### Kideok Cho, Ph.D.

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RESEARCH INTERESTS Content-oriented network architecture & service; Content distribution & caching; Scalable content routing; Wireless/Mobile Networks

**EDUCATION** 

Ph.D., 2011, School of Computer Science & Engineering, Seoul National University Advisors: Prof. Yanghee Choi and Prof. Ted "Taekyoung" Kwon
B.S., 2004, School of Computer Science & Engineering, Seoul National University Magna Cum Laude, With Honors in Engineering

Work Experiences

- Postdoctoral Researcher; September 2011 May 2012 at Seoul National University
- Technical Secretary; August 2006 May 2012 at Future Internet Forum (FIF), Korea
- Visiting Researcher; December 2006 May 2007 at Advanced Wireless Networking Lab (AWNL), City University of New York (Advisor: *Prof. Myung J. Lee*)
- Intern; Summer 2002 at Samsung Networks

Thesis

1. **Kideok Cho**, "Efficient Content Delivery Towards Content-Oriented Networking," Ph.D. Thesis, Seoul National University, Seoul, Korea, 2011.

INTERNATIONAL JOURNAL PUBLICATIONS

- 1. Dukhyun Chang, **Kideok Cho**, Nakjung Choi, Ted "Taekyoung" Kwon, and Yanghee Choi, "A Probabilistic and Opportunistic Flooding Algorithm in Wireless Sensor Networks," *Elsevier Computer Communications (COMCOM)*, Vol. 35, No. 4, pp. 500-506, February 2012.
- 2. **Kideok Cho**, Hakyung Jung, Munyoung Lee, Diko Ko, Ted "Taekyoung" Kwon, and Yanghee Choi, "How can an ISP merge with a CDN?," *IEEE Communications Magazine*, Vol. 49, No. 10, pp. 156-162, October 2011.
- 3. Hakyung Jung, Ted "Taekyoung" Kwon, **Kideok Cho**, and Yanghee Choi, "RE-ACT: Rate Adaptation using Coherence Time in 802.11 WLANs," *Elsevier Computer Communications (COMCOM)*, Vol. 34, No. 11, pp. 1316-1327, July 2011.
- 4. **Kideok Cho**, Sangheon Pack, Ted "Taekyoung" Kwon, and Yanghee Choi, "An Extensible and Ubiquitous RFID Management Framework over Next-Generation Network," *Wiley International Journal of Communication Systems (IJCS)*, Vol. 23, No. 9-10, pp. 1093-1110, September-October 2010.
- Jeongkeun Lee, Kideok Cho, Seungjae Lee, Taekyoung Kwon, and Yanghee Choi, "Distributed and energy-efficient target localization and tracking in wireless sensor networks," *Elsevier Computer Communications (COMCOM)*, Vol. 29, No. 13-14, pp. 2494-2505, 21 August 2006.

INTERNATIONAL CONFERENCE PUBLICATIONS

- Kideok Cho, Munyoung Lee, Kunwoo Park, Ted "Taekyoung" Kwon, Yanghee Choi, and Sangheon Pack, "WAVE: Popularity-based and Collaborative In-network Caching for Content-Oriented Networks," in Proc. IEEE INFOCOM Workshop on Emerging Design Choices in Name-Oriented Networking (NOMEN), Florida, USA, March 2012.
- Munyoung Lee, Kideok Cho, Kunwoo Park, Ted "Taekyoung" Kwon, and Yanghee Choi, "SCAN: Scalable Content Routing for Content-Aware Networking," in Proc. IEEE International Conference on Communications (ICC) 2011, Kyoto, Japan, June 2011.
- 3. **Kideok Cho**, Hakyung Jung, Munyoung Lee, Diko Ko, Ted "Taekyoung" Kwon, and Yanghee Choi, "How can an ISP merge with a CDN?," in *Proc. of ITU Kaleidoscope Beyond the Internet? Innovations for future networks and services (K-2010)*, Pune, India, December 2010. **Second Best Paper Award** (Acceptance Ratio: (23+14)/115 = 32.1
- 4. Youndo Lee, **Kideok Cho**, Ted "Taekyoung" Kwon, and Yanghee Choi, "A Robust Flooding Algorithm in Multi-Radio Multi-Channel Wireless Mesh Networks," in *Proc. of IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM 2010)*, Montreal, Canada, June 2010. (Short Paper, Acceptance Ratio: (35+12/165) = 28.5
- 5. Diko Ko, **Kideok Cho**, Munyoung Lee, Hyunchul Kim, Ted "Taekyoung" Kwon, and Yanghee Choi, "Decentralized and Autonomous Content Overlay Networking (DACON) with WiFi Access Points," in *Proc. of International Conference on Future Internet Technologies (CFI) 2010*, Seoul, Korea, June 2010.
- Jinyoung Han, Jeongkeun Lee, Munyoung Lee, Kideok Cho, Tae Joon Ha, Ted "Taekyoung" Kwon, and Yanghee Choi, "Virtual WiFi Network Database Construction for Positioning Services," in Proc. of International Conference on Future Internet Technologies (CFI) 2009, Seoul, Korea, June 2009.
- Kideok Cho, Munyoung Lee, Dong-il Diko Ko, Taekyoung Kwon, and Yanghee Choi, "An Efficient Multicast Routing in IEEE 802.15.5 Networks," in *Proc. of International Conference on Information Networking (ICOIN) 2009*, Chiang Mai, Thailand, January 2009.
- 8. **Kideok Cho**, Jaeyoung Choi, Dong-il Diko Ko, Taekyoung Kwon, and Yanghee Choi, "Content-Oriented Networking as a Future Internet Infrastructure: Concepts, Strengths, and Application Scenarios," in *Proc. of International Conference on Future Internet Technologies (CFI) 2008*, Seoul, Korea, June 2008.
- 9. Hakyung Jung, **Kideok Cho**, Yongho Seok, Taekyoung Kwon, and Yanghee Choi, "RARA: Rate Adaptation Using Rate-adaptive Acknowledgment for IEEE 802.11 WLANS," in *Proc. of IEEE Consumer Communications & Networking Conference (CCNC)* 2008, Las Vegas, USA, January 2008.
- 10. **Kideok Cho**, Sangheon Pack, Taekyoung Kwon, and Yanghee Choi, "SRMS: SIP-based RFID Management System," in *Proc. of IEEE International Conference on Pervasive Services (ICPS) 2007*, Istanbul, Turkey, July 2007.
- 11. Min Zhang, Sangheon Pack, **Kideok Cho**, Dukhyun Chang, Yanghee Choi, and Taekyoung Kwon, "An Extensible Interworking Architecture (EIA) for Wireless Sensor Networks and Internet," in *Proc. Asia-Pacific Network Operations and Management Symposium (APNOMS) 2006 Poster Sessions*, Busan, Korea, September 2006.

# DOMESTIC JOURNAL PUBLICATIONS

- 1. **Kideok Cho**, Yongwoon Park, Taekyoung Kwon, and Yanghee Choi, "QoS-guaranteed Multimedia Streaming for Multiple Interfaces," *Journal of KIISE: Information Networking*, Vol. 36, No. 3, pp. 191-197, June 2009.
- Sangheon Pack, Min Zhang, Dukhyun Chang, Kideok Cho, Yanghee Choi, and Taekyoung Kwon, "A Survey on Integration Schemes of Wireless Sensor Networks and Internet for Ubiquitous Sensor Networks," SK Telecommunications Review, Vol. 15, No. 2, April 2005.

## OTHER PUBLICATIONS

1. **Kideok Cho**, Kunwoo Park, and Munyoung Lee, "An overview of content-oriented networking researches," *KISA Future Internet Issue Analysis Series*, December 2010.

#### PATENTS

- 1. **Kideok Cho**, Munyoung Lee, Soyoung Park, Hakyung Jung, Diko Dong-il Ko, Taekyoung Kwon, and Yanghee Choi, "Delivering Contents by Using Storage of Network," Korea Patent, No. 10-2010-0102721, Pending, October 2010.
- Dong-il Ko, Kideok Cho, Munyoung Lee, Taekyoung Kwon, and Yanghee Choi, "A Hybrid Network Apparatus for Combining an Endpoint-Oriented Networking and a Content-Oriented Networking, and Method of Using Thereof," Korea Patent, No. 1009784710000, August 23, 2010.
- 3. Dong-il Ko, **Kideok Cho**, Munyoung Lee, Taekyoung Kwon, and Yanghee Choi, "A Network System and Method thereof with DACON," Korea Patent, No. 10-2008-0055721, Pending, June 2008.

#### Project Experiences

- Fundamental Research on In-network Caching and Routing for Named-data Networking sponsored by Korea Communication Agency (KCA) (2011.03 2011.12)
- Future Internet Network Model Development sponsored by Korea Research Council of Fundamental Science & Technology (KRCF) (2008.12 2011.12)
- Fundamental technologies for the Future Internet sponsored by Ministry of Information and Communication (MIC) (2007.09 2010.02)
- Ubiquitous Content Service in the Future Internet sponsored by National Information Society Agency (NIA) (2008.07 2008.12)
- Ubiquitous Zone Project sponsored by Ministry of Information and Communication (MIC) (2007.03 2008.02)
- Development of an Adaptive Immersive 3D Networked Virtual Environment sponsored by Incheon IT Promotion Agency (IITPA) (2006.01 2007.02)
- Integration of Wireless Sensor Networks and Internet supported by Korea Science and Engineering Foundation (KOSEF) (2004.9 - 2007.8)

#### INVITED TALKS

- Korea University, "Efficient Content Delivery Towards Content-Oriented Networking," Seoul, Korea, Sep. 2011.
- National Information Society Agency (NIA), "How can an ISP merge with a CDN?," Seoul, Korea, Feb. 2011.
- KT, "An overview of content-oriented networking researches," Seoul, Korea, Aug. 2010.

#### Professional Services

- Committee member of AsiaFI NDN Hands-on Workshop 2012, Future Internet Workshop 2010, AsiaFI School on Mobile & Wireless Networks 2010, Future Internet Summer Camp 2008, AsiaFI School on Architecture and Building blocks 2008, AsiaFI School on Mobile & Wireless Networks 2008, Graduate Workshop on Networking 2007
- Reviewer of Elsevier JNCA, Wiley IJCS, GLOBECOM 2007, ICC 2006, MASS 2005/2008, WCNC 2009/2010, COMSWARE 2007/2008, SWCC 2007, ICOIN 2008/2009

#### AWARDS

ITU Kaleidoscope - Beyond the Internet? - Innovations for future networks and services (K-2010)

- The Second Best Paper Award, December 2010
- The Young Author Recognition, December 2010

Telecommunications Technology Association (TTA), Korea

- The Prize for Encouragement in the 2nd TTA IT Standardization Paper Contest, December 2006. (joint work with Sangheon Pack, Title: Ubiquitous Mobile RFID Management Framework based on IP Multimedia Subsystem)
- The Prize for Encouragement in the 1st TTA IT Standardization Paper Contest, December 2005. (joint work with Sangheon Pack, Title: A Study on RFID Management System based on SIP)

#### Scholarship

- Korea Student Aid Foundation (KOSAF), 2009 2010
- Sinyang Cultural Foundation, 2001 2003
- School of Computer Science & Engineering, Seoul National University, 2000

- TECHNICAL SKILLS Programming Languages: C++, Java, Visual C++, Visual Basic, nML, Python
  - OS: MS Windows, Linux/FreeBSD, TinyOS, Nano-Qplus
  - Tools: Oracle, QualNet, NS2

#### Professional SOCIETIES

FIF, IEEE, IEICE, KICS, KIISE

#### References

Prof. Yanghee Choi (e-mail: yhchoi@snu.ac.kr; phone: +82-2-880-7303)

• Professor, School of Computer Science & Engineering, Seoul National University, Korea

Prof. Ted "Taekyoung" Kwon (e-mail: tkkwon@snu.ac.kr; phone: +82-2-880-9105)

• Professor, School of Computer Science & Engineering, Seoul National University, Korea

Prof. Myung J. Lee (e-mail: lee@ee.ccny.cuny.edu; phone: +1-212-650-7260)

• Professor, Department of Electrical Engineering, City University of New York, USA

Prof. Sangheon Pack (e-mail: shpack@korea.ac.kr; phone: +82-2-3290-4825)

• Professor, School of Electrical Engineering, Korea University, Korea