

Research on some video compression techniques - Application in online meetings, training, and staff development in the education sector of Quang Ninh province

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Abstract: This study investigates advanced video compression techniques and their application to online meetings, training, and professional development for educational staff in Quang Ninh province. Given the increasing demand for high-quality, real-time video communication in the education sector, efficient compression is critical to overcoming bandwidth limitations and ensuring smooth, accessible remote collaboration. The research analyzes key compression standards, including H.264, H.265, and emerging neural network-based methods, evaluating their performance in terms of bitrate reduction, latency, and visual fidelity. A practical system is designed and implemented specifically for the provincial education department's online briefing and training workflows. Experimental results demonstrate that optimized compression parameters significantly reduce bandwidth consumption while maintaining sufficient video quality for instructional and administrative purposes. The findings provide a cost-effective technical solution for enhancing the reliability and scalability of remote training and meetings, supporting the digital transformation of educational management in Quang Ninh.

Keywords: Video compression, online meetings, staff training, Quang Ninh education.