Project Proposal

Survey of FFT Algorithm IPs for OFDM

I plan to do a survey if various FFT algorithms and IP’s used for OFDM devices. OFDM is popular for wideband communications today. Low cost digital signal processing components are used to efficiently calculate FFT algorithm on receiver side and inverse FFT on sender side.

FFT algorithms used for mobile device units are essentially different from the regular FFT studied for floating point, since they are made for light-weight digital components and are mainly discrete integer-based. After doing a quick survey of some recent work on these algorithms, I plan to take up one of the most promising ones (after discussing with Professor Hu) and do its hardware implementation using SystemC. This implementation could be verified by writing a test bench and a C program for the algorithm, which could be treated as gold code.

Pankhuri

NOTE: I will keep on adding references to the proposal/future project reports based on literature survey done.