

Fault Identification and Removal Proof of Concept

This proof of concept only works with video files that are 400x400px. This is due to a limitation in the noise generation and a constant to identify the total number of pixels in the image.

A video file is read in, converted to greyscale using the ITU-R BT.709 standard. Then, noise is added to each frame (both permanent and transient noise).

After this, each frame undergoes fault correction and the result is compared to the original to determine the effectiveness of the reconstruction.

The video is also sampled to identify the locations of the permanent faults. These are reported to the user as well as identified how much of the frame is covered in permanent faults.

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