

## **An Overview of Adaptive Channel Equalization Techniques and Algorithms**

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**Abstract :** Wireless communication system has been proved as the best for any communication. However, there are some undesirable threats of a wireless communication channel on the information transmitted through it, such as attenuation, distortions, delays and phase shifts of the signals arriving at the receiver end which are caused by its band limited and dispersive nature. One of the threat is ISI (Inter Symbol Interference), which has been found as a great obstacle in high speed communication. Thus, there is a need to provide perfect and accurate technique to remove this effect to have an error free communication. Thus, different equalization techniques have been proposed in literature. This paper presents the equalization techniques followed by the concept of adaptive filter equalizer, its algorithms (LMS and RLS) and applications of adaptive equalization technique.

**Keywords :** channel equalization, adaptive equalizer, least mean square, recursive least square

**Conference Title :** ICCSP 2014 : International Conference on Communications and Signal Processing

**Conference Location :** Los Angeles, United States

**Conference Dates :** September 29-30, 2014