

5G Modulation Options

5G Modulation must improve bandwidth efficiency and out of band emission in comparison to 4G.

Improved bandwidth efficiency is required to achieve higher data capacity targeted for 5G.

Improved out of band emission is also required to achieve more efficient spectrum utilization as well as reduced power consumption.

Out of band emission of analog blocks/components in the RF/MW front will be related to their linearity.

There are some proposed modulations which will need to be evaluated by 5G community, such as;

- Orthogonal Time, Frequency, and Space; aka OTFS by Cohere Technologies
- Filter Bank Multi Carrier, aka FBMC by Behrouz Farhang-Boroujeny, University of Utah