CHAPTER 54

TECHNOLOGY
COMPUTER SCIENCE

Doctoral Theses

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Design and Analysis of Sensor Network Architecture with New Features
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Abstract

Studies the existing architecture of wireless sensor netowrks and came up with its limitations. Prososes a nwe network architecture, which has a set of indispensable layers specially tailored to the characteristics of sensor networks. The layers of the proposed architecture are Physical layer with power management, robust and self-stabilized MAC layer, Application independent data aggregation, Differentiated packet scheduling, real time routing layer, transport layer and application layer.

Contents

1. Introduction. 2. proposed wireless sensor network architecture. 3. Robust and real time data delivery mechanism (RRTD). 4. Reliable robust and real-time communication protocol (RRRT). 5. Real time scheduling 6. Real time communication capacity. 7. Lifetime maxmizing tree construction techniques. 8. Application independent data aggregation. 9. quality of service on-demand power aware routing algorithm. 10. Conclusion and furture work. Bibliography.