

D43 - 3rd International Workshop on Internet Performance, Simulation, Monitoring and Measurements (IPS-MoMe 2005)

Abstract

This document is the report from the 3rd International Workshop on Internet Performance, Simulation, Monitoring and Measurements (IPS-MoMe 2005), held in Warsaw, Poland, on 14-15 March 2005.

Keywords

Dissemination, D43, IPS-MoMe 2005

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1 Overview

The 3rd International Workshop on Internet Performance, Simulation, Monitoring and Measurements (IPS-MoMe 2004) was held in Warsaw, Poland, on 14-15 March 2005.

The IPS-MoMe 2005 was a successor of the IPS-2003 and IPS-2004 workshops organised in the framework of the European projects IST INTERMON (5FP) and IST MOME (6FP).

The final technical programme for the IPS-MoMe 2005 contained 31 presentations including 2 keynotes, 2 invited papers and 27 papers carefully selected by reviewing process on the basis of 42 submissions. The program consisted of 8 sessions dedicated to the following topics: traffic measurements and modeling, measurement methods, simulation and measurements in the IST EuQoS project, monitoring and measurement tools and systems, performance evaluation, QoS architectures and mechanisms, traffic engineering and simulation tools.

Detailed information including the presentations held on IPS-MoMe 2005 is available at the workshop web-site:

<http://www.tele.pw.edu.pl/ips-mome>

2 IPS-MoMe 2005 Organisation

The IPS-MoMe 2005 workshop was organised by the Institute of Telecommunications, Warsaw University of Technology, in cooperation with the IST MOME project.

2.1 Program Committee

Co-chairs

Wojciech Burakowski, Warsaw University of Technology, Poland
Ulrich Hofmann, Salzburg Research, Austria

Members

Nail Akar, Bilkent University, Turkey
Enrico Angori, Datamat, Italy
Alessandro Anzalani, Instituto Tecnológico de Aeronáutica, Brazil
Torsten Braun, University of Bern, Switzerland
Antal Bulanza, University of Brussels, Belgium
Georg Carle, University of Tübingen and Fraunhofer FOKUS, Germany
Marek Dabrowski, Warsaw University of Technology
Salvatore D'Antonio, CINI, Italy
Franco Davoli, University of Genoa, Italy
Giuseppe Di Battista, University of Rome 3, Italy
Willie Donnelly, Waterford Institute of Technology, Ireland
Marcus Fiedler, Blekinge Institute of Technology, Karlskrona, Sweden
Timothy G.Griffin, Intel Reseach, UK
Pedro Andrés Aranda Gutiérrez, Telefónica I+D, Spain
Baiba Kaskina, TERENA, The Netherlands
Yevgeni Koucheryavy, Tampere University of Technology, Finland
Udo Krieger, Otto-Friedrich Universität Bamberg, Germany
Luciano Lenzini, University of Pisa, Italy
Ilka Miloucheva, Fachhochschule Bonn-Rhein-Sieg, Germany
Sándor Molnár, BUTE, Hungary
Dmitri Moltchanov, Tampere University of Technology, Finland
Edmundo Monteiro, University of Coimbra, Portugal
Jürgen Quittek, NEC Europe, Germany
Simon Pietro Romano, University of Napoli Frederico II, Italy
Kave Salamatian, University Paris VI LIP 6, France
Stefano Salsano, University of Rome "Tor Vergata", Italy
Carsten Schmoll, Fraunhofer FOKUS, Germany
Felix Strohmeier, Salzburg Research, Austria
Paul Van Binst, University of Brussels, Belgium
Iakovos Venieris, National Technical University of Athens, Greece
Giorgio Ventre, University of Napoli Frederico II, Italy
Rolland Vida, BUTE, Hungary
Attila Vidács, BUTE, Hungary
Manuel Villen-Altamirano, Telefonica I+D, Spain
Tanja Zseby, Fraunhofer FOKUS, Germany

2.2 Local Organising Committee

Andrzej Beben, Marek Dabrowski, Zuzanna Mazek, Halina Tarasiuk, Elzbieta Tarwacka, Warsaw University of Technology, Poland

3 Workshop presentations

The final technical programme for the IPS-MoMe 2005 contained 31 presentations including 2 keynotes, 2 invited papers and 27 regular papers. 8 European research projects submitted papers to the workshop. The following 7 of them presented their papers:

- IST EVERGROW (6FP FET Integrated Project)
- IST EuroNGI (6FP Network of Excellence)
- IST MOME (6FP Coordination Action)
- IST EuQoS (6FP Integrated Project)
- IST E-NEXT (6FP Network of Excellence)
- IST COSIN (FET Open Project)
- IST DELIS (FET Open Project)

All the papers presented at the IPS-MoMe 2005 are listed below. The presentations are available at the workshop web-site.

14 March 2005 (Monday)

Session 1: Traffic Measurements and Modelling

Keynote: *“Complex System Approach to Internet Measurements: The EVERGROW Measurement and Virtual Observatory Programs”*

G. Vattay, Eötvös University, Hungary

1.1. *“Exploiting Clustering Techniques for Web User-session Inference”*

A. Bianco, G. Mardente, M. Mellia, M. Munafo, L. Muscariello, Politecnico di Torino, Italy

1.2. *“On the need of specific IPv6 routing repositories”*

P. Aranda Gutierrez, Telefonica I+D, Spain

1.3. *“MOME: An advanced measurement meta-repository”*

P. Aranda Gutierrez, Telefonica I+D, Spain

A. Bulanza, University of Brussels, Belgium

M. Dabrowski, Warsaw University of Technology, Poland

B. Kaskina, TERENA, The Netherlands

J. Quittek, NEC, Germany

C. Schmoll, FOKUS, Germany

F. Strohmeier, Salzburg Research, Austria

A. Vidacs, K. Zsolt, Budapest University of Technology, Hungary

Session 2: Measurement Methods

2.1. *“PathSensor: Towards Efficient Available Bandwidth Measurement”*

P. Haga, I. Csabai, Eötvös University and Collegium Budapest, Hungary

A. Pasztor, Ericsson Research, Hungary

D. Veitch, University of Melbourne, Australia

2.2. *“Feedback Verification for Trustworthy Tomography”*

V. Arya, T. Turetli, C. Hoffmann, INRIA, France

2.3. *“A Flexible Tomography Approach for Queueing Delay Distribution Inference in Communication Networks”*

G. Simon, P. Haga, G. Vattay, I. Csabai, Collegium Budapest, Hungary

2.4. *“Towards Anomaly Detection in Network Traffic by Statistical Means and Machine Learning”*
R. Kwitt, T. Strohmeier, Salzburg Research, Austria

Session 3: Simulations and Measurements in the IST-EuQoS Project

3.1. *“Simulation Model for End-to-end QoS across Heterogeneous Networks”*

G. Stea and C. Cicconetti, University of Pisa
G. Garcia de Blas, Telefónica I+D, Spain
X. Masip, Technical University of Catalunya, Spain
J. Sá Silva, University of Coimbra, Portugal
G. Santoro, University of Rome “La Sapienza”, Italy
Halina Tarasiuk, Warsaw University of Technology, Poland

3.2. *“Ethernet QoS Modeling in Emerging Scenarios”*

M. Carmo, J. Sá Silva, E. Monteiro, P. Simões and F. Boavida, University of Coimbra, Portugal

3.3. *“A Software Architecture for Simulating IEEE 802.11e HCCA”*

C. Cicconetti, L. Lenzini, E. Mingozzi and G. Stea, University of Pisa, Italy

3.4. *“Active measurement tool for the EuQoS project”*

R. Serral-Gracia, A. Cabellos-Aparicio, H. Julian-Bertomeu, J. Domingo-Pascual, Technical University of Catalunya, Spain

Session 4: Monitoring and Measurement Tools and Systems

4.1. *“A Network Monitoring System with a Peer-to-Peer Architecture”*

P. Salvador, R. Valadas, University of Aveiro / Institute of Telecommunications Aveiro, Portugal

4.2. *“A distributed multi-purpose IP flow monitor”*

C. Mazzariello, F. Oliviero, Università degli Studi di Napoli “Federico II”
S. D'Antonio, D. Salvi, CINI, Italy

4.3. *“RTLG -RSVP enabled Traffic Load Generator for Intra-Domain and Inter-Domain QoS Signalling Tests”*

R. Chaparadza, Y. Glickman and P. H. Deussen, Fraunhofer Institute for Open Communication Systems, Germany

4.4. *“Reference Measurement Points for validation of end-to-end QoS in heterogeneous multiple domain network”*

A. Bęben, W. Burakowski and M. Dąbrowski, Warsaw University of Technology, Poland

15 March 2005 (Tuesday)

Session 5: Performance Evaluation

Keynote: *“Queues with vacations and their applications”*

D. Fiems, H. Bruneel, Ghent University, Belgium

5.1. *“Performance Evaluation of Telecommunications Systems Specified with Formal Description Techniques”*

M. J. Csorba, S. Palugyai, Budapest University of Technology and Economics, Hungary

5.2. *“The Impact of RTT and Delayed ACK Timeout Ratio on the Initial Slow Start Phase”*

R. Dunaytsev, Y. Koucheryavy, J. Harju, Tampere University of Technology, Finland

5.3. *“Closed Form Approximations of the TCP Throughput and Packet Loss Probability in Multi-Service Communication Networks: Analysis and Performance Evaluation”*

I. Bisio, M. Marchese, CNIT, Italy

Session 6: QoS Architectures and Mechanisms

6.1. *“An Analytical Approach for the Two-Tier Resource Management Model”*

Y. Rebahi, Fraunhofer Institute for Open Communication Systems, Germany

6.2. *“MPLS-based QoS Interworking among Autonomous Systems”*

A. Garibbo, Selenia Communications, Italy

M. Marchese, M. Mongelli, University of Genoa, Italy

6.3. *“A high-end Linux based Open Router for IP QoS networks: tuning and performance analysis with internal (profiling) and external measurement tools of the packet forwarding capabilities”*

R. Bolla, R. Bruschi, University of Genoa, Italy

6.4. *“Performance Measurements and Comparison of Modified TCP Control Algorithms over Rain-Faded Satellite Channels”*

F. Davoli, G. Spano, S. Vignola, S. Zappatore, CNIT, Italy

Session 7: Traffic Engineering

7.1. *“Estimating Successive Traffic Matrices in Backbone IP Networks: a Model Based on Underlying Trends of Variation”*

J. S. Bedo, M. Bouhtou and V. Martin, France Telecom R&D, France

7.2. *“Traffic Engineering for Hard Real Time Multicast Applications Using Genetic Algorithm”*

S. Zhang, L. Kreft, U. Killat, Technical University of Hamburg, Germany

7.3. *“Comparative Study of Inter-Domain Traffic Optimization Algorithms”*

M. Pedro, Polytechnic Institute of Leiria and University of Coimbra, Portugal

E. Monteiro and F. Boavida, University of Coimbra, Portugal

7.4. *“Towards Optimal Prepending for Incoming Traffic Engineering”*

G. Di Battista, M. Patrignani, M. Pizzonia, M. Rimondini, Università degli Studi Roma Tre, Italy

Session 8: Simulation Tools

8.1. *“Burrito: A simulation tool for P2P networks”*

M.L. Garcia Osmá, G. Garcia de Blas, F.J. Ramon Salguero, J. Andres Colas, J. Enriquez Gabeiras, Telefonica I+D, Spain

S. Perez Sanchez, R. Trueba Fernandez, Universidad de Deusto, Bilbao, Spain

8.2. *“Internet Topology Generation for Large Scale BGP Simulation”*

J.M. Fourneau, H. Yahiaoui, PRiSM, France

8.3. *“Overview of the RSVP-TE Network Simulator: Design and Implementation”*

D. Adami, C. Callegari, S. Giordano, F. Mustacchio, M. Pagano and F. Vitucci, University of Pisa, ITALY

4 List of participants

There were 70 participants at the workshop, representing 12 countries.

Peter Alm	Netintact	Sweden
Piotr Arabas	NASK	Poland
Jordi Mongay Batalla	Warsaw University of Technology	Poland
Bedo Jean-Sebastien	France Telecom R&D	France
Andrzej Bęben	Warsaw University of Technology	Poland
Krzysztof Bronarski	Warsaw University of Technology	Poland
Roberto Brushi	CNIT - University of Genova	Italy
Krzysztof Brzeziński	Warsaw University of Technology	Poland
Antal Bulanza	University of Brussels	Belgium
Wojciech Burakowski	Warsaw University of Technology	Poland
Paweł Caban	PTC Sp. z o.o.	Poland
Maxweel Carmo	University of Coimbra	Portugal
Ranganai Chaparadza	Fraunhofer Institute Fokus	Germany
Mate J. Csorba	Budapest University of Technology and Economisc CINI, Consorzio Interuniversitario Nazionale per l'Informatica	Hungary Italy
Salvatore D'Antonio	University of Genoa	Italy
Franco Davoli	University of Genoa	Italy
Marek Dabrowski	Warsaw University of Technology	Poland
Andrzej Dąbrowski	Warsaw University of Technology	Poland
Damian Duda	Military Communication Institute	Poland
Roman Dunaytsev	Tampere University of Technology	Finland
Dieter Fiems	Ghent University	Belgium
Andrzej Firlej	Military Communication Institute	Poland
Piotr Frejowski	Warsaw University of Technology	Poland
Maria Luisa Garcia Osma	Telefonica I+D	Espania
Maciej Głowiak	Poznan Supercomputing and Networking Center	Poland
Krzysztof Grochla	IITiS PAN	Poland
Anders Gustafsson	Netintact	Sweden
Pedro Andrés Aranda Gutiérrez	Telefónica I+D	Spain
Peter Haga	Eötvös University	Hungary
Alexander Havang	Netintact	Sweden
Ceilidh Hoffmann	INRIA	France
Ulrich Hofmann	Salzburg Research Forschungsgesellschaft mbH	Austria
Robert Janowski	Warsaw University of Technology	Poland
Marcin Kamiński	Poznan Supercomputing and Networking Center	Poland
Baiba Kaskina	Terena	The Netherlands
Agata Kolewska	Warsaw University of Technology	Poland
Jarosław Kowalczyk	TP S.A.	Poland
Piotr Krawiec	Warsaw University of Technology	Poland
Sławomir Kukliński	Warsaw University of Technology	Poland
Roland Kwitt	FH Salzburg	Austria

Józef Lubacz	Warsaw University of Technology	Poland
Wictor Mardini	Technical University of Lodz	Poland
Zuzanna Mazek	Warsaw University of Technology	Poland
Maurizio Mongelli	DIST, Genoa University	Italy
Adrian Mroczko	Military Communication Institute	Poland
Luca Muscariello	Politecnico di Torino	Italy
Fabio Mustacchio	University of Pisa	Italy
Saverio Niccolini	NEC Europe Ltd., Network Laboratories	Germany
Manuel Pedro	University of Coimbra	Portugal
Piotr Pyda	Military Communication Institute	Poland
Yacine Rebahi	Fraunhofer Institute Fokus	Germany
Massimo Rimondini	Universita degli Studi Roma Tre	Italy
Dario Salvi	CINI, Consorzio Interuniversitario per l' Informatica	Italy
Carsten Schmoll	Fraunhofer Institute Fokus	Germany
Joern Seger	Dortmund Universitad	Germany
Rene Serral-Gracia	UPC - CCABA	Spain
Gabor Simon	Collegium Budapest Institute for Advanced Study	Hungary
Pior Stasiewicz	Warsaw University of Technology	Poland
Giovanni Stea	University of Pisa	Italy
Felix Strohmeier	Salzburg Research Forschungsgesellschaft mbH	Austria
Jarosław Śliwiński	Warsaw University of Technology	Poland
Halina Tarasiuk	Warsaw University of Technology	Poland
Leszek Urban	Warsaw University of Technology	Poland
Rui Valadas	University of Aveiro	Portugal
Gabor Vattay	Eötvös University	Hungary
Attila Vidacs	Budapest University of Technology and Economisc	Hungary
Steve Williams	UKERNA	United Kingdom
Piotr Wolański	Warsaw University of Technology	Poland
Zygmunt Wereszczyński	TP S.A.	Poland
Houssame Yahiaoui	Prism Lab	France
Shu Zang	Technische Universität Hamburg-Harburg	Germany