

A HaarPSI-Based Perceptual Similarity Index for Video Quality Assessment

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Abstract

Everyday we experience the increasing importance of images and videos in our daily interaction with the internet. A Cisco study even claims that, in 2016, IP video traffic accounted for 73 percent of all consumer internet traffic (see [1]). As in many cases the signals are targeted at a human viewer the correct assessment of distortions perceived by the human visual system is highly important.

The *Haar wavelet-based perceptual similarity index* (HaarPSI) is a full reference quality assessment algorithm for images which achieves state-of-the-art results on benchmark databases and is computationally effective.

In this talk, I will present a full reference video quality assessment algorithm that is based on the HaarPSI. For this, I will explain the basics of the HaarPSI algorithm in the first part of my talk and then present a generalization approach to videos. After that I will show numerical results on benchmark databases and finally give an outlook onto future improvements.

References

- [1] Cisco visual networking index: Forecast and methodology, 2016–2021. Technical report, Cisco Systems, Inc., 2017.

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