交互多视点视频(Interactive Multiview Video)

Supported by NSFC, 863,CNGI

Introduction

交互多视点视频（Interactive Multiview Video）：

The next generation multimedia applications will be interactive and realistic based on network. In one hand, people want to be more active and participant to meet the requirement of personality, in the other hand, they hope to get realistic experience while viewing the scene or interacting with other people. This project is proposed to resolve the represent, interaction, codec and transmission of 3D interactive video, and implement the interactive network multimedia application in the near future with the stereo video and multi-view video technology putting into practicability.

Objects:

- **Viewpoint selecting and multi-view 3D image synthesizing**
- **High efficiency multi-view video codec algorithms**
- **Streaming technology for Multi-view video**
- **A prototype of multi-view video streaming system**

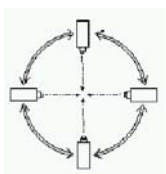
Details:

- Multiview video synthesis

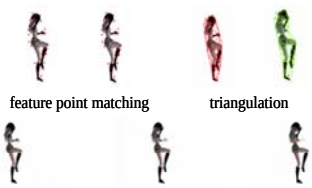
  Motion vector based video objects segmentation and tracking

  Feature based incomplete 3D structure video synthesizing

  Layered depth images based multiview video rendering



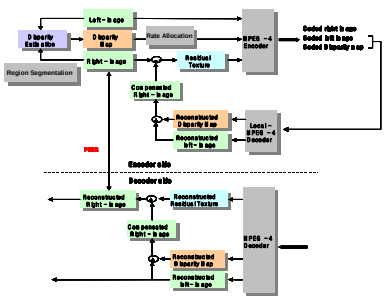
Semi-immersive MultiView display environment



virtual video synthesizing by interpolation

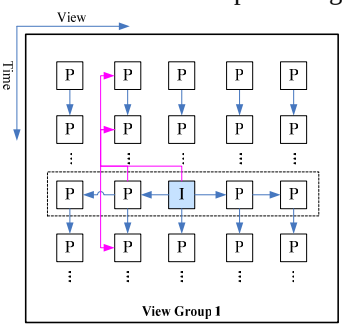
- High efficiency Multiview Video Coding

  Disparity based multiview video coding

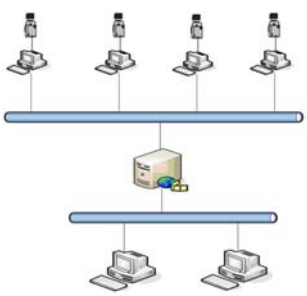


Multiview Video Coding with Region based Rate Allocation

View dependent multiview video predicting codec



- Interactive multiview video streaming



View switch

Time frozen moment