VCISR: Blind Single Image Super-Resolution with Video Compression Synthetic Data (Supplementary Material)

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In light of the space constraints imposed by the main paper, we have compressed the figures to meet the guidelines. This supplementary material is therefore included to facilitate a lossless visualization of the figures presented in the paper, which would enable a more accurate and detailed comparison between our proposed method and other existing works.

To provide a comprehensive understanding of the VCISR (Video Coding-Inspired Super-Resolution) system flow, we have also made the training and testing source code available on GitHub, as linked in the Abstract.

The high-quality visualizations are attached below for better comparison. Please zoom in for best view.

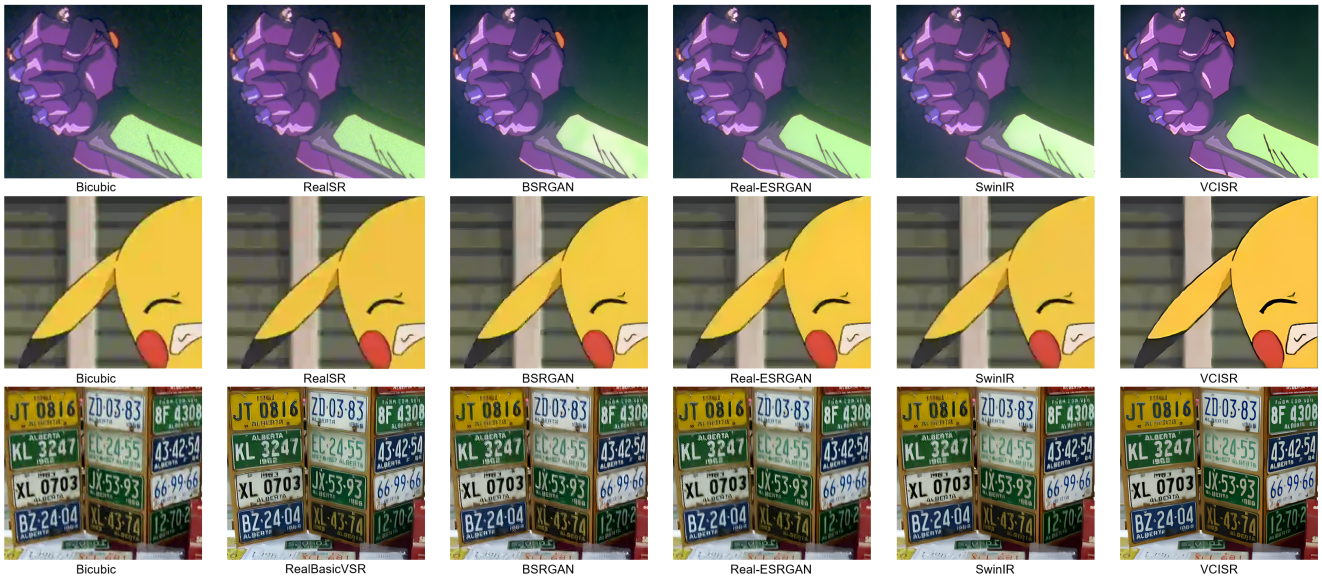

Figure 1. Qualitative comparisons of the bicubic-upsampled baseline, and RealSR, BSRGAN, Real-ESRGAN, SwinIR, RealBasicVSR, and our proposed VCISR super-resolved real-world images. The SR network trained with our proposed data synthesis and degradation flow can produce finer details and more visually appealing results.

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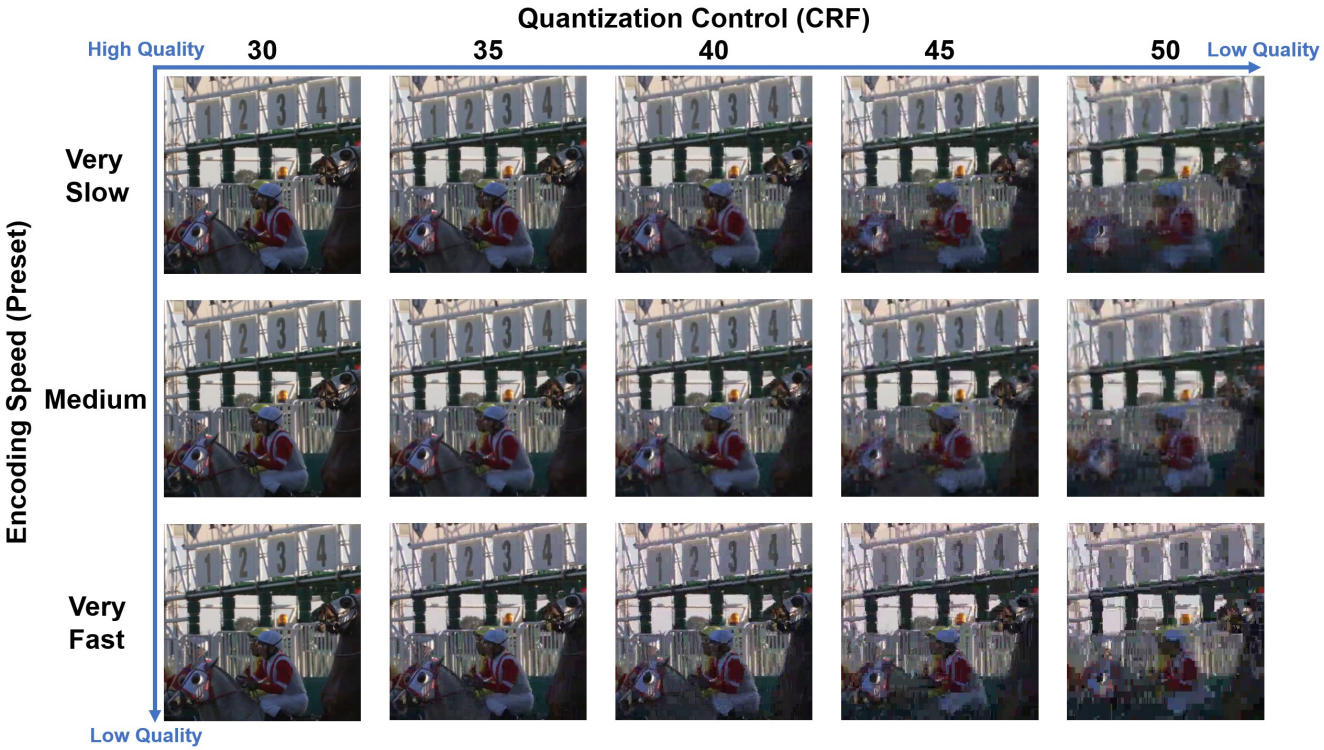

Figure 2. Encode Speed vs. Quantization Control. Under the same Quantization level (*CRF*), a faster encode speed leads to more high-frequency information (margins and details of objects) lost. This phenomenon becomes more severe for a higher *CRF* value. No other noise is introduced in this comparison.

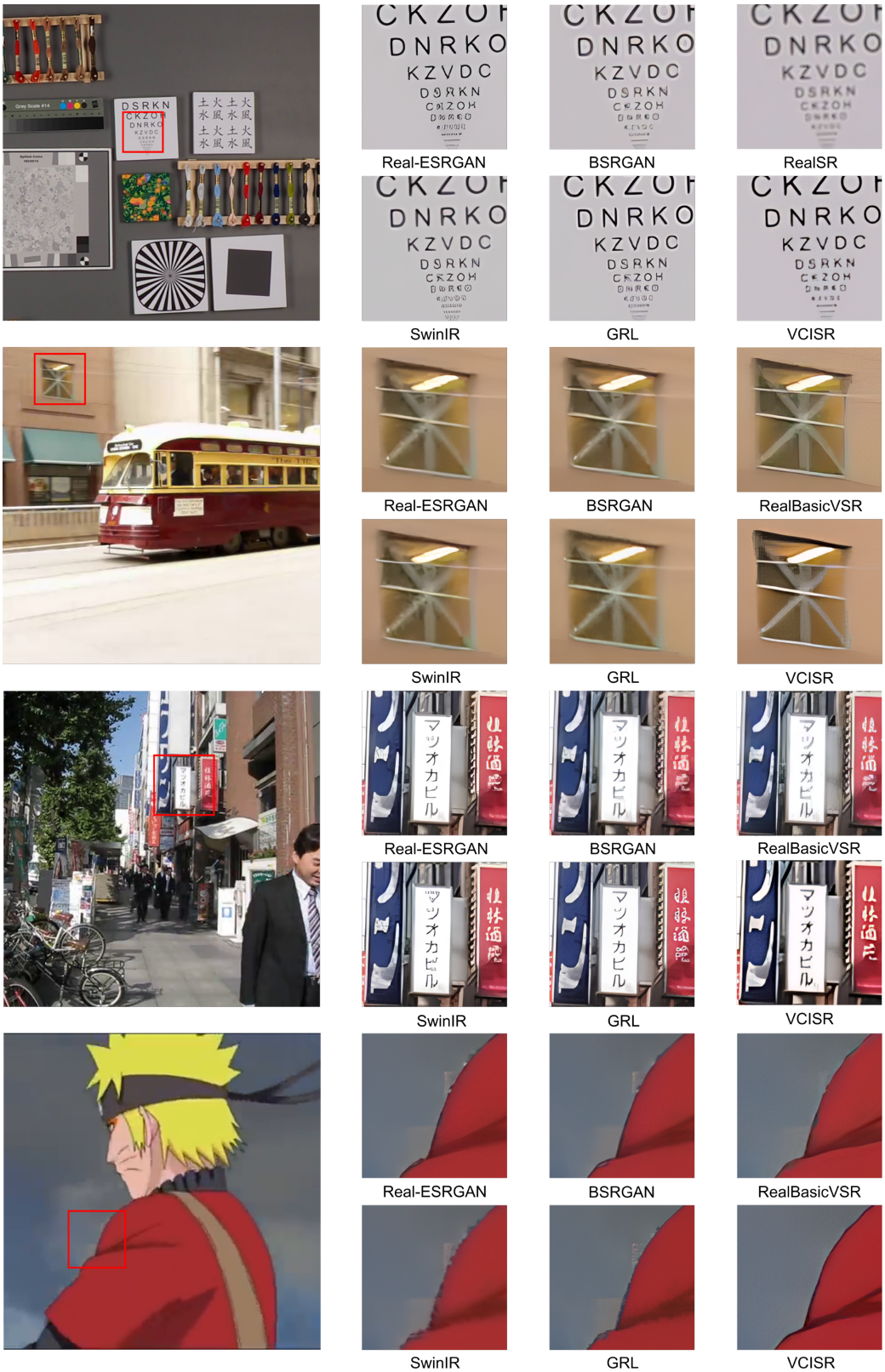

Figure 3. Qualitative comparisons of different methods on $\times 4$ super-resolved images in the DRealSR, VideoLQ, VideoLQ, and AVC datasets from top to bottom respectively.