Network Coding Aided Collaborative Real-Time Scalable Video Transmission in D2D Communications

ABSTRACT

- In this paper, we study how to improve the quality of real-time scalable video services by efficiently scheduling coding aided collaborative transmissions.
- We first formulate the problem of optimal collaborative transmission scheduling that determines the optimal transmitting sequence and coding pattern at each transmitting device, which is shown to be NP-hard.
- To address this problem, we propose a new weight function for measuring the quality of a coding pattern by considering packet recovery gain and potential video decoding gain at receivers.

EXISTING SYSTEM

- There has been an increasing demand for providing real-time video streaming services in the next-generation cellular networks.
- However, most existing work in this area had not considered the issue of how to schedule such coding aided collaborative transmissions effectively for supporting real-time scalable video applications in such environment.

PROPOSED SYSTEM

- Based on this new weight function, we propose a low complexity centralized algorithm using global state information and an efficient distributed mechanism supporting localized operations in dynamic environment.
- Coding aided collaborative real-time scalable video transmission has significant advantages in improving the PSNR performance.
- In this paper, we investigated how to improve thequality of real-time scalable video services by effectively scheduling the coding aided collaborative transmission in D2D networks.

HARDWARE REQUIREMENTS

- Processor - Intel core i3
- RAM - 2B
- Hard Disk - 20 GB

SOFTWARE REQUIREMENTS

- Operating System : LINUX
- Tool : Network Simulator-2
- Front End : OTCL (Object Oriented Tool Command Language)

REFERENCE

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