On Extrapolating Side Information in Distributed Video Coding

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Abstract :
The ongoing research in Distributed Video Coding (DVC) for low complexity encoding is trying to bridge the substantial performance gap to well known state-of-the-art coders. We introduce our true motion based extrapolation scheme and compare its performance to other state of the art systems in the field of DVC. The results of the extrapolation based approach display nearly the same performance as interpolation based ones. These results are also significantly better than the results from other state of the art extrapolation approaches. Furthermore we study the influence of the motion estimation part by investigating an interpolation approach, based on the same scheme. Finally, we study the losses incurred by using only past frames to represent the motion in the current one.