

C015794 : MAJOR ELECTRICAL ENGINEERING

KEY WORD : VIDEO COMPRESSION/DCT/ADPCM/ISDN/DSP

TEERAYUTH BOONCHOTE : DESIGN AND CONSTRUCTION OF A DATA COMPRESSION
EQUIPMENT FOR MOVING GRAY-SCALE IMAGE TRANSMISSION BY DCT-ADPCM METHOD.
THESIS ADVISOR : DR. BANDHIT ROJARAYANONT, 140 pp.ISBN 974-581-716-3

This thesis is a study, design and construction of a black and white video bandwidth compression equipment for transmission through 64 Kb/s channel. The method used in this thesis is hybrid 2D-DCT and ADPCM which performs an ADPCM in frequency domain after 2D-DCT and processed data will be encoded by huffman coding scheme to minimize data rate. The hardware constructed uses parallel processing technique to get enough high processing power. The testing result by internal loopback shows that this system can transmit and receive moving image above 5 frames per second.