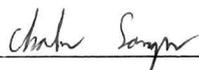


Chaloemphol Songpharm 2007: Design and Implementation of Video Compression on FPGA. Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering, Department of Electrical Engineering. Thesis Advisor: Assistant Professor Chugiat Garagate, Ph.D. 98 pages.

This thesis describe the design and implementation of Video Compression on FPGA. Due to the data size of video signal is high, which wide require large data storage. That is not convenient for data presentation or e-mail. Especially in Video signal communication, it was requires wide-bandwidth. So the design of video compression is able to decrease the demand of channel in narrow band data communication such as Video Telephony. Haar Wavelet Transform which is mathematical theory that is use for Huffman encoding will use for entropy of video signal compression.

In this thesis, VHDL is used for programming FPGA. FPGA is a programmable device that can be programed as any digital circuit. Nowadays the gate capacity of FPGA developed from thousands to millions available to support a complicated digital circuit. Also the speed which compare to a microprocessor, is also higher. From the experiment, in 91 Kbytes data compression, this method is 65% successful, the compression ratio is 2.94 and takes only 0.172 seconds that is quicker than PC Program which takes 0.6 seconds. Nowadays, the design of FPGA is populared and widely used for user in the future.



Student's signature



Thesis Advisor's signature

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