Chapter 7

CONCLUSION AND FUTURE SCOPE

7.1 CONCLUSION

The analysis of the simulation results showed that if a feature like RECB is used to authenticate the node through response challenge mechanism then most of the trust worthy nodes can be easily identified. Also the low threshold of trust index as used in case of AODV-1 can provide a significant amount of requisite security. Increasing the threshold for the trust index beyond a limit is a mere luxury and doesn’t increase much of the security. Therefore it is advisable that a reasonable optimal trust threshold be chosen along with a light weight cryptographic mechanism like RECB. This will ensure a reasonable amount of security. The experimental studies showed that at very high concentration of malicious/selfish nodes most of the routes formed are of very low hop count and most of the times they are limited to the adjacent nodes only. It was further observed by the experimental studies that the regions with same area but with more of the perimeter require more resources in ad hoc networks to maintain same level of connectivity.

7.2 Future Scope

The proposed work relates to incorporating the security in the MANET environment by ensuring the trust worthiness of the intermediate nodes in the network. The proposed protocol was simulated on the computer system. The primary future scope of the proposed work can be to implement this protocol in real environment and to confirm the simulation results. The proposed protocol has been an extension to the conventional AODV protocol, the trust model and other proposed strategies can also be incorporated in the other routing protocols such as DSR, TORA etc. While performing the
experimental studies in the MATLAB environment impact of rectangular shaped obstacles was taken. The work can be extended by studying the impact of other types of shapes (irregular) can also be taken. In the zone based routing, different trust thresholds can be used with in and outside the clusters. It is also possible to use only RECB within cluster without using any trust computation.