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Abstract: Wyner-Ziv (WZ) video coding is a particular case of distributed video coding, the recent video coding paradigm based on the Slepian-Wolf and Wyner-Ziv theorems that exploits the source correlation at the decoder and not at the encoder as in predictive video coding. Although many improvements have been done over the last years, the performance of the state-of-the-art WZ video codecs still did not reach the performance of state-of-the-art predictive video codecs, especially for high and complex motion video content. This is also true in terms of subjective image quality mainly because of a considerable amount of blocking artefacts present in the decoded WZ video frames. This paper proposes an adaptive deblocking filter to improve both the subjective and objective qualities of the WZ frames in a transform domain WZ video codec. The proposed filter is an adaptation of the advanced deblocking filter defined in the H.264/AVC (advanced video coding) standard to a WZ video codec. The results obtained confirm the subjective quality improvement and objective quality gains that can go up to 0.63 dB in the overall for sequences with high motion content when large group of pictures are used.

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