Abstract

With the introduction of diverse variety of display transmission and resolutions channel capacities, the Joint Video Team (JVT) has developed the H.264/SVC as an extension of
H.264/AVC. In fact, it provides a single compressed bit-stream with several scalability levels. Such a dataflow needs to be analyzed. Consequently, this paper is the first that decorticates and investigates the H.264/SVC bit-stream in order to highlight its contribution from one hand and to analyze deeply the different sub bit-stream modules in terms of size and importance on the other hand. Results of a first analysis shows that multicast coding using H.264/SVC standard provides an average bit rate reduction of 18% compared to simulcast. Second analysis demonstrates the importance of inter layer prediction. Then a third study illustrates two best combinations for two network bandwidth limitation. Finally, analysis of different subfields that constitute H.264/SVC bit stream shows the importance of the residual module which can form up to 72% of the total data output. Results also illustrate the significance of the inter-layer prediction. In fact, base layer information takes the lion's share of bit consumption mainly for B frame.

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Index Terms

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