

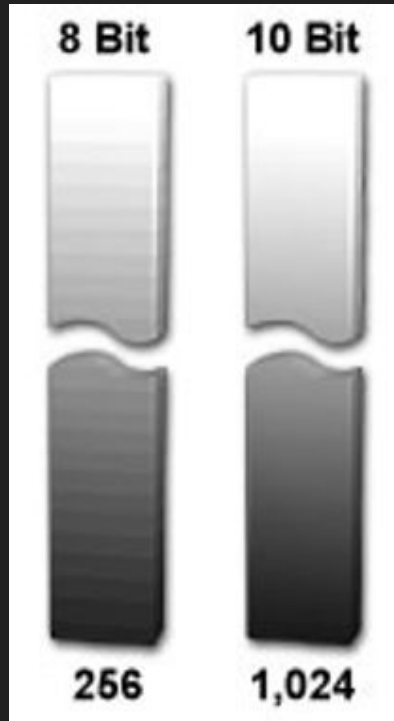
# Decoding Consumer Grade Video for Filmmaking

Optical-Flow-Informed Artifact Removal, Chroma  
Upsampling, and Bit Depth Interpolation

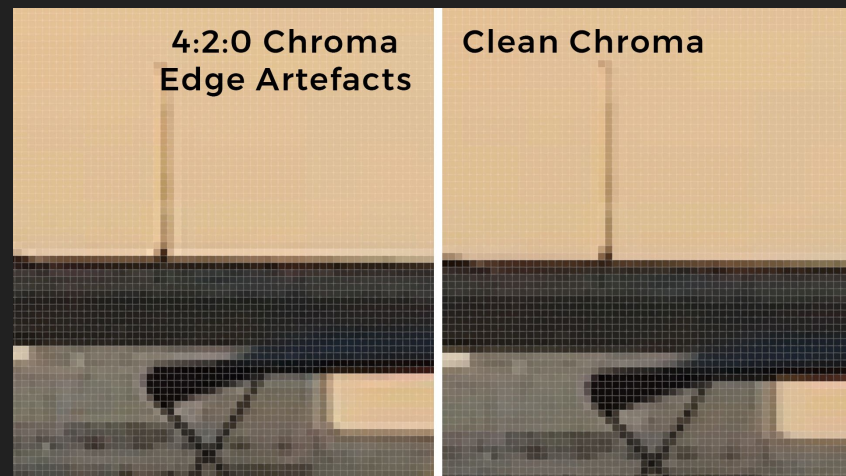
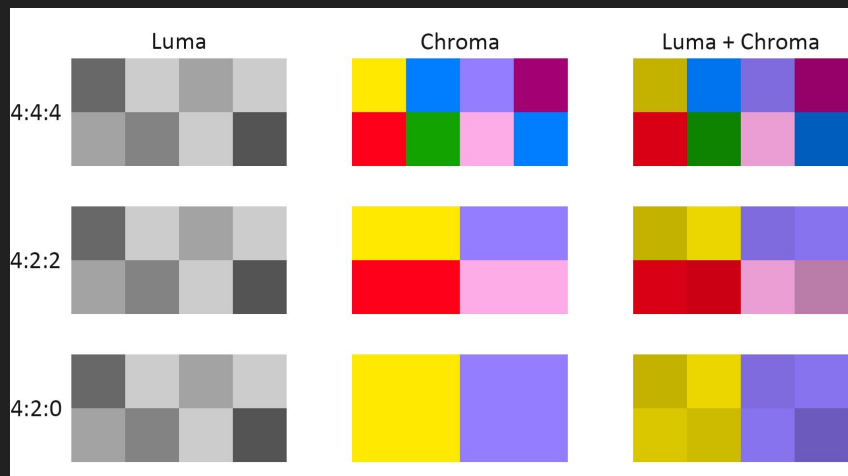
Frankie Eder

Problem

# Bit Depth



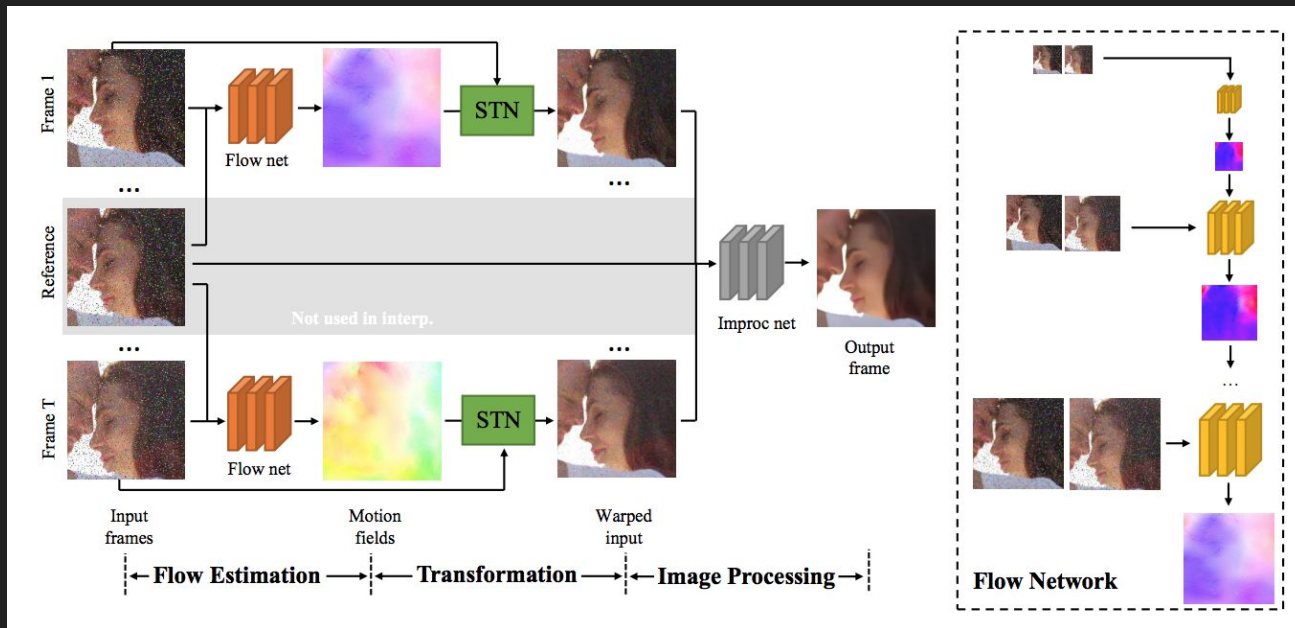
# Chroma Subsampling



# Compression Artifacts



# Model



“Video Enhancement with Task-Oriented Flow”, Xue et al.

# Dataset

- Professional-Grade
- 2TB -> ~80GB
- ProRes -> H.264
- ~25,500 samples

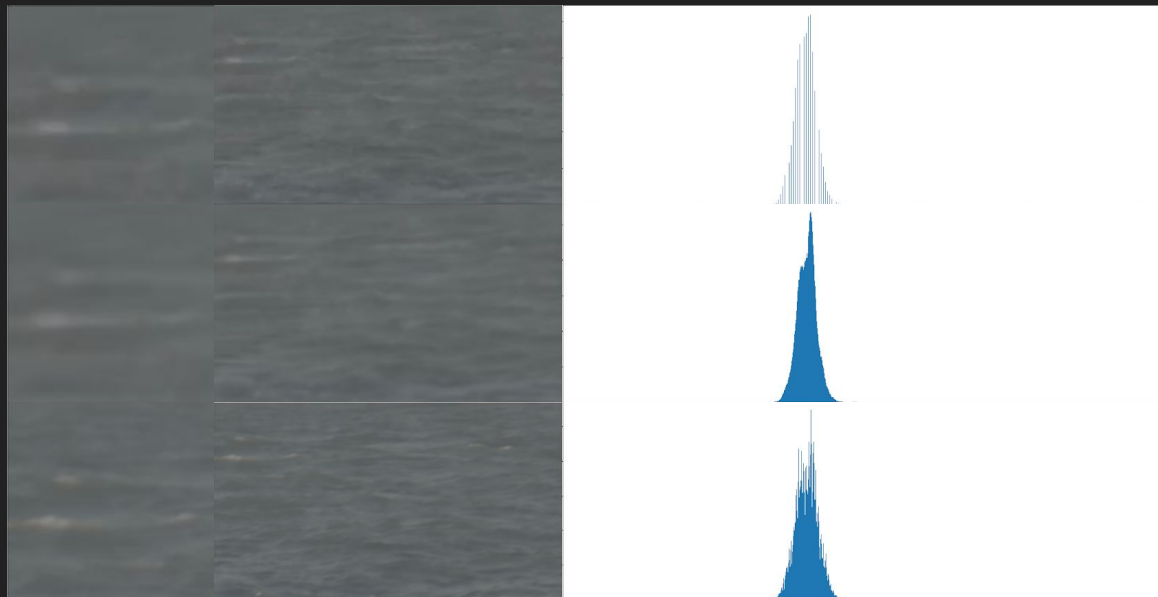


# Results

X

$\hat{Y}$

Y



**PSNR: 39.67**   **SSIM: .9726**