



Fig 18: Full FSM coverage report

8. CONCLUSION

This design explains the concept of USB 3.0 LTSSM and their different states and sub-states. Since the data received by scoreboard same as the expected state of the design, therefore proposed design of LTSSM is functionally correct. As shown in figure 16 states are correctly matched. Figure 17 shows the different types of coverage report of the design i.e. toggle coverage, expression coverage, and functional coverage and toggle coverage. Figure 18 shows that all the states of proposed design is successfully covered.

9. ACKNOWLEDGMENTS

We would like to thank our professors Mr. Sunderasan C. and Asst. Prof Samarendranath Bhattacharya for being our advisor and guide. We are grateful to them for their continuous support and help throughout the development of the project. We would also like to thank our friends Ashwin K Rao and Ronak Tank who helped us during this project. Besides, we would like to thank our department School Of Information Science for providing us with a good environment and facilities to complete this project. At last

but not least gratitude goes to all of my friends who directly or indirectly helped me to complete this project.

REFERENCES

- [1] "Universal Serial Bus 3.0 Specification", Revision 1.0, November 12, 2008.
- [2] "Universal Serial Bus 2.0 Specification", Revision 1.0, March 13, 2006.
- [3] PCI Express Base Specification, Revision 2.0, December 2006
- [4] M. Aguilar, A. Veloz and M. Guzman, "Proposal of implementation of the" data link layer" of PCI-express", Proceedings of 1st International Conference on Electrical and Electronics Engineering, pp. 64, June 2004.
- [5] Ravi Budruk, Don Anderson & Tom Sanely, 2004. " PCI Express System Architecture" , Mindshare Inc., pp 419-434.
- [6] Chris Spears, "System Verilog for Design, "A Guide to Using System Verilog for Hardware Design and Modeling," Springer Second edition.
- [7] http://www.mindshare.com/files/resources/MindShare_Intro_to_USB_3.0.pdf.
- [8] Verilog HDL by Sameer Palnitkar.