# Workshop Proposal

#### P2P-NVE 2011

#### The 5th International Workshop on Peer-to-Peer Networked Virtual Environments

in conjunction with

#### The 17th International Conference on Parallel and Distributed Systems (ICPADS 2011)

December 7-9, 2011

Tainan, Taiwan

## Purpose and Scope

Peer-to-peer (P2P) is a computing paradigm based on self-organizing network overlays, in which participating entities play symmetric roles as both servers and clients for accomplish common goals. Compared with the traditional client/server (C/S) paradigm, the P2P paradigm is not vulnerable to a single point of failure and has better scalability and lower installation and management cost. It has been successfully applied to many applications, such as data sharing, storage sharing, bandwidth sharing, collaborative computation, and so on. Many research studies have been devoted to developing efficient, flexible, and secure P2P systems. They call for a workshop to provide a forum for researchers to exchange their ideas about state-of-the-art P2P technologies.

Recently, some studies try to apply the P2P paradigm to network virtual environments (NVEs), which is also known as distributed virtual environment (DVEs) or collaborative virtual environment (CVEs), to increase NVE scalability and to reduce NVE management and deployment costs. An NVE is a computer-generated virtual world where multiple users can assume virtual representatives (or avatars) to concurrently interact with each other via networked links. Examples of NVEs include early DARPA SIMNET and DIS systems as well as currently booming Massively Multiplayer Online Games (MMOGs). Typical examples of studies on P2P NVEs are P2P voice chatting, P2P 3D streaming, P2P game state management, and so on. In spite of the success of the studies, we need more studies about state consistency control, persistent data storage, multimedia data dissemination, cheat-prevention, topology mismatching, and virtual world interoperability to construct NVEs of better performance.

The 1st, 2nd, 3rd and 4th International Workshop on Peer-to-Peer Networked Virtual Environments were held in conjunction with the 13th, 14th, 15th and 16th International Conference on Parallel and Distributed Systems in 2007, 2008, 2009, and 2010 respectively. To adhere to the theme of P2P-NVE workshops, the theme of P2P-NVE 2011 is to solicit original and previously unpublished new ideas on general P2P schemes as well as on the design and realization of P2P NVEs. The workshop aims to facilitate discussions and idea exchanges by both academics and practitioners. Authors are invited to submit an electronic version of original, unpublished manuscripts, not to exceed 8 double-columned, single-spaced pages, to the workshop. Submitted papers should be in accordance with IEEE Computer Society guidelines, and will be refereed by reviewers in terms of relevance, originality, contribution, correctness, and presentation. All Accepted papers will be published by IEEE Press (indexed by EI) and will be included in IEEE Xplore.

# **Topics of Interest**

Topics of interest include, but are not limited to:

- P2P systems and infrastructures
- Applications of P2P systems
- Performance evaluation of P2P systems
- Trust and security issues in P2P systems
- Network support for P2P systems
- Fault tolerance in P2P systems
- Efficient P2P resource lookup and sharing
- Distributed Hash Tables (DHTs) and related issues
- Solutions to topology mismatching for P2P overlays
- P2P overlays for NVEs
- P2P NVE multicast
- P2P NVE interoperability
- P2P NVE content distribution
- P2P NVE 3D streaming
- P2P NVE voice communications
- P2P NVE architecture designs
- P2P NVE prototypes
- P2P NVE consistency control
- Persistent storage for P2P NVEs
- Security and cheat-prevention mechanisms for P2P games
- P2P control for mobile NVEs
- P2P NVE applications on mobile devices

## **Important Dates**

Submission:	August 20, 2011
Notification:	September 25, 2011
Camera ready:	October 7, 2011

# **Organizing Committees**

#### Workshop Chair:

Jehn-Ruey Jiang, National Central University, Taiwan

Program Committee Members (listed in alphabet order): Maha Abdallah, University of Paris VI, France Guey-Yun Chang, National Central University, Taiwan Bing-Yu Chen, National Taiwan University, Taiwan Guihai Chen, Nanjing University, China Hsu Yung Cheng, National Central University, Taiwan Li-Der Chou, National Central University, Taiwan Aaron Harwood, University of Melbourne, Australia Pilar Herrero, Madrid University of Technology, Spain Jiung-yao Huang, National Taipei University, Taiwan Hung-Chang Hsiao, National Cheng-Kung University, Taiwan Fu-Hau Hsu, National Central University, Taiwan Minoru Ito, Nara Institute of Science and Technology, Japan Yoshihiro Kawahara, University of Tokyo, Japan Chuan-Ming Liu, National Taipei University of Technology, Taiwan Gianluca Moro, University of Bologna, Italy Wei Tsang Ooi, National Singapore University, Singapore Gregor Schiele, Mannheim University, Germany Sandeep Singhal, Microsoft Corporation, USA Po-Chyi Su, National Central University, Taiwan Wernhuar Tarng, Nat'l Hsinchu University of Education, Taiwan Pedro Morillo Tena, University of Valencia, Spain Orazio Tomarchio, University of Catania, Italy Shinichi Ueshima, Kansai University, Japan Jia-Ching Wang, National Central University, Taiwan Wei-Jen Wang, National Central University, Taiwan Michael Welzl, University of Innsbruck, Austria Stephen J.H. Yang, National Central University, Taiwan Shih-Chin Yeh, National Central University, Taiwan Suiping Zhou, Teesside University, United Kingdom