

**TITLE:**

OFDM FOR 4G WIRELESS COMMUNICATION SYSTEMS

**Group Members:**

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**Description:**

The history of wireless communication shows the attempts made to reduce a number of technologies to a single global standard which indeed gave the spark to design different generation systems e.g., 1G, 2G, 2.5G, 3G . The next generation of wireless system is 4G which is expected by 2010s. The major 4G infrastructures will consist of a set of various networks using IP (Internet Protocol) as a common protocol by which these systems will have broader bandwidth, higher data rate, smoother and quicker handoff, and focus on ensuring seamless service across a multitude of wireless systems and networks. In a short, Application adaptability and being highly dynamic are the main features of 4G services of interest to users.

**Context:**

The main technologies expected to be used in these systems are: WCDMA, MC-CDMA, and OFDM. The key concept is integrating the 4G capabilities with all of the existing mobile technology through advanced technologies. The dominant methods of access to this pool of information will be the mobile telephone, PDA and laptop for accessing the voice communication. 4G systems incorporate with 2G, 3G and digital broadcasting systems.

**Aims:**

- 1) Evolution of wireless communications
- 2) Brief description about the different generations (1G - 4G)
- 3) Advancements of 4G systems
- 4) Short Notes on proposed DSP techniques used in 4G
- 5) Study on OFDM technique in the wireless communication systems

**Group Responsibility:**

All the work will be equally distributed among the group members.