**Assignment 2**

**STF and LTF:** please use simulations to show the arrival detection performance of STF and synchronization performance of LTF.

1. Given a SNR level, you should try sufficient times to measure the arrival detection probability of STF. Please elaborate your detection method, and plot the curve of arrival detection probability versus the SNR level.
2. Given a SNR level, you should try sufficient times to measure the synchronization error distribution of LTF. Channel can be AWGN, multipath channel with noise is a plus. Please elaborate your detection method, and plot the curve of error variance versus the SNR level.

SIG: Please use one example to show how the L-SIG field is transformed to one OFDM symbol.