VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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Project Report

On

"IMPLEMENTATION AND PERPORMANCE ANALYSIS OF ENCRYPTION ALGORITHM USING DSP BLOCK OF FPGA" SPONSORED BY KSCST, IISC BANGALORE

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In

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ABSTRACT

The rising growth of data communication technique and electronic transactions over the web has made system security to become the most important issue over the network. To provide modern security features public key cryptosystem is used. RSA algorithm is one of such cryptographic algorithm which includes the implementation of Public key cryptography and digital signature. In the age of information, security issues play a very crucial role. Security comes with three points confidentiality, integrity and availability. These three points will be implemented when we consider the most secured and an efficient cryptographic algorithm. An algorithm which is considered as the most efficient cryptographic algorithm is RSA Algorithm, only if the key length of it is 1024 bits and more.

Our project report summarizes the implementation of RSA algorithm using C language to implement on DSP Starter kit and also reporting the execution parameters like Execution time, Maximum file size and Memory mapping. Our project also includes RSA Algorithm in MATLAB and showing simulation results of RSA Algorithm in VHDL code using Xilinx 13.2 version.