this is a key technology to address similar problems in future massive multiple-input and multiple-output (MIMO) systems, due to the ability provided by this modulation to transform a channel that randomly fades within the frequency-time slot on a non-random, non-fading stationary channel between the transmitter and receiver

Título: Análisis del desempeño de la OTFS para mejorar la flexibilidad de la arquitectura para la 6G electronic resource].]

Editorial: 2021

Tipo Audiovisual: OTFS 6G TF retardo-Doppler MIMO Desarrollo de la Modulación OTFS OTFS 6G delay-Doppler TF MIMO Development of the OTFS Modulation

Documento fuente: Revista Científica de Ingeniería Electrónica, Automática y Comunicaciones, ISSN 1815-5928, Vol. 42, Nº. 3, 2021

Nota general: application/pdf

Restricciones de acceso: Open access content. Open access content star

Lengua: Spanish

Enlace a fuente de información: Revista Científica de Ingeniería Electrónica, Automática y Comunicaciones, ISSN 1815-5928, Vol. 42, Nº. 3, 2021
