

HomeWork 3 Report

Munish Mehra 50097875

Explanation for Quantization tables :

Video selected as CIF file has 300 frames and is news reporter video (submitted with project files). GOP taken is 30. This video is selected as it has very difference between frames only some part of frames changes rest remain the same. So code will be also be analysed on basis of how it captures very less change in frames.

Video created by own has 228 frames and GOP taken for this is 12(to avoid extra calculations). This video is different from video selected above is there is large motion in it and analysis will also done on how code behaves when there is larger difference in frames.

Resoluiton for both files are 352 by 288.

Explanation for Quantization :

Quantization settings are selected on the basis that larger the value of variables in table more the compression is but we will have to compromise on the quality then so there is basically trade of between quality and compression in this case.

So settings are chosen by taken above statement in mind.

Explanation for Algorithm Selection :

In this Homework I implemented TSS algorithm which is much faster than Full search algorithm which is also implemented in Homework. Their huge computation difference in bith algorithm which is around factor of 9. In full search the block comparisions needed to be done are 225 but in case of full search comparisions are reduced to 25.

TSS involves 3 step process which is fairly to implement and output results can be differentiated on the basis of algo.

PSNR Table:

	CIF-TSS	CIF-ES	Self-TSS	Self-ES
PSNR	36.3315	36.5746	26.4837	25.1474

Explanation on Results:

In case of ES algorithm takes much time to run and video produced when decoding faster moving video is clearer in this case while in case of TSS the time taken is much less but the video is not that clear in faster moving video.

But there is one thing noticed during decoded video play the corners are much visible in case of TSS than ES.

As we can also see the PSNR ratio of ES is smaller than TSS.