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## **Comparison of 5G candidate multi-carrier waveforms in a hardware testbed**

The Fifth Generation of mobile communications (5G) is being standardized in order to reach higher data rates and deploy new services. Orthogonal Frequency Division Multiplexing (OFDM) has several drawbacks. One of the most important ones is that it has high Out-of-Band Emissions (OBE) which forces us to leave wider guard bands. Reducing so the spectral efficiency. Many new waveforms have been proposed recently. A strong candidate is the Filtered-OFDM (f-OFDM) due to its similarity to the well known OFDM in order to keep the backward compatibility. However, the f-OFDM enhances the Inter-Symbol Interference (ISI). To combat its effect we need to enlarge the Cyclic Prefix (CP) which reduces the frame efficiency. Recently, we have proposed the masked-OFDM which is capable to fulfill the requirements of 5G and avoid the main issues of the proposed candidates. In this paper we are going to show a comparative of OFDM, f-OFDM and masked-OFDM candidates throughout some measurements.

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