6th ACM SIGCOMM Workshop on Network and Systems Support for Games 2007

(NetGames 2007)

Melbourne, Australia
19-20 September 2007

Program for 6th Annual Workshop on Network and Systems Support for Games (in cooperation with ACM SIGCOMM)

Wednesday, Sep 19

8:30 AM - 9:00 AM

Arrival - Outside room EN101, registered attendees may pick up workshop information and CDROM

9:00 AM - 9:15 AM

Introductions

Grenville Armitage (Swinburne university of technology, Australia)

9:15 AM - 10:00 AM

Day 1 Keynote: Professor Farzad Safaei

The challenge of immersive multimedia communication for networked games

Farzad Safaei graduated from the University of Western Australia with the degree of Bachelor of Engineering and obtained his PhD in Telecommunications Engineering from Monash University, Melbourne, Australia. He has more than 17 years of experience in conducting and managing
advanced research in the field of data communications and networks. Currently, he is the Professor of Telecommunications Engineering and Director of Centre for Emerging Networks and Applications at the University of Wollongong. He is also the Program Manager of the Cooperative Research Centre for Smart Internet Technology. Before joining the University of Wollongong, he was the Manager of Internetworking Architecture and Services Section in Telstra Research Laboratories (TRL).

In the last six years, his research focus has been on network support for immersive and distributed virtual environments. A key aspect of this research is large-scale delivery and real-time creation and processing of multimedia content (such as voice and video of participants in a crowded virtual environment) with judicious adaptation of the spatial location of computation performed on multimedia streams. The application of this research on provision of immersive voice communication capability for massively multiplayer network games is currently being commercialised through a start-up company SpatialVoice Corporation (www.spatialvoice.com).

10:00 AM - 10:30 AM

Morning break (day 1)

10:30 AM - 12:00 PM

Session 2

**Is a Bot at the Controls - Detecting Input Data Attacks**
Travis Schluessler (Intel Corporation, USA); Erik Johnson (Intel Corp. USA); Stephen Goglin (Intel Corporation, USA)
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**User Identification based on Game-Play Activity Patterns**
Kuan-Ta Chen (Academia Sinica, Taiwan); Hong Li-Wen (Academia Sinica, Taiwan)
pp. 7-12

**Skype4Games**
Tonio Triebel (University of Mannheim, Germany)
pp. 13-18

12:00 PM - 1:30 PM

Lunch (day 1)

1:30 PM - 3:00 PM

Session 3

**A Long-Term Study of a Popular MMORPG** (Slides from presentation)
Wu-chang Feng (Portland State University, USA); Debanjan Seha (IBM T.J. Watson, USA); David Brandt (CCP Games, Iceland)
pp. 19-24

**A Measurement Study of Virtual Populations in Massively Multiplayer Online Games**
Daniel Pittman (University of Denver, USA); Chris Gauthier-Dickey (University of Denver, USA)
pp. 25-30

**Emotional States Control for On-line Game Avatars**
Ce Zhen (University of Wollongong, Australia)
pp. 31-36
3:00 PM - 4:00 PM

Afternoon Break (day 1) and Posters

Poster Presentations

**Hydra: A Peer-to-Peer Architecture for Massively Multiplayer Games**
Luther Chan (National University of Singapore, Singapore); Kim Leng Yong (National University of Singapore, Singapore); Ben Leong (National University of Singapore, Singapore); Raymond Choon Leng Tan (National University of Singapore, Singapore)

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**Mediator: A Design Framework for P2P MMOGs**
Lu Fan (Heriot-Watt University, United Kingdom); Hamish Taylor (Heriot-Watt University, United Kingdom); Phil Trinder (Heriot-Watt University, United Kingdom)

(pp. 43-48)

**Voronoi-based Adaptive Scalable Transfer revisited: Gain and Loss of a Voronoi-based Peer-to-Peer Approach for MMOG**
Helge Backhaus (Universitaet Karlsruhe, Germany); Stephan Krause (Universitaet Karlsruhe, Germany)

(pp. 49-54)

**Assessment of MANET Broadcast Schemes in the Application Context of Multiplayer Video Games**
Ahmad Sardouk (France Telecom, France); Sidi-Mohamad Senouci (FT R&D, France); Nadjib Achir (L2TI, PARIS 13 University, France); Khaled Boussetta (L2TI, Universite de Paris 13, France)

(pp. 55-60)

**Construction and Scheduling of Extrapolated Parity Packets for Dead Reckoning Prediction in Network Gaming**
Gene Cheung (HP Labs, Japan); Takashi Sakamoto (HP Labs Japan, Japan)

(pp. 61-66)

**Wildlife Net-Gamekeepers using Sensors Network**
Leonardo Trejos (Ibaraki University, Japan); Masaru Kamada (Ibaraki University, Japan); Tatsuhiko Yonekura (Ibaraki University, Japan); Mamun Ibne Reaz (International Islamic University Malaysia, Malaysia)

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4:00 PM - 5:30 PM

Session 4

**ARMA(1,1) Modeling of Quake4 Server to Client Game Traffic**
Antonio Cricenti (Swinburne University of Technology, Australia); Philip Branch (Swinburne University of Technology, Australia)

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**Adaptive Delta-Causality Control with Adaptive Dead-Reckoning in Networked Games**
Yutaka Ishibashi (Nagoya Institute of Technology, Japan); Yousuke Hashimoto (Nagoya Institute of Technology, Japan); Tomohito Ikedo
RTF: A Real-Time Framework for Developing Scalable Multiplayer Online Games
Frank Glinka (University of Muenster, Germany); Alexander Ploß (University of Muenster, Germany); Jens Mueller-Iden (University of Muenster, Germany); Sergei Gorlatch (University of Muenster, Germany)
pp. 81-86

6:30 PM - 9:30 PM
Workshop Dinner

Thursday, Sep 20

8:45 AM - 9:00 AM
Welcome back

Grenville Armitage (Swinburne university of technology, Australia)

9:00 AM - 9:45 AM
Day 2 Keynote: Associate Professor Wu-chang Feng

What’s Next for Networked Games?

Computing and communication advances have made on-line games much more functional and compelling, but also more complex and difficult to develop. In this talk, we will examine some of the challenges in networking, parallel and distributed systems, and security that are being tackled by on-line game developers as technology has improved with an eye on identifying research that might be useful for our community to tackle.

Bio

Wu-chang Feng is currently an Associate Professor at the Intel Systems and Networking Laboratory at Portland State University where he works on projects in networking, security, and online games. Besides running mshmr.com, one of the most popular game communities in the Northwest, his gaming work includes cheat detection and prevention, game server measurement and modeling, and the characterization of global game workloads. As a result of playing the research game, he owns the 2003 IEEE Communications Society William R. Bennett award, the 2002 IBM Research Best Paper Prize, and the 2005 IMC Best Student Paper award.

9:45 AM - 10:30 AM
Panel

10:30 AM - 11:00 AM
Morning break (day 2)

11:00 AM - 12:30 PM
Session 5

Do Nintendo handhelds play nice? An analysis of its
wireless behavior
Adam Lusch (University of Notre Dame, USA); Adele Fleury (University of Notre Dame, USA); Surendar Chandra (University of Notre Dame, USA)
pp. 87-92

An Immersive Voice OverIP Service to Wireless Gaming: User Study and Impact of Virtual World Mobility
Ying Que (University of Wollongong, Australia); Farzad Safaei (Telecommunications and Information Technology Research Institute, University of Wollongong, Australia); Paul Boustead (Telecommunications and Information Technology Research Institute, University of Wollongong, Australia)
pp. 93-98

Synchronization Medium: A Consistency Maintenance Component for Mobile Multiplayer Games
Abdul Malik Khan (Institut National des Telecommunication, France); Antoine Beugnard (ENST Bretagne, France); Sophie Chabridon (Institut National des Telecommunications, France)
pp. 99-104

12:30 PM - 2:00 PM
Lunch (day 2)
2:00 PM - 3:30 PM
Session 6

Dynamic Clustering in Delaunay-Based P2P Networked Virtual Environments
Matteo Varvello (Eurecom - Thomson, France); Ernst Biersack (Institut EURECOM, France); Christophe Diot (Thomson, France)
pp. 105-110

Virtual Context Based Services for Support of Interaction
Sonja Bergstr{"a}ßer (Technical University of Darmstadt, Germany); Tomas Hildebrandt (TU Darmstadt, Germany); Lasse Lehmann (Technische Universit{"a}t Darmstadt, Germany); Christoph Rensing (Technical University of Darmstadt, Germany); Ralf Steinmetz (Technische Universitaet Darmstadt, Germany)
pp. 111-116

Enhanced Mirrored Servers for Network Games
Steven Webb (Curtin University of Technology, Australia); Sieteng Soh (Curtin University of Technology, Australia); W. Lau (Curtin University of Technology, Australia)
pp. 117-122

3:30 PM - 4:00 PM
Afternoon break (day 2)
4:00 PM - 5:30 PM
Session 7

Performance Analysis of ANGEL System for Automated
**Control of Game Traffic Prioritisation**
Jason But (Swinburne University, Australia); Thuy Nguyen (Swinburne University of Technology, Australia); Lawrence Stewart (Swinburne University of Technology, Australia); Nigel Williams (Swinburne University of Technology, Australia); Grenville Armitage (Swinburne University of Technology, Australia)
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**Latency Evaluation of Networking Mechanisms for Game Traffic**
Szabolcs Harcsik (Simula Research Laboratory, Norway); Andreas Petlund (University of Oslo, Norway); Carsten Griwodz (Simula Research Laboratory, Norway); Pål Halvorsen (Simula Research Laboratory, Norway)
pp. 129-134

**Time-Stamp Service makes Real-Time Gaming Cheat-Free**
Shunsuke Mogaki (Ibaraki University, Japan); Masaru Kamada (Ibaraki University, Japan); Tatsuhiko Yonekura (Ibaraki University, Japan); Shusuke Okamoto (Seikei University, Japan); Yasuhiro Ohtaki (Ibaraki University, Japan); Mamun Ibne Reaz (International Islamic University Malaysia, Malaysia)
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