Distributed source coding of video - DTU Orbit (08/11/2017)

Distributed source coding of video

A foundation for distributed source coding was established in the classic papers of Slepian-Wolf (SW) [1] and Wyner-Ziv (WZ) [2]. This has provided a starting point for work on Distributed Video Coding (DVC), which exploits the source statistics at the decoder side offering shifting processing steps, conventionally performed at the video encoder side, to the decoder side. Emerging applications such as wireless visual sensor networks and wireless video surveillance all require lightweight video encoding with high coding efficiency and error-resilience. The video data of DVC schemes differ from the assumptions of SW and WZ distributed coding, e.g. by being correlated in time and nonstationary. Improving the efficiency of DVC coding is challenging. This paper presents some selected techniques to address the DVC challenges. Focus is put on pin-pointing how the decoder steps are modified to provide adaptive decoding in distributed coding.

General information

State: Published
Organisations: Department of Photonics Engineering, Coding and Visual Communication, Centre of Excellence for Silicon Photonics for Optical Communications, University of Erlangen-Nuremberg
Authors: Forchhammer, S. (Intern), Van Luong, H. (Ekstern)
Pages: 11-14
Publication date: 2015

Host publication information

Title of host publication: Proceedings of 8th Workshop on Information Theoretic Methods in Science and Engineering
Publisher: IEEE
Main Research Area: Technical/natural sciences
Conference: The Eighth Workshop on Information Theoretic Methods in Science and Engineering, Copenhagen, Denmark, 24/06/2015 - 24/06/2015
Electronic versions:

witmse2015proceedingsForchhammer.pdf
Source: PublicationPreSubmission
Source-ID: 118920276
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015