

### 一种面向视频传输的SVC码流排序方法

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## A Sorting Approach of SVC Streaming for Video Transmission

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摘要

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**摘要** 该文提出了一种适用于传输的可分级视频编码码流的排序方法。该方法通过对码流的合理选择和对失真的高效近似计算, 优先传输率失真性能较好的可分级码流, 从而提高了重建图像的质量。该文建立了用于划分复合可分级码流的状态模型, 推导出了可分级码流失真的近似计算公式, 在一定带宽限制下, 采用率失真优化的方法对可分级码流进行排序。仿真结果表明该方法能提高视频流重建图像质量。

**关键词:** 视频传输 可分级视频编码 率失真理论 码流优先级

**Abstract:** A sorting approach for Scalable Video Coding (SVC) streaming is proposed for video transmission. By the accurate states selection and the effective approximate distortion calculation of the fully scalable video streaming, the proposed approach can priority transmit the scalable streaming owning better rate-distortion performance, which improves effectively the reconstructed quality of video streaming. A state model is built to select layered streaming from the fully scalable video streaming, and the distortion approximate formula of the scalable streaming is deduced. The scalable streaming is reordered by employing the rate-distortion optimization under certain bandwidth limitations. The simulation results show that the proposed approach can improve the reconstructed quality of video streaming.

**Keywords:** Video transmission Scalable Video Coding (SVC) Rate-distortion theory Bit streams priority

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