

# Extending the Internet to Low power and Lossy Networks (IP+SN 2011)

April 11th 2011

Chicago, Illinois

Co-located with CPS Week 2011

<http://hinrg.cs.jhu.edu/ip+sn2011/>

For nearly a decade, wireless sensor network research and development largely assumed that the Internet architecture was ill-suited for sensor networks. Many in the field argued that the Internet protocols were impractical for the resource constrained devices that were being embedded in the physical world; that the end-to-end architecture was inappropriate for the localized algorithms and in-network processing required to achieve robustness and scalability; and that an architecture designed to accommodate a wide range of applications was unnecessary as sensor networks would be tailored to specific target applications. In the past couple years, the Smart Grid push has placed a pressing need to deploy networks that have an unprecedented scale when compared to existing IP networks (e.g., 10 million end points within a single network targeted by utility manufacturers), allow multi-vendor interoperability, and utilize low-cost communication devices. Sensor networks are considered a natural fit for Smart Grid applications such as Automated Metering Infrastructure (AMI) and Home Area Networking (HAN). To address this need, the Internet Engineering Task Force (IETF) is working with researchers and practitioners to standardize protocols, such as 6LoWPAN and ROLL, for constrained networks. This workshop solicits articles that describe early experiences with such standards, papers that describe sensor network applications built on top of these standards, as well as research proposals regarding how to extend the standards.

## Topics of Interest

Authors are invited to submit papers for presentation at the workshop. The topics of interest include theoretical and empirical work in, but not limited to:

- Experience with 6LoWPAN/RPL implementations
- Experience with IP-based sensornet deployments
- Interoperability results
- Applications of IP-based sensor networks
- Application-level protocols (e.g., work related to the IETF CoRE WG on CoAP)
- End-to-end, IP-based architectures that include sensor networks
- Experience with IP over low-power, duty cycled networks

## Important Dates

- Abstract Submission Deadline: **Feb 14th**
- Paper Submission Deadline: **Feb 28th**
- Acceptance Notification: **March 18th**
- Camera Ready Due: **April 4th**

## Workshop Organization

### Co-Chairs

- Andreas Terzis, *Johns Hopkins University*
- Jonathan Hui, *Cisco Systems, Inc.*

### Technical Program Committee

- Fred Baker, *Cisco Systems, Inc.*
- Carsten Bormann, *Center for Computing Technology (TZI)*
- Adam Dunkels, *SICS*
- Vipul Gupta, *Oracle*
- Cullen Jennings, *Cisco Systems, Inc.*
- Andreas Terzis, *Johns Hopkins University*
- Dominique Barthel, *France Telecom*
- Thomas Heide Clausen, *Ecole Polytechnique*
- Omprakash Gnawali, *Stanford*
- Jonathan Hui, *Cisco Systems, Inc.*
- Philip Levis, *Stanford*
- JP Vasseur, *Cisco Systems, Inc.*