Abstract

In recent years most of the applications of WSNs are supported with array of image/video sensors to enhance the performance. Multiple coexisting cameras deployed can provide different views of the same area or target which enhances the view of scene of interest. The redundancy introduced by multiple, possibly heterogeneous, overlapped sensors can provide enhanced understanding and monitoring of the environment. But individual transmission of these images of same scene of interest from multiple coexisting cameras unnecessarily consumes energy and degraded image quality. Hence to overcome this problem we proposed a protocol "Energy Efficient Prioritized Multipath QoS Routing (EEPMQR)" which optimally transmits image over wireless sensor network. Multiple paths are built first and then are scored using path conditions based on availability of resources such as free buffer size, energy, hop-count and packet loss along the paths. The proposed scheme is compared with non-optimal scheme which doesn't calculate the non-overlapping regions and overlapping regions of the original images. Simulation results have demonstrated the effectiveness of the proposed scheme in terms of better image quality and less packet loss across the image region compared to non-optimal scheme using various metrics.
References

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Index Terms

Computer Science Wireless

Keywords

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