CHAPTER 9

CONCLUSION AND FUTURE SCOPE

9.1 CONCLUSION

RFID systems have been evolved to become the foundation for many vital services and complex applications. In this research a RFID based protection technique for the IPP of the SRAM-based FPGA IP cores is developed. This protection technique symmetrically protects the interest of both the IP providers and the IP buyers. The novelty in the proposed IPP technique lies in the fact that the contribution uses the following features: wireless authentication; wireless based remote activation; and wireless decryption key transfer to provide the required IPP for SRAM-based FPGA IP cores. Moreover, unlike the existing IPP techniques which are only theft detection techniques, the RFID based IPP schemes can prevent the unauthorized usage of the IP cores. Further the RFID technology provides an extra layer of security to the IP cores, when compared to the other existing FPGA IPP methods. The reconfiguration concept employed in the RRRAP and RRRAP-TBP schemes ensures that there is no significant performance degradation, due to the incorporation of the RFID tag security features in the reconfigurable IP cores. Also the realization of three types of reconfigurable RFID tag security features, makes it possible to incorporate the RFID based IPP schemes in any of the SRAM-based FPGA devices available in the XILINX family. The experimental evaluation of the RFID based IPP schemes using the developed hardware prototype is also quite encouraging.
9.2 SCOPE FOR FUTURE WORK

In this research, the overhead analyses associated with the RFID based IPP schemes is limited to area and speed. In future the power criteria may also be added in the analyses. Further, in the future other competent wireless technologies like the Bluetooth, Zigbee etc may also be considered for providing the efficient wireless protection to the reconfigurable FPGA IP cores.