# IFIP TC6 Working Group 6.3 Performance of Communication Systems

## Status Report No. 1 - 2006 Submitted to the IFIP TC6 Meeting May 19-20, 2006, Coimbra, Portugal

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IFIP WG6.3 is sponsoring 7 conferences and workshops in 2005. The flagship conference is Networking in cooperation with WG 6.2 and 6.8.

## 1 - Report on Past Conferences and Events (10/2005 – 5/2006):

• WONS'06: Third Annual Working Conference on Wireless On-demand Network Systems, (in some ski resort in the French Alps, Jan. 18-20, 2006). This event followed the two successful previous editions combining scientific quality and wonderful locations, WONS 2004, Madonna di Campiglio, Italy, and WONS 2005, St. Moritz, Switzerland.

Sponsors: IFIP WG6.3, WG6.8

**Programe Chairs:** Isabelle Guerin Lassous, INRIA, Rhône-Alpes

Mario Gerla, UCLA

Program Committee Chairs: Carla-Fabiana Chiasserini Pol. di Torino, Torino, Italy

Edward W. Knightly, Rice University, Houston, USA

**Steering Committee:** Roberto Battiti, University of Trento, Italy (chair), Imrich Chlamtac, Create-Net, Mario Gerla, UCLA, USA, Enrico Gregori, CNR of Pisa, Italy, Ioannis

Stavrakakis, University of Athens, Greece

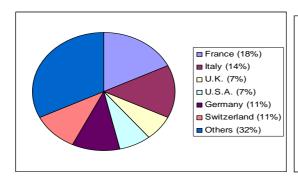
**Objectives:** The workshop will concentrate on new research issues open in the "wireless Internet" context, including design, modelling and performance evaluation, pricing and profitability models, QoS models and practical implementation. Sound experimental evaluation of new techniques will also be considered.

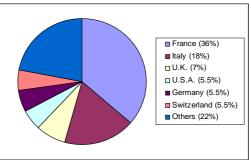
**Program:** 56 papers were submitted. 16 papers were accepted as full papers and 8 papers were accepted as short papers. We also invited two papers: Pan Hui (University of Cambridge), James Scott (Intel Research), Jon Crowcroft (University of Cambridge), and Christophe Diot (Thomson Research) presented "Haggle: a networking architecture designed around mobile users", and Longbi Lin (Purdue University), Ness B. Shroff (Purdue University), and R. Srikant (UIUC) presented "Energy efficient Routing in Sensor Networks: A Large Systems Approach".

Serge Fdida (University Paris 6) was the keynote speaker with a talk on "Networking in Autonomic Communications". Renato Lo Cigno organized a panel on the still very timely theme: "Is There a Killer Application for On-Demand Networking?".

**Sponsors:** WONS 2006 received the financial support from INSA de Lyon, INRIA and Alcatel and received the technical support from IFIP TC6.

**Authors /Participants:** 53 participants were registered for the conference.





Authors' Origin

Participans' Origin

Proceedings are stored on HAL-INRIA, an open archive of INRIA: <a href="http://hal.inria.fr/WONS2006/fr/">http://hal.inria.fr/WONS2006/fr/</a>

• WiOpt'06: Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks, April

3-7, 2006, Boston (http://www.wiopt.org/)

**Sponsors:** IFIP WG6.3, IEEE

General Chair: : Ibrahim Matta, Boston University

General Vice-Chair: : Christos Douligeris, University of Piraeus, Greece

Program Chairs: Eytan Modiano, MIT

Leandros Tassiulas, University of Thessaly

**Steering Committee Chair**: Imrich Chlamtac, Create-Net, Italy (Chair), Eitan Altman, INRIA, France, Tamer Basar, UIUC, USA, Marco Conti, IIT-CNR, Italy Jon Crowcroft, Cambridge University, UK Tony Ephremides, University of Maryland, USA Holger Karl, University of Paderborn, Germany Daniele Miorandi, CREATE-NET, Italy Roger Whitaker, Cardiff University, UK.

Workshops Steering Subcommittee: Chadi Barakat, INRIA, France, Dina Papagiannaki, Intel Research Cambridge, UK

Workshops Chair: Mingyan Liu, University of Michigan, USA

Local Arrangements Chair: David Starobinski, Boston University, USA

Publicity Chair: Stavros Toumpis, University of Cyprus, Cyprus Publications Chair: Guevara Noubir, Northeastern University, USA

**Objectives:** The complexity of mobile, ad hoc, and wireless networks requires thoroughly founded models capturing their essential characteristics and new optimization techniques building upon such models. Insights into both the theoretical aspects of these problems as well as practical methods and tools are necessary. This symposium intends to bring together researchers and practitioners working on optimization issues from different perspectives, including performance analysis, mobile networking, wireless communication, and optimization theory. Contributions to this conference should show new modeling and optimization techniques suitable for mobile/wireless networks or innovative applications of these techniques to improve network operation. Topics of interest include, but are not limited to:

- \* Modeling techniques and tools for wireless networks
- \* Performance characterization & optimization of wireless networks
- \* Wireless network optimization: Applications, algorithms, and tools
- \* Protocol design for optimal wireless network utilization
- \* Models and optimization approaches for energy efficiency, QoS, bandwidth economy and other aspects of wireless networks

- \* Models and optimization techniques for non-standard network paradigms like sensor, vehicular, body area networks
- \* Security and co-operation models for mobile and ad hoc networks
- \* Pricing and incentives in wireless networks
- \* Game theoretic techniques for mobile/wireless networks

Submissions Instructions: Papers should be submitted as extended abstracts of up to 8 pages, single column format; and contain sufficient information to allow for a detailed review. The final manuscript will be 10 pages in double column format. Selected papers from WiOpt 2006 will appear in a special issue of ACM/Kluwer Monet.

#### ADJUNCT WORKSHOPS:

\* WINMEE 2006: Measurement in Wireless Networks

Chairs: K. Almeroth (UCSB), Kave Salamatian (LIP6-CNRS)

\* RAWNET 2006: Resource Allocation in Wireless Networks

Chairs: S. Borst (Bell Labs.-CWI), A. Proutiere (France Telecom R&D)

\* SPASWIN 2006: Stochastic Geometry for Wireless Networks

Chairs: M. Fransescheti (USCD), P. Thiran (EPFL)

\* NETCOD 2006: Network Coding and Information Theory

Chairs: R. Kotter (UIUC), M. Medard (MIT)

**Sponsorship:** WiOpt is technically sponsored by IEEE, Information Theory Society, and IFIP TC6, WG 6.3 (Performance of Communication Systems), and sponsored by Create-net, ICST, Boston University, and INRIA.

#### **Attendance:**

Technical Session	83
NetCod	37
Raw Net	19
SpasWim	27
WinMee	29

• Networking 2006, May 1-19, 2006, Coimbra, Portugal

Sponsors: IFIP WG6.2, WG6.3, WG6.8

General Chair: Edmundo Monteiro, University of Coimbra, Portugal

Technical Program Chair: Fernando Boavida, University of Coimbra, Portugal

http://networking2006.dei.uc.pt/index.htm

**Steering Committee:** Harry Perros, North Carolina State University, USA, Augusto Casaca IST/INESC, Portugal, Guy Omidyar, USA, Guy Pujolle, University of Paris 6, France, Ioannis Stavrakakis, University of Athens, Greece, Otto Spaniol, RWTH-Aachen University, Germany.

## **2 - Plans for future conferences and events:**

• WAC2006: The 3nd IFIP TC6 International Workshop on Autonomic Communication, (<a href="http://www.autonomic-communication.org/wac/">http://www.autonomic-communication.org/wac/</a>), Sept. 25-29, 2006, Paris, France.

**Sponsors:** IFIP WG6.3, IFIP WG6.6

General Chair: D. Gaïti (University of Troyes, FR), G. Pujolle (UPMC, FR)

Program Chair: Simon Dobson, UCD, IR

Steering Committee: Mikhail Smirnov, Ioannis Stavrakakis, Raouf Boutaba, Simon Dobson

**Workshop Topics:** 

Theoretical foundations of autonomic network control

Designing evolvable next generation networks

Self-organisation for NGN

Autonomic Communications testbeds

Modelling and analysis of Autonomic Communication systems

Generic network-level service composition

Context handling within Autonomic Communications

**Applied Autonomic Communication systems** 

Self-organised communications

Context and/or Autonomic Ontologies

Quality of Context Management

### • EUNICE 2006: 12th Open European Summer School Summer School and IFIP Workshop,

Stuttgart, Germany, September 18 - 20, 2006, University of Stuttgart, Germany

http://www.ikr.uni-stuttgart.de/eunice2006

TPC Chair: Prof. Paul Kühn, University of Stuttgart, Germany

**Purpose:** The EUNICE network (http://www.eunice-forum.org/) has been created to foster the mobility of students, faculty members and research scientists working in the field of information and communication technologies and to promote educational and research cooperation between its member institutions. The main goal of the EUNICE Summer School is to give researchers and particularly Ph.D. students the opportunity to present their work at an international level. In addition to the research paper presentations, a number of tutorials or invited talks, presented by experts in the field, will be given.

Call for Contributions: The exponential growth in the mobile communication market in the past years has led to a variety of new and envisioned applications. One example are context-aware applications for mobile networks, which impose many challenges for network and service architectures with a wide range of new requirements. On the one hand research has to build up a sound understanding of these applications and their supporting service architectures. On the other hand, the network infrastructure needs to be able to provide the necessary quality of service for the envisioned applications. The EUNICE summer school is open to researchers from any institution, and we cordially invite all researchers to contribute with original submissions. Topics of interest are, but are not limited to:

Services and Applications

Location and context-based services, Mobile services, Nomadic communications,

Ubiquitous computing, Autonomic computing, Service architectures in future networks

**Architectures and Protocols** 

System architectures for context-based systems, Core and edge node architectures, 3G and beyond 3G architectures, Security and privacy

Networks and Infrastructures

Photonic networks, Radio access networks, Ad-hoc and sensor networks,

Cross-layer interactions and optimizations, Network resilience, Measurements and Trials

Theoretical and Formal Methods

Mobility models, Performance and quality of service, Protocol engineering,

Data fusion and interference methods

**Regular Contributions:** Authors are invited to submit original papers, which will be reviewed for presentation and publication in the proceedings of the Summer School. Papers must be written in English and must not exceed eight single-spaced A4 pages.

**Tutorials**: Each EUNICE member institution is cordially invited to present tutorials (approx. 75 minutes) at the Summer School. Prospective tutorial speakers are kindly asked to submit proposals covering one or more of the technical areas indicated above. The tutorial proposals

should include a brief outline, a short resume, and the speaker's full postal address, phone and fax numbers, homepage and e-mail-address.

**Sponsors:** IFIP WG6.3, WG6.4, WG6.6, WG6.9

• WONS'07: Fourth Annual Working Conference on Wireless On-demand Network

**Systems,** will be held in January 2007 in Obergurgl, Austria; the submission deadline is September 1, and reviews are due October 20, 2006. Details and the CFP can be found at http://wons.uibk.ac.at

Sponsors: IFIP WG6.3, WG6.8

**Organization:** Renato Lo Cigno, Ernst Biersack, Sven Hessler, Thomas Ziegler, Michael Welzl

 WiOpt'07: Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks, April/May 2007, Cyprus (<a href="http://www.wiopt.org/">http://www.wiopt.org/</a>)
 Sponsors: IFIP WG6.3, IEEE

• **IFIP Networking 2007**, The Sixth International Conference on Networking, <a href="http://www.ifip-networking07.org/">http://www.ifip-networking07.org/</a>, May 15-20, 2007, Georgia Tech Hotel, Atlanta, Georgia, USA

IFIP Networking 2007 is the sixth event in a series of International Conferences on Networking, sponsored by the IFIP Technical Committee on Communication Systems (TC 6). The main objectives of Networking 2007 are to bring together active and proficient members of the networking community, from both academia and industry, to discuss recent advances in this broad and fast-evolving field of telecommunications, and to highlight key-issues, identify trends and refresh vision in the field of telecommunications.

The conference objectives will be pursued through technical sessions, keynote talks, and tutorials offered by invited experts, as well as panel discussions on hot topics. The technical sessions will be structured into three tracks:

(1) Ad Hoc and Sensor Networks, (2) Wireless Networks, (3) Next Generation Internet.

Sponsors: IFIP WG6.2, WG6.3, WG6.8

**General Co-Chairs:** Ian F. Akyildiz, Georgia Institute of Technology, R. Sivakumar, Georgia Institute of Technology

**Technical Program Co-Chairs:** Eylem Ekici (AdHoc/Sensor Networks Track), Ohio State University, USA, Janise McNair (Wireless Networks Track), University of Florida, USA Jaudelice de Oliveira (NG Internet Track), Drexel University, USA