LCN 2007
The 32nd Annual IEEE Conference on
Local Computer Networks (LCN)

Dublin, Ireland
October 15-18, 2007

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

Keynote speakers:
Alan Crouch, Intel, USA
Donal O'Mahony, Trinity College, IE

Monday, October 15	Workshops
7:30 - 8:30	Registration
8:30 - 12:30	**Half Day** – Second IEEE LCN Workshop on Network Measurements (WNM)
1:30 - 5:30	**Half Day** – Third IEEE LCN Workshop on Network Security (WNS)
8:30 - 6:00	**Full Day** – Third IEEE International Workshop on Performance and Management of Wireless and Mobile Networks (P2MNET)
8:30 - 6:00	**Full Day** – Seventh IEEE International Workshop on Wireless Local Networks (WLN)

Tuesday, October 16	LCN 2007		
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: Alan Crouch, USA (title of talk: "Network Security: New Essentials for Safeguarding Network Systems")		
10:00 - 10:30	Coffee break		
10:30 - 12:10	Session #1 (tracks A, B, and C)		
	A – Wireless Networks	B – High Speed Networks	C – Multicast & Security
12:10 - 1:30	Lunch		
1:30 - 3:10	Session #2 (tracks A, B, and C)		
	A – WLAN/IEEE 802.11	B – Overlay Networks	C – Modeling & Performance
3:10 - 3:30	Coffee break		
3:30 - 4:45	Poster session		
5:00	Buses leave for social event		

Wednesday, October 17	LCN 2007		
8:00 - 9:00	Registration		
9:00 - 10:00	Keynote #2: Donal O'Mahony (title of talk: "Architectural Trends in Future Communications Systems")		
10:00 - 10:30	Coffee break		
10:30 - 12:10	Session #3 (tracks A, B, and C)		
	A – Wireless Ad Hoc/Mesh Networks & Split TCP	B – Peer-to-peer Networks	C – Quality of Service
12:10 - 1:30	Lunch		
1:30 - 3:10	Session #4 (tracks A, B, and C)		
	A – Mobility	B – High Speed, LAN & Home Area Networks	C – QoS in Wireless Networks
3:10 - 3:30	Coffee break		
3:30 - 5:35	Session #5 (tracks A, B, and C)		
	A – Sensor Networks	B – Security	C – Performance

Thursday, October 18	Workshops
7:30 - 8:30	Registration
8:30 - 6:00	**Full Day** – First IEEE LCN Workshop On User MObility and VEhicular Networks (ON-MOVE)
8:30 - 6:00	**Full Day** – Second IEEE International Workshop on Practical Issues in Building Sensor Network Applications (SenseApp)

Conference supporters:

Tuesday – October 16, 2007 (LCN 2007)

10:30 - 12:10 Session #1 (Tracks A, B, and C)

Session 1A: Wireless Networks (Session Chair: Jogesh K. Muppala)

RRAND: A New Requirement Aware RAND based Flexible Slot Allocation Mechanism Optimized For Spatial Reuse Of Slots by Yuvraj Krishna Rana, Sanjay Jha

Spatial Diversity in Signal Strength Based WLAN Location Determination Systems by Anil Ramachandran, Sarangapani Jagannathan

Rate splitting MIMO-based MAC Protocol by Abduladhim Ashtaiwi, Hossam Hassanein

Distributed CDMA-based MAC Protocol for Underwater Sensor Networks by Hwee-Xian Tan, Winston Seah

Session 1B: High Speed Networks (Session Chair: Joe Bumblis)

LiTPiC – Light-trails and Photonic Integrated Circuits: Issues of Network Design and Performance by Ashwin Gumaste, Nasir Ghani

Experiments on Network Services for the Grid by Christoph Barz, Peter Martini, Markus Pilz, Florian Purnhagen

Storage-Efficient Architecture for Routing Tables via Prefix Transformation by Fong Pong, Nian-Feng Tzeng

Lightpath Reconfiguration in Regional IP-over-WDM Networks by a Centralized Control System by Yutaka Katsuyama, Michio Hashimoto, Keiji Nishikawa, Akira Ueno, MD. Nooruzzaman, Osanori Koyama

Session 1C: Multicast & Security (Session Chair: Tim Strayer)

An Architecture for Secure and Accountable Multicasting by J. William Atwood

Sender Access Control in IP Multicast by Salekul Islam, J. William Atwood

Application-level Fair Multicasting Scheme Suitable for Multipoint Real-time Communication by Kanako Uchida, Hideki Tode, Koso Murakami

eSMP: A Multicast Protocol to Minimize SOAP Network Traffic in Low Bandwidth Environments by Khoi Anh Phan, Zahir Tari, Peter Bertok

1:30 - 3:10 Session #2 (Tracks A, B, and C)

Session 2A: WLAN/IEEE 802.11 (Session Chair: Geyong Min)

Real-Time Communication in IEEE 802.11 Networks: Timing Analysis and a Ring Management Scheme for the VTP-CSMA Architecture by Ricardo Moraes, Paulo Portugal, Stefano Vitturi, Francisco Vasques, Pedro Souto

Use of Frequency Diversity in Signal Strength based WLAN Location Determination Systems by Anil Ramachandran, Jagannathan Sarangapani

A Novel MIMO-Aware Distributed Media Access Control Scheme for IEEE 802.11 Wireless Local Area Networks by Dan Dechene, Khalim Amjad Meerja, Abdallah Shami, Serguei Primak

Resolving Collision and Delay Deterioration by a Novel Channel Collision Based Adaptive Backoff (CCBAB) Scheme in Wireless LANs by Di Wu, Guangxi Zhu, Gan Liu, Wenpeng Yuan, Mingxin Chen

Session 2B: Overlay Networks (Session Chair: Burkhard Stiller)

Dynamic Group Membership Management for Distributed Interactive Applications by Knut-Helge Vik, Carsten Griwodz, Pål Halvorsen

Placing Multicast Proxies for Internet Live Media Streaming by Jun Guo, Sanjay Jha

A Chord-based Recommender System by Christoph Sorge

Distributed Service Provisioning Using Stateful Anycast Communications by Tim Stevens, Joachim Vermeir, Marc De Leenheer, Chris Develder, Filip De Turck, Bart Dhoedt, Piet Demeester

Session 2C: Modeling & Performance (Session Chair: Carey Williamson)

A Measurement-Based Modeling Approach for Network-Induced Packet Delay by Daniel Vivanco, Anura Jayasumana

Bloom Filters: One Size Fits All? by Paul Hurley, Marcel Waldvogel

Fibre Channel Switch Modeling at Fibre Channel-2 Level for Large Fabric Storage Area Network Simulations using OMNeT++: Preliminary Results by Timothy Brothers, Suresh Muknahallipatna, Jerry C. Hamann

3:30 - 4.45 Poster Session (Short Papers)

A Context-Aware Multi-Agent System for Building Intelligent Services by the Classification of Rule and Ontology in a Smart Home by Yoonsik Uhm, Zion Hwang, Minsoo Lee, Yong Kim, Gwanyeon Kim, Sehyun Park

A Distributed Scheduling Approach for Ethernet-based Passive Optical Networks by Marilet De Andrade, Lluís Gutiérrez, Sebastià Sallent

A Performance Evaluation of an Optimized Caching Protocol for Mobile Gnutella Based Network to Support Distributed Collaborative Virtual Environment by Azzedine Boukerche, Anis Zarrad, Regina Borges Araujo

A Prototype Power Management Proxy for Gnutella Peer-to-Peer File Sharing by Miguel Jimeno, Ken Christensen

A Scheme for Probabilistically Reliable Multicast Routing in Wireless Mesh Networks by Xin Zhao, Chun Tung Chou, Jun Guo, Sanjay Jha

A Ubiquitous Computing Network Framework for Assisting People in Urban Areas by Minsoo Lee, Yoonsik Uhm, Zion Hwang, Yong Kim, Joohyung Jo, Sehyun Park

Adaptive Out-Of-Band Routing Protocol Auto-Negotiation for Mobile Ad Hoc Networks by Oliver Battenfeld, Patrick Reinhardt, Bernd Freisleben

An Energy-Efficient Multihop Cooperative Transmission Protocol Design for Sensor Networks by Pan Zhou, Wei Liu, Kanru Xu

An Initial Performance Evaluation of Ethernet Rapid PHY Selection (RPS) for Energy Efficient Ethernet by Francsico Blanquicet, Ken Christensen

CAT: A Cost-Aware BitTorrent by Shusuke Yamazaki, Hideki Tode, Koso Murakami

Digital Ecosystem for Cross-domain Context Sensing and Trading by Tom Pfeifer, Paul Malone

Efficient MD Coding Core Selection To Reduce the Bandwidth Consumption by Sunoh Choi, Sang-Seon Byun, Chuck Yoo

Fibre Channel based Storage Area Network Modeling using OPNET for Large Fabric Simulations: Preliminary Work by Joshua Staley, Suresh Muknahallipatna, Howard Johnson

Identifying BT-like P2P Traffic by the Discreteness of Remote Hosts by W.Q. Cheng, J. Gong, W. Ding

Interference-free TDMA Slot Allocation in Wireless Sensor Networks by Mário Nunes, António Grilo, Mário Macedo

Issues in TCP Vegas over Optical Burst Switched Networks by Olga León, Sebastia Sallent

Layer-Encoded MBMS Channel Allocation for Mobile Networks by Ai-Chun Pang, Shun-Ren Yang, ChenKuang Yang

Light-weight End-to-End QoS as DoS Prevention by Marcel Waldvogel, Tobias Köck

Local Area Network Modeling for Performance Prediction by Paulo Salvador, António Nogueira, Rui Valadas

Modeling of a Polling-Based Access Scheme for 802.11 by Dany Obeid, Sami Sheeshia

Modified Algorithms for Multilevel GRSB Protocol by Mohammad Asadul Hoque, S.M. Iftekharul Amin, M. Sohrab Hossain

Monitoring, Controlling and Configuring a Wireless Household-Electric Network through LabVIEW Remote Virtual Interface by Antonio Heronaldo de Sousa, Rafael Campos do Prado, Felipe Cubas Schulz

Partial-Disjoint-Based Multipath Routing for Wireless Ad-hoc Networks by Haseeb Zafar, David Harle, Ivan Andonovic, Mahmood Khan

Performance Modelling of TXOP Differentiation in Infrastructure-Based WLANs by Geyong Min, Jia Hu, Mike Woodward

Performance Analysis of Single Cell IEEE 802.16e Wireless MAN by Thierry Peyre, Rachid El-Azouzi

Performance Degradation of IEEE 802.15.4 Slotted CSMA/CA due to Hidden Nodes by Manjukumar Harthikote-Matha, Tarun Banka, Anura Jayasumana

Performance Evaluation of Traffic Mix in IP Based Networks by Norrozila Sulaiman, Rolando Carrasco, Graeme Chester

Port-based Multihomed Mobile IPv6: Load-balancing in Mobile Ad hoc Networks by Robert Brännström, Christer Åhlund, Arkady Zaslavsky

Towards Smooth Introduction of IPv6 in SIP-based Architectures by Mohamed Boucadair, Yoann Noisette

Voice Quality Measurement In a Typical Router-Based Network by Arash Azarfar, Amir Hossein Jahangir

Wednesday – October 17, 2007 (LCN 2007)

10:30 - 12:10 Session #3 (Tracks A, B, and C)

Session 3A: Wireless Ad hoc/Mesh Networks & Split TCP (Session Chair: Anura Jayasumana)

Non-Bifurcated Routing in Wireless Multi-Hop Mesh Networks by Abdullah-Al Mahmood, Ehab Elmallah, Ahmed Kamal

Achieving True Video-on-Demend Service in Multi-hop WiMax Mesh Networks by Fei Xie, Kien Hua, Ning Jiang

Characterisation and Modelling of Voice Traffic in First Responder Networks by Nils Aschenbruck, Peter Martini, Michael Gerharz

Semi-Split TCP: Maintaining End-to-End Semantics for Split TCP by Fei Xie, Ning Jiang, Kien Hua, Yao Ho

Session 3B: Peer-to-peer Networks (Session Chair: Marcin Matuszewski)

Replica Placement and Location using Distributed Hash Tables by Daniel Bauer, Paul Hurley, Marcel Waldvogel

A Comparative Study of Hierarchical DHT Systems by Marc Sànchez Artigas, Pedro García-López, Antonio Skarmeta

Overlay Bandwidth Management: Scheduling and Active Queue Management of Overlay Flows by Kálmán Graffi, Konstantin Pussep, Sebastian Kaune, Aleksandra Kovačević, Nicolas Liebau, Ralf Steinmetz

Search Algorithms for Unstructured Peer-to-Peer Networks by Reza Dorrigiv, Alejandro Lopez-Ortiz, Pawel Pralat

Session 3C: Quality of Service (Session Chair: Gabriel-Miro Muntean)

Dimensioning Methods for Data Networks with Flow-Level Qos Requirements by Pasi Lassila, Aleksi Penttinen, Jorma Virtamo

Introducing QoS Mechanisms into the IPsec Packet Processing by Lars Völker, Marcus Schöller, Martina Zitterbart

Closing the Loop for Dynamic IP QoS Provisioning: A Case Study by Swati Sinha Deb, Alistair Munro

A Simulation Study of Multi-Color Marking of TCP Aggregates by Miriam Allalouf, Yuval Shavitt

1:30 - 3:10 Session #4 (Tracks A, B, and C)

Session 4A: Mobility (Session Chair: Christer Ahlund)

Factoring IPv6 Device Mobility and Ad-hoc Interactions into the Service Location Protocol by Bilhanan Silverajan, Jarmo Harju

Session Control Protocol Exploiting Controlled Mobility in Multi-Robot Sensor Networks by Ryohei Suzuki, Yoshito Tobe, Kaoru Sezaki

Power-Aware Link Maintenance (PALM) for Mobile Ad Hoc Networks by Sungsoon Cho, John Hayes

Location Aware Route Maintenance Protocols for the Mobile Bluetooth Radio Networks by Prasan Kumar Sahoo, Chih-Yung Chang, Sheng-Wen Chang

Session 4B: High Speed, LAN & Home Area Networks (Session Chair: J. William Atwood)

Effect of Delivery Latency, Feedback Frequency and Network Load on Adaptive Multimedia Streaming by Gabriel-Miro Muntean

Discovering Network Topology of Large Multisubnet Ethernet Networks by Hassan Gobjuka, Yuri Breitbart

A Scalable Hybrid Approach to Switching in Metro Ethernet Networks by Minh Huynh, Prasant Mohapatra

A Robust Device Hybrid Scheme to Improve System Performance in Gigabit Ethernet Networks by Xiaolin Chang, Jogesh K. Muppala, Pengcheng Zou, Xiangkai Li

Session 4C: QoS in Wireless Networks (Session Chair: Mario Serafim Nunes)

Analysis of Different Scheduling Strategies in 802.11e Networks with Multi-Class Traffic by Renato Lo Cigno, Luigi Palopoli, Alessio Colombo

The Capability of the EDCA Mechanism to Support Voice Traffic in a Mixed Voice/Data Transmission over 802.11e WLANs – An Experimental Investigation by Miroslaw Narbutt, Mark Davis

Channel State Estimation and Scheduling Algorithms for Multi-Rate Wireless Systems by Sourav Pal, Sumantra Kundu, Amin Mazloom, Sajal Das

Improvement on Network Capacity for Voice Services over HCCA by Wenpeng Yuan, Guangxi Zhu, Gan Liu, Di Wu

3:30 - 5:35 Session #5 (Tracks A, B, and C)

Session 5A: Sensor Networks (Session Chair: Salil Kanhere)

Evolution of Cooperation in Multi-Class Wireless Sensor Networks by Garth Crosby, Niki Pissinou

A Distributed Connectivity Restoration Algorithm in Wireless Sensor and Actor Networks by Ameer Ahmed Abbasi, Kemal Akkaya, Mohamed Younis

Layered Diffusion Based Coverage Control in Wireless Sensor Networks by Bang Wang, Cheng Fu, Hock Beng Lim

Information Coverage and Network Lifetime in Energy Constrained Wireless Sensor Networks by Bang Wang, Vikram Srinivasan, Kee Chaing Chua, Wei Wang

On Improving the Energy Efficiency of Wireless Sensor Networks under Time-Varying Environment by Xiao-Hui Lin, Yu-Kwong Kwok, Hui Wang

Session 5B: Security (Session Chair: Lillykutty Jacob)

Efficient Multi-Dimensional Flow Correlation by Tim Strayer, Christine Jones, Beverly Schwartz, Sarah Edwards, Walter Milliken, Alden Jackson

AntSec, WatchAnt and AntRep: Innovative Security Mechanisms for Wireless Mesh Networks by Parag Mogre, Kalman Graffi, Matthias Hollick, Ralf Steinmetz

Towards Stateless Single-Packet IP Traceback by Rafael Laufer, Pedro Velloso, Daniel Cunha, Igor Moraes, Marco Bicudo, Marcelo Moreira, Otto Duarte

A Game-Theoretic Framework for Bandwidth Attacks and Statistical Defenses by Mark Snyder, Mayur Thakur, Ravi Sundaram

Session 5C: Performance (Session Chair: Jalel Ben-Othman)

Performance Modelling of Priority Queuing Discipline under Self-Similar and Poisson Traffic by Xiaolong Jin, Geyong Min

Modeling and Performance Analysis of Telephony Gateway REgistration Protocol by Kushal Kumaran, Anirudha Sahoo

Performance Modelling of Adaptive Routing in Hypercubic Networks under Non-Uniform and Batch Arrival Traffic by Yulei Wu, Geyong Min, Lan Wang, Mohamed Ould-Khaoua

Optimal DiffServ AC Design using Non-Linear Programming by Ricardo Nabhen, Edgard Jamhour, Manoel Penna, Mauro Fonseca, Guy Pujolle

Measuring High-Speed TCP Performance during Mobile Handovers by Gábor Németh, Péter Tarján, Gergely Biczók, Ferenc Kubinszky, András Veres