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Video Bitrate Reduction Using Non-Realistic or Cartoonized Image Filtering.

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The following project is intended to offer a different option to share live media content using less networks resources like bandwidth, by applying image filtering techniques, specifically cartoonizer filter. Videos are getting more and more popular nowadays, and new ways to use them are increasing continuously. The mobile industry is among the more interested in the continuous improvement in the efficient use of network resources, as bandwidth and device power consumption. The method purposed in this study consists on applying non-realistic filters to the source image frames before passing them through encoders. The filter used is intended to make a cartoon effect to Simplify as most as possible the output frames by reducing the data to send while keeping an attractive quality of the content. An implementation was developed, using free, available Apple tools and developing frameworks to measure how much the bit-rate could be reduced with this technique during a live video chat session. Although the attractiveness of the cartoonized video obtained was as expected, the bit-rates measured from experiments were not as well as expected. Improvements in the implementation of the filtering process are needed in order to achieve the goal of video size reduction.