

**Raptor Q-Based Efficient  
Multimedia Transmission over  
Cooperative Cellular Cognitive  
Radio Networks**

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# ABSTRACT

- In this paper, we investigate reliable downlink video transmission in underlay cellular cognitive radio networks by means of cooperative diversity.
- We use RaptorQ code as the Application Layer Forward Error Correction scheme to combat packet loss arising from primary user interference and other channel conditions such as channel fading.
- For implementing cooperative diversity, we select the best relay based on the ability of successful decoding using RaptorQ and the value of signal-to-interference-plus-noise ratio at the destination node.

# EXISTING SYSTEM

- Accommodating the fast-growing multimedia traffic demands at low cost is critical to ensure the future competitiveness of cellular networks.
- Cognitive Radio emerges as a key technology to enhance radio spectrum utilization and provides an effective solution to meet critical spectrum demands for future mobile multimedia traffics.

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# PROPOSED SYSTEM

- Moreover, for efficient primary user channel utilization, the selected relay performs merging of the encoding coefficients before forwarding to the destination.
- We evaluate the performance of the proposed framework under various time sharing scenarios between the direct and best indirect transmission links in terms of decoding overhead, probability of decoding failure, and peak signal-to-noise ratio of the received videos.

# HARDWARE REQUIREMENTS

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

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# SOFTWARE REQUIREMENTS

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

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# REFERENCE

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