LCN 2008
The 33rd Annual IEEE Conference on Local Computer Networks (LCN)
Montreal, Canada
October 14-17, 2008

Conference Web site:
http://www.ieeeclc.org

Conference supporters:
BBN Technologies

Keynote speakers:
Chip Elliott, BBN, USA
Raouf Boutaba, Univ. of Waterloo, Canada

Monday, October 13 | 5:00 PM Registration and reception

Tuesday, October 14 | Workshops
7:30 - 8:30 Registration
8:30 – 12:30 Half Day - Third IEEE LCN Workshop on Network Measurements (WNM)
9:00 – 4:00 Full Day - Second IEEE LCN Workshop On User MObility and VEhicular Networks (ON-MOVE)
8:45 – 5:00 Full Day - Eighth IEEE International Workshop on Wireless Local Networks (WLN)

Wednesday, October 15 | LCN 2008
7:30 - 8:30 Registration
8:30 - 8:45 Welcome from LCN general chair and program co-chairs
8:45 - 9:00 Welcome from the local host
9:00 - 10:00 Keynote #1: Chip Elliott (title: “GENI: Overview & Plans”)
10:00 - 10:15 Talk: Ken Christensen (title: "The Ethernet Alliance University Program: Bridging Academia and the Ethernet Industry")
10:15 - 10:45 Coffee break
10:45 - 12:25 Session #1 (tracks A, B, and C)
   A – Peer-to-Peer Systems I
   B – Mesh and Optical Networks
   C – Sensor Networks
12:25 - 1:45 Lunch break
1:45 - 3:25 Session #2 (tracks A, B, and C)
   A – Energy Awareness
   B – Routing
   C – Implementation and Performance Analysis
3:25 - 4:00 Coffee break
4:00 – 5:15 Poster session
6:30 Social event

Thursday, October 16 | LCN 2008
8:00 - 9:00 Registration
9:00 - 10:00 Keynote #2: Raouf Boutaba (title: “Distributed Search Revisited: Resolving the conflict of Flexibility and Efficiency”)
10:00 - 10:30 Coffee break
10:30 - 12:35 Session #3 (tracks A, B, and C)
   A – Security I
   B – Performance Assessment
   C – Link Layer
12:35 - 1:45 Lunch break
1:45 - 3:25 Session #4 (tracks A, B, and C)
   A – Security II
   B – Optical Networks
   C – IEEE 802.11 Systems
3:25 - 3:45 Coffee break
3:45 – 5:50 Session #5 (tracks A, B, and C)
   A – Mobility
   B – Peer-to-Peer Systems II
   C – Design Optimization and Resource Management

Friday, October 17 | Workshops
7:30 - 8:30 Registration
9:00 - 3:00 Full Day - Fourth IEEE LCN Workshop on Network Security (WNS)
8:30 - 5:15 Full Day - Fourth IEEE International Workshop on Performance and Management of Wireless and Mobile Networks (P2MNET)
8:45 - 5:30 Full Day - Third IEEE International Workshop on Practical Issues in Building Sensor Network Applications (SenseApp)
Session #1 (Tracks A, B, and C)

Session 1A: Peer-to-Peer Systems I (Session Chair: Burkhard Stiller)

Cooperative Caching: The Case for P2P Traffic
Mohamed Hefeeda and Behrooz Noorizadeh

Experimental Comparison of Peer-to-Peer Streaming Overlays: An Application Perspective
Jeffrey Seibert, David Zage, Sonia Fahmy, and Cristina Nita-Rotaru

Range Queries and Load Balancing in a Hierarchically Structured P2P System
Simon Rieche, Bui Vinh, and Klaus Wehrle

Constructing Low-Latency Overlay Networks: Tree vs. Mesh Algorithms
Knut-Helge Vik, Pål Halvorsen, Carsten Griwodz

Session 1B: Mesh and Optical Networks (Session Chair: Tim Strayer)

IP Address Assignment in Wireless Mesh Networks
Alexander Zimmermann, Volker Böhme, and Arnd Hannemann

An Efficient Cooperation of On-demand and Proactive Modes in Hybrid Wireless Mesh Protocol
Won-Ju Yoon, Sang-Hwa Chung, Seong-Joon Lee, and Yun-Sung Lee

CORE: Centrally Optimized Routing Extensions for the IEEE 802.16 MeSH Mode
Parag Mogre, Nico d’Heureuse, Matthias Hollick, and Ralf Steinmetz

Reducing network cost of many-to-many communication in unidirectional WDM rings with network coding
Long Long and Ahmed Kamal

Session 1C: Sensor Networks (Session Chair: Damla Turgut)

Reconstructing the Plenoptic Function from Wireless Multimedia Sensor Networks
Azzedine Boukerche, Jing Feng, Richard Pazzi, Ying Huang, and Yan Du

Improving Information Availability in Storage-Centric Sensor Networks
Nam Nguyen, Sudha Krishnamurthy, Peng Xie, and Douglas Jones

Delay constrained placement of mobile data collectors in underwater acoustic sensor networks
Waleed Alsalih, Hossam Hassanein, and Selim Akl

Path Guiding Mechanisms for a Mobile Anchor Improving or Balancing Location Accuracies of Static Sensors in WSNs
Chih-Yung Chang, Chao-Tsun Chang, Sheng-Wen Chang, Yu-Chieh Chen, and Ming-Hsien Li

Session #2 (Tracks A, B, and C)

Session 2A: Energy Awareness (Session Chair: Gary Kessler)

Efficient Power Management for Wireless Sensor Networks: a Data-Driven Approach
Mingjian Tang, Jinli Cao, and Xiaohua Jia

Neighborhood Aware Power Saving Mechanisms for ad hoc networks
Abdelfettah Belghith and Wafa Akkari

Energy Efficient Ethernet Encodings
Yanpei Chen, Tracy Wang, and Randy H. Katz
Energy-Saving Scheduling in IEEE 802.16e Networks
Chia-Yen Lin and Hsi-Lu Chao

Session 2B: Routing (Session Chair: Adel Ben Mnaouer)

Scalability Considerations for an Anomaly-free iBGP Routing
Uli Bornhauser, Peter Martini, and Martin Horneffer

Spherical Coordinate Routing for 3D Wireless Ad-hoc and Sensor Networks
Shao Tao, Akkihebbal L. Ananda, and Mun Choon Chan

A New Approach for the Construction of Multiple Multicast Trees Using Multiple Description Video for Wireless Ad Hoc Networks
Osamah Badarneh, Michel Kadoch, and Ahmed Elhakeem

Single-Path Routing for Life Time Maximization in Multi-hop Wireless Networks
Yigal Bejerano, Seung-Jae Han, Keon-Taek Lee, and Amit Kumar

Session 2C: Implementation and Performance Analysis (Session Chair: Suleyman Uludag)

DiCAP: Distributed Packet Capturing Architecture for High-Speed Network Links
Cristian Morariu and Burkhard Stiller

TCP mechanisms for improving the user experience for time-dependent thin-stream applications
Andreas Petlund, Kristian Evensen, Carsten Griwodz, and Pål Halvorsen

An Analysis on Error Servers for Stochastic Network Calculus
Jing Xie and Yuming Jiang

Signal Strength Sensitivity and Its Effects on Routing in Maritime Wireless Networks
Chee Wei Ang and Wen Su

Poster Session

A Distributed Mobility Management Scheme for Large-Scale Mobile Networks
Keita Kawano, Kazuhiko Kinoshita, and Nariyoshi Yamai

Resource assignment for adaptively modulated interconnected WLANs
Amiotosh Ghosh and Ahmed Elhakeem

Analysis and Evaluation of a Scalable QoS Device for Broadband Access to Multimedia Services
Wenyu Zhu, Thomas Dreibholz, and Erwin Rathgeb

P2P Directory Search: Signature Array Hash Table
Ken Christensen and Miguel Jimeno

Managing Energy Use in a Network with a New SNMP Power State MIB
Ken Christensen and Francisco Blanquicet

Channel Assignment and Scheduling in Multichannel Wireless Sensor Networks
Yuanyuan Zeng, Naixue Xiong, and Tai-hoon Kim

Graph Theory Based Aggregation of Sensor Readings in Wireless Sensor Networks
Tatiana Bokareva, Nirupama Bulusu, and Sanjay Jha

Probabilistic Packet Dropping for Load Control in Multihop Wireless Networks
Daewon Jung, and Hyuk Lim

Reputation based trust management using TCG in Mobile Ad-Hoc networks (RTA)
Makan Pourzandi, Segla Kpodjedo, and Samuel Pierre
Cross-Layer Analysis and Enhancement of Fast MIPv6 in the Real IEEE 802.11 based WLANs
Yilin Song and Yi Sun

TCP Computational Energy Cost within Wireless Mobile Ad Hoc Network
Alaa Seddik-Ghaleb, Yacine Ghamri-Doudane, and Sidi-Mohammed Senouci

Mitigate DDoS Attack Using TTL Buckets and Host Threatening Index
Xi Chen, Jianhua Yang, and Gaogang Xie

On Selfish Behavior using Asymmetric Carrier Sensing in IEEE 802.11 Wireless Networks
Eunho Yang, Jaehyuk Choi, and Sunglim Lee

End-to-end Diagnosis of QoS Violations with Neural Network
Lifeng Zhou, Lei Chen, Hung Keng, and Lek Heng Ngoh

A Cross-Domain Framework for Coordinated End-to-End QoS Adaptation
Lifeng Zhou, Hung Keng Pung, and Lek Heng Ngoh

A CGA Based IP Source Address Authentication Method in IPv6 Access Network
Guang Yao and Jun Bi

Performance of Opportunistic Scheduling Schemes for MIMO-OFDM Wireless LANs
Mikael Gidlund and Per Ahag

A Graph Theoretic Approach in Achieving Robust Peer-to-Peer Networking Paradigm
Hosein Shafiee, Foozhan Hoseini, Ahmad Khonsari, and Mohamed Ould-Khaoua

Queue-based Contention Control for Congested Multihop Wireless Networks
Jaeseon Hwang and Hyuk Lim

Self-adjusting Scheme for High Speed Routers
Nizar Benneji and Adel Bouhoula

Optimizing router locations for minimum-energy wireless networks
Sungsoon Cho and John Hayes

TabooQMR: A Taboo-based search algorithm improving Mamcra for Multicast Routing
Adel Ben Mnaouer, Abdelfettah Belghith, Naouel Ben Ali, and Miklos Molnar

Short-term QoS Provisioning in MPLS Ingress Nodes
Masoomeh Torabzadeh and Wessam Ajib

A Forwarding Protocol with Relay Acknowledgement for Vehicular Ad-Hoc Networks
Inhyeok Jang, Wooyeol Choi, and Hyuk Lim

Connectivity-Driven Flow Recovery for Time-Sensitive Transport Services
Michio Honda, Jin Jakazawa, Yoshifumi Nishida, and Hideyuki Tokuda

A Proactive Secure Routing Algorithm Defense against Node Compromise in Wireless Sensor Networks
Xiangqian Chen, Kia Makki, Kang Yen, Niki Pissinou, and Zhihua Liu

Two Dynamic Restoration Schemes for Survivable Traffic Grooming in WDM Networks
Huaxiong Yao, Yan Yang, and Zongkai Yang

Distributed Channel Assignments in Wireless Mesh Networks with Guaranteed Connectivity
Suleyman Uludag and Kemal Akkaya

A Tag Prediction Algorithm using Upper Bit in RFID Systems
SungSoo Kim, YongHwan Kim, SeongJoon Lee, KyungHo Chung, and KwangSeon Ahn
Hybrid Role Hierarchy for the Extended Role Based Access Control Model
Zhenxing Luo, Jing Chen, and Zuoquan Lin

Performance Measurement and Queueing Analysis of Medium-High Blocking Probability of Two and Three Parallel Connection Servers
Chung-Ping Chen, Y. Bai, and Yin-Sheng Lee

Spatially Disjoint Multipath Routing Protocol without Location Information
Juan Jose Galvez, Pedro Ruiz, and Antonio Gomez-Skarmeta

Video Streaming with Network Coding and Opportunistic Relay in Wireless Mesh Networks
Boubacar Kimba Dit Adamou, Shihong Zou, and Shiduan Cheng

An Efficient Anti-Collision Algorithm through Division Transfer of Tag ID in RFID Systems
Seong Joon Lee, Young Tae Kim, SungSoo Kim, Yong Soo Park, YongHwan Kim, and Kwang Seon Ahn

Quality of Service Support in Wireless Local Area Network with Error Control Protocol
Abdelsalam Amer, Fayez Gebali, and Yousry Abdel-Hamid

Analysis of Proxy MIPv6 Performance compared to Fast MIPv6
Ali Diab, Andreas Mitschele-Thiel, Kalin Getov, and Oliver Blume

Interconnecting MANET and the Internet. A mobility approach
Francisco David Trujillo Aguilera, Antonio Jesús Yuste Delgado, Alicia Trivino Cabrera, Eduardo Casilari Perez, and Antonio Diaz Estrella

Thursday – October 16, 2008 (LCN 2008)

Session #3 (Tracks A, B, and C)

Session 3A: Security I (Session Chair: J. William Atwood)

A New Approach for Network Vulnerability Analysis
Hai Le Vu, Kenneth Khaw, Ty Chen, and Fei-Ching Kuo

On the Application of Anomaly Detection in Reliable Server Pooling Systems for Improved Robustness against Denial of Service Attacks
Pascal Schöttle, Thomas Dreibholz, and Erwin P. Rathgeb

Covert Channels in Multiplayer First Person Shooter Online Games
Sebastian Zander, Grenville Armitage, and Philip Branch

Decision Process for Automated Selection of Security Protocols
Lars Völker, Christoph Werle, and Martina Zitterbart

Session 3B: Performance Assessment (Session Chair: Jalel Ben-Othman)

Implementation and Performance Evaluation of Selective Repeat ARQ for WiMAX NS-2 model
Michael Hempel, Wei Wang, Hamid Sharif, Ting Zhou, and Puttipong Mahasukhon

Evaluation and Parameterization of Voice Traffic Models for Disaster Area Scenarios
Nils Aschenbruck and Peter Martini

Performance Evaluation of Optimal Sized Cluster Based Wireless Sensor Networks with Correlated Data Aggregation Consideration
Fan Bai and Abbas Jamalipour

Reliability of Wireless Sensor Grids
Hosam Aboelfotoh and Ehab Elmallah
Monitoring the Spatial-Temporal Effect of Internet Traffic Based on Random Matrix Theory
Jia Liu, Wenzhu Zhang, Jian Yuan, Depeng Jin, and Lieguang Zeng

Session 3C: Link Layer (Session Chair: Parag S. Mogre)

Optimal distance-based clustering for tag anti-collision in RFID systems
Waleed Alsalih, Kashif Ali, and Hossam Hassanein

A Hybrid MAC with Prioritization for Wireless Sensor Networks
Ines Slama, Bharat Sreshta, Badii Jouaber, and Djamal Zeghlache

Real-Time Performance Analysis of Adaptive Link Rate
Baoke Zhang, Karthikeyan Sabhanatarajan, Ann Gordon-Ross, and Alan George

A Medium Access Control Protocol for UWB Sensor Networks with QoS Support
Tan Jicong, Mun Choon Chan, Hwee-Xian Tan, Peng-Yong Kong, and Chen Khong Tham

Modeling two-flow interactions under SINR model in Multi-hop wireless networks
Saquib Razak, Vinay Kolar and Nael Abu-Ghazaleh

Session #4 (Tracks A, B, and C)

Session 4A: Security II (Session Chair: Salekul Islam)

Fuzzy Trust Recommendation Based on Collaborative Filtering for Mobile Ad-hoc Networks
Junhai Luo, Xue Liu, Yi Zhang, Danxia Ye, and Zhong Xu

IPclip: An Architecture to restore Trust-by-Wire in Packet-switched Networks
Harald Widiger, Stephan Kubisch, Peter Danielis, Jens Schulz, Daniel Duchow, Thomas Bahls, and Dirk Timmermann

The Design of a Secure Key Management System for Mobile Ad hoc Networks
Azzedine Boukerche and Yonglin Ren

Key Management in Wireless Sensor Networks with Inter-network Sensor Roaming
Sejin Choi, Venkatesh Sarangan, and Steve Trost

Session 4B: Optical Networks (Session Chair: Soumaya Cherkaoui)

Avoidance of Multicast Incapable Branching Nodes for Multicast Routing in WDM Networks
Fen Zhou, Miklos Molnar, and Bernard Cousin

Cost-Efficient Backup-Plane Architecture for Single-hop WDM Network
Noriaki Kamiyama

Routing and Buffer Placement Optimization in Optical Burst Switched Networks
Jorge Sousa e Castro, João Manuel Ferreira, and Paulo Monteiro

Multi-Criteria p-Cycle Network Design
Hamza Drid, Bernard Cousin, Samer Lahoud, and Miklos Molnar

Session 4C: IEEE 802.11 Systems (Session Chair: Hesham El-Sayed)

Towards a Zero Configuration Authentication Scheme for 802.11 Based Networks
Carolin Latze, Ulrich Ultes-Nitsche, and Florian Baumgartner

WBest: a Bandwidth Estimation Tool for IEEE 802.11 Wireless Networks
Mingzhe Li, Mark Claypool, and Robert Kinicki

A Time Multiplexing Coordination Mechanism on Top of the IEEE 802.11 MAC Layer
Alexander Leonovich and Huei-Wen Feng

QoE-based Network Selection for Multimedia Users in IEEE 802.11 Wireless Networks
Kandaraj Piamrat, Adlen Ksentini, César Viho, and Jean-Marie Bonnin

Session #5 (Tracks A, B, and C)

Session 5A: Mobility (Session Chair: Frank Hübner)

On Supporting Handoff Management for Multi-Source Video Streaming in Mobile Communication Systems
Tarik Taleb, Tomoyuki Nakamura, and Kazuo Hashimoto

Intelligent Mobility Support for IPv6
S. Wang, Yong Cui, and Sajal Das

Receiver Access Control and Secured Handoff in Mobile Multicast using IGMP-AC
Salekul Islam and J. William Atwood

A Client-based Vertical Handoff Approach for Seamless Mobility in Next Generation Wireless Networks
Yong-Sung Kim, Dong-Hee Kwon, and Young-Joo Suh

Session 5B: Peer-to-Peer Systems II (Session Chair: Carsten Griwodz)

A Collaborative Peer-to-Peer Architecture to Defend Against DDoS Attacks
Radwane Saad, Farid Nait-Abdesselam, and Ahmed Serhrouchni

Supporting Geographical Queries onto DHTs
Jordi Pujol Ahulló, Pedro García López, Marc Sánchez Artigas, and Antonio F. Gómez Skarmeta

Supporting a Seamless Map in Peer-to-Peer System for Massively Multiplayer Online Role Playing Games
Xinbo Jiang and Farzad Safaei

A Loosely Synchronized Gossip-Based Algorithm for Aggregate Information Computation
Dongsheng Peng, Weidong Liu, Chuang Lin, Zhen Chen, and Jiaxing Song

An Ant Based Rate Allocation Algorithm for Media Streaming in Peer to Peer Networks
Amir Hesam Salavati, Hadi Goudarzi, and Mohammad Reza Pakravan

Session 5C: Design Optimization and Resource Management (Session Chair: Nils Aschenbruck)

Distributed and Scalable Control Plane for Next Generation Routers: A Case Study of OSPF
Kim-Khoa Nguyen and Brigitte Jaumard

Online Control Techniques for Management of Bandwidth over Shared End-to-End Paths
Kaliappa Ravindran, and Mohammad Rabby

Optimized Resource Allocation for the Uplink of SFBC-CDMA Systems
Taimour Aldalgamouni and Ahmed Elhakeem

Bader Al-Manthari, Nidal Nasser, Najah Abu Ali, and Hossam Hassanein

Smart Spanning Tree Bridging For Metro Ethernets
Aref Meddeb