Team: Redskins

Proposal:

- Encrypt a video frame by frame, applying an encryption algorithm to each pixel in the frame.
- frames = 30 frames per second * length of video
- frames * pixels per Image = amount of pixels to calculate

Algorithm to parallelize:

- Chaotic sequence generator
- https://arxiv.org/pdf/1208.0999.pdf

Independent subtasks:

- For a 3 value 2D tensor (Matrix that each element is a 3 value vector) the idea is to apply the Chaotic sequence generator to each pixel (image size of 1080 x 1080 = 1,166,400 pixels)

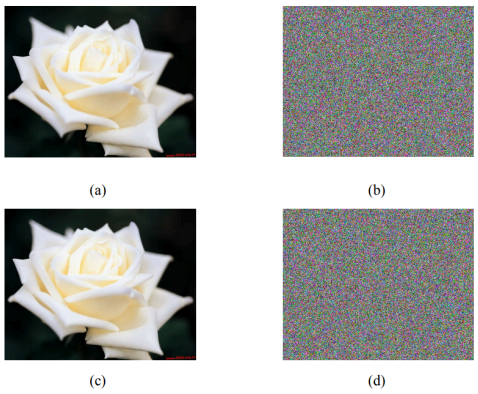

Fig. 8 JPEG images (a) original image, (b) encrypted image, (c) decrypted image and (d) decrypted image with wrong initial values

Technique:

- GPU