Abstract

Recently more and more telecommunication systems are supporting different kinds of real-time transmission, video transmission being one of the most important application. In wireless environments, channel bandwidth and high packet loss rate are to main limitations in the way of delivering of a good quality video to the end user. Therefore, in applications such as video over wireless networks, a video codec should have ability to handle the erroneous situations of the channels well as the bandwidth limitations. H. 264/AVC is the newest international video coding standard, jointly developed by groups from ISO/IEC and ITUT. It has several error resilience techniques to make a video bit stream robust in the erroneous channels conditions and also
Analysis of Video Coding and Error Resilience Tools of H. 264/AVC in Wireless Environment

achieves a significant improvement in the compression efficiency. We analyze various error resilience schemes and innovative features of H. 264/AVC for real-time video streaming. The focus of the work is to test video coding and error resilience tools of H. 264/AVC in real-time environments over wireless networks.

References

- Sunil Kumar, Liyang Xu, Mrinal K. Mandal, Sethuraman Panchanathan, "Error resiliency schemes in H. 264/AVC standard."
- Thomas Wiegand, Gary J. Sullivan, Senior Member, IEEE, Gisle Bjøntegaard, and Ajay Luthra, "Overview of the H. 264/AVC Video Coding Standard."
- Jian-Wen Chen, Chao-Yang Kao, Youn-Long Lin, "Introduction to H. 264 Advanced Video Coding."
- "THE H. 264 ADVANCED VIDEO COMPRESSION STANDARD" by Iain E. Richardson
- M. Altaf, M. Fleury, M. Ghanbari and N. Qadri, "Error Resilience Performance for Wireless Conversational Services."
- ACM 5th International Mobile Multimedia Communications.
- M. M. Ghandi *, M. Ghanbari, "Layered H. 264 video transmission with hierarchical QAM."
- "Video Compression—From Concepts to the H. 264/AVC Standard," GARY J. SULLIVAN, SENIOR MEMBER, IEEE AND THOMAS WIEGAND

Index Terms

Computer Science

Wireless Communications
Keywords
Encoder  Decoder  Video Compression