CHAPTER 6

6. CONCLUSION AND FUTURE SCOPE

6.1 CONCLUSION

The performance of the proposed LDPC coded - APSK modulated - Pulsed-OFDM system has been analyzed with the IEEE 802.15.3a (ECMA-368) standard. It is observed that performance of Multiband OFDM has been enhanced with less power and computation complexity.

- Achieves a BER of $10^{-6}$ at 13dB SNR.
- Improves the data rate to 960 Mbps with a code rate $\frac{3}{4}$
- Reduces the signal power up to 3dBm.
- Reduces the system complexity using 32 point FFT in Pulsed OFDM in place of 128 point FFT.
- Transmitter complexity is reduced by replacing the coder, puncturer and interleaver with a single block of LDPC coder.
- Coverage distance is increased by 1.5 m.
- Maximum capacity is achieved with less SNR of 6dB.

6.2 SUGGESTIONS FOR FUTURE WORK

- A cross-layer methodology may allow the performance improvement of IEEE 802.15.3a (ECMA-368) standard
- Performance may be enhanced further by using adaptive UWB modulation and coding techniques.
- The spectral efficiency may be increased by integrating with MIMO technology. These techniques may be implemented in prototypes and tested in UWB test bed to provide solution to the real time issues in the existing networks.