



SOI Asia Course

Advanced Internet Technology - IV:

State of the Art Internet Technologies

<http://www.soi.wide.ad.jp/class/20070044>

WIDE Project presents a series of cutting edge topics on Internet technologies



"Digital wireless communication basics "

Dr. Jun Takei

Intel Corporation

Wireless communication has become one of the most important communication infrastructure in our life. This course will cover basic wireless communication technology and latest usage cases such as wireless LAN and mobile communications with its technology. Students will learn the basic technology that supports current

digital wireless communication technology and the mechanism.

Requirements for Digital wireless communication basics:

- basic understanding of the electrical engineering (undergraduate EE level)
- basic understanding of the wireless communication system such as WLAN and cellular system etc.

#01 Jan 08, 2008 16:30-18:00 JST

"Digital wireless communication basics (1) "

Dr.Jun Takei, Intel Corporation

#02 Jan 09, 2008 16:30-18:00 JST

"Digital wireless communication basics (2) "

Dr.Jun Takei, Intel Corporation

#03 Jan 15, 2008 16:30-18:00 JST

"Digital wireless communication basics (3) "

Dr.Jun Takei, Intel Corporation

#04 Jan 16, 2008 16:30-18:00 JST

"Digital wireless communication basics (4) "

Dr.Jun Takei, Intel Corporation



“Location Information and the Internet”

Assoc. Prof. Nobuo Kawaguchi

Nagoya University

To enable context aware services, location information plays an important role. However, it is not easy to obtain location information so far. GPS is one of a key device to utilize location information. But it does not work well in indoor environment and also expensive for ordinary user. In this lecture, WiFi location estimation technology is introduced. One can estimate the location by using pre-acquired unique ID and location of WiFi access points. WiFi location system is cheap and works well in both outdoor and

indoor environment. Other Internet technologies such as P2P computing and plug-and-play technologies are also introduced in the lecture.

#05 Jan 21, 2008 16:30-18:00 JST

"Location Information and the Internet (1)"

Assoc. Prof. Nobuo Kawaguchi, Nagoya University

#06 Jan 23, 2008 16:30-18:00 JST

"Location Information and the Internet (2)"

Assoc. Prof. Nobuo Kawaguchi, Nagoya University

#07 Jan 28, 2008 16:30-18:00 JST

"Location Information and the Internet (3)"

Assoc. Prof. Nobuo Kawaguchi, Nagoya University

#08 Jan 30, 2008 16:30-18:00 JST

"Location Information and the Internet (4)"

Assoc. Prof. Nobuo Kawaguchi, Nagoya University



“Toward IP multicast deployment”

Dr. Hitoshi Asaeda

Keio University

IP multicast is highly advantageous for high quality streaming applications and future needs in the Internet. Yet, it is generally recognized that IP multicast routing protocols are fairly complex and non-scalable and require additional maintenance and operational costs for the administrations. In this lecture, the complexities of traditional multicast communication are clarified and possible solutions using the one-to-many multicast communication model called Source-Specific Multicast (SSM) is explained. While SSM gives great advantages for the IP multicast deployment, it requires additional functions to fulfill the demand. This lecture also details the necessary components the network operators and the application programmers need to know, and discusses the future direction.

#09 Feb 04, 2008 16:30-18:00 JST

"Toward IP multicast deployment (1) "

Dr. Hitoshi Asaeda, Keio University

#10 Feb 05, 2008 16:30-18:00 JST

"Toward IP multicast deployment (2) "

Dr. Hitoshi Asaeda, Keio University

#11 Feb 11, 2008 16:30-18:00 JST

"Toward IP multicast deployment (3) "

Dr. Hitoshi Asaeda, Keio University

#12 Feb 12, 2008 16:30-18:00 JST

"Toward IP multicast deployment (4) "

Dr. Hitoshi Asaeda, Keio University



“Introduction to Internet Measurement”

Dr. Kenjiro Cho

IJJ Research Laboratory

Measurement is essential to understand the current Internet as well as to design future Internet. Still, there are many challenges in Internet measurement because of its diverse and dynamic nature with statistical properties that are considerably different from conventional communication media. This course will introduce Internet measurement covering topics such as tools, methods,

modeling and visualization.

Requirements for Internet Measurement Lectures:

- basic understanding of the Internet architecture.
- knowledge of Internet management tools such as ping, traceroute and tcpdump.
- basic knowledge of linear algebra, probability and statistics, which will help you analyze and interpret data properly.

#13 Feb 19, 2008 16:30-18:00 JST

"Introduction to Internet Measurement (1)"

Dr. Kenjiro Cho, IJJ Research Laboratory

#14 Feb 20, 2008 16:30-18:00 JST

"Introduction to Internet Measurement (2)"

Dr. Kenjiro Cho, IJJ Research Laboratory

#15 Feb 26, 2008 16:30-18:00 JST

"Introduction to Internet Measurement (3)"

Dr. Kenjiro Cho, IJJ Research Laboratory

#16 Feb 27, 2008 16:30-18:00 JST

"Introduction to Internet Measurement (4)"

Dr. Kenjiro Cho, IJJ Research Laboratory