



REAL-TIME VIDEO TRANSMISSION PROTOCOL FOR WIRELESS SENSOR NETWORKS

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Book Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | Performance Evaluation of Existing Transport Protocols and Introduction of VSCP (Video Sensor Communication Protocol) | Many WSN applications require efficient multimedia communication capabilities. However, the existing communication protocols in the literature do not address the multimedia communication challenges in WSN. It has been shown that the existing proposals achieve very poor performance in terms of large set of metrics such as packet delivery rate, end-to-end packet delay, bandwidth and energy efficiency, frame PSNR, delivery probability, end-to-end delay and jitter. Based on these results, an energy-efficient real-time and reliable video sensor communication protocol (VSCP) is introduced. VSCP estimates video quality perceived by sink and aims to maintain the overall reliability at a given level with minimum energy expenditure. Source data rates are adjusted in a quality adaptable manner according to the network conditions and the overall reliability computed by sink. QSC encoding technique is used to produce a nearly constant quality video at a given maximum data rate during adjustment of source data rates. Performance evaluations show that VSCP significantly outperforms the existing proposals in terms of multimedia communication performance metrics in WSN. | Format: Paperback | Language/Sprache: english | 76...



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