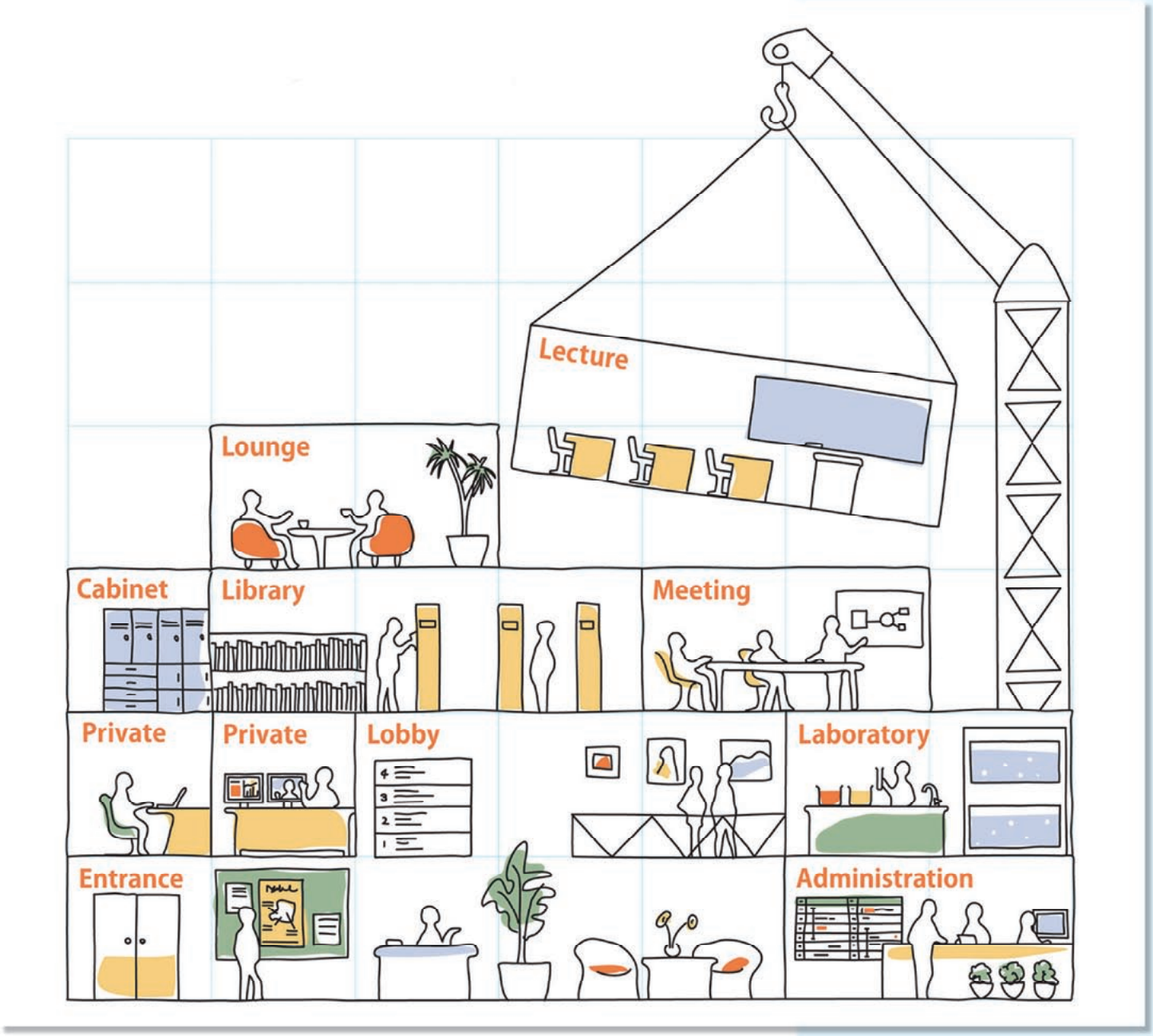
ISSN 1349-6875

National Institute of Informatics News

No.15
2006

Corresponds to
Japanese edition No.29 (Nov.,2005)



Concept chart of NetCommons

Joint research No.9

Ultrasound applications

Hiromichi Hashizume (NII)

Ultrasound applications

Many of us use computers today, hooking them to the Internet via wires, or even wireless communication, which has become popular these days for mobile PCs. However, we have also been trying to communicate with PCs via a unique method – using ultrasound – for those years. It is a joint research between Prof. Sugimoto* of University of Tokyo and us.

Ultrasound, a clumsy way of communication

We easily communicate with the opposite side of the planet using the Internet, or cover a whole house or an entire office floor in a wireless LAN with just a small box for the access point. As a matter of fact the current telecommunication technology gives us a very handy and reliable way of PC communication, regardless of the distance to our counterparts.

This is not true for ultrasonic communications. Ultrasound is a form of sound and quite similar to our voice. *Ultra* means that it has a bit higher pitch than our ears can perceive. PC ultrasonic communication is nothing more than human-beings' voice communication. As the distance to the speaker increases, the listener becomes more difficult to hear, so that the sound gets weaker in the air. They cannot communicate between two rooms because the wall prevents the sound travel. Ultrasonic communication usually covers as far as 10 meters.

Another property of sound is its relative slowness. With a tick of a clock, the electronic signal goes around the earth seven times and half the sound travels only 340 meters. It has a millionth of speed of light in the atmosphere – so we can make echoes on a mountain hike. For PC communication it takes a few hundredths of seconds when a PC sends data using ultrasound to other PCs only a few meters away. It is a significant delay for PCs.

Ultrasounds had been regarded as an unsuitable way for computer communication, as they have a relatively short range of reachability and inherent slowness.

Student of a joint research that measures ultrasonic wave

Feeling the neighbors

These ultrasonic communication properties, however, have recently been considered merits. PCs, especially the mobile models, have become smaller and smaller and can be hand-carried, moving throughout towns or in buildings. In such situations, a PC sends out electronic signals like radio waves and other responses. However, the sender cannot figure out whether the responder is just standing behind them or is on the other side of the earth, because the electronic signal is too good at covering the distance. On the contrary, when the sender sends out the signal in an ultrasonic way, he may only get a response when the receiver resides within a 10 meter range. You can distinguish the nodes by the distance, feeling the presence of the neighbors, when you use ultrasounds.

If the PC simultaneously transmits a signal using radio waves and ultrasounds, the receiver can measure the delay time of the ultrasound. When the sender stands close the delay is short, otherwise it's long. The receiver can calculate the exact distance to the sender from the delay time and the sound velocity. Giving ultrasound transmitters to your children will give you an easy way to locate them within a crowd. Putting transmitters on merchandise shelves in a department store will allow shoppers to here an quick explanation of the goods. These are typical location awareness applications, where ultrasound plays a key role.

Selected as a special promotion research of NII

Under the scheme of NII joint research, I worked with Professor Sugimoto and the students in his laboratory for several years. We had to start building ultrasonic communication equipment from scratch to collect the fundamental data of ultrasound characteristics, because only little had been reported in preceding work. It, however, unexpectedly rewarded us. We made a discovery (or an invention?) in sending precise timing information via ultrasonic communication.

In ultrasonic communications or ultrasonic distance measurements the sender has to transfer the exact timing of a clock timing of the node to another at the starting point of the communication. It is like a clock on a tower striking a bell, *Ding-Don*, to tell the time. For the receivers, however, the sound *Ding* is not clear enough to identify the exact position of the clock timing. Such a thousandth of a second ambiguity in the clock makes a sonic measurement uncertain under a 30-cm resolution.

We, however, invented a method of transferring fine timing data under a hundred thousandth of a second resolution by making a special tone pattern of *Ding* in ultrasound. Using this method we can measure the distance of two nodes placed almost 10 meters apart within a millimeter error. This is a new precision measurement technology applicable to some industrial needs. For those reasons this joint research was evaluated and selected as one of the NII special promotion researches for 2005.

Expected applications

People often wonder what kind of applications are possible using ultrasonic communication, for example, could it be used for the guidance system located in a department store, as I described previously?

It will be possible to make a guidance system in a crowded party hall. The system could tell you that the person you want to greet is 8 meters ahead of you, in the 10 o'clock direction. Or one could make a drink delivery robot for a party. Those applications are possible using ultrasonic communications, like the global positioning system (GPS) in automobile navi-

* Professor Masanori Sugimoto, Graduate School of Frontier Science, University of Tokyo.

gators . The ultrasonic position location, however, could be achieved within a millimeter error range inside a building, to which GPS radio waves do not come.

When we started the research we were focusing on ultrasonic communication being a variation of speech communication, however, through the course of research we found some new facts. Indeed the nature of ultrasonic communications is interesting.

*(**Hiromichi Hashizume**, Professor, Information media study.)*

Research & Education

NetCommons user conference 2005

It is the recent trend to introduce content management systems (CMS) or communitywares to support intellectual collaborative working. By using these systems, users can effectively share knowledge and information on the Internet. Weblog is one example of CMS which flourished recently. CMS was first developed as a system for the creation, modification, archiving and removal of information resources from an organised repository. However, it is expected that CMS will be evolved into a system which support collaborative learning and working, such as virtual offices and virtual classrooms.

National Institute of Informatics has been developing a CMS, called NetCommons, from 2001. NetCommons is designed mainly for educational use from elementary school level to graduate school and life-long education. We released the beta version in 2003. More than seventy organizations joined the NetCommons project and used it for a variety of purposes for two years. Not only the universities but also non profit organizations and associations adopted NetCommons as their information portal systems. We collected the test cases, analyzed the logs, and brushed up the system to release NetCommons 1.0.0 in summer, 2005. NetCommons 1.0.0 utilized the most popular CMS, XOOPS, as its base system, and combine it with the beta version of NetCommons. NetCommons 1.0.0 consists of three different layers. The fist layer is called Toppage, which is open for the public, and used as the portal site. The second layer is called MyRoom which is designed for the virtual private office. The third layer is called GroupRoom which can be used as a groupware, suitable for virtual collaborative learning and working spaces. By installing NetCommons, one gains CMS, groupware, mailinglist, e-learning, portal site and virtual private office at the same time on o ne server. We believe that NetCommons deserves for the title of genuine one-stop service.

On the 1st of July, 2005, we held the first NetCommons users conference at Hitotsubashi Hall, Tokyo. Five organizations reported how they used NetCommons in education, and five organizations reported how they used it in non-profit activities. Niijima Women's College reported that they adopted NetCommons as the IT infrastructure of the whole college, and how they utilized it in education, alumni activities, and faculty development and so on. Toyama Prefecture University reported how they used it as the virtual laboratory.

NetCommons is reliesed as an open source under the GNU Public License, just as XOOPS. Now it is downloadable from the site, http://www.netcommons.org/. English version is also available. On the 9th of August, the day before the opening of the download site, press-release conference was held in National Institute of Informatics. More than 500 NetCommons was downloaded on the day, and more than twenty NetCommons site was constructed in the same month, which was more than we expected. Among these sites, one can find COE project homepage at Tokyo Institute of Informatics, and virtual laboratory of "Hopeology" at Tokyo University. Many others have been added on the list.

This year, NetCommons project focuses on K-12. More than one hundred schools are now considering introducing NetCommons as their information portal systems.

*(**Noriko Arai**, project leader)*

NetCommons user conference 2005

Lecture Arai associate professor

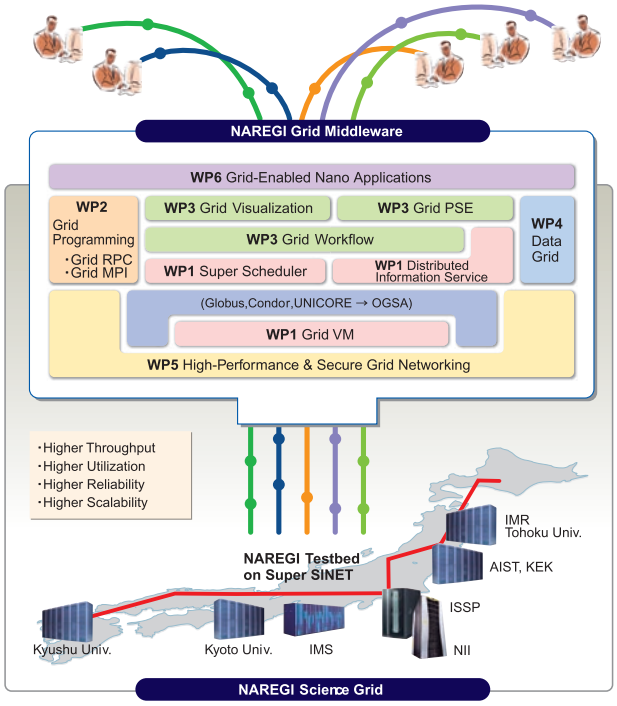
NAREGI Grid Middleware (Alpha Version) as the Core of Cyber Science Infrastructure

The NAREGI Project has developed alpha-version grid middleware for a colossal virtual computing environment. As the virtual environment gathers heterogeneous computing resources from across the network, users do not even need to be aware of the complexity of the various connections. The grid middleware was on display in demonstrations at the NAREGI Symposium 2005 and Grid World 2005.

NAREGI alpha-version grid middleware includes a super scheduler, a distributed information service, and a grid virtual machine. These components work together to enable a reservation system for simultaneous execution of multiple computing resources. The reservation system not only has a high throughput, it enables a metacomputing environment in which individual jobs must cooperate among multiple computing resources. Metacomputing provides new possibilities for advanced science research.

A beta version of the grid middleware is due out by March 2006. It will be open source.

NAREGI grid middleware is the core of the cyber science infrastructure under development at the National Institute of Informatics (NII) and the backbone of future science research.



(Collaborative Center for Research Grid)

National Institute of Informatics' 2005 Open Forum on Informatics: "Law, Economics, and Technology concerning Digital Commerce"

With the advancement of broadband networks, various contents such as music and movies are being increasingly distributed and delivered on the network. We often hear the words "merger of broadcasting and communication." The distinction between broadcasting and communication no longer exists, and the time has come for contents to be digitized and distributed via broadcast, real-time delivery, and a network with a package-delivery function. Furthermore, with the cost of broadband communications decreasing, the cost of a communication network within the scope for contents distribution has become relatively insignificant, and the system and workflow for producing high-quality contents and delivering them securely and effectively is keenly anticipated. Considering this background, to prepare for the advent of the time when the network delivery of digital contents (that is, "d-Commerce," where digital contents are transacted and traded as commodities), we hosted an open forum on informatics from the viewpoint of law, economics, and information technology.

The main objective of "Open Forum on Informatics" is to make a contribution to the field of informatics as well as to the information-technology industry by providing an opportunity for not only academics but also people in the community and industry to freely exchange their opinions. As a result, about 60 people attended the forum and took part in the discussions.

The forum opened with a brief explanation of its objective, theme, and topics by the chairman, Noboru Sonehara Ph.D., (Professor, NII), followed by three presentations: "Technology and Law of E-Commerce–Globalization of the Research on Information Systems" (Hitoshi Okada Ph.D., Associate Professor, NII); "d-Mark: Law and Economics of Copyright System in the Digital Age" (Koichiro Hayashi Ph.D., Vice President, Institute of Information Security); and "digital Commerce: Intel-

lectual Property Rights, Regulations, and Economics in the US-Australia Free Trade Agreement" (Liz Williams Ph.D., Visiting Fellow, Australian National University). The panelists and the public actively exchanged their opinions on the issues of trading and intellectual property rights regarding digital contents, the domestic and the Australian situations, and challenges and prospects regarding digital commerce.

*(**Noboru Sonehara**, Professor, Infrastructure Systems Research Division)*

NII Message from NII Researcher

Best Poster Award
at the World Wide Web Conference 2005

Ulrich Apel

Suggesting a New Kanji Learning System for Foreigners

One of the major obstacles for foreigners to learn Japanese is its complicated writing system. Japanese is written in characters of Chinese origin mixed with kana. Kana comprise hiragana and katakana, which are cursive or shortened versions of former kanji and which represent only the sounds of syllables. While Japanese learn the writing system at school over many years, foreigners mostly learn it as grown-ups and normally while pursuing their education or job.

A good way to practice kanji is to write them. However, it is not easy for beginners to analyse the components of kanji. As most foreigners do not have a personal writing tutor, even determining the direction of a stroke may be difficult.

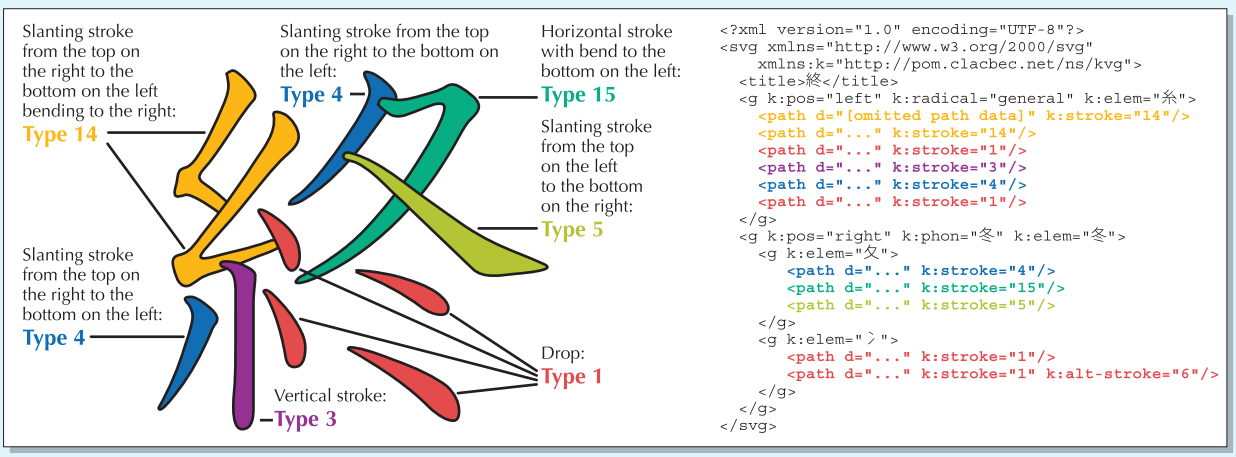
In collaboration with Julien Quint (at NII until last year, now at the National Rehabilitation Center for Persons with Disabilities), I developed a system for describing kanji as vectors. For this, we use the XML-based Scalable Vector Graphics standard and extended it with a special namespace for describing stroke types and kanji components, which cover kanji with few strokes and kanji that can be build up other kanji. These Kanji Vector Graphics data can also be used for more complex and less restricted ways to look up kanji.

Beside animations for the screen, we can use these data to highlight individual strokes or kanji components. It might even be usable for character recognition.

The data can be used together with a transliteration tool accessible on the home page of the AAAA-project: **<http://papillon.ex.nii.ac.jp:8998/aaaa>.**

This project was presented at W3C 2005 and won the Best Poster Award.

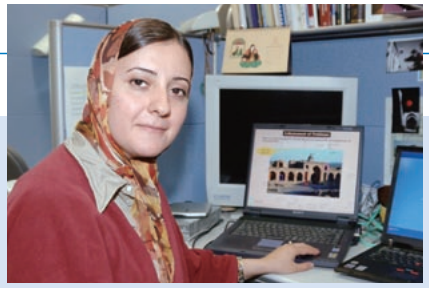
Dr. phil. Ulrich Apel has been a visiting researcher at NII since March 2004; his main project is constructing a comprehensive electronic Japanese-German dictionary WaDokuJT.



Picture title: Analyses of Kanji Strokes and their Representation as Vector Paths with Mark-up for Stroke Types, Components, Position, Radical and Phoneticum in KVG

Graduate Education

Message from Graduate Students



Elham ANDAROODI

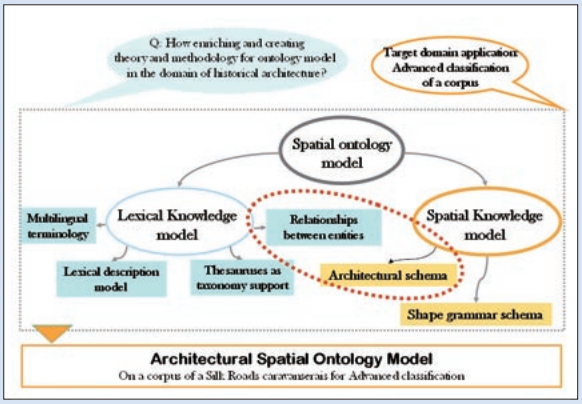
Diploma of Physics and Mathematics,
Narjes High school, Iran 1992
Master of Architectural Engineering,
University of Tehran (UT), Iran 2001

Following my past research on systematic study of cultural heritages of Silk Roads and cooperation with UNESCO on caravanserais (a typology of historical buildings), I decided to continue my research life–with a background of architectural engineering—as a Ph.D. student of informatics for advanced recognition, knowledge management, and classification of caravanserais of Silk Roads. I followed the advice of my technical supervisor Prof. Lebigre (from EVCAU, CIERA) to become a Ph.D. student in NII and changed my target country for this purpose from France to Japan under the supervision of associate Prof. Frederic ANDRES.

As a multidisciplinary research in informatics, my study focuses on Architectural Spetial Ontology Model for caravansaries of Silk Roads with a multilingual terminology, with focus on a specific corpus for systematic classification with the following processes:

(1) Designing multilingual-lexical ontology knowledge model
  (1.1) Data acquisition, component-recognition, and completing technical terminology of caravanserais.
  (1.2) Collaborative work (by UNESCO experts) on extending monolingual term-set to major languages of Silk Roads to cover the need of Silk Roads users.
  (1.3) Designing a lexical terminology model by mapping from available lexical databases or dictionaries using the Protégé tool.
  (1.4) Designing a taxonomic lexical model mapped with each monolingual term-set using thesauruses.
(2) Designing a spatial ontology knowledge model.
  (2.1) Defining relationships between terms as entities based on the spatial organization or structural features of entities in selected corpus by developing caravanserais numeral descriptive rules
  (2.2) Enhancing the ontology knowledge model by covering spatial architectural attributes of caravanserais space and developing shape grammar visual rules (using drawing tools) and shape-grammar verbal schema (using Protégé tool).
(3) Validating the content of the ontology knowledge model by implementing the verification rules inside the schema for advanced systematic classification of 137 cases of caravanserais of a specific corpus in a semi automatic way.

During the two and a half years of this research, I have had the great chance to experience the integration of modernity and tradition in Japanese life while working in an advanced research environment in NII with the constant scientific support of my supervisors. I also have had an exciting student life among other students from more than ten different nations. We learned how to be a scientist in informatics and how to respect the differences of each other.



Development & Operations

Workshop held: "Institutional Repositories and Metadata: Organizing and Communicating Information on Research Results"

The goal of this workshop was to deepen discussions on collection, organization, storage, and communication of information concerning the results of research. Focusing on institutional repositories, the invited participants included representatives of institutions that participated in the "Academic institutional repository test implementation project" conducted in the previous fiscal year and in the "Digital content project" of the Japan Association of National University Libraries'.

The workshop began with a presentation by the developer of DSpace, a type of free software in common use at institutional repositories. This presentation was followed by reports from three institutions (Waseda University, Hokkaido University, and Chiba University) that have

Development & Operations

already built and are operating (including testing and release) institutional repositories. The workshop concluded with a presentation by Prof. Kando of NII on NII's metadata database.

Materials from this workshop are available on NII's Web site:

(Contents Division)

National Institute of Informatics holds an open house

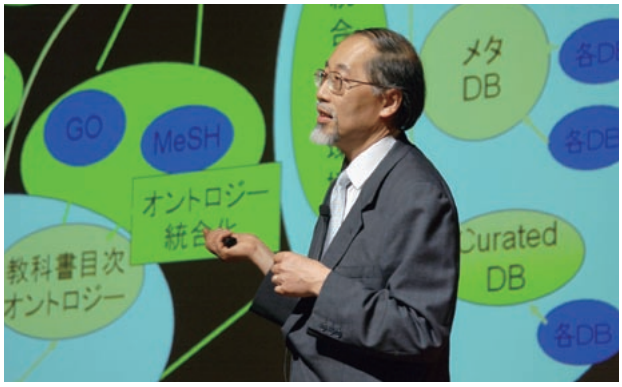
Over two days (June 2-3), the National Institute of Informatics (NII) held an open house at the National Center of Sciences building to mark the fifth year since NII's establishment. The goal of this open house was to introduce the general public to the activities of NII, including its research activities and projects.

As parts of a preliminary program, the first day of the open house featured the Chiyoda IT Forum and a Citizens' Concert.

Under the title "Manga meets the Motion Picture: The Leading Edge of the Content Business," the Chiyoda IT Forum welcomed the following guests for presentations and a discussion concerning the latest trends in the content business: Tadao Sato, President of the Japan Academy of Moving Images; Jenny Corbett, Executive Director of the Australia-Japan Research Centre at the Australian National University; Mitsuru Imoto, President of North Stars Pictures, Inc.; and Nobuhiko Horie, President of Coamix Co., Ltd. and creator of the manga "Hokuto no Ken" ("Fist of the North Star").

The Citizens' Concert featured performances of jazz and classical music, played mostly by music enthusiasts living in the nearby area.

Chiyoda IT Forum



Special Lecture Fujiyama professor

Presentation and Exhibition

The second day of the open house featured a special lecture at the Hitotsubashi Memorial Hall and introductions to NII's research and projects and to the Department of Informatics at the Graduate University for Advanced Studies.

NII Prof. Asao Fujiyama gave a special lecture, entitled "From Bio-Research to Society: Task of Science Communication." Prof. Fujiyama is coordinator of the next-generation bioportal project, which introduced in November an experimental version of a Japanese Bio-Portal Web site intended to provide the general public with information on the latest research in the biosciences.

The introductions to the NII's research and projects and to the Department of Informatics at the Graduate University for Advanced Studies featured descriptions provided by NII educators and staff members as well as current graduate students.

An exhibition of research featured exhibits from the National Archives of Japan, the Meiji University Library, the Tokyo Antiquarian Booksellers Cooperative, and the Chiyoda City Office, as well as introductions by NII educators and graduate students to their research and projects.

In addition, this open house welcomed students from a French school in Japan, the Ryuhoku campus of the Lycee et College Franco-Japonais. NII educators and staff described its research activities to the students and guided them around the site of the open house.

A program, summaries of announcements, exhibition posters, and images of the open house are available at the following URL:

(Publicity and Dissemination Division)

Science Information Network Administration/ Integration Division report

The Cyber Science Infrastructure (CSI) is a new comprehensive framework in which Japanese universities and research institutions are collaboratively constructing an information technology (IT) based environment to boost scientific research and education activities.

In preparation for the construction of CSI, Academic Information Infrastructure Planning and Promotion Headquarters was established in February 2005. The mission of this committee is to make decision for planning and designing as well as administering the next generation Science Information Network that will be launched in FY2007, serve as the core of CSI.

The following improvement plans for the FY2005 have been decided by the committee: lines to 18 SINET nodes will be upgraded to the speed of 1Gbps and 6 Super SINET nodes will be newly installed. These plans are selected from the 80 institutions that responded to the call for requests on the Science Information Network implementation.

In preparation for CSI implementation, we are continuing the study for the construction of the next generation Science Information Network.(SINET3)

(Network Division)

Implementation of 1-Gbps technology for SINET nodes (18 nodes)		
Hirosaki University node	Shinshu University node	University of Yamanashi node
Saitama University node	Gunma University node	University of Electro-Communications node
Tokyo University of Agriculture and Technology node	Chiba University node	Yokohama National University node
Toyama University node	University of Fukui node	Shizuoka University node
The University of Tokushima node	Ehime University node	Kyushu Institute of Technology node
Nagasaki University node	Kumamoto University node	Kagoshima University node

Super-SINET node installation (6 institutions)	
Kamioka Observatory	Japan Aerospace Exploration Agency, Institute of Aerospace Technology
Japan Atomic Energy Agency, Tokai Laboratory	Japan Synchrotron Radiation Research Institute
Akihabara Cross Field	National Astronomical Observatory of Japan and Yamaguchi 32-meter radio telescope

SPARC/JAPAN holds a series of seminars: Thinking About the Distribution of Academic Information in the Age of E-Journals

As part of the activities of the International Scholarly Communication Initiative, SPARC/JAPAN supports the digitization of English-language scholarly journals issued by academic societies in Japan. Beginning this fiscal year, SPARC/JAPAN will hold a series of seminars, "Thinking About Distribution of Scholarly Information in the Age of Digital Journals," with the goals of introducing the latest topics related to distribution of scholarly information and sharing technical and systemic information and know-how on the publication of digital journals. This series of seminars will be targeted at people involved in the publication of electronic journals in Japan, centered on the journals selected by SPARC/JAPAN. The seminar schedule is shown below.

Each seminar has great success, with participants representing not only academic societies but also libraries, publishers, and other organizations enthusiastically asking questions and exchanging opinions. This series of seminars in designed to help build an academic community that crosses the boundaries of categories such as researchers, academic societies, and libraries. At the same time, it contributes to the training of editorial staff in academic societies.

Details of this series of seminars are available on the International Scholarly Communication Initiative's Web site (**http://www.nii.ac.jp/sparc/**).

(Contents Division)

Seminar	Schedule	Topic
No.1	Thursday, May 19, 2005:	Nature and Japan: Nature's editorial policies
No.2	Wednesday, June 29, 2005:	What is the online manuscript submission and peer-review system to use in Japan?
No.3	Friday, July 15, 2005:	Concept and practice of Open Access for researchers, libraries, and scholarly journals
No.4	Thursday, September 22, 2005:	The way of creating and publishing e-journals
No.5	Thursday, October 6, 2005:	What should researchers do in E-journal era?
No.6	Wednesday, November 30, 2005:	The COUNTER Project: Working to make online usage statistics more meaningful
No.7	Monday, December 12, 2005:	Copyediting in Japanese scholarly journals
No.8	Tuesday, January 31, 2006 (exact date and time not yet finalized)	Recent trend and technical standards in distributing scholarly information: Google Scholar, CrossRef, OAI-PMH, etc
No.9	Friday, February 10, 2006 (exact date and time not yet finalized)	Wrap-up session by partners of SPARC/JAPAN

Topics

National Institute of Informatics Professor Emeritus Award Ceremony

On Friday, May 27, the National Institute of Informatics (NII) held a ceremony bestowing the title of NII Professor Emeritus on former NII Director General (now Advisor) Yasuharu Suematsu and on former Director of the Multimedia Information Research Division Takeo Yamamoto.

After previously serving in a number of positions including President of the Tokyo Institute of Technology, Inspector General of the Japan Society for the Promotion of Science, Director General of the Ministry of International Trade and Industry (MITI)'s National Institute for Advanced Interdisciplinary Research, and President of the Kochi University of Technology, Prof. Suematsu was appointed NII Director General in April 2001 and a Director of the Research Organization of Information and Systems upon the incorporation of inter-university research institutes in April 2004. He resigned as Director General of NII upon completion of his term on March 31, 2005. From preparations for the establishment of NII through the incorporation of inter-university research institutes, Prof. Suematsu has given his all to advance the growth and development of NII.

The professor emeritus award ceremony held on May 27, 2005
A commemorative photograph featuring
Prof. Suematsu and Prof. Yamamoto

The ceremony held to commemorate the hanging of the portrait of
Prof. Suematsu

Prof. Yamamoto was appointed Associate Professor at the Research Center for Library and Information Science (RCLIS) at the University of Tokyo, the starting point for NII's precursor, the National Center for Science Information Systems (NACSIS). After building the foundation for the Center, he served as Professor and Vice President at the University of Library and Information Science before his appointment in April 2001 as Director of the Multimedia Information Research Division and Professor at NII. He left this position effective March 31, 2005, after reaching retirement age.

The title of professor emeritus has been bestowed upon Prof. Suematsu and Prof. Yamamoto in recognition of the success of each professor to this point in their respective careers.

On the same date, a portrait of Prof. Suematsu as Director General was hung in the drawing room on the 22nd floor.

(General Affairs Division)

Karuizawa Saturday Salon 2005

The first and second lectures of the Karuizawa Saturday Salon were held respectively on May 14 and June 25, 2005 at the International Seminar House for Advanced Studies in Karuizawa, Nagano.

The First Lecture: May 14, 2005

"Static" analysis and "Motion" analysis –3D digital archive of cultural heritage–

Professor of the Institute of Industrial Science,
the University of Tokyo
IKEUCHI, Katsushi

The digital archive of cultural heritage supports preservation, education, and promotion purposes over a wide range of useful technical fields. In this lecture, I will outline the digitalization technology that we have developed in our group for storage of tangible and intangible cultural heritage. First, I will focus on "static" analysis of how to model shapes of tangible cultural properties such as a Great Buddha and a Noh mask, how to reproduce appearances of a heritage object in "color," "gloss", etc. and how to integrate created digital models into a scene seamlessly. Next, I will describe the motion of intangible cultural heritage such as classical Japanese dance. I will then explain "motion" analysis like reproduction by CG

or robots. Finally, I will introduce digital contents like the World Buddha Library generated by using these elemental technologies.

(Excerpt quoted in leaflets handed out at the seminar)

The Second Lecture: June 25, 2005

My Literary World

Poet, writer
TSUJII, Takashi

Having published two full-length novels – Portrait of My Father and Journey From the End – from last year to this year, I feel that the right path I should follow hereafter in my career as a writer is becoming visible at last. The duty of the writer is to challenge the times he or she is living in; consequently, the attitude and style of writing must also change in order to cope with the changes in society. If literature is seen as the workings of the critical mind, then it should be said that the present state of literature, which continues to be pushed away by entertainment, is in decline or even in crisis.

To overcome this situation, I believe it is necessary to deconstruct the legacy of modern and contemporary

Japanese literature after the Meiji era – the reign of the Meiji Emperor who presided over the transformation of Japan into a modern nation from 1867 to 1912 - and rediscover our tradition once again. I would like to present a message within the context of such awareness at our meeting (and, hopefully, without making it sound like a university lecture).

(Excerpt quoted in leaflets handed out at the seminar)

National Institute of Informatics Public Lectures 2005, "Eight words to discuss Informatics"

The First Lecture: Wednesday, July 13, 2005

"Blog: How do ordinary people change the Internet by their publishing?"

Professor, Research Center for Test beds and Prototyping

Hideaki Takeda

Doctor of Engineering from University of Tokyo, 1991
1995-2002 Associate Professor, Nara Institute of Science and Technology
2000-2003 Associate Professor, National Institute of Informatics
2002-2003 Associate Professor, The Graduate University for Advanced Studies
2003- Professor, The Graduate University for Advanced Studies
2003- Professor, National Institute of Informatics
Research fields: Artificial Intelligence, Design Theory

Currently, the web has been changing from a tool simply to get information to a communication tool for uses such as blogging. In the lecture, I talked about the web in terms of a communication tool's past, present and future.

The web started as an information exchange tool in the research community.

Later on, it became a tool for everyone.

From this beginning, the web has originally played the role of a communication tool; it can thus be said that "blog," "wiki," and Social Networking Service (SNS) – which many people are now using – are the revival of that role. The"blog"is positioned as a development of the diary in Japan; however, its role is not only to show a diary to the public but also to promote communications among people. Wiki's mechanism enables anyone to freely participate in editing of hypertext. Social Network Service (SNS) has a function for exchanging information by writing the relations between participants.

These are all tools to enhance communications in the community, so they have become very popular. This status shows how much we have all needed these kinds of web tools for our community life. In the future, with these tools, we will strengthen our community ties as we advance toward sharing and exchanging knowledge. One result of these efforts is the semantic web-which uses metadata to offer more advanced information that can be shared.

(Publicity and Dissemination Division)

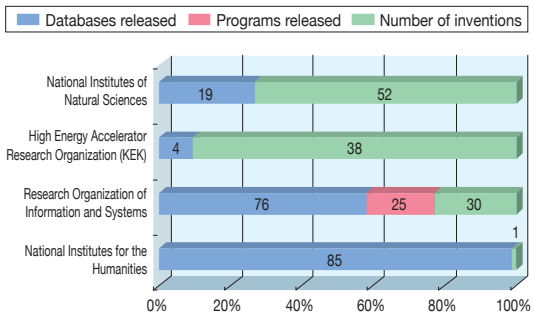
Intellectual Property Center News

Utilization of the intellectual property of inter-university research institutes

Valuation of the intellectual property of universities is in the process of shifting from a focus on numbers of patent applications to one on utilization. Industry expects to use the advanced fundamental technologies of universities to provide new products and services. The Intellectual Property Center is calling for support of activities that take into account strategic considerations in the securing of rights to such advanced fundamental technologies and of rights to application technologies developed through means such as joint research.

At the same time, the intellectual property of inter-university research institutes is characterized not only by patent relationships but also by a number of copyrighted research results, including those in databases and programs, as well as academic papers. Although the success rates of inter-university research institutes vary considerably by institute (see the chart below), the use of copyrighted materials must not be ignored when considering utilization of intellectual property. It is likely that a considerable number of such cases involving utilization of software by the Research Organization of Information and Systems remain unrealized. In addition to the continued efforts at ascertaining the true circumstances of such cases, the Intellectual Property Center will conduct activities to provide backup support for making contributions to society that have true impacts, such as achieving cultural changes, by utilizing intellectual property in the form of research results.

(Intellectual Property Center)



Figures above represent actual FY 2004 performance

Description of a cover

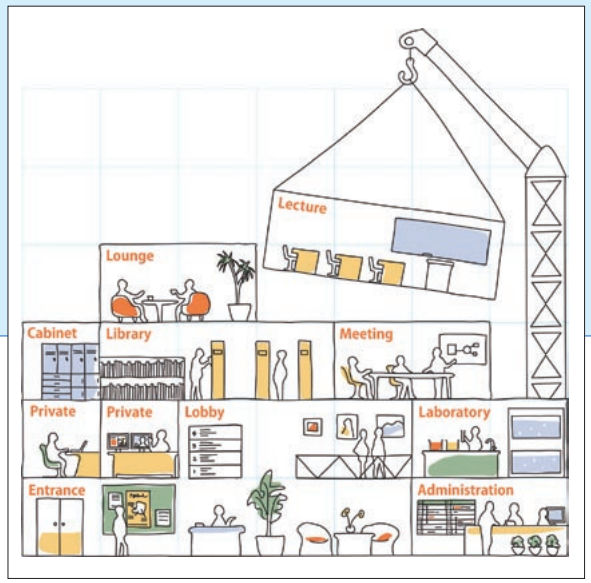
Concept chart of NetCommons

NetCommons is an information portal system for education which combines content management system, groupware and distance learning system in one.

It is a big challenge for the universities to provide a distributed collaborative working environment to accelerate knowledge and information sharing.

NetCommons is expected to play the main role in the next generation education.

(http://www.netcommons.org/)



Detailed information on the research and projects of NII is available at our Website.

http://www.nii.ac.jp/

National Institute of Informatics News No.15 2006
Issue : Inter-University Research Institute Corporation / Research Organization of Information and Systems
National Institute of Informatics

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