

Evaluación de numerologías 5G para URLLC

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RESUMEN

In the last years, there is a growing trend to automate and integrate data exchange mechanisms in manufacturing processes, known as Industry 4.0. The fifth generation of mobile phone technologies (5G) is presented as one of the main options through its service categories. Ultra-Reliable and Low Latency Communications (URLLC) is the type of communication used by critical mechanisms, with a millisecond end-to-end delay and reduced probability of failure. In order to achieve the delay requirement, 5G defines new numerologies, with different SubCarrier Spacing (SCS) and cyclic prefix, together with mini-slots for a faster scheduling. The main challenge of this is to select the appropriate numerology according to radio conditions and packet size. In this paper, we evaluate the delay measured in the radio link, specifically, at PDCP (Packet Data Convergence Protocol) layer, for each numerology in LOS and NLOS conditions in order to assess which of them suits better URLLC delay requirements.

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