

Public Abstract

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Title:**TRANSCODING TRANSPORT STREAM MPEG2**

Video conferencing provides students with the opportunity to remotely attend classes and participate in a 2-way communication with the teacher. Nuclear Science and Engineering Institute at the University of Missouri – Columbia has been using VBrick to facilitate distant learning through video conferencing. Multicast protocol is used to deliver DVD quality MPEG2 video to audience during class room sessions. This thesis looks into the possibilities of delivering these lectures live to audience that do not have connectivity to Internet2 and the problem with transcoding transport stream MPEG2 (generated by the VBrick) to lower bit-rate is addressed. A framework to transcode transport stream MPEG2 into other formats like Windows Media Video, H.264 and Real Video is proposed. Existing tools like Windows Media Encoder and Real Producer is used in this framework. A GUI application to facilitate the use of this framework is designed using Qt. In addition, the comparison of the transcoded video is made by measuring its Peak Signal to Noise Ratio and the compression statistics.