National Institute of Informatics

2007-2008

Weaving Information into Kowledge

NII

Contents

Greeting from the Director General

Needless to say, academic research organizations are now under increased pressure to clarify their missions and roles, plan and implement unique activities, and effectively demonstrate their various successes.

The National Institute of Informatics (NII) has designated the following missions and roles: To create future value (create scholarship) as Japan's sole comprehensive academic research institute in the field of informatics; to attain the status of a national center for informatics research activities; and to spearhead and develop service operations related to the academic information infrastructure (academic networks and contents) — a task vital to the research and education activities of today's academic community overall. Through the above efforts, the NII aims to realize the effective contributions internationally as well as to domestic society.

These missions have now reached a particularly important stage, after the ten-year history from the IT boom to IT bubble collapse. The field of informatics thus needs to demonstrate new theories, methodology, and applications (future value) that can generate new types of actual value for human and society. In addition, needs are growing as regards the formation of a 'Cyber Science Infrastructure (CSI)' that organically combines elements such as shared ultra-high-speed networks, research resources, and science software and databases, as well as human resources, in order to realize global competitiveness in broader-ranging research and industrial and education activities. The need is therefore urgent to develop academic information infrastructure that will lead seamlessly to that of the next generation. Next generation science information network (SINET3) that starts at current year, and next generation science contents infrastructure formation by cooperation with universities is parts of the concrete result.

The NII intends to focus its efforts on fulfilling these missions by further strengthening its research structure and by making the institution more accessible.

We look forward to the continued understanding and support of all related parties.

Masao Sakauchi

Director General, National Institute of Informatics

April 2007

History

1973	October	Ministry of Education, Science, Sports and Culture proposes an "Improved Circulation System for Academic Information" in the Third Report (Basic Policies for the Promotion of Scholarship) of the Science Council.
1976	May	Research Center for Library and Information Science (RCLIS) is established at the University of Tokyo.
1978	November	"A New Plan for Academic Information Systems" is presented to the Science Council by the Minister of Education, Science, Sports and Culture. The Science Council issues a response in January 1980.
1983	April	Center for Bibliographic Information is established at the University of Tokyo, with the reorganization of the Research Center for Information and Library Science.
1986	April	National Center for Science Information Systems (NACSIS) is established, with the reorganization of the Center for Bibliographic Information, the University of Tokyo.
1997	March	International Seminar House for Advanced Studies (Karuizawa, Nagano Prefecture) is established.
2000	February	Operations move to a building in the National Center of Sciences (Hitotsubashi, Chiyoda-ku, Tokyo).
1997	December	An Advisory Panel on a Core Institution for Scientific Research in the Information Field is established by the Ministry of Education, Science, Sports and Culture.
1998	January	A proposal entitled "Promoting Computer Science Research" is published by the Science Council of Japan, calling for the establishment of a core institution for inter-university research in informatics.
1998	March	Advisory Panel on a Core Institution for Scientific Research in the Information Field issues its report.
1998	April	Coordination Office is established for the Core Institution for Scientific Research in the Information Field; committee is formed in May.
1999	March	Coordinating Committee of the Core Institution for Scientific Research in the Information Field issues its report.
1999	April	Preparatory Office is established for the Core Institution for Scientific Research in the Information Field; committee is formed in May.
1999	July	Preparatory Committee of the Core Institution for Scientific Research in the Information Field issues its interim report.
2000	March	Preparatory Committee of the Core Institution for Scientific Research in the Information Field issues its final report.
2000	April	National Institute of Informatics (NII) is established, with the reorganization of NACSIS and assumption of its functions.
2002	April	Ph.D. Program in Informatics is established in the Department of Informatics, Graduate University for Advanced Studies.
2002	September	Research Planning and Promotion Strategy Office is founded.
2002	October	International Course is established within Ph.D. Program in Informatics.
2003	January	Global Liaison Office is formed.
2003	April	National Research Grid Initiative (NAREGI) begins. Initiation of Project to Improve Infrastructure for International Circulation of Scholarly Information
2004	April	NII begins a new chapter as a member of the new Inter-University Research Institute Corporation / Research Organization of Information and Systems.
2005	April	The official service of GeNii -NII Scholarly and Academic Imformation Portal- is launched.

Administrative Council

Members advise the Director General regarding plans for NII projects and other important matters related to management and operations.

Setsuo Arikawa	Trustee, Kyushu University
Haruhisa Ichikawa	Director, NTT Science and Core Technology Laboratory Group
Mariko Takahashi	Science Editor, Asahi Shimbun
Hidehiko Tanaka	Director, Graduate School of Information Security, Institute of Information Security
Hozumi Tanaka	Professor, School of Computer and Cognitive Sciences, Chukyo University
Mario Tokoro	SVP, Corporate Executive, Sony Corporation
Shojiro Nishio	Professor and Director, Graduate School of Information Science and Technology, Osaka University
Mitsutoshi Hatori	Professor, Faculty of Science and Engineering, Chuo University
Yoichi Muraoka	Professor, School of Science and Engineering, Waseda University
Yoshifumi Yasuoka	Professor, Institute of Industrial Science, University of Tokyo
Yoh'ichi Tohkura	Deputy Director General, NII
Asao Fujiyama	Director, Principles of Informatics Research Division, NII
Shinichi Honiden	Director, Information Systems Architecture Science Research Division, NII
Keizo Oyama	Director, Digital Content and Media Sciences Research Division, NII
Noboru Sonehara	Director, Information and Society Research Division, NII
Kenichi Miura	Director, Center for Grid Research and Development, NII
Akihiko Takano	Director, Research and Development Center for Informatics of Association, NII
Shigeki Yamada	Director, Research and Development Center for Academic Networks, NII
Jun Adachi	Director, Cyber Science Infrastructure Development Department, NII
Masamitsu Negishi	Director, School of Multidisciplinary Sciences, The Graduate University for Advanced Studies
Ken Hayami	Head, Department of Informatics, School of Multidisciplinary Sciences, The Graduate University for Advanced Studies

Advisory Board

Advisory Council for Research and Management Members provides advice and suggestions to the Director General regarding joint research programs and other important matters related to the operation of NII, in response to requests from the Director General.

Advisor (National Institute of Informatics)

Yasuharu Suematsu	Former Director General, NII

Professor Emeritus (NACSIS: National Center for Science Information Systems)

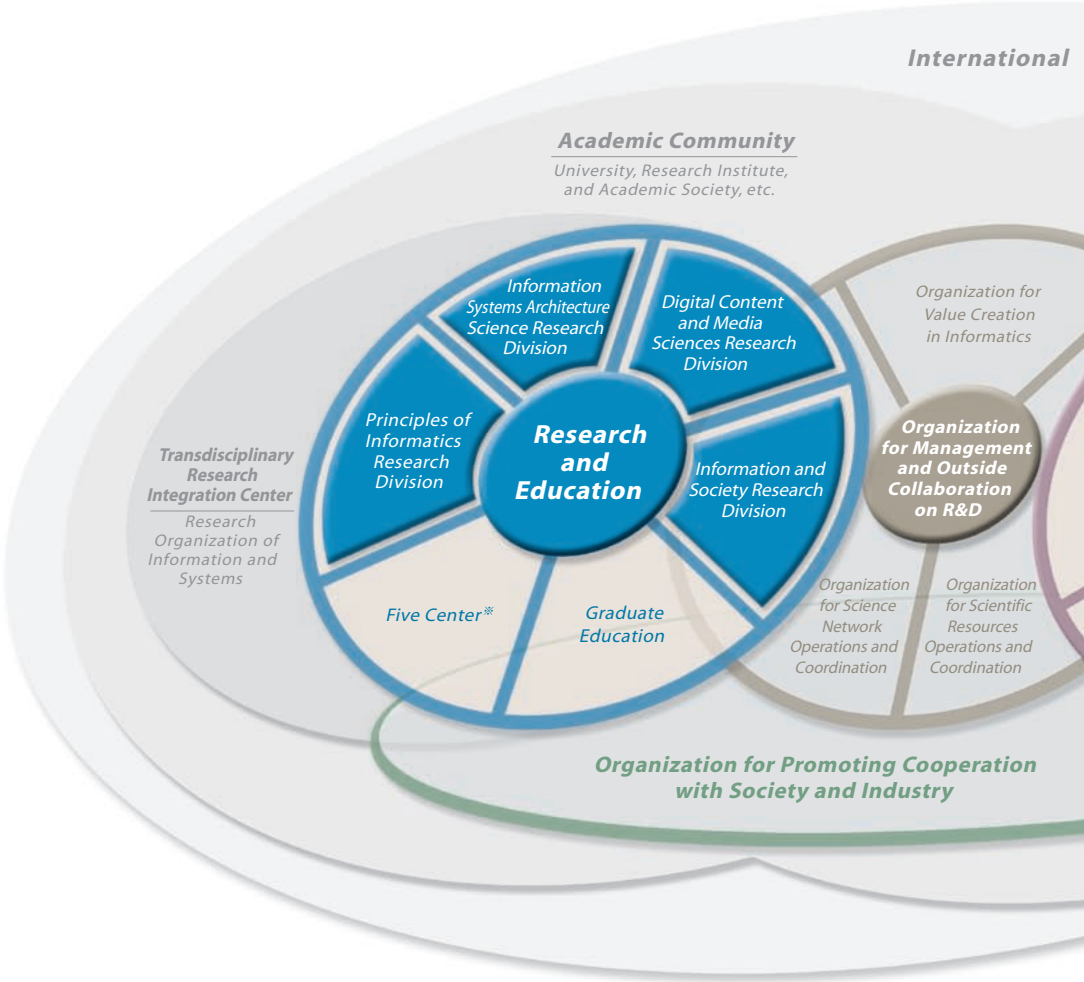
Kimio Ohno	Former Deputy Director General, NACSIS	Tatsuo Nishida	Professor Emeritus, Kyoto University
Atsunobu Ichikawa	Professor Emeritus, Tokyo Institute of Technology	Hisao Yamada	Professor Emeritus, University of Tokyo
		Hitoshi Inoue	Former Deputy Director General, NACSIS

Professor Emeritus (NII : National Institute of Informatics)

Takamitsu Sawa	Director General, Institute of Economic Research, Kyoto University
Mitsutoshi Hatori	Professor, Faculty of Science and Engineering, Chuo University
Yasuharu Suematsu	Former Director General, NII
Eisuke Naito	Professor, Faculty of Sociology, Toyo University
Kinji Ono	Visiting Professor, Waseda University
Takeo Yamamoto	Former Director, Multimedia Information Research Division, NII
Haruki Ueno	Former Professor, Principles of Informatics Research Division, NII

Future Value Creation through Informatics by

As Japan's only general academic research institution seeking to create future value in the new discipline of in-
velopment activities in information-related fields, including networking, software, and content. These activities
stitute, NII promotes the creation of a state-of-the-art academic-information infrastructure (the Cyber Science In-
munity, with a focus on partnerships and other joint efforts with universities and research institutions
Founded in April 2000, the NII marked its new beginning in April 2004 as a member of the Research Organiza-



Advancing integrated research and education in the field of informatics

Informatics is a new academic discipline based not just only on computer science and information technology, but on the human, social, and life sciences. The NII advances informatics research with the goals of creating future value; furthering social and public contributions; promoting interdisciplinary approaches to information processing; partnerships among industry, government, academic, and civilian organizations; and international research activities and operations. The NII has established four research divisions, five research centers, the Organization for Management and Outside Collaboration on R&D, and the Collaborative Research Unit.

Creating future value

Seeking to establish a new academic discipline through long-range promotion and systemization of a broad range of informatics research, ranging from the natural sciences through the human and social sciences, the NII contributes to informatics development by creating future value (ranging from theoretical and methodological work through applications) throughout the discipline.

Social and public contributions

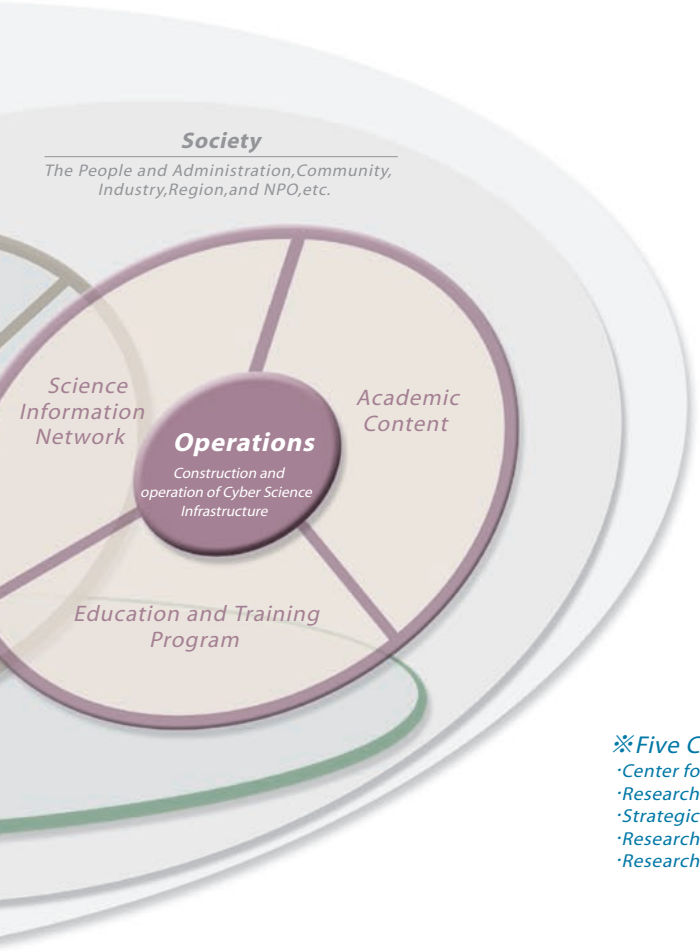
The NII seeks to achieve harmony between society, culture, and social systems, in addition to creating platforms and portals that encourage the establishment, searching, and use of content to develop, and enliven, and disseminate academic, cultural, educational, publishing, and environmental activities, as well as the social and public activities of localities, nonprofit organizations, and other entities.

Interdisciplinary approach to information processing

The NII promotes cross-functional interdisciplinary research and promotes synergistic efforts between academic disciplines to enable progress in new and developing domains. Established in April 2005 at the Research Organization of Information and Systems, the Transdisciplinary Research Integration Center undertakes interdisciplinary research across a broad range of fields, seeking to elucidate issues in the life and earth system sciences.

Advancing Research and Operations in Tandem

formatics, the National Institute of Informatics (NII) seeks to advance integrated research and de-
range from theoretical and methodological work to applications. As an inter-university research in-
frastructure, or CSI) that is essential to research and education within the broader academic com-
throughout Japan, as well as industries and civilian organizations.
tion of Information and Systems.



※*Five Center*
- *Center for Grid Research and Development*
- *Research and Development Center for Informatics of Association*
- *Strategic Research Projects Incubation Center*
- *Research and Development Center for Academic Networks*
- *Research and Development Center for Scientific Information Resources*

Promoting the Cyber Science Infrastructure (CSI)

The NII advances the formation and operation of the CSI, a state-of-the-art academic-information infrastructure. Through these efforts, the entire research organization — comprising the Organization for Scientific Network Operations and Coordination and the Organization for Scientific Resources Operations and Coordination, that which plan and manage partnerships and cooperation with universities and other institutions throughout Japan; the Development and Operations Department, that which handles development and operation of information systems; and the research centers that promote researcher participation and incorporation of the results of research — contributes to the academic community.

Partnerships among industry, government, and academic sectors

The NII enjoys close ties to and works in close partnership with universities and public and private research institutions. Joint efforts include research projects and human resource development, as well as activities promoting the utilization of research results based on partnerships with civilian organizations, as represented by localities and nonprofit organizations.

International research activities

The NII strives to expand its informational reach to the international community through the sharing of academic information with overseas researchers and conducting joint research with overseas research institutions. Such efforts are based on memoranda of understanding (MOUs) on international exchange concluded with universities and research institutions from around the world. The NII also engages in the development of an infrastructure for international distribution of scientific information and international academic networks.

Graduate education and human resource development

At the Graduate University for Advanced Studies, the NII has established an interdisciplinary Ph.D. program in Informatics to achieve mid-to long-term growth —, both qualitative and quantitative —, in researchers and engineers in the field of informatics. The NII has established a base for development of strategic human resources and seeks to train engineers with the skills to link the spheres of industrial and academic research.

Principles of Informatics Research Division

In the Principles of Informatics Research Division we seek to discover new principles, theories and methods in Informatics, and extend our goal to pioneering the frontiers to try and achieve a paradigm shift in informatics.

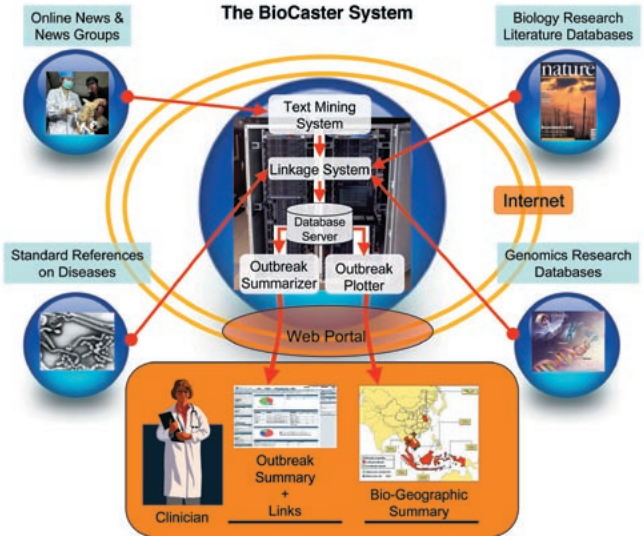
Advanced text mining and analytics

Our research focuses on bridging the gap between unstructured text and actionable data using intelligent text mining. In recent years we have been conducting research towards tools that support scientists in the life sciences to make sense of the vast quantity of results in the biomedical literature. Since 2006 we have been working with public health experts to build a system called BioCaster [1] which monitors large quantities of Internet news for signals that indicate the start of an epidemic such as SARS or Avian H5N1 influenza.

The technology behind our research is based on three complementary approaches. The first is to use machine learning based on annotated corpora to classify texts, detect domain entities such as people, locations, diseases, viruses, genes etc. and also the relations between them. Models we have explored range from hidden Markov models to conditional random fields. The second is to model this knowledge within a well founded ontological framework. A third level of technology is to exploit the results of text mining so that they can be easily interpreted by the experts who make the decisions. For example to plot disease outbreak reports on bio-geographic maps. Underlying all of these technologies is the use of high performance scalable computing to perform text analysis on large quantities of data in real time.

(Nigel Collier)

[1] BioCaster project portal: http://biocaster.nii.ac.jp



Action imitation of humanoid robots using mirror neuron model

The mirror neuron is a domain in the brain which activates when observing the actions of others, and also activates when he/she tries to perform the same action.

Since this domain is like a mirror, which projects the corresponding relation between the actions of others and one's own body, it is appropriately named a 'mirror neuron'. Since this domain is near the cerebral language field, a hypothesis of being deeply concerned with brain functions, such as recognition, generation, abstraction, verbalization of motions, has been proposed. We propose a mathematical technique called a mirror neuron model that calculates the action of this part. The model has been engineered into humanoid robots.

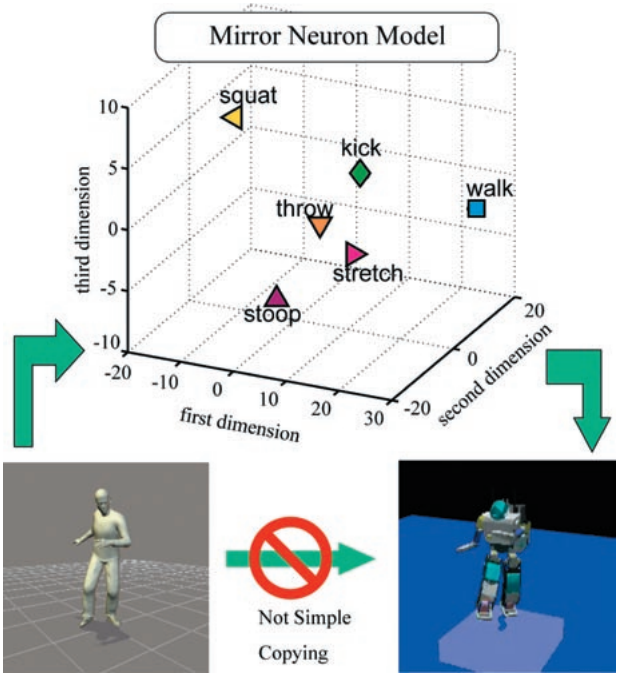
In this model, human actions are represented as a series of time series patterns of motions and sensors, such as vision, hearing, tactile sense, and force.

Then, abstracting the set of action patterns performed by humans and the name of an action by a stochastic model called the Hidden Markov Model (HMM), and measuring the similarity between the actions with the hyper-parameters of the HMM. Using the similarity, a certain topological space structure could be built.

With the help of the space structure, we can attain the communication/behavior imitation/motion transfer using the state point on the topological space, i.e., a primitive symbol.

One of the advantages of the model is that it can recognize strange actions and the generation of a novel action using the geometric spatial relationship of the state points. This enabled the humanoid robots to imitate the users' physical behaviors even if the behavior was strange to the humanoid, by using a combination of known element actions.

(Tetsuya Inamura)



Information Systems Architecture Science Research Division

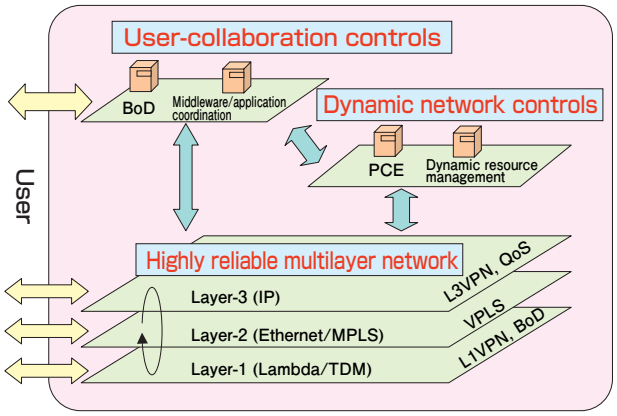
The Information Systems Architecture Science Research Division deals with the research issues in software/hardware architectures of computers and networks, and their system implementation.

Dynamic resource optimization control for multilayer networks

As the scientific applications of academic networks continue to grow, the required capabilities for the networks have also diversified. While the diversification can be seen for a wide-range of aspects, such as layer, QoS, and VPN, their demands are not predictable or clear. Under such conditions, traditional network architectures only lead to very uneconomical solutions. Therefore, we are seeking to develop so-called "programmable networks" that can flexibly respond to the fluctuations in demand, by modifying and adapting the networks capabilities and characteristics in response to ever-changing users' needs. We are conducting research and development on dynamic resource assignment technologies in response to service demands, network utilization, and network failures, and on user collaboration technologies that can enable user-initiated resource securing, based on multilayer (e.g., IP, Ethernet, and wavelength) transfer platforms. One specific example is the research and development of layer-1 bandwidth on-demand technologies that will allow users to secure, as necessary, ultimate communications environments (with very low delay, no delay jitter, and no data loss) in multilayer networks. In the near future, some of the results from this research and development will be implemented in NII's Cyber Science Infrastructure (CSI).

(Shigeo Urushidani)

References: S. Urushidani, S. Abe, K. Fukuda, J. Matsukata, Y. Ji, M. Koibuchi, and S. Yamada, "Architectural Design of Next-Generation Science Information Network," IEICE Trans. Commun. Vol. E90-B, No.5, May 2007.



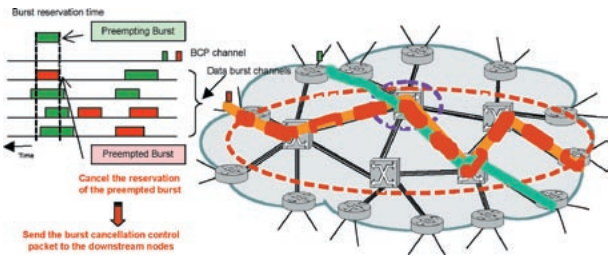
Research on quality of service provisioning in optical burst switching networks

Optical burst switching (OBS) based on wavelength division multiplexing (WDM) technology has been considered a promising technology for establishing the next-generation optical Internet. On the other hand, quality requirements for communication services vary by applications. This entails the demands for service differentiation in which service qualities for different service classes are differentiated, as well as absolute quality of service guarantee in which the loss or delay for guaranteed classes will not exceed a predefined value.

In an OBS network, the time for transmitting individual bursts, which is the basic data-transmission unit, must be reserved in advance. When making such reservations, wavelength preemption refers to the process when a burst in a higher-priority class takes the wavelength reserved for a burst in a lower-priority class (see illustration). When network resources are competed among bursts, methods such as wavelength preemption enable control of quality levels for each class. For example, wavelength preemption based on the number of wavelengths and the length of time actually used by each class allows us to guarantee the bandwidth allocated to each class. In addition, we can effectively ensure that loss in a higher-priority class does not exceed the maximum limit by having each service class maintain a specific burst loss ratio and by increasing the likelihood of wavelength preemption when the burst loss ratio of a high-priority class approaches the guaranteed value. Further studies now underway are addressing the problem of ensuring service fairness by adopting wavelength preemption based on the usage of network resources.

(Yusheng Ji,)

References:
1.Jumpot Phuritatkul and Yusheng Ji, "Resource Allocation Algorithms for Controllable Service Differentiation in Optical Burst Switching Networks," IEICE Transactions on Communications, Vol.E88-B, No.4, pp.1424-1431 (2005).
2.Jumpot Phuritatkul, Yusheng Ji, and Shigeki Yamada, "Proactive Wavelength-Preemption for Supporting Absolute QoS in Optical Burst Switched Networks," to appear on IEEE/OSA Journal of Lightwave Technology, vol.25, No.5 (2007).



Digital Content and Media Sciences Research Division

The Division conducts research on various types of contents and media such as text and video in terms of analysis, creation, compilation and application, and their processing methods from the theories to the systems.

Integrated Use of Diverse Content
CEAX Project – Using Content Related to Cultural Heritage Objects for Education

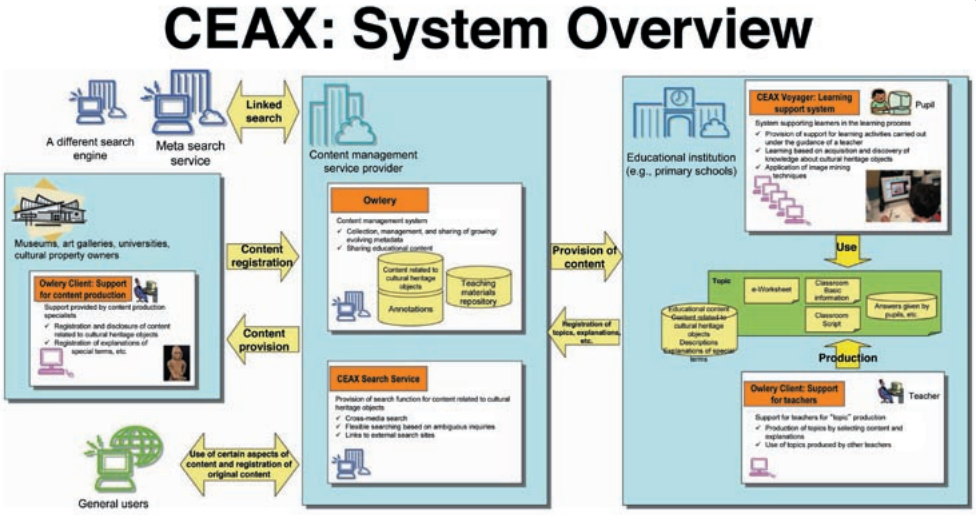
Museums and art galleries have been producing metadata on the cultural heritage and art objects currently in their collections and exhibitions. In many cases, the descriptive content, academic level of the description, and data structures are independently defined and established by each museum/art gallery. The media being described varies considerably, too, consisting of text, images, audio, and video. These inconsistencies make it difficult to integrate and use the content related to such cultural heritage objects. In particular, use of this content for educational purposes requires the addition of descriptions (annotations) such as discussions and comments specific to each of the individual cultural heritage objects.

The CEAX project promotes research on new metadata structures (growing and evolving metadata) to promote the sharing of disparate content, as well as research on content management, search methods (cross-media, cross-searching), and related methods and systems for use in educational settings. To assess the effectiveness of the techniques proposed, with the cooperation of Tokyo National Museum, we are conducting various studies, applying such content in actual primary school classroom settings.

Using the content related to cultural heritage objects presumes the ability to share this content not just among experts and specialists such as museum curators, but among a broader spectrum of participants, including teachers, pupils, and the general public. The CEAX project seeks to establish a framework that supports use of digital archives by educational institutions, one capable of serving as a nexus of information for a wide range of people.

http://research.nii.ac.jp/ceax/

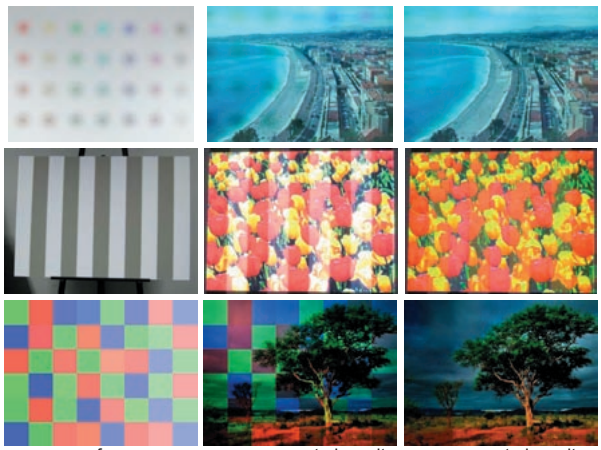
(Kenro Aihara)



Content-dependent Photometric Projector Compensation

Digital projectors have been steadily becoming smaller and cheaper, and are now used to augment various surfaces with digital information. However, in situations other than the ideal dark room with a perfect white screen, we must contend with ambient light and the non-uniformity in the color of a surface, which reduces the contrast of the image that is output and introduces visible irregularities. In this work, we present a method that compensates for these irregularities and simultaneously achieves a contrast that is equal or similar to what would be obtained in an ideal situation. Rather than insisting on a photometrically perfect result, we allow for some errors in the final output due to limited projector range and spatial variations. However, these errors are bounded by the perceptual limits derived from a model of the human visual system and the content of the image.

(Imari Sato)



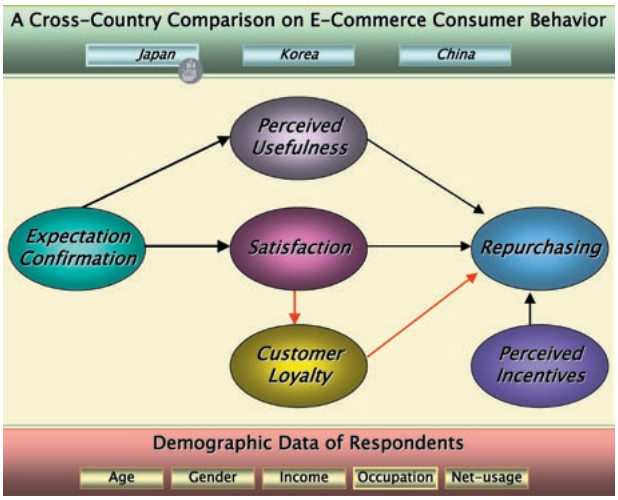
Information and Society Research Division

The Information and Society Research Division takes an interdisciplinary approach to relations between a variety of information and society or community and to implementing information systems in society. (This approach includes social informatics, scientific informatics, and cultural informatics.)

A Cross-Country Analysis of E-commerce Consumers' Behavior

As one of the advantage of the Internet, e-commerce services are seeing rapid increases in the number of users in Japan and elsewhere. However, it is an unfortunate fact that a networked society involves a wide range of risks such as "phishing" scams and leaks of private information.
On this point, via surveys conducted on e-commerce user awareness, we are working to clarify the interrelation between the convenience and the risks of Internet shopping and engaging in research into how consumer satisfaction can be improved and anxieties eliminated. The results of this research are targeted at increasing convenience and efficiency for users and enabling information and communication technologies (ICT) to power economic growth.
We have conducted online user surveys in Japan, China, South Korea and analyzed the differences in the risks and convenience perceived by Internet users in each country. These surveys have elucidated certain tendencies, such as the tendency of users in China to try to buy high-quality products by carefully reading the reviews written by other buyers on e-commerce websites and the tendency of consumers in Japan to be more loyal to certain shops.
In the future, we plan to continue this research while expanding its range of subjects and increasing the numbers of countries surveyed, in order to clarify how consumer behavior changes in response to the development of a networked society. Making clear the interrelations between services created through ICT, their users, and society, on a global scale, will make it possible to achieve sustained growth of the Internet economy.

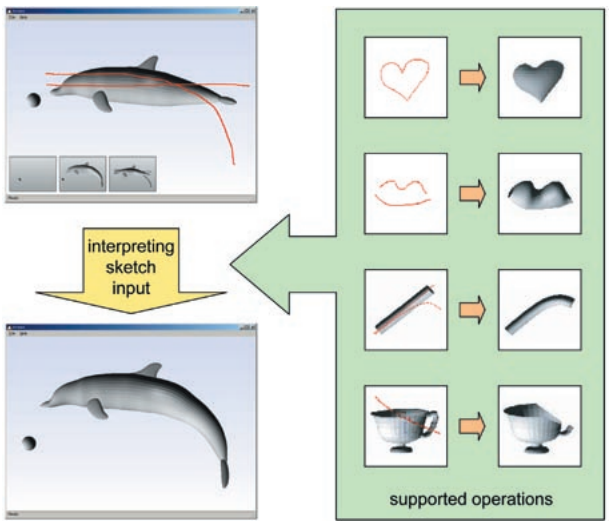
(Hitoshi Okada)



Research into three-dimensional modeling systems based on sketch input

Most of the objects around us have distinct three-dimensional shapes. Our research deals with methods of creating and editing these shapes using computers.
A computer's display is suited to rendering two-dimensional graphics. As a result, we have seen the development of a large number of two-dimensional graphic editing systems. On the other hand, creating and editing three-dimensional graphics is more of a challenge than working with two-dimensional ones. For example, most three-dimensional computer-aided design (CAD) systems use three-view drawings to enable designation of graphic elements such as position and inclination. However, a good bit of practice is required before the user is able to manipulate these three-view drawings effectively.
In order to make it easier to create and edit three-dimensional graphics, our research has focused on sketches, which anybody can easily draw. Specifically, our research deals with a system whereby a user draws a sketch (i.e., lines depicting the outline and other aspects) of the object he or she intends to create; the computer then interprets this sketch and provides corresponding three-dimensional shapes. Since different individuals draw sketches in different ways, there are multiple ways of interpreting sketch input as well. In these cases, the computer will provide multiple candidate shapes and ask the user to choose one.

(Hironobu Gotoda)



Research Center

Center for Grid Research and Development

The Center researches and develops grid middleware necessary to advanced research and development in the Cyber Science Infrastructure (CSI), and disseminates its results and conducts operations.

Research and Development Center for Informatics of Association

The Center researches and develops associative calculation mechanisms about large-scale content, and constructs practical information technology that supports raising humans' associative ability.

Strategic Research Projects Incubation Center

The Center plays a role in developing potential projects and incubating them into strategic and organized projects by providing research support.

Research and Development Center for Academic Networks

The Research and Development Center for Academic Networks is responsible for conducting research and development as well as construction of the cutting-edge infrastructures of the academic network and the UPKI (University Public Key Infrastructure) for Japanese universities, both forming the core of the Cyber Science Infrastructure (CSI) by cooperating with Japanese universities and relevant organizations.

Research and Development Center for Scientific Information Resources

The Center coordinates and operates with the related organizations in conducting advanced research and development about their circulation and generation, common of the academic digital content on the Cyber Science Infrastructure (CSI).

Organization for Management and Outside Collaboration on R&D

Organization for Science Network Operations and Coordination

The Organization coordinates and operates the construction of Next-Generation Network, middleware and others as part of the core of Cyber Science Infrastructure (CSI).

Organization for Scientific Resources Operations and Coordination

The Organization coordinates and operates the management of scientific resources and the provision of services as part of the core of Cyber Science Infrastructure (CSI).

Organization for Value Creation in Informatics

Meeting future social and technological requirements through value creation in informatics, the organization is making continuous research efforts are made to overcome grand challenges by organizing all Japanese universities and research institutions in each research area.

Organization for Promoting Cooperation with Society and Industry

Promoting research activities in informatics to contribute to society and the public and to reinforce government-industry-academia collaboration, and aiming at sharing research results and their values with society and industry, the organization is developing innovative model and frameworks for promoting cooperative activities.

Projects

Cyber Science Infrastructure (CSI)

■Science Information Network SINET3
http://www.sinet.ad.jp/english/
Organization for Science Network Operations and Coordination

■Next-generation scientific content infrastructure, content service
http://www.nii.ac.jp/irp/index.html
Organization for Scientific Resources Operations and Coordination

■Integrated middleware for CSI
http://www.naregi.org/index_e.html
Center for Grid Research and Development

■UPKI (University Public Key Infrastructure) joint public key infrastructure for universities
Organization for Science Network Operations and Coordination

■E-science promotion project

Informatics for future value creation

■Cyber Infrastructure for the information-explosion era
http://itkaken.ex.nii.ac.jp/i-explosion/eng/
Jun Adachi

■Research into quantum computing based on coherent states and solid state quantum bits (qubits)
Yoshihisa Yamamoto

■Electronic entanglement security technology
http://www.qis.ex.nii.ac.jp/ex_project2005.html
Yoshihisa Yamamoto

■Science Grid
Kenichi Miura

■Construction of next-generation informatics research infrastructure

Next-generation software strategies

■Next-generation operating system: SSS-PC
http://www.ssspc.org/
Takashi Matsumoto

■TOP SE (Education Program for Top Software Engineers)
http://www.topse.jp/
Shinichi Honiden

■Identifying basic software technologies)
Katsumi Maruyama

Information environment/Content creation

■New generation bio portal R&D
http://www.bioportal.jp/
Asao Fujiyama

■Associative information access technology incorporating self-learning
http://www.cc-society.org/about/about_cts02.html#ctslink05
Akihiko Takano

■Generic Engine for Transposable Association (GETA)
http://geta.ex.nii.ac.jp/e/
Akihiko Takano

■Content integration and manipulation technology for digital archiving
http://research.nii.ac.jp/ceax/
Jun Adachi

■Thinking content-The Smartive Project
http://smartive.jp/
Shinichi Honiden

■Digital cinema common specifications development project (DCCSDP)
http://www.mpeg.rcast.u-tokyo.ac.jp/DECSDP/index.html
Noboru Sonehara

■Research Infrastructure for Evaluation and Performance Comparisons of Information Searching and Access Technology-NTCIR (NII-NACSIS Test Collection for IR Systems)
http://research.nii.ac.jp/ntcir/
Noriko Kando

Social/Public contribution

■Cultural Heritage Online
http://bunka.nii.ac.jp/
Akihiko Takano

■IMAGINE–a content-based infrastructure associated to the imagination
http://imagine.bookmap.info/
Akihiko Takano

■Information sharing system-NetCommons
http://www.netcommons.org/
Noriko Arai

■Information reliability mechanism–Infotrustics
Noboru Sonehara

■Digital Silk Roads Project
http://dsr.nii.ac.jp/index.html.en
Kinji Ono

Integrated informatics

■Determining the genomic infrastructure of evolution and diversity through comparative genome analysis
http://www.genome-sci.jp/
Asao Fujiyama

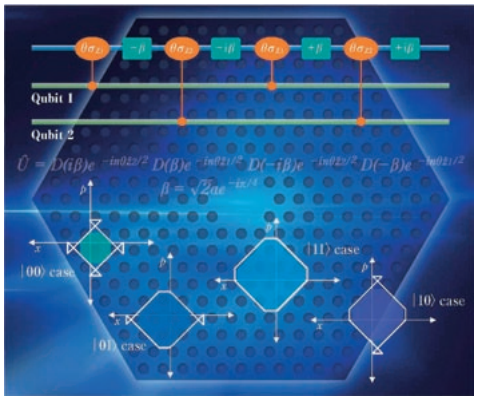
Projects

Cyber Infrastructure for the information-explosion era

Jun Adachi
http://research.nii.ac.jp/i-explosion/eng/
The aim of this project is to develop core technologies for advanced IT infrastructure designed for the "information-explosion era." These core technologies are in areas such as the efficient, secure, and unbiased extraction of necessary information from exponentially expanding mounds of data; safe, secure, and sustainable system administration for massive information systems; and utilizing information through user-friendly dialog. The project also incorporates design of social systems to accommodate advanced IT services in wider society, through R&D into a range of advanced techniques in informatics and related fields and flexible combinations thereof.
[Ministry of Education, Culture, Sports, Science and Technology (MEXT): Grant-in-aid for Scientific Research on Priority Area: Professor Kitsuregawa, the University of Tokyo)]

Electronic entanglement security technology

Yoshihisa Yamamoto
http://www.qis.ex.nii.ac.jp/ex_project2005.html
This project involves research into the physical implementation of electronic entanglement network technology and associated applications. Physical implementation refers to theoretical and practical validation of core technology elements — network creation, operation, storage, and observation. Theoretical research focuses on amplifying small nonlinearities in order to manipulate the quantum state and facilitate observation, while experimental research encompasses quantum dot photon sources, photon detection using wavelength converters, EIT nonlinear operators, and nuclear spin quantum memory. Meanwhile, applications under study include examination of fundamental theory, complete algorithms for future use, and simple protocols designed for immediate implementation.



Identifying basic software technologies

Katsumi Maruyama
This project represents a joint initiative in strategic research undertaken by the public, private, and academic sectors in a bid to provide leadership in software technology on the international stage through the development of software designed to accommodate burgeoning demand and combat widespread problems caused by software flaws. The project revolves around discussion and information dissemination in two key areas. The first is analysis of current trends and the future outlook for software technology and research at the global level, as well as discussion of future software research strategies. The other key area is discussion of joint public-private-academic software research frameworks and consortiums researching practical software predicated on the concepts of safety, security, reliability, and ease of development.

Top SE (Education Program for Top Software Engineers)

Shinichi Honiden
http://www.topse.jp/
The Top SE Project is developing a structured software engineering course curriculum based on advanced, practical software development teaching materials put together by software engineering researchers from universities and research institutes in Japan and around the world and augmented by input from industry. The objective is to rectify the tendency of software engineering education and research courses at Japanese universities to pursue "toy problems" — that is, issues that are removed from reality and have little practical relevance. The software targeted in this project is mainly related to networked home appliances. The classes thus developed will be used as the basis for training and educational units equivalent to master's courses at university graduate schools, as part of a structured education program in advanced software engineering. The aim is to train "super-architect" professionals with the capability and adaptability to take on new problems and technological issues.
[Ministry of Education, Culture, Sports, Science and Technology (MEXT): FY2004 Promotion and Adjustment Expenses, for the issue of "Creating Training Facilities for Advanced Software Engineers Integrating Industry and Academia"]

New generation bio portal R&D

Asao Fujiyama
http://www.bioportal.jp/
This project involves research and development into a bio portal for the latest findings in life science research. The aim is to encourage scientists to describe their research outcomes, such as genome analysis of closely related animals like humans and chimpanzees, in simple Japanese suitable for general audiences. To this end, the bio portal provides tools for expression of the underlying basic principles of life. The project involves preparation of translation conversions for specialist terminology, dictionaries, and descriptive explanations to clarify specialist terminology and concepts that are unique to the life sciences. These efforts are also made with the aim of conquering the English-Japanese language barrier. The project is also developing browsing and analysis functions for genome information that are suitable for researchers in a range of fields, as well as information about the location of information, systems of genome analysis tools, and literature searching tools.

Associative information access technology incorporating self-learning

Akihiko Takano
http://www.cc-society.org/about/about_cts02.html#ctslink05
This project aims to develop associative information access technology that imparts depth and security to the information space, in order to provide an overall structure for associative informatics. By creating a flexible combination of multiple information sources (where such sources are originally designed for differing purposes) in accordance with user-specified parameters, the technology stimulates new ideas and concepts. Similarly, associative computing of experiential information such as images, video, and three-dimensional objects in tandem with text data supports scholarly learning predicated on experience and experimentation.
[Ministry of Education, Culture, Sports, Science and Technology (MEXT): Technology Infrastructure for Intellectual Assets Project for the issue of "Associative Information Access Technology Incorporating Self-Learning"]
http://www.cc-society.org/about/about02.html

Generic Engine for Transposable Association (GETA)

Akihiko Takano
http://geta.ex.nii.ac.jp/e/index.html
This project involves the development of a Generic Engine for Transposable Association (GETA) that is capable of identifying similarities in document information at high speed. GETA will be distributed in the form of open source code. The GETA-based library searching service Webcat Plus, for instance, provides associative searching of some nice million books. GETA is also used in a number of other information services such as Cultural Heritage Online, Shinsho Map (New Book Map), and Book Town JIMBOU.

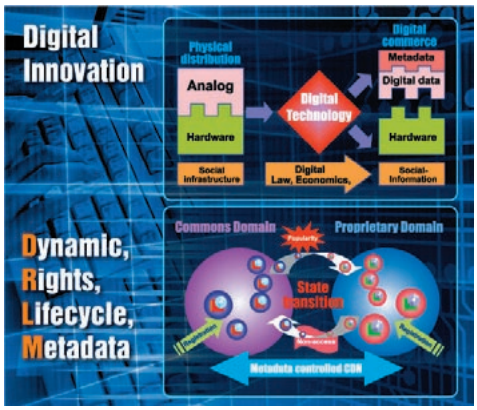
Thinking content - The Smartive Project

Shinichi Honiden
http://smartive.jp/
Smartive technology generates content autonomously based on the needs of content providers and users, which are embedded in the form of policy. Prototype trials and validation tests on an application of Smartive technology involving the generation of teaching content for English conversation practice among students have shown the technology to be an effective new e-Learning system. It is hoped that Smartive technology will also revolutionize content utilization in fields other than education, such as music, video, and advertising.
[Ministry of Internal Affairs and Communication (MIC): FY2002 Strategic Telecommunications Research and Development Promotion System, Joint Initiatives between the Private, Public and Academic Sectors, Advanced Technology Development (SCOPE), for the issue of "R&D into Agent Framework for Secure and Accessible Content Distribution"

Projects

Digital Cinema Common Specifications Development Project (DCCSDP)

Noboru Sonehara
http://www.mpeg.rcast.u-tokyo.ac.jp/DECSDP/index.html



With the growing popularity of wide-area networks and video distribution systems, sensory and cultural content is poised to develop into a core industry. Meanwhile, advances in digital video imaging, manipulation, expression, and distribution technology are making digital cinema a reality, both in cinemas and in the home. This development is creating new forms of video-based culture and an associated video cinema industry. This project is dedicated to creating new value chains in digital technology and developing common specifications and standards for metadata technology, from initial production through to the final viewing stages. The National Institute of Informatics (NII) is conducting research on copyright technology and other forms of distribution rights, particularly in relation to secondary and tertiary distribution of content, in order to confirm the validity and business potential of the same.
[Ministry of Education, Culture, Sports, Science and Technology (MEXT: Science and Technology Promotion and Adjustment Expenses, Promoting Research to Address Key Issues, for the issue of "Research on Standards for Digital Cinema - R&D on DRM in relation to Digital Cinema Video Distribution"]

Research Infrastructure for Evaluation and Performance Comparisons of Information Searching and Access Technology – NTCIR

Noriko Kando
http://research.nii.ac.jp/ntcir/

NTCIR has compiled a very large test data set for use in the evaluation of information access technologies used for searching, summarizing, and extracting information. At the same time, NTCIR is also pursuing research into evaluation techniques. From time to time NTCIR holds workshops in selected research fields, in which participating research groups in Japan and overseas test a common data set. The test results are then collated for use in generating correct data, conducting comparative evaluation and analysis of systems and algorithms, sharing resources, and engaging in general discussion of research concepts. In this way, research work in related areas contributes to overall progress in the field.

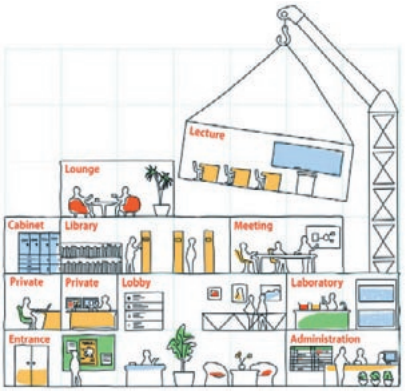
Cultural Heritage Online

Akihiko Takano
http://bunka.nii.ac.jp/

The Cultural Heritage Online Initiative is a joint project involving the Agency for Cultural Affairs and Ministry of Internal Affairs and Communications (MIC) that aims to make available to the general public a wide range of information on tangible and intangible cultural heritage, both regional and national, via high-speed, high-capacity communication systems. Cultural Heritage Online is an internet portal site providing ready access to information on the diverse and valuable cultural heritage of Japan. At present, the portal provides cultural heritage information on around 4,000 items supplied by museums throughout the country. Development and ongoing operation of the portal is the responsibility of the National Institute of Informatics (NII).
[Cultural Affairs and Ministry of Internal Affairs and Communications (MIC)]

Information sharing systems – NetCommons

Noriko Arai
http://www.netcommons.org/
NetCommons is an information-sharing platform for e-Learning sites and virtual labs, designed to encourage the formation of virtual communities among universities and NPOs. The NetCommons 100 Project, a two-year validation trial launched in July 2003, evaluated the introduction, utilization, efficacy, and convenience of the platform. The trial involved some 90 groups including universities, other higher education institutions, and joint industry-university groupware initiatives, as well as virtual offices such as NPOs. Following the success of the trial, version 1.0.0 of the platform was released as open source code in August 2005 in a bid to promote the NetCommons approach throughout society.



Information reliability mechanism –Infotrustics

Noboru Sonehara
The advent of the ubiquitous society will lead to an explosive increase in the volume of information disseminated over networks. Users will need to be much more selective in plucking out the required information from the massive volume in circulation. The selection process depends on frameworks for evaluating information with respect to accuracy, reputation, ranking, and quality — frameworks that have yet to be developed. The aim of this project is to develop an information reliability evaluation system for implementation in wider society as a combination of (1) techniques for objective evaluation of rating and quality information; (2) subjective evaluation mechanisms for reputation and word of mouth information; and (3) analysis of how the reliability of information affects economic models with respect to informatics, engineering, law, and economics.
[Ministry of Education, Culture, Sports, Science and Technology (MEXT): Social Science R&D Project, for the issue of "Governance in the Ubiquitous Society"]

Determining the genomic infrastructure of evolution and diversity through comparative genome analysis

Asao Fujiyama
http://www.genome-sci.jp/
The Comparative Genome Project, a designated research field of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), seeks to describe biological evolution and diversity on earth through analysis of biological genomes that hold the vital key to the evolution of life over more than 3.5 billion years. The project studies the most important biological genomes in relation to evolution, namely animals such as choanoflagellates, silkworms, amphioxuses, cyprinodonts, chimpanzees, and humans, as well as plants such as moss and corn. The project is also involved with new approaches to genome research such as analysis of co-existence systems generated by plants and bacteria in the environment. Within the scope of objectives in this very wide field, the focus of research is on primate genomes and the factors that led to the evolution of primates into humans.

Current Research Topics of Reseach Staff of NII

Principles of Informatics Research Division

Mathematical Informatics

Ken Hayami	● Numerical analysis: The application of GMRES (Generalized Minimal RESidual) method to singular systems and least squares problems ● The numerical solution of systems of algebraic equations arising in a MEG (MagnetoEnthelophaloGraphy) inverse problem
Kenichi Kawarabayashi	● Graph coloring problems in discrete math ● Structural graph theory and its applications to algorithms ● Network flow and disjoint paths problem
Takeaki Uno	● Efficient and practical fast algorithms for solving large scale problems arising from data mining and genome sciences ● Theory of Complexity on Discrete algorithms and enumeration algorithms ● Practical efficient computational models and algorithms for industrial engineering such as scheduling, logistics, and vehicle routing problems

Mathematical Logic

Makoto Kanazawa	● Lambda calculus and formal grammar ● Logical semantics of natural language
Makoto Tatsuta	● Type theory for classical logic ● Strong normalization of permutative conversions
Kazushige Terui	● Studies on linear logic, type theory and computational complexity

Quantum Information

Keiji Matsumoto	● Quantum information and computation
Kae Nemoto	● Quantum information/computation ● Quantum optics ● Theoretical physics
Youdai Watanabe	● Security of quantum key distribution schemes ● Relation among security notions in cryptography ● Performance of probabilistic inference algorithms on graphical models
Yoshihisa Yamamoto	● Photonic quantum information systems ● Electronic quantum simulation systems

Material and Life Informatics

Asao Fujiyama	● Comparative genomics research
Keiichi Kuma	● Comparative genome analysis which is based on study of molecular evolution
Hiroko Satoh	● Computer-assisted chemical reaction prediction ● Computer-assisted NMR chemical shift prediction and structure determination ● Visualization of chemical information and development of interface of chemical software

Intelligent Informatics

Nigel Collier	● Machine learning for semantic annotation of Web pages ● Information extraction ● Ontology engineering ● Text mining
Ryutaro Ichise	● Machine learning ● Knowledge sharing ● Data mining
Tetsuya Inamura	● Human robot interaction ● Synthetic study of robot intelligence based on stochastic information processing ● Intelligent information processing based on embodiment of robots
Katsumi Inoue	● Consequence finding and theory formation ● Induction and abduction ● Dynamics of knowledge and belief
Ken Satoh	● Construction of multiagent systems with speculative computation ● Applications of AI to Legal Reasoning
Hideaki Takeda	● Knowledge sharing system ● Community support system ● Design theory

Information Systems Architecture Science Research Division

Network Architecture

Shunji Abe	● Researches on performance analysis based on communication traffic measurement and QoS control method ● Researches on photonic network architecture ● Researches on mobile IP communication
Shoichiro Asano	● Integrated control technologies for next-generation all-optical networks ● Survival of network operation against natural calamities
Kensuke Fukuda	● Measurement and analysis of Internet traffic ● Network science

Information Network

Yusheng Ji	● Research on quality of service provisioning in multi-service networks ● Research on characterization and control of network traffic ● Research on resource management in distributed systems
Jun Matsukata	● Network control scheme for very fast Internet
Motonori Nakamura	● Network Communication Systems ● Security/Authentication Technologies ● Network Operations and Administrations
Shigeo Urushidani	● Dynamic resource optimization technologies for multi-layer networks
Shigeki Yamada	● Research on context-aware and mobile computing networks ● Research on privacy protection and security technologies

Computer Architecture	
Kento Aida	●Parallel computing ●Grid computing ●Scheduling
Hiromichi Hashizume	●Human interface with computer augmented reality ●Collaboration support systems ●Sensor applications
Michihiro Koibuchi	●High-performance interconnection networks in multiprocessor systems ●Networks-on-Chips architecture ●Interconnects using Ethernet in PC clusters
Takashi Matsumoto	●Research on fault-tolerant functions for the SSS-PC operating system ●Research on high-performance embedded microprocessors which can efficiently cooperate with high-speed network
Kenichi Miura	●Grid Computing ●Supercomputer Architecture and Performance Analysis ●Parallel Numerical Algorithms for Large Scale Simulations, Monte Carlo Method, Nonlinear Dynamics
Basis Software	
Soichiro Hidaka	●Optimization of XML query language ●Parallel processing environments for non-numeric applications ●Extensible and distributed operating systems
Katsumi Maruyama	●Research on an extensible distributed operating system ●Research on a wide-area cooperative system
Ichiro Satoh	●Middleware for ubiquitous, mobile and distributed computing
Software Engineering	
Shinichi Honiden	●Agent oriented software engineering ●Agent Architecture ●Advanced Application of Agent
Hiroshi Hosobe	●Constraint programming for graphical interfaces ●Theory and solution of soft constraints
Shin Nakajima	●Formal specification and verification of software (Application to Web service and embedded systems)
Hironori Washizaki	●Component-based and model-driven software development ●Knowledge and process reuse based on software patterns and process lines ●Software quality assurance with metrics and testing
Tomohiro Yoneda	●High-Level synthesis of asynchronous circuits ●Mapping of asynchronous circuits to FPGA ●Formal verification of real-time software
Nobukazu Yoshioka	●Agent oriented software engineering ●Agent Architecture ●Software development methods based on security patterns

Digital Content and Media Sciences Research Division

Foundations of Content Management	
Isao Echizen	●Technologies and systems for multimedia content security ●Integrity of multimedia content ●Information hiding
Fuyuki Ishikawa	●Software Infrastructure for Contract-based Composition, Distribution, Provision, and Consumption of Digital Content and Services ●Service-Oriented Computing
Norio Katayama	●Data Management Technology for Video Corpus Analysis
Hiroyuki Kato	●Optimization for casual queries to database ●Fundamental issues on optimizing queries to XML databases
Shingo Nishioka	●Research on Scalable Association for Huge Corpus Access ●Interactive methods in information space based on association
Akihiko Takano	●Research on parallel association computation based on algebra of association ●Interactive methods in information space based on association ●Scientific method for software construction using program transformation
Atsuhiro Takasu	●Learnable approximate matching model ●Non-linear time series document analysis ●Distributed index processing
Kazutsuna Yamaji	●Research data sharing and its metadata management ●Platform system activating the research community
Text and Language Media	
Jun Adachi	●Information retrieval and integration of heterogeneous data ●Modeling and implementation of high-performance information retrieval systems ●Text mining
Akiko Aizawa	●Identification and linkage of text information ●Analysis of textual data using statistical methods ●Automatic construction of linguistic resources
Keizo Oyama	●Research on techniques for utilizing web information ●Research on an integrated platform for scholarly information services ●Research on full text search technology
Pattern Media	
Asanobu Kitamoto	●Data mining from large-scale scientific image databases ●Meteoinformatics ●Digital archives
Kazuya Kodama	●A study on structure of multi-dimensional image information and communication systems of distributed shared image environment with real-time quality control
Hiroshi Mo	●A study on case based video indexing ●A study on intelligent video structuring
Imari Sato	●Physics-based object shape and reflectance modeling ●Creating spatially immersive displays for human computer interaction
Shin'ichi Satoh	●A Study on video analysis, retrieval, and knowledge discovery based on broadcast video archives ●A study on image retrieval
Akihiro Sugimoto	●Sensing and understanding human activities in our daily life ●Automatic modeling of 3D objects ●Computer vision under the existence of digitization errors

Current Research Topics of Reseach Staff of NII

Human and Knowledge Media	
Kenro Aihara	●Computer supported lifelong learning by using digital archives about historical and artistic objects ●Information acquisition and utilization for field study environment
Frederic Andres	●Multilingual semantic management for image learning ontology ●Geomedia Database Management ●Collaborative monitoring control of Cultural heritage sites over the internet
Masashi Inoue	●Multi-source learning ●Cross-media information retrieval ●Communication understanding
Ikki Ohmukai	●Personal communication and interation in semantic Web environment ●Information sharing and distribution based on personal network
Helmut Prendinger	●Life-like characters ●Multimedia/multi-modal presentation systems ●Physiologically interactive systems
Seiji Yamada	●Human-Agent Interaction ●Interactive Information Gathering/Retrieval

Information and Society Research Division

Information Use	
Noriko Arai	●Designing collaborative learning environment ●Knowledge sharing, distance learning ●Mathematical logic
Nobuhiro Furuyama	●Motor coordination in communication
Hironobu Gotoda	●Similarity search for 3D models ●Visualizing citation links among research papers
Noriko Kando	●Evaluation of information access technologies ●Text structure and genre analysis ●Multi-faceted metadata and search user interface ●Cross-lingual information retrieval
Teruo Koyama	●Term extraction from text corpora ●Structurization of terms ●Structural analysis of terms ●Knowledge representation and use
Akira Miyazawa	●Union catalogue database construction and usage ●Link of NACSIS-CAT database and Chinese traditional book catalogue database ●Character codes as a fundamental tool for database representation ●D: Data processing utilitiesndexing ●A study on intelligent video structuring
Kouichirou Ueki	●Development of the next generation information system
Science Information	
Sumio Kakinuma	●Science and technology policy studies ●Scientometrics
Masamitsu Negishi	●Research on trends in technology and businesses for databases, electronic libraries and e-journals with the current developments of information and telecommunication technologies ●Bibliometric research for mesuring research levels and identifying research trends
Masaki Nishizawa	●Investigation study on network structure of information sciences related research and its trends ●Empirical analyses on the role of Grants-in-Aid for Scientific Research for promotion of basic research ●Empirical analyses on network for industrial-government-university cooperation in Japan
Morio Shibayama	●Metrical analysis of research trends and research evaluation ●Statistical study on change of research environment ●Study on indentification of creativity in research activities
Yuan Sun	●Bibliometric research on university-industry-government relations ●Structure analysis on network of informatics related research ●DIF research in Japanese achievement testing
Information Public Policy	
Hajime Kitaoka	●Research on the relationship between customers and producers in intelligence production ●Research on the mechanism for intelligence requirement creation ●Policty studies on intelligence community unification and reinforcement
Tetsuro Kobayashi	●Social and political consequences of ICT use ●Social network and human communication ●Social capital theory
Takashi Koga	●Legal, institutional and policy research concerning access to government information ●Interdisciplinary research on recordkeeping and archival issues
Hitoshi Okada	●Research on critical growth factors of E-Commerce and E-Society ●Research on university security information policy portal (USIPP)
Noboru Sonehara	●Digital commerce (dCommerce) system ●Intellectual property rights lifecycle management system
Yoh'ichi Tohkura	●Relationships between ICT (Information and Communication Technology) and humans ●Science and technology for the society ●Transdisciplinary study on human information processing
Masashi Ueda	●Network policy for broadband society ●Social and economic analysis of open source software

Graduate Education Activities

NII provides graduate education under the three main forms described below, in its efforts to train leading researchers capable of combining a broad view with advanced specialization. Students develop the ability to address challenges by capitalizing on NII's unique strengths, including comprehensive informatics research systems and a practical environment in which theoretical research and practical development are combined.

(1) Participation in the Graduate University for Advanced Studies
(2) Cooperation with graduate universities
(3) Special collaboration with research students

Department of Informatics, The Graduate University for Advanced Studies

Establishment of the Department

The Department of Informatics (advanced PhD program), which began at the Graduate University for Advanced Studies with the participation of the NII in April 2002, saw its first class of students graduate in March 2005.
And Sokendai introduced A five-year doctor course program from 2006. (Admission Quota - A five-year doctor-course program: 4 / A three-year doctor course program: 6) Sokendai is a graduate university composed of 21 majors in six subjects, five of which (corresponding to 20 majors) are shared among inter-university research institutes.

Aims and Structure of the Department

The Department's goal is to foster outstanding young international IT researchers and technicians. Students work toward obtaining a Ph.D.
The Department covers the following six research areas, and offers a total of over 80 subjects.

- Fundamental Informatics
- Foundations and Infrastructure Science
- Software Science
- Information and Media Sciences
- Intelligent Systems Science
- Information Environment Science

Description

Since its start, the Department of Informatics has proactively accepted students from overseas. For this reason, the department features lively cultural exchanges among its diverse student body.
The Department also features a large number of students with full-time jobs, with such students accounting for about half of the department's total enrollment.

Lecture on informatics in the class room

Graduate students office

Enrollment (as of April 2007)

( )Foreign students among total

Year of Admission (Fiscal Year)		A five-year doctor course program	A three-year doctor course program	Total
FY 2002	April	——	2	3 (0)
	October	——	1 (0)	
FY 2003	April	——	5 (1)	6 (1)
	October	——	1 (0)	
FY 2004	April	——	1 (0)	10 (2)
	October	——	9 (2)	
FY 2005	April	——	6 (1)	14 (3)
	October	——	8 (2)	
FY 2006	April	1 (1)	8 (2)	19 (9)
	October	0 (0)	10 (6)	
FY 2007	April	1 (0)	8 (3)	9 (3)
Total		2 (1)	59 (17)	61 (18)

Background of the students on the Sokendai Ph.D. Course

Japan	・Hokkaido University ・Tohoku University ・University of Tsukuba ・The University of Tokyo ・Tokyo University of Agriculture and Technology ・University of Electro-Communications ・Yokohama National University ・Shizuoka University ・Nagoya University ・Mie University ・Kyoto University ・Osaka University ・Kobe University ・Kyushu University ・Nara Women's College ・Iwate Prefectural University ・The University of Aizu ・Keio University ・Seijo University ・Tokai University ・Tokyo University of Science ・Nihon University ・Hosei University ・Waseda University ・Doshisha University ・The University of the Air
China	・Harbin Institute of Technology ・Nankai University ・Shanghai Jiaotong University ・Tongji University ・University of Science and Technology of China
Iran	・Amirkabir University
Bangladesh	・Dhaka University
France	・Institut des Sciences et Techniques de l'Ingenieur d'Angers ・Universite de Savoie
Germany	・University of Paderborn
UK	・University of Bristol
USA	・University of Pittsburgh ・Yale University
Australia	・Ther University of Western Australia
Other	・Asian Institute of Technology

Career options

( )Foreign students among total

Year of Graduation	University/Institution	Company	Not yet determined	Total
FY 2004	4	1(1)	0	5 (1)
FY 2005	6 (5)	3(2)	1(1)	10 (8)
FY 2006	11 (6)	2	2(2)	15 (8)
Total	21(11)	6(3)	3(3)	30(17)

Cooperation with Graduate Universities

NII actively cooperates with the graduate university of Tokyo and Tokyo Institute of Technology. NII also accepts graduate students from these institutions for additional instruction.

University	Graduate School	
The University of Tokyo	Graduate School of Information Science and Technology	FY2001～
Tokyo Institute of Technology	Graduate School of Information Science and Engineering	FY2002～
	Interdisciplinary Graduate School of Science and Engineering	FY2003～
Waseda University	Graduate School of Science & Engineering	FY2005～

Special Collaboration with Research Students

NII accepts students from other universities as research students in special collaborative projects, fostering both research and education.
And for exchanging the student of NII and the MOU conclusion system, NII accepts the foreign student as a "an international internship PROGRAM" from 2005.
These students not only benefit from our extensive research databases and our infrastructure for information exchange, but also perform research under the instruction of NII research staff.

Universities which research students for special collaboration belong to (as of April 2007)

University / Graduate School	
Chiba University	Graduate School of Science and Technology Graduate School of Advanced Integration Science
The University of Tokyo	Graduate School of Humanities and Sociology
Tokyo Institute of Technology	Interdisciplinary Graduate School of Science and Engineering
Keio University	Graduate School of Media and Governance
Chuo University	Graduate School of Science and Engineering
Tokyo University of Science	Faculty of Engineering

The number of students from other universities for special collaboration or cooperation between graduate universities is shown in the table on the right.

Students from other universities (as of April 2007)

Master Course	Ph.D. Course	Research Students	Total
33	15	1	49

Accepting students from abroad through an international internship program

FY2006	32	8 countries

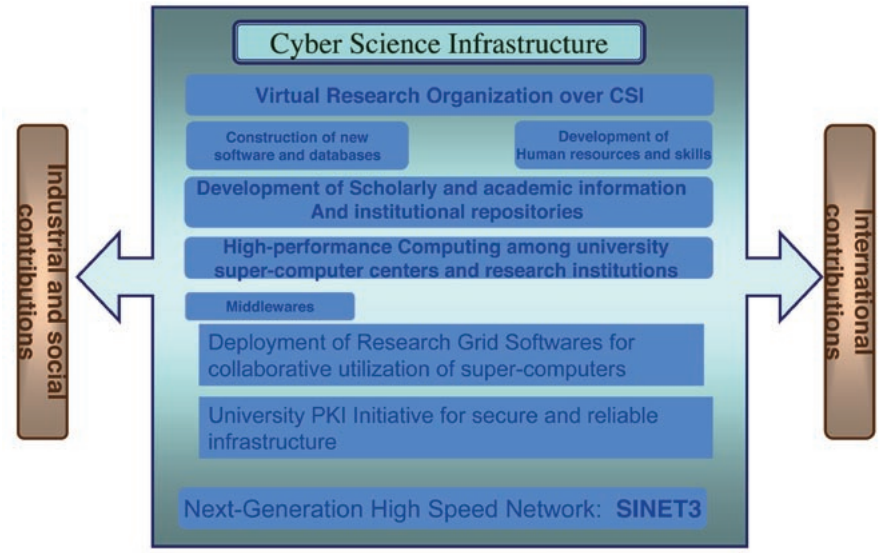
Contact: International Affairs and Education Support Team, Research and Education Promotion Division
TEL: +81-3-4212-2110 FAX: +81-3-4212-2120 E-mail: daigakuin@nii.ac.jp

Construction of Cyber Science Infrastructure (CSI)

http://csi.nii.ac.jp/

The National Institute of Informatics (NII) is promoting the construction of the Cyber Science Infrastructure (CSI) through cooperation with universities and other organizations, in order to promote Japan's academic research and educational activities and to further strengthen whose international competitiveness.

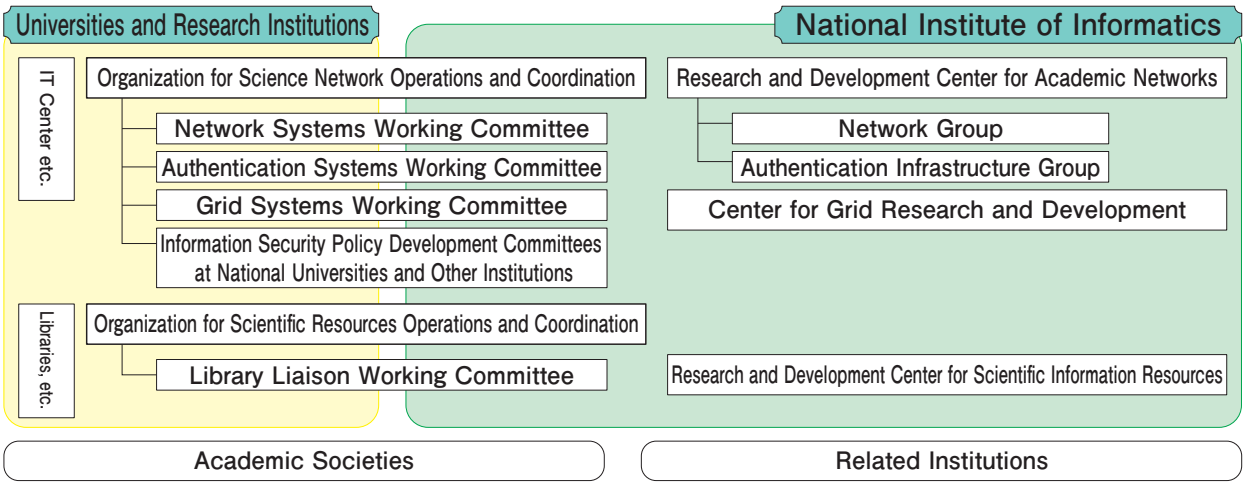
CSI means an information environment that incorporates and utilizes various research activities and results from universities and research institutions – such as supercomputers and other distinctive scientific utilities and resources, scientific software and databases, and human resources – over a super high-speed network, transcending the borders of organizations or scientific fields. This infrastructure will guarantee an environment that enables the promotion of cutting-edge higher education as well as research and development of technology in universities, research institutions, and industry.



The NII put in strategic efforts to the following three areas, as expanding the various development projects and operations it has implemented to date within the framework of the CSI.

1. Establishment of next-generation academic networks, the infrastructure for grid environment nationwide authentication systems through cooperation between the NII, the university IT centers and other organizations
2. Establishment of the infrastructure for next-generation scientific resources through cooperation between the NII, university libraries and other organizations
3. Formation of a nationwide informatics research alliance for future value creation

The NII, universities and other research institutions will collaborate and cooperate closely to facilitate the above, and Japan's academic community will work as one to prepare and vigorously promote the framework for advancing CSI construction.



Contact: Coordination and Training Team, Infrastructure Planning Division
TEL +81-3-4212-2215 FAX +81-3-4212-2230 E-mail:plan@nii.ac.jp

Science Information Network (SINET3)

http://www.sinet.ad.jp/

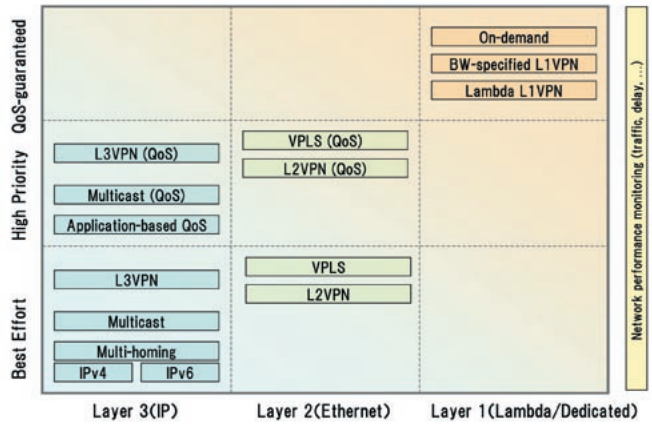
The Science Information Network is an information communication network connecting universities signed to promote research and education as well as the circulation of scientific information among also connected to research networks such as Abilene[*1] in the U.S. and GÉANT[*2] in Europe to facili- with research networks overseas.
SINET3 was launched in April 2007 to integrate the existing SINET and Super SINET. SINET3 is a

SINET3 network architecture

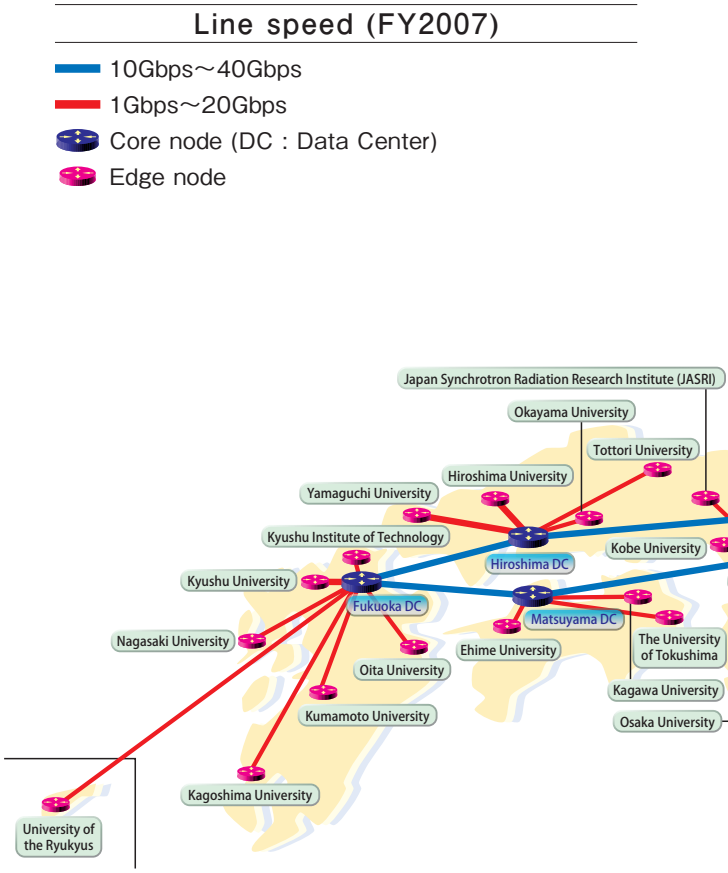
To realize the diverse range of services it provides, the SINET3 network's characteristics include the following: (1) an optical/IP hybrid architecture; (2) a hierarchical architecture consisting of two layers, the backbone (core) node and research-facility (edge) nodes; (3) flexible resource assignment to each layer; (4) enhanced features for high reliability, through use of a multi-loop backbone; and (5) a large-capacity backbone with maximum line capacity of 40 Gbps.

SINET3 network services

In order to promote progress in research, development, and the educational environments that make use of networks, SINET3 is diversifying the menu of services it provides. SINET3 characteristic services include the provision of: (1) multiple layer services (IP, Ethernet, lambda/dedicated line) to increase the flexibility of networking between user organizations, (2) enriched VPN (Virtual Private Network) services to achieve secure coordination over networks, (3) enhanced QoS (Quality of Service) for stable support of real-time applications and other systems sensitive to network quality, (4) Layer-1 bandwidth-on-demand services for the purposes of ultra-high-capacity and ultra-high-quality data transmission, and (5) network performance (traffic, delay, etc.) monitoring for the visualization of network status.



Scope of network service of SINET3

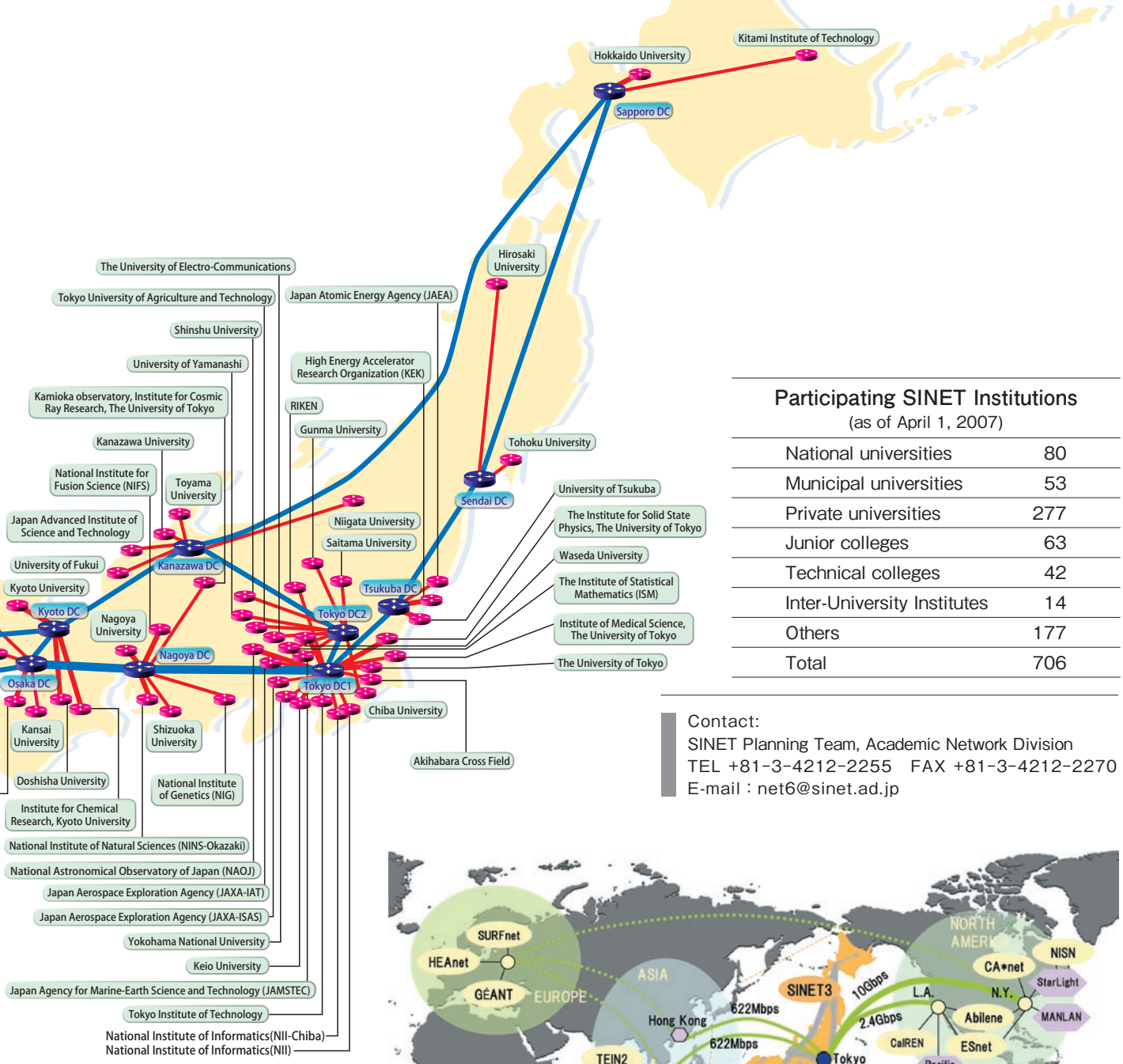


*1 Abilene Abilene is a testbed network operated by the next-generation Internet development project"Internet2" and involves more than 190 participating universities and research institutes across the US.

*2 GÉANT GÉANT is a pan-European research network formed by the EC as a policy initiative, and covers more than 3,000 participating research and educational organizations in more than 30 countries.

and research institutions throughout Japan via nationwide nodes (connection points); it is de-
universities, research institutions, and similar entities. The Science Information Network is
tate the international dissemination of research information and to promote collaboration

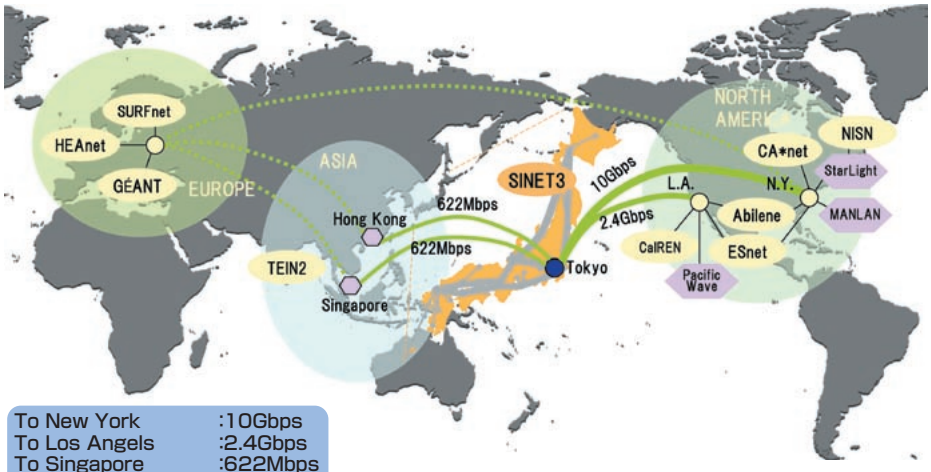
core component of the Cyber Science Infrastructure (CSI).



Participating SINET Institutions
(as of April 1, 2007)

National universities	80
Municipal universities	53
Private universities	277
Junior colleges	63
Technical colleges	42
Inter-University Institutes	14
Others	177
Total	706

Contact:
SINET Planning Team, Academic Network Division
TEL +81-3-4212-2255 FAX +81-3-4212-2270
E-mail : net6@sinet.ad.jp



To New York :10Gbps
To Los Angels :2.4Gbps
To Singapore :622Mbps
To Hong Kong :622Mbps

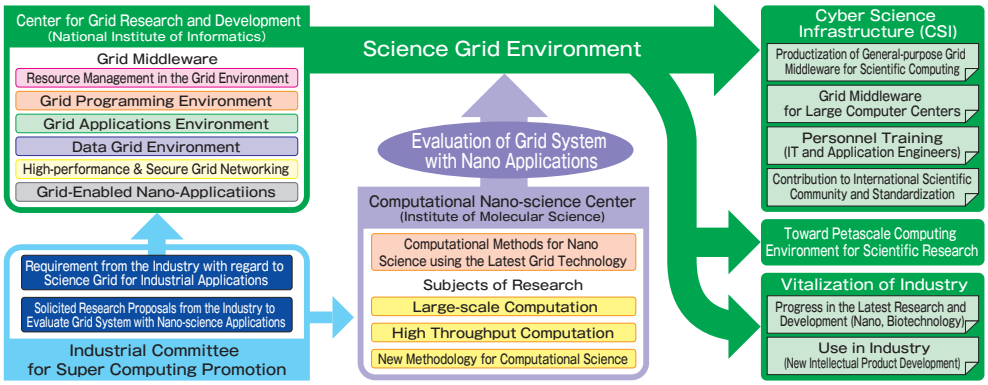
International Network Collaboration

National Research Grid Initiative (NAREGI)

http://www.naregi.org/

Objectives of NAREGI Program

The NAREGI (National Research Grid Initiative) program aims to research and develop grid middleware that will put the construction of the computer research environment in the petascale era in view, as part of the“ Development and Application of Advanced High-performance Supercomputer Project”.
This program is a system of joint research development that designates the National Institute of Informatics (NII) and the Institute for Molecular Science as its core, in order to cooperate strongly with the cooperating organizations. The program also involves cooperation with the industrial world. The NII offers the tools that are necessary for the research and development of the grid middleware (NAREGI Grid Middleware) and the construction and utilization of the resulting grid environments. In addition, the Institute aims at cooperation of the grid environment with those of various countries.
The achieved result is expected to contribute significantly to the achievement of the Cyber Science Infrastructure (CSI). In addition, the Institute for Molecular Science as the proof research base of the NAREGI Middleware is targeting the nano-field by researching and developing large-scale simulation software.
The results of the NAREGI Program were released in 2006 as part of a beta version of the NAREGI Grid Middleware. Plans call for the release of NAREGI Middleware Version 1.0 in 2008.
The beta version of NAREGI Grid Middleware is currently undergoing evaluation, including testing at the Institute for Molecular Science. It is currently being used on a trial basis at facilities including the IT Center and various inter-university research institutions. The resulting feedback furthers research and development efforts related to NAREGI Grid Middleware Version 1.0, a version suitable for practical implementation that is expected to serve as a CSI infrastructure.



Research Themes

Resource management in the grid environment

Theme ●Super Scheduler ●Grid VM ●Distributed Information Services
NII is currently conducting research and development of the Super Scheduler, which administers all the scheduling operations in the grid, including the “resource broker” functions. This function takes into account the requests from users, such as the number of CPUs, degree of urgency, and cost. Furthermore, efforts are also focused on securing computer resources through the Grid VM (Virtual Machine). This machine carries out resource control, resource protection, and scheduling at the local level of the computer resources. Efforts to secure computer resources are also being conducted through the Distributed Information Service, which is used for management and assessment of such aspects in the grid as computer resources, networks, software, and users.

Grid programming environment

Theme ●Grid RPC System ●Grid MPI System
As for the Grid RPC, the NAREGI project has been developing a system enabling easy development and high execution efficiency within the grid application software, with several clusters of a few dozen to hundreds of CPUs; this system is based on a model that allows the library functions to be called from a remote computer. As for the Grid MPI, NAREGI is carrying out research and development on TCP/IP-level or MPI-level communication libraries to realize high-performance, interoperable communication that takes into account the variable communication delay on the network. Both of these projects are expected to contribute to international standardization through the Global Grid Forum.

Grid applications environment

Theme ●Grid Workflow ●Grid PSE ●Grid Visualization System
Applications being simple and the movements of mechanisms being efficient are important within the grid environment.
To this end, NAREGI is conducting research and development of a Grid Workflow and a Grid PSE (Problem-solving Environment). Grid Workflow is meant for easy control of job flow in Grid programming, either in terms of user-friendly GUIs or in terms of comprehensible external interface with the script languages. The research on PSE aims at developing an application development and execution environment that includes the deployment and registration, within the grid environment, of application software developed by researchers. Further efforts are focused on the execution and coordination of and collaboration among, distributed application software, computational modules, and data. Finally, research and development is underway on a Grid Visualization software tool, which visualizes the results of computations.

Data Grid environment

Theme ●Data Grid fundamental technology ●Search control technology for database federation ●Metadata-based information integration for heterogeneous data resources

Technologies are under research and development for the federation of numerous databases spread throughout the Internet on the grid environment. The technologies include the Data Grid fundamental technology for managing and querying data resources using the WSRF-based OGSA infrastructure, search control technology (preventing combinatorial explosion caused by searching across many databases), and information integration technology with metadata that mediates heterogeneous data resources.

High-Performance & Secure Grid Networking

Theme ●Network communication infrastructure ●Security authentication infrastructure

With regard to network function infrastructure for grid computing, NAREGI is conducting research and development on the control technology, enabling determination of the optimal route based on the measurement of network traffic as well as establishing multiple alternative routes as backup. Work is also done on the communication protocol infrastructure, that is, optimization of the communication protocol for large-sized file transfer on the grid. As for the security infrastructure, the goals are to develop a security model based on PKI and to implement authentication infrastructure across multiple organizations.

Grid-enabled Nano-applications

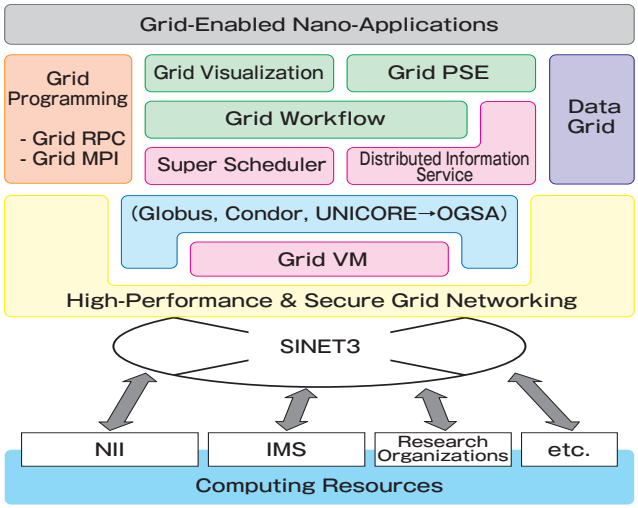
Theme ●Parallelized and decentralized nano-applications for the grid

The NAREGI project aims at making the nano-application software – which has been developed by researchers at the Computational Nano-science Center at IMS – grid-ready. The NAREGI project is also working on development of middleware for coupled simulations in the nano-science / nano-technology areas, to conduct applied research in the grid environment, and generally to create a grid environment suitable for nano-applications.

Research on Utilization of Grid Middleware

Theme ●Application Programming Interfaces (API) ●Heterogeneous mutual grid utilization technology

Research and development of API and the interoperability technologies, in order to realize a smooth transition from the operational computing environment constructed in the ITBL (IT-based Laboratory) project to the next-generation science grid infrastructure, centered around the next-generation supercomputing system.

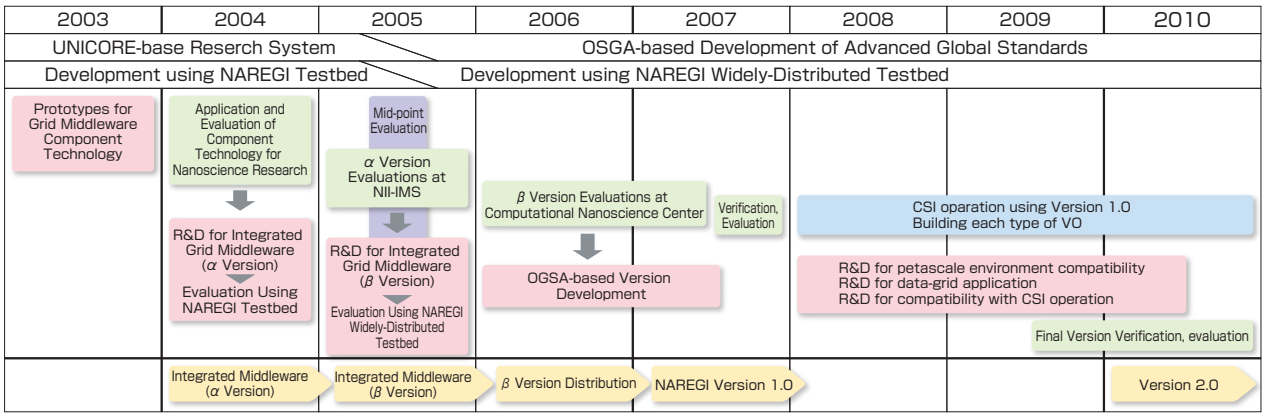


NAREGI Cooperating Research Institutes (partial list)

●Industrial sector:
Fujitsu, Hitachi, NEC,
Industrial Committee for Super Computing Promotion (including pharmacy, chemical, metal, material companies)

●Academic sector:
Center for Grid Research and Development
Tokyo Institute of Technology, Osaka University, Kyushu University, Kyushu Institute of Technology
Computational Nano-science Center
The University of Tokyo,
Kyoto University, Tohoku University
High Energy Accelerator Research Organization,
Research laboratories
National Institute of Advanced Industrial Science and Technology,
Japan Atomic Energy Agency

R&D Schedule



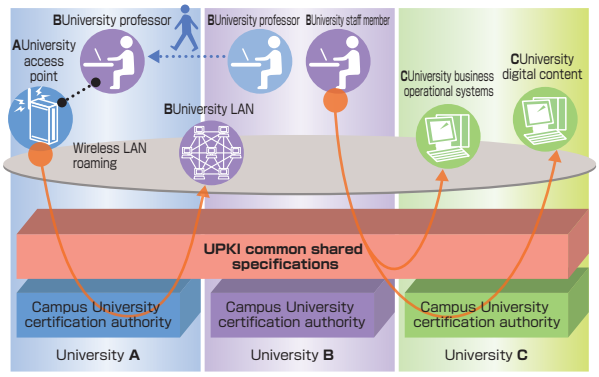
Contact: Center for Grid Research and Development (Collaborative Center for Research Grid)
TEL: +81-3-4212-2857 FAX: +81-3-4212-2803 URL: http://www.naregi.org/

Construction of a University Public Key Infrastructure (UPKI) for use in cooperation between universities

https://upki-portal.nii.ac.jp/

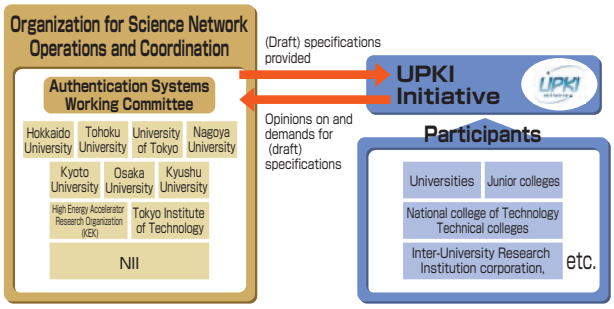
UPKI overview

Construction of the University Public Key Infrastructure (UPKI) is underway, intended to achieve a inter-university cooperation that makes use of educational and research computing systems, digital content, networks, and business systems at these universities and other institutions in safe, convenient, and effective ways.
In the construction of UPKI, Inter-university authentication federation is promoted by developing UPKI common specifications that makes it easier for campus PKI interoperation with each other, and by developing applications using the UPKI. And providing a software package for certification authority supports establishing of Campus PKI.



Structure of UPKI R&D and cooperation

The UPKI development project is moving forward with R&D efforts centered on the Authentication Systems Working Committee in the Organization for Science Network Operations and Coordination, established at the NII. The project publishes the draft specifications created in the Authentication Systems Working Committee to UPKI Initiative, and proceeds with the construction of UPKI with adopting the opinions and demands of Initiative participants.



Development and other projects now underway

●Development of UPKI commmon specifications
- CP/CPS guidelines for campus certification authority
- Procurement request guidelines for campus certification authority
- Campus PKI Interoperability specifications

●Development of applications using the UPKI
- Interuniversity wireless-LAN roaming
- Single Sign-On
- Public SSL/TLS server certificates
- S/MIME

●Providing the software package of certification authority for Campus PKI
Developing and providing a software package of certification authority for supporting the establishment of Campus PKI.

●Establishment of the UPKI Initiative
As part of efforts in construction of the UPKI, the UPKI Initiative was established in August 2006 as a network community for the purposes of exchanging and sharing opinions and information with faculty and staff at universities and other institutions concerning UPKI specifications and its use.

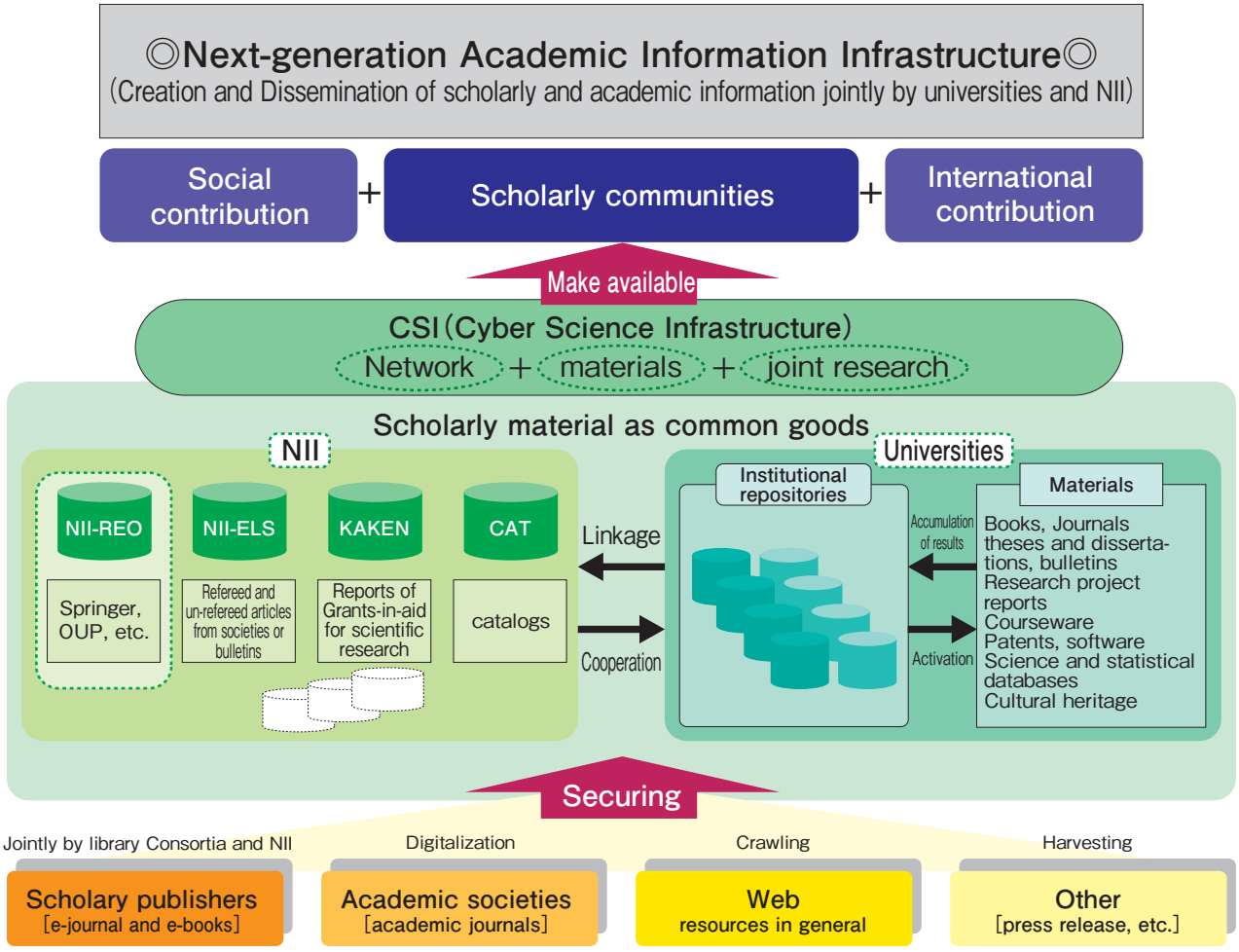
［URL］https://upki-portal.nii.ac.jp/

Contact: UPKI section, Infrastructure Planning Division
TEL +81-3-4212-2218 FAX +81-3-4212-2230 E-Mail：upki@nii.ac.jp

Establishment of Next-Generation Academic Information Infrastructure

Establishment of Next-Generation Academic Information Infrastructure

Next-generation Academic Information Infrastructure is an important element of Cyber Science Infrastructure (CSI). It serves as an information platform that will secure Scholarly and Academic Information that is essential to the scholarly community while also ensuring its stable supply. At the same time, it collects and organizes the results of education and research that are produced at universities and research institutes, enhances their value, and disseminates them to society at large.



NII has contributed to the formation of various forms of scholarly and academic information in cooperation with universities and academic societies. Examples of such information include catalog information of books and journals, reports on JSPS grants-in-aid for scientific research, the full text information of academic papers prepared together with societies and universities, and the e-journal archives of academic publishers (Springer, Oxford University Press, etc.) that NII purchased jointly with the University Library Consortia.

Given its role as an organization that has inherited such established undertakings and that works to promote development of next-generation academic information infrastructure, NII established the Organization for Scientific Resources Operations and Coordination in collaboration with university research institutes. With this organization playing the central role, NII will secure various forms of information needed by the scholarly community while also working toward reinforced dissemination of the valuable scientific information that is produced by universities and others.

Contact: Scholarly and Academic Information Division
TEL: +81-3-4212-2305 FAX: +81-3-4212-2370 E-mail: infocont@nii.ac.jp

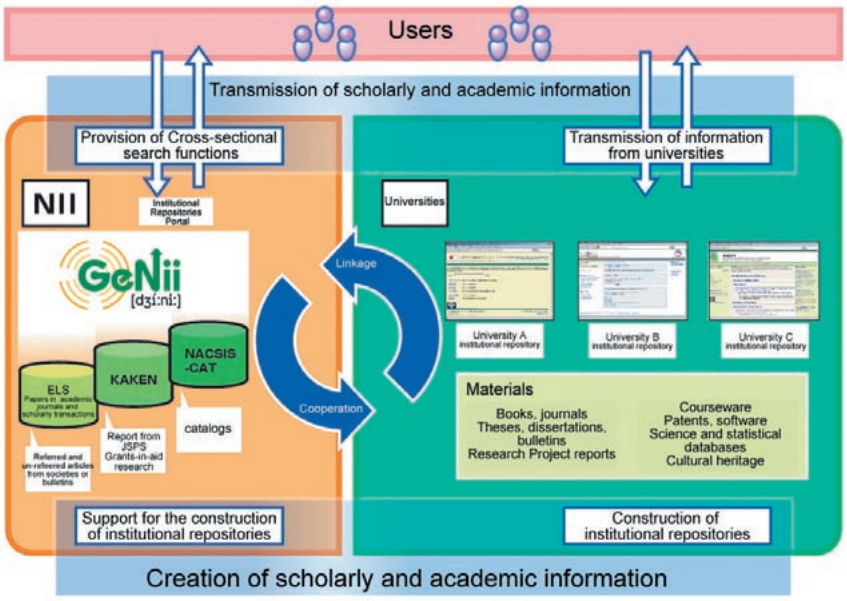
Support for Linkage between Institutional Repositories

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

NII is collaborating with universities to secure various scholarly and academic information with the aim of creating next-generation academic information infrastructure. Of these information, "institutional repositories" have been attracting interest in recent years as systems for gathering, organizing, storing and transmitting academic information arising from education and research activities, particularly by universities.
Institutional repositories comprise a series of services provided by universities to members of their communities, in order to manage and transmit digital data created by universities and their members.
NII has conducted a collaborative program with universities to support the operation of institutional repositories since FY 2004. It involves the extension and integration of existing scholarly and academic information services at NII and the enhancement and improvement of information dissemination from universities. In FY 2006, NII commissioned the development of institutional repositories at 57 universities.

Entrusted universities (FY 2006)
National University(47)
Hokkaido University, Obihiro University of Agriculture and Veterinary Medicine, Asahikawa Medical College, Kitami Institute of Technology, Hirosaki University, Tohoku University, Yamagata University, Fukushima University, University of Tsukuba, Gunma University, Saitama University, Chiba University, The University of Tokyo, Tokyo University of Foreign Studies, Tokyo Gakugei University, Tokyo Institute of Technology, Ochanomizu University, Hitotsubashi University, Yokohama National University, Niigata University, Kanazawa University, Shinshu University, Gifu University, Nagoya University, Mie University, Shiga University of Medical Science, Kyoto University, Kyoto Institute of Technology, Osaka University, Osaka Kyoiku University, Hyogo University of Teacher Education, Kobe University, Nara University of Education, Nara Women's University, Shimane University, Okayama University, Hiroshima University, Yamaguchi University, Kochi University, Kyushu University, Saga University, Nagasaki University, Kumamoto University, Oita University, Kagoshima University, University of the Ryukyus, Japan Advanced Institute of Science and Technology

Private University (10)
Keio University, Toyo University, Hosei University, Waseda University, Kanto Gakuin University, Doshisha University, Kansai University, Kwansei Gakuin University, Kochi University of Technology, Ritsumeikan Asia Pacific University



Contact: Institutional Repository Desk, Scholarly and Academic Information Division
TEL +81-3-4212-2350 FAX +81-3-4212-2375 E-Mail:ir@nii.ac.jp

International Scholarly Communication Initiative (SPARC Japan)

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

Background

To promote academic research, it is important that research results are rapidly circulated through scholarly papers and that researchers and students are always able to access the latest research results. Moreover, a record of the published scholarly papers of an individual or group is an important tool for evaluating that entity's research activities in the respective countries and academic fields.
In North America and Europe, SPARC (Scholarly Publishing & Academic Resources Coalition) has been promoting efforts aimed at generating a new scholarly communication model to compete with the high cost of commercial scholarly journals, mainly through activities in university libraries, as a movement for reform of scholarly communication.
In recent years, particularly, there have been positive initiatives in dissemination and advocacy activities as well as support for the creation of institutional repositories, with a view to establishing an "Open Access" model for barrier-free access to research results.

Activities

This project began in FY2003 for strengthening the electronic journals of the scholarly publications of Japan's academic societies, with a view to keeping in the hands of Japanese researchers the outstanding research results that are currently published abroad and further promoting the international dissemination of research results.
NII has promoted the project in collaboration with academic societies and university libraries in Japan, the Japan Science and Technology Agency (JST), SPARC (USA) and SPARC Europe, helping to establish a system that facilitates affordable electronic publication of internationally recognized Japanese academic journals.
So far, 34 issues of English-language scholarly journals from 28 academic societies (institutes) have been selected as SPARC Japan publishing partner journals, and support activities are currently in progress.
SPARC Japan publishing partner journals of biology and mathematical area have collaborated with BioOne and Project Euclid that SPARC (USA) has supported, and a part of the partner journals have concluded site license contracts with university libraries.
NII has also been engaged in a wide range of related efforts for other partner journals, such as investigating e-journal strategies, developing and introducing electronic submission and peer-review systems, assessing optimal business models, and planning or supporting the launch of new e-journals.
In addition to these support activities, NII has hosted a number of seminars and symposia concerning the problems facing scholarly communication and initiatives for reform, as dissemination and advocacy activities aimed at researchers, academic societies and university libraries based on the Memorandum of Understanding between NII and SPARC

Contact: SPARC Japan Desk, Scholarly and Academic Information Division
TEL: +81-3-4212-2360 FAX: +81-3-4212-2370 E-mail: sparc@nii.ac.jp

Catalog Information Service

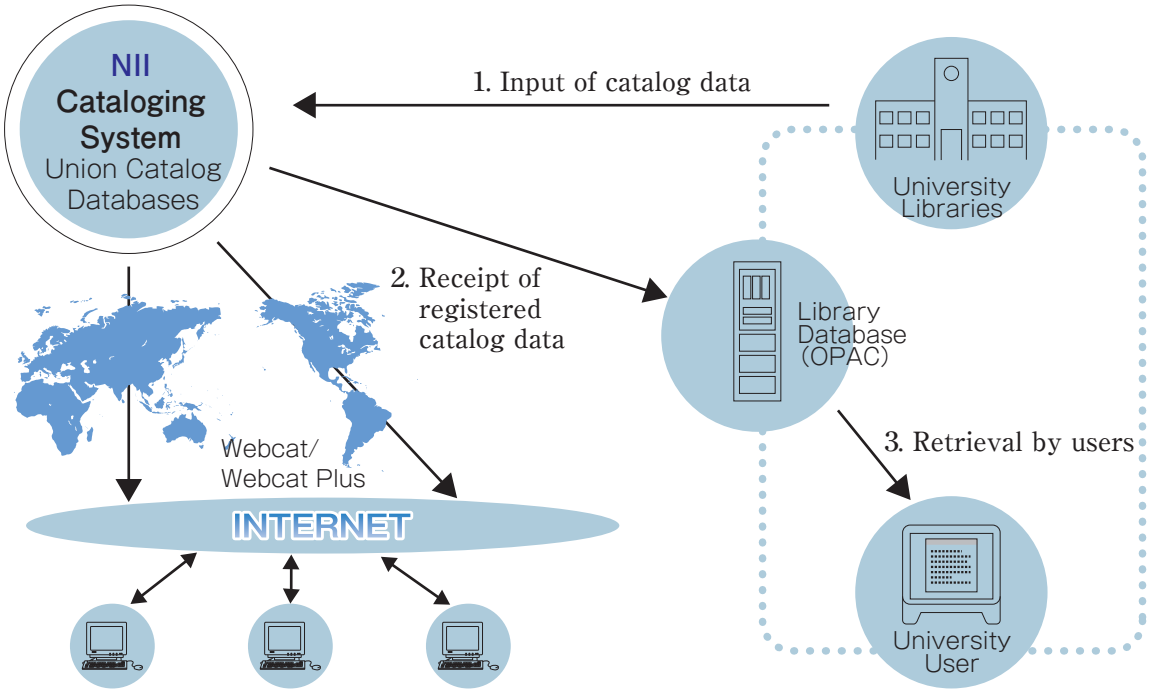
http://www.nii.ac.jp/CAT-ILL/

The Catalog Information Service consists of the Cataloging System and the Interlibrary Loan System (ILL).

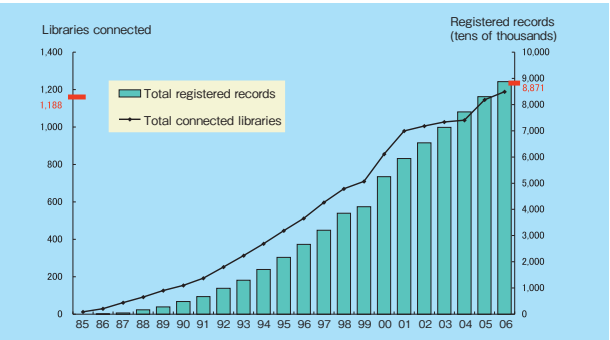
Cataloging System (NACSIS-CAT)

The NACSIS-CAT Cataloging System offers union catalog databases of academic documents (books and serials) held by university libraries and other such institutions throughout the country. These databases were compiled to support scholarly research and can be searched to determine instantly where specific materials are housed. To improve efficiency, standardized cataloging data (MARC) are referred to when constructing databases, and university libraries and other institutions share the work of inputting records online. The System also includes a function for referencing similar databases in other countries (OCLC in the USA, HBZ in Germany).

The union catalog of books and serials consisting of the compiled databases can be freely accessed via the worldwide web online search service (Webcat/Webcat Plus).



Trends in number of libraries connected and number of records registered (as of March 2007)



Number of participating institutions (as of March 2007)

Number of participating institutions	1,188
Domestic	1,092
(Universities: 692, Junior College: 141, Technical college: 58, Inter-University Research Institute Corporation: 15, Other: 186)	
Overseas	96
(Asia: 69, Europe: 26, North America: 1)	

Frequency of Webcat searches (April 2006 – March 2007)

16,617,000

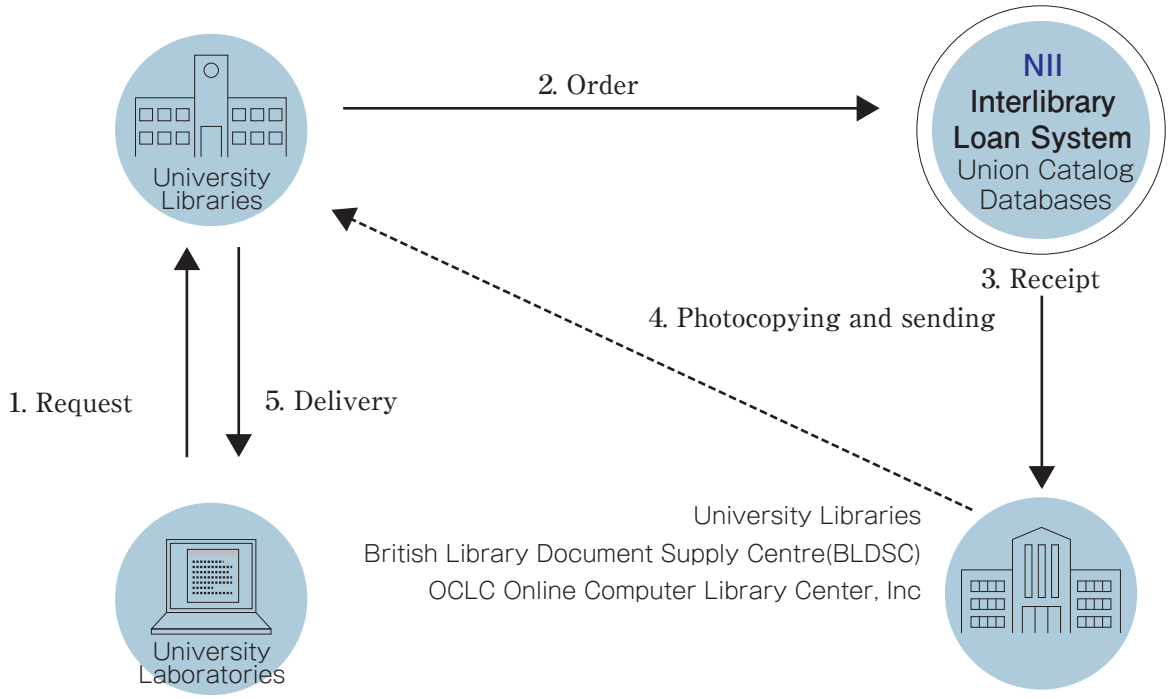
http://webcat.nii.ac.jp/

Contact: NACCSIS-CAT Desk, Scholarly and Academic Information Division
TEL +81-3-4212-2310 FAX +81-3-4212-2375 E-Mail:catadm@nii.ac.jp

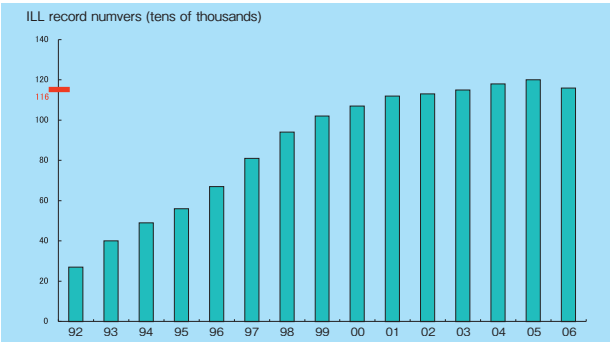
The National Center for Science Information Systems (NACSIS) was the forerunner of the National Institute of Informatics (NII). The acronym NACSIS is still used in the names of some NII services.

Interlibrary Loan System (NACSIS-ILL)

The Interlibrary Loan System (NACSIS-ILL) supports the exchange of books and serialized research dissertations among libraries to facilitate the provision of documents to researchers at universities and other institutions.
The service applies the latest information from the union catalog databases constructed by NACSIS-CAT, resulting in improved efficiency and prompt delivery of documents to users.
Users of the system may also request materials from the British Library Document Supply Centre (BLDSC), and may use the interlibrary loan service between overseas university libraries through collaboration with overseas ILL systems (such as the OCLC system in the USA and KERIS in the Republic of Korea).
The efficiency of the system has been enhanced with an offsetting service for ILL document copying and other charges.



State of use of the ILL system (as of March 2007)



User institutions (as of March 2007)

User institutions	1,049
Institutions participating in ILL charge offsetting service	681

Global ILL participating institutions

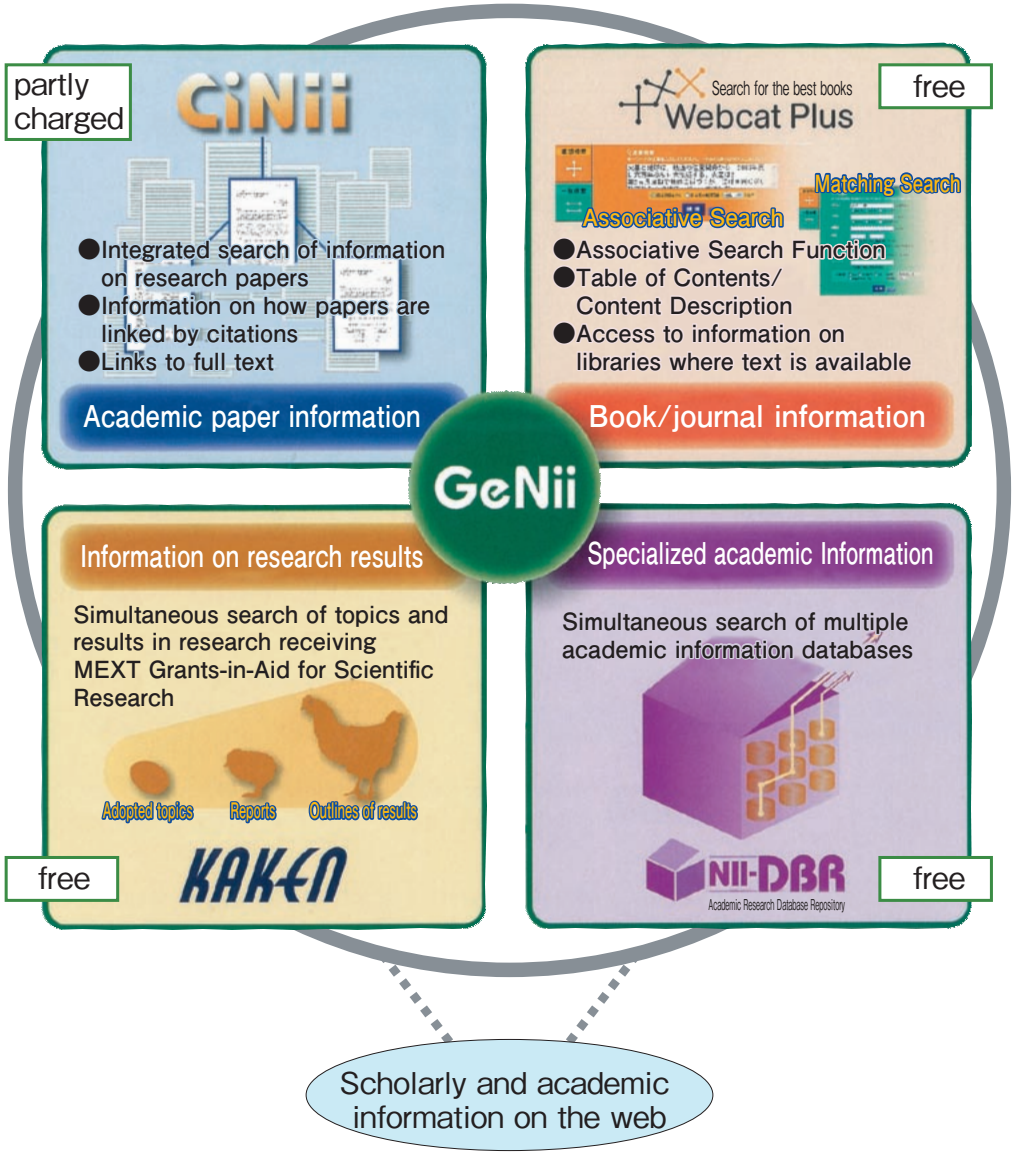
Japan-US ILL : Japan	134	US	55
Japan-ROK ILL : 日Japan	94	ROK	242

Contact: NACSIS-ILL Desk, Scholarly and Academic Information Division
TEL: +81-3-4212-2320 FAX: +81-3-4212-2375 E-mail: illadm@nii.ac.jp

GeNii (NII Scholarly and Academic Information Portal)

http://ge.nii.ac.jp/

GeNii is a web-based service offering comprehensive scholarly and academic information created by NII in collaboration with university libraries, academic societies, and researchers.
Currently GeNii presents information in four major areas: (1) academic papers, (2) books/journals, (3) research results, and (4) specialized academic information. These areas feature individual search engines suited to the relevant content, while the GeNii Integrated Search System provides a tool for cross-referenced searching to help users quickly find the information they need.



Contact: GeNii Desk, Scholarly and Academic Information Division
TEL +81-3-4212-2300 FAX +81-3-4212-2370 E-Mail:geniiadm@nii.ac.jp

CiNii (NII Scholarly and Academic Information Navigator)

http://ci.nii.ac.jp/

- CiNii provides citation information, primarily in Japanese, together with navigation tools for searching both text and citation references.
- Basic search is available to anyone via the internet, while citations and fee-based electronic library content are available to registered users only.
- The Thomson Scientific Citation Index (Science Citation Index Expanded, Social Sciences Citation Index, Arts & Humanities Citation Index) is also available. (These are some limitations to use of the Citation Index.)
- CiNii continually deepens its interaction with the other databases, such as the Japana Centra Revuo Medicina (Ichushi) and search engine, while expanding its own range of resources, including papers stored in NII Electronic Journal Repository (NII-REO).
- CiNii is continually looking to enhance the citation navigation experience through the introduction of additional tools such as link resolvers and CrossRef, while interacting with OPAC in university libraries.

Database volume by content type (as of March 2007)

Content		Items	Links to full text
NII citation index database (CJP)		Bibliographies = 1.24 million Cited papers = 13.3 million	
NII electronic library service (NII-ELS)	Academic journals	Bibliographies, abstracts and papers =2.61 million	All
	University research bulletins	Bibliographies, abstracts and papers= 780,000 (with full text=280,000)	Some
Japanese Periodical Index		Bibliographies = 7.2million	

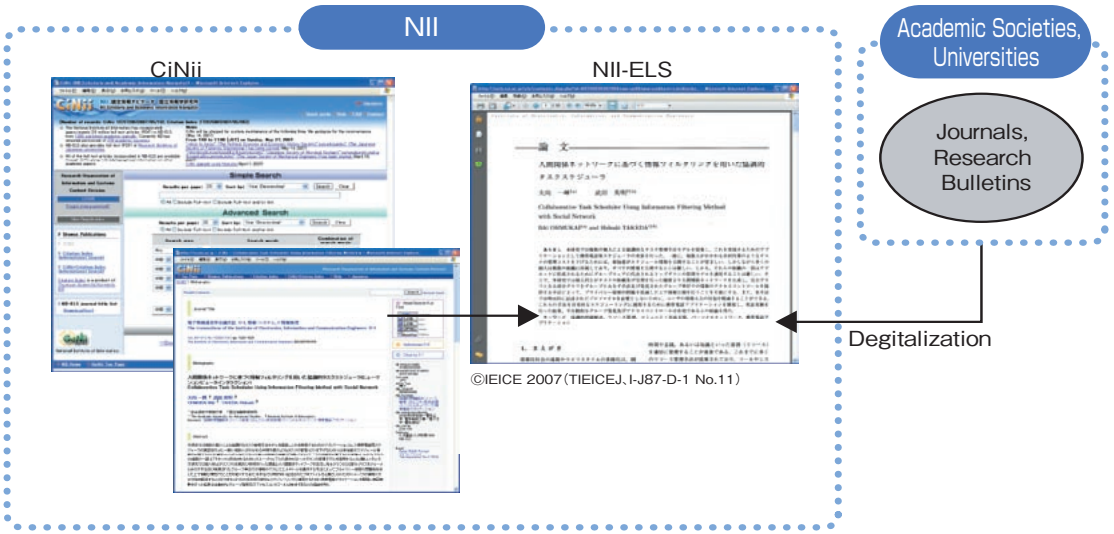
NII Electronic Library Service (NII-ELS)

- The NII Electronic Library Service is a vast digital archive encompassing recent as well as past research papers, providing access to page images of a comprehensive collection of research papers sourced from journals published by academic societies and universities research reports. Searching and browsing is available via CiNii.

NII-ELS bibliography (as of March 2007)

Participating organizations	Journals (with full text of articles)	Research papers
1,260 (academic societies 282)	3,170	2.89 million

Contact: NII-ELS Desk, Scholarly and Academic Information Division
TEL: +81-3-4212-2340 FAX: +81-3-4212-2370 E-mail: els@nii.ac.jp



Contact: CiNii Desk, Scholarly and Academic Information Division
TEL: +81-3-4212-2300 FAX: +81-3-4212-2370 E-mail: ciniiadm@nii.ac.jp

GeNii (Scholarly and Academic Information Portal)

http://ge.nii.ac.jp/

Webcat Plus

http://webcatplus.nii.ac.jp/

- With an "Associative search function", you can easily find the books you need.
- Webcat Plus has a comprehensive books/journals catalog database from libraries and other facilities throughout the country, and tables of contents/brief summaries of Japanese and English books.
- You can search among source materials owned by university libraries and among books not stocked in libraries but commercially available.

Database contents (as of March 2007)

Books	Journals
12,150,000	290,000

Contact: Webcat Plus Desk, Scholarly and Academic Information Division
TEL +81-3-4212-2300 FAX +81-3-4212-2370 E-Mail:webcatplus@nii.ac.jp

KAKEN (Grants-in-Aid for Scientific Research)

http://seika.nii.ac.jp/

- This site presents a brief overview on themes (themes when initially adopted) and results (e.g., reports and reviews) of the research themes funded by grants-in-aid for scientific research from the Ministry of Education, Culture, Sports, Science and Technology and the Japan Society for the Promotion of Science.
- Provides access to the latest scientific information in Japan.
- Research lists of research areas and research themes in individual categories.

Stored documents (as of March 2007) 530,000 items

Contact: KAKEN Desk, Scholarly and Academic Information Division
TEL +81-3-4212-2300 FAX +81-3-4212-2370 E-Mail:seika_adm@nii.ac.jp

NII-DBR (Academic Research Database Repository)

http://dbr.nii.ac.jp/

- This site features specialized databases prepared by Japanese academic societies and research groups.
- Cross-searching of two or more databases is possible, in addition to the standard individual database search.

Stored databases (as of March 2007) 1.65 million documents from 28 databases

Contact: NII-DBR Desk, Scholarly and Academic Information Division
TEL +81-3-4212-2300 FAX +81-3-4212-2370 E-Mail:dbr@nii.ac.jp

NII Electronic Journal Repository (NII-REO)

http://reo.nii.ac.jp/

NII-REO is an electronic journal content storage and access system developed by consortia of university libraries as a means of ensuring continuous and reliable access to journal data. The availability of each item depends on the individual conditions agreed upon with the publishers.

Stored databases (as of March 2007)

Publishers	Titles	Research papers	Year of registration
IEEE Computer Society	25	150,000	1988−
Oxford University Press	150	900,000	1849−2003
Kluwer Academic Publisher	500	350,000	1997−2005
Springer Science+Business Media	1,100	2,000,000	1847−1996

Contact: NII-REO Desk, Scholarly and Academic Information Division
TEL +81-3-4212-2305 FAX +81-3-4212-2370 E-Mail:reo@nii.ac.jp

Online Scientific Terms (Sciterm)

http://sciterm.nii.ac.jp/

Scientific dictionaries and glossaries help to promote consistency of usage of scientific terms among researchers and standardization of terminology across different disciplines by providing definitions and working examples of a wide range of scientific terms.
With the Online Scientific Terms (Sciterm) service, prepared with the approval of the Ministry of Education, Culture, Sports, Science and Technology and concerned academic societies (copyright holders of the series content), the scientific terms contained in the series can be retrieved, via the Internet, free of charge.

Registered data (as of March 2007)

Number of registered Series	Number of registered scientific terms
24	145,000

Contact: Scholarly and Academic Information Division
TEL +81-3-4212-2330
FAX +81-3-4212-2370
E-mail:sciterm@nii.ac.jp

Academic Society HomeVillage

http://wwwsoc.nii.ac.jp/

Academic Society HomeVillage is a service to provide homevillage data area for Japanese academic societies. The purpose of this service is to collect scholarly research relating to Japanese academic societies and to support the activities of academic societies and scholary research through dissemination of information over the internet. The service provides a valuable information source with efficient information retrieval through keyword searching, as well as a portal site for a range of media in academic, education/research and culture fields.

Registered data (as of March 2007)

Participating societies
989

Contact: Scholarly and Academic Information Division
TEL +81-3-4212-2340
FAX +81-3-4212-2370
E-mail:wwwsoc@nii.ac.jp

Education and Training Programs

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

The National Institute of Informatics provides a range of training programs for university and other academic personnel responsible for scientific and academic information at universities and elsewhere.

User Training

NII offers database/operation training courses for those working in NACSIS-CAT/ILL services. Regional courses are also offered in conjunction with university libraries.

NII also advances the development of self-learning materials that can be used on the web.

■**NACSIS-CAT Training Courses (Book course/Serial course)**
This course provides the opportunity to learn the structure of NACSIS-CAT, its contents, data uploading methods (input standards), and operation rules.

■**NACSIS-ILL Training Course**
This course provides the opportunity to learn the structure of NACSIS-ILL, its contents, and operation rules.

Advanced Training Programs

NII provides opportunities for academic research support staff at universities and research institutes to learn the latest in specialized and advanced technologies.

■**NACSIS-CAT/ILL Workshop**
This workshop provides training for core staff responsible for cataloging systems in the form of a discussion about the various tasks on NACSIS-CAT/ILL.

■**Academic Portal Training Course**
This course equips participants with professional expertise and skills for the construction and administration of information services and academic portals.

■**Academic Information Literacy Training Course**
This course provides professional expertise and skills in academic information literacy.

■**Seminar for University Librarians**
This course equips junior university library personnel with the latest skills and expertise.

■**Karuizawa Information Processing Seminar**
This seminar provides training for key academic research support personnel in the latest technologies and theories of information processing, specifically with respect to the rapidly developing infrastructure of academic information.

Academic Portal Training Course (Nagoya University Hall)

■**Information Security Training Course**
This course provides a basic grounding in information security and protection issues.

■**Network Security Training Course**
This course provides training in practical security techniques to enable network security managers to counter network threats.

■**Network Administration Training Course**
This course provides training in LAN operation and administration.

NII Practical Training Course

This course provides core academic research support personnel with training in advanced academic information systems through hands-on experience at NII facilities.

Theme and curriculum are determined between NII, trainees, and the institutions they belong to.

Support for User Training Sponsored by Universities

To support guidance and user training on NII services sponsored by universities and academic societies, NII offers a number of services, for example providing training texts or materials curriculum advice, and assignment of user IDs.

Collaboration with Other Organizations

In collaboration with other related organizations, NII presents a variety of training courses in order to train core academic research support staff.

Contact: Infrastructure Planning Division
TEL +81-3-4212-2177 FAX +81-3-4212-2230 E-Mail:edu@nii.ac.jp

Research Cooperation/Intellectual Properties

The NII actively advances research into grants-in-aid for scientific research, as well as research into private-sector funding (such as through commissioned research), and contributes to society through utilizing intellectual property that is created, acquired, and managed by NII.

Grants-in-aid for Scientific Research (as of March 2007)

Research Categories	Number	Awarded Amount (thousands of yen)
Specially Promoted Research	1	128,440
Scientific Research(A)	5	61,230
Scientific Research(B)	12	45,110
Scientific Research(C)	8	11,300
Exploratory Research	4	4,600
Encouragement of Young Scientists(A)	5	35,230
Encouragement of Young Scientists(B)	11	12,800
Encouragement of Young Scientists (launch of activities)	1	1,500
Scientific Research in Priority Areas	12	375,700
Special Purposes	1	2,500
JSPS Fellows	7	6,600
Publication of Scientific Research Results	3	21,900
Total	70	706,910
Adjustment cost for the promotion of science and technology	2	149,727

University-Industry Cooperation and Collaboration (as of March 2007)

Research Categories	Number	Amount Received (Thousands of yen)
Joint Research with the Private Sector, etc.	9	32,445
Commissioned Research	24	281,793
Endowments	33	31,580

Collaborative Research

As an inter-university research institution, the NII provides opportunities for mutual exchange and research among researchers in universities and research institutions in Japan, while actively promoting many collaborative research projects. As of March 2007, 135 such projects were carried out.

NII Visiting Researchers (as of March 2007)

Visiting Researchers	(Foreign Research Scholars)	4
	(JSPS Postdoctoral Fellowship for Foreign Researchers)	5
	(Others)	6
Cooperative Scholars		3
Requested Researchers		2
Technical Assistants	(Research Support and Promotion Staff)	3
Project Researchers	(Part-time Researchers)	10
	(Scientific Research Support Staff)	14
	(Researchers Promoting Science and Technology)	21
	(Researchers for University-Industry Collaboration)	29
Research Assistants		17
Special Joint Researchers		33
Total		147

Contact: Research Promotion Team, Research and Education Promotion Division
TEL +81-3-4212-2105 FAX +81-3-4212-2120 E-mail:kenkyou@nii.ac.jp

Total Number of Inventions and Applications for Patents (as of March 2007)

Total	Attribution		Patent Applications
	Organization Attribution	Individual Attribution	
16	15	1	11

Intellectual Property

The Intellectual Property Office of the Research Organization of Information and Systems conducts a range of proactive activities, including the accumulation, management, and use of intellectual property held within the National Center of Sciences.

In addition, through its university intellectual property maintenance activities, this office serves as the organization representing the Inter-University Research Institute Corporation / Intellectual Property Office, which combines four Inter-University Research Institute Corporations.

Contact: Intellectual Property Office
TEL +81-3-4212-2125 FAX +81-3-4212-2187 E-mail:chizai-staffs@nii.ac.jp

International Exchange

The NII established the Global Liaison Office (GLO) in January 2003 and actively promotes international cooperation with prominent overseas institutes. The GLO is concluding International Exchange Agreement (MOU) with the organizations and implementing a variety of measures that promotes international research exchanges.

International Exchange Agreement (MOU)

The NII actively promotes conclusion of International Exchange Agreement (MOU, memorandum of understanding) with overseas universities and research organizations, and holds various exchange activities such as joint research project, interactions between researchers and students, and seminar/symposium.

Also, "MOU Grant" and "NII International Internship Program" support dispatch and invitation of researchers and students between MOU institutes. As of April 2007, MOU institutes/universities are over 42 in 14 countries in Asia, Oceania, North America, and Europe.

MOU on cooperative research: (as of April 2007) (for research cooperation)	
People's Republic of China	State Key Laboratory on Microwave and Digital Communications, Tsinghua University
	Chinese Academy of Sciences
	School of Electronics and Information Engineering, Tongji University
Thailand	Chulalongkorn University
	Asian Institute of Technology
	Kasetsart University
	National Electronics and Computer Technology Center, National Science and Technology Development Agency (NECTEC)
Vietnam	International Research Centre Multimedia Information, Communication and Applications, Hanoi University of Technology
	Hanoi University of Technology
	Vietnam National University of Ho Chi Minh City
People's Republic of Bangladesh	University of Dhaka
Korea Republic	Korea Institute of Science and Technology Information
Australia	The Australia-Japan research centre, of The Australian National University
	National ICT Australia Limited (NICTA)
USA	School of Engineering and Computer Science University of Michigan-Dearborn
	College of Engineering, University of Washington, Seattle
	TransPAC2 Project and Indiana University
	Department of Computer Science, The University of North Carolina at Charlotte
	University of Maryland, Department of Computer Science
	New Jersey Institute of Technology
Canada	University of Waterloo, Faculty of Mathematics
France	Universite de Nantes Laboratoire d' Informatiquede Nantes-Atlantique
	Institut National de Recherche en Informatique et en Automatique
	Institut National Polytechnique de Grenoble
	Universite Joseph Fourier-Grenoble 1
	Computer Science Laboratory of Paris 6
	Institute National Polytechnique de Toulouse
	UNIVERSITE PAUL SABATIER-TOULOUSE III
UK	Department of Computer Science Faculty of Engineering Science, University College London
	Faculty of Mathematics and Computing, Open University
	University of Bath
Germany	Faculty of Applied Informatics, University of Augsburg
	German Research Center for Artificial Intelligence (DFKI)
Netherlands	Centre for Mathematics and Computer Science(CWI)
Republic of Italy	Torino University, Department of Informatics
Czech Republic	Czech Technical University in Prague
(for development and operational cooperation)	
USA	North American Coordinating Committee on Japanese Library Resources
	Institute for Scientific Information, Inc.
	Association of Research Libraries (ARL)
Germany	Hochschulbibliothekszentrum des Landes Nordrhein-Westfalen
Republic of Korea	Korea Education & Research Information Service
Europe	Delivary of Advanced Network Technology to Europe

Accepting students from abroad through an international internship program

As part of its student exchange activities with institutions with which it has concluded MOUs, from the 2005 fiscal year, the NII has accepted overseas students through an international internship program.

The goal of this international internship program is to provide graduate students (in master's and PhD courses) from universities and research institutions that have concluded MOUs with the NII the opportunity to take part in research and to receive guidance from professors at NII. Students enroll for two to six months, depending on their research interests.

In the 2006 fiscal year, the NII accepted a total of 31 interns from institutions with which it had concluded MOUs in eight countries: China, Thailand, Vietnam, Canada, United Kingdom, France, Germany, and the Czech Republic.

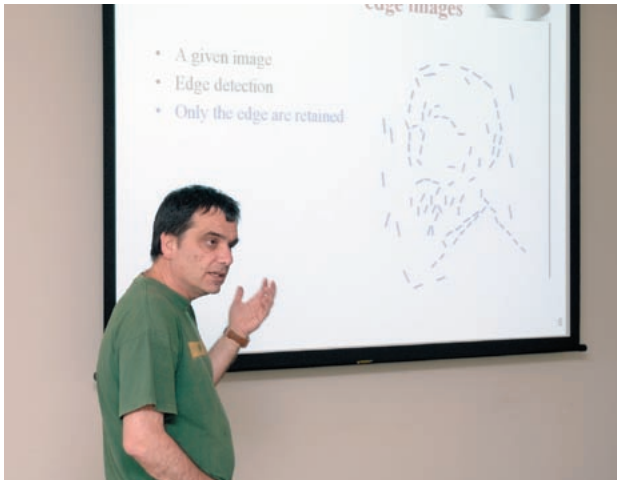
Names of universities and other institutions sending interns during the 2006 fiscal year and their countries:

Name of university / institution	Country
Chinese Academy of Sciences (two interns)	China
Tsinghua University (two interns)	China
Tongji University	China
Chulalongkorn University (five interns)	Thailand
Asian Institute of Technology (two interns)	Thailand
Vietnam National University of Ho Chi Minh City (six interns)	Vietnam
Hanoi University of Technology	Vietnam
University of Waterloo (two interns)	Canada
Bath University	United Kingdom
University of Augsburg	Germany
German Research Center for Artificial Intelligence(DFKI)	Germany
University of Paris 6	France
University of Grenoble 1 (Joseph Fourier) (two interns)	France
Institut de Recherche en Informatique de Toulouse (two interns)	France
Czech Technical University (two interns)	Czech Republic
Total: 31 interns	

Acceptance of researchers from abroad (2006 fiscal year)

Program		Number of researchers
Japan Society for the Promotion of Science	Postdoctoral Fellowships for Foreign Researchers	5
	Postdoctoral Fellowships for Foreign Researchers (Short-term; for researchers from Western countries)	1
	Invitation Fellowship Program for Research in Japan	2
Other researchers accepted (visiting researchers, visiting professor [International Affairs Division])		14

NII researchers and other personnel on assignment overseas (2006 fiscal year)	2
Guests accepted from abroad (2006 fiscal year)	79



Public lecture by researchers (visiting professors) invited from abroad

Contact: Planning Team, Planning and Promotion Strategy Department
TEL +81-3-4212-2165 FAX +81-3-4212-2150 E-mail: kokusai@nii.ac.jp

Dissemination of Research Results

The NII holds lectures and symposiums and issues publications under the general aim of disseminating research findings on informatics widely throughout society.

Open House

The NII, a research institution, which is widely open to the public, holds "Open House" two days once a year to present its activities and research results to the public as well as to researchers and Ph.D. candidates.

NII Open House (June, 2006)

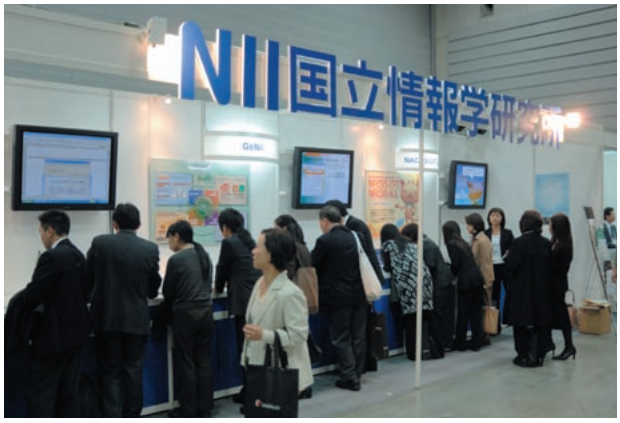
Symposiums and Study Meetings

The symposiums and study meetings organized by the NII provide opportunities for multi-faceted discussion of informatics by participating researchers from Japan and abroad.

The NII also holds research meetings for exchanges among researchers and technology specialists interested in informatics, through the presentation of reports and other events.

Presentations

The NII attempts to disseminate its research results and promote its information service through presentations in various exhibitions



Library Fair & Forum (November, 2006)

Open Lectures and Seminars

The NII also holds open lectures and seminars.

■Karuizawa Saturday Salon

Each year since the 1998 fiscal year, the International Seminar House for Advanced Studies in Karuizawa has been home to some half-dozen or more lectures and recitals led by eminent researchers and experts from various fields. The contents of past lectures have been made available to the public as described below.

- Streaming video of lectures and recitals available on the NII website * in Japanese
- Publication of Karuizawa Doyo-Konwakai Koenshu: Chi to Bi no Harmony ("Collection of Lectures from the Karuizawa Saturday Meetings: Harmony of Intelligence and Beauty") * in Japanese

(http://www.nii.ac.jp/karuizawa/)

(November, 2006)

■NII Public Lectures

Since the 2003 fiscal year, NII researchers have held public lectures on a wide range of themes related to informatics—a total of eight per year, with no more than one held in any given month—at the National Center of Science in Hitotsubashi, Chiyoda Ward, Tokyo. Some content from past lectures has been made available to the public as streaming media from the NII website. * in Japanese

(http://www.nii.ac.jp/shimin/index.shtml)

(July, 2006)

Publications

The NII publishes books and periodicals detailing its research findings.

■**Karuizawa Doyo-Konwakai Koenshu:** Chi to Bi no Harmony ("Collection of Lectures from the Karuizawa Saturday Salon: Harmony of Intelligence and Beauty") * in Japanese
This is a collection of lectures from the Karuizawa Saturday lecture meetings (held since the 2000 fiscal year). Only Volume 1 is available for sale to the public.
(http://www.nii.ac.jp/karuizawa/harmony.html)

Karuizawa Doyo-Konwakai Koenshu: Chi to Bi no Harmony

■**NII Series (Maruzen Library)**
To help familiarize more people with the field of informatics, this series of books introduces and describes the details of NII research using familiar examples that are easily understood by the general public. These books are published primarily in paperback form (by Maruzen Library). * in Japanese
(http://www.nii.ac.jp/books/maruzen-lib/index-j.shtml)

NII Series (Maruzen Library)

■**Progress in Informatics**
Progress in Informatics is an international peer-reviewed journal published by the NII, aiming at the promotion of research and development in the broad area of informatics. The journal provides the international academic community with a venue for discussion and a means of exchanging information covering a wide range of fields involving informatics applications. The published articles consist not only of original research papers but also of surveys and project reports which contribute internationally to the progress of research and development. Plans call for semiannual publication, and submissions are accepted on a rolling basis.
(http://www.nii.ac.jp/pi/)

Progress in Informatics

■**NII Technical Report**
NII Technical Reports are issued as individual publications such as research papers, reference materials, and manuals covering the results of NII research, to serve generally as updates on the NII's research activities. These reports are available through the NII website.
(http://research.nii.ac.jp/TechReports/index.html)

NII Technical Report

Brochures

NII Today
Catalogue of NII
Outline of NII
Annual Report

NII website/E-mail Newsletter

Detailed information is available on the NII website.
(http://www.nii.ac.jp/)

Information related to the NII, including up-to-date information on a variety of events and other topics, is sent via e-mail. Subscription is free and available at the following URL. * in Japanese
(http://www.nii.ac.jp/magazine/nii-mag-top-j.shtml)

Contact: Publicity and Dissemination Team, Planning and Promotion Strategy Department
TEL +81-3-4212-2135 FAX +81-3-4212-2150 E-mail:kouhou@nii.ac.jp

NII Library

NII Library holds a number of books and periodicals on informatics, including domestic and overseas scholarly journals as part of its role as an informatics research/education center. Library collaborates with the nearby Meiji University Library to provide access to information of academic documents for students of the Graduate University for Advanced Studies.

Inventory, Magazine titles (end of March 2007)

Document type	Books	Bound journals	Journals (in title)
Domestic documents	8,462	8,972	211
Foreign documents	8,806	4,581	270
Total	17,268	13,553	481

Major on-line journals and databases

	Service	Publisher
1	ACM Digital Library	ACM
2	MathSciNet	AMS
3	ASPP	IEEE
4	e-Proceedings	IEEE Computer Society
5	COMSOC DL	IEEE Communications Society
6	Wiley Interscience	John Wiley & Sons.
7	CUP online	Cambridge University Press
8	OUP online	Oxford University Press
9	Springer Link	Springer
10	Science Direct	Elsevier B.V.

Facility, Equipment

	Reading room	Stack room
Area	140m^2	271m^2
Seats	8	3
PC for search	2	1
Other equipment	Automatic Book Circulation Machine (Sumitomo 3M ABC-III)	Micro reader printer (Konikaminolta P7000)
	Copier (FUJI XEROX ApeosPort C5540I)	

Reading room1

Reading room2

Stack room

Subscribed journals

Contact: Information Service Team, Information Technology Center
TEL +81-3-4212-2140 FAX +81-3-4212-2150 E-Mail:library@nii.ac.jp

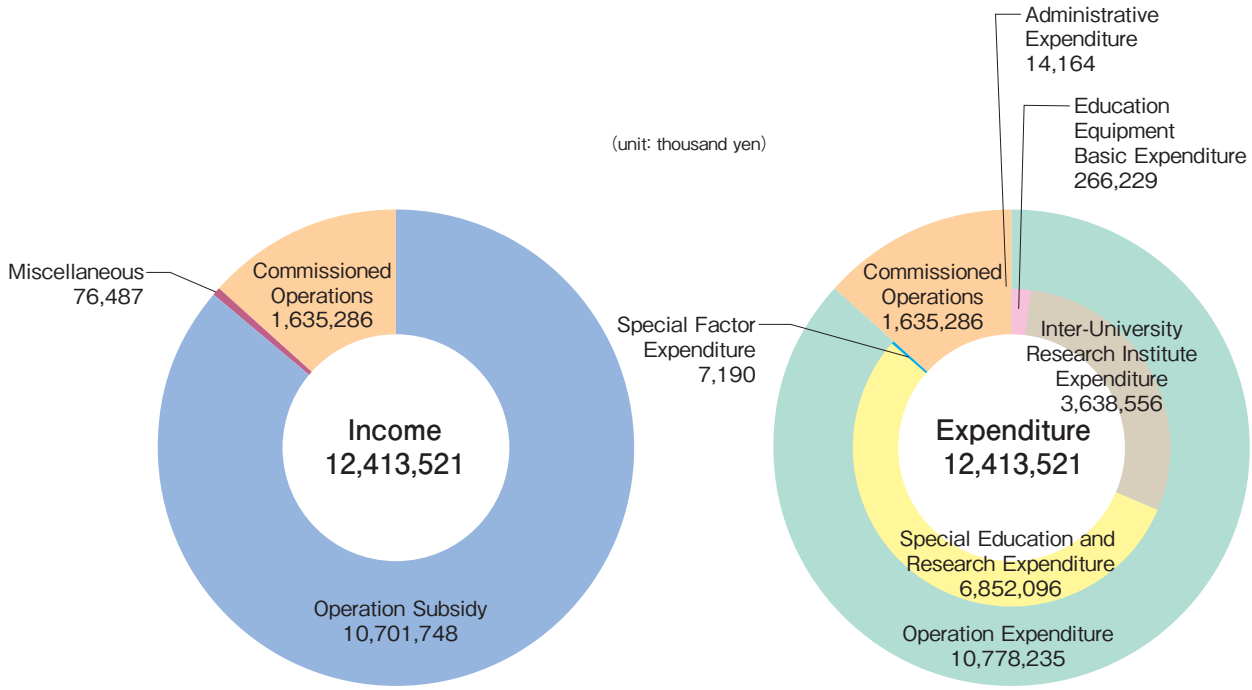
Staff/Budget

Staff (as of April 1, 2007)

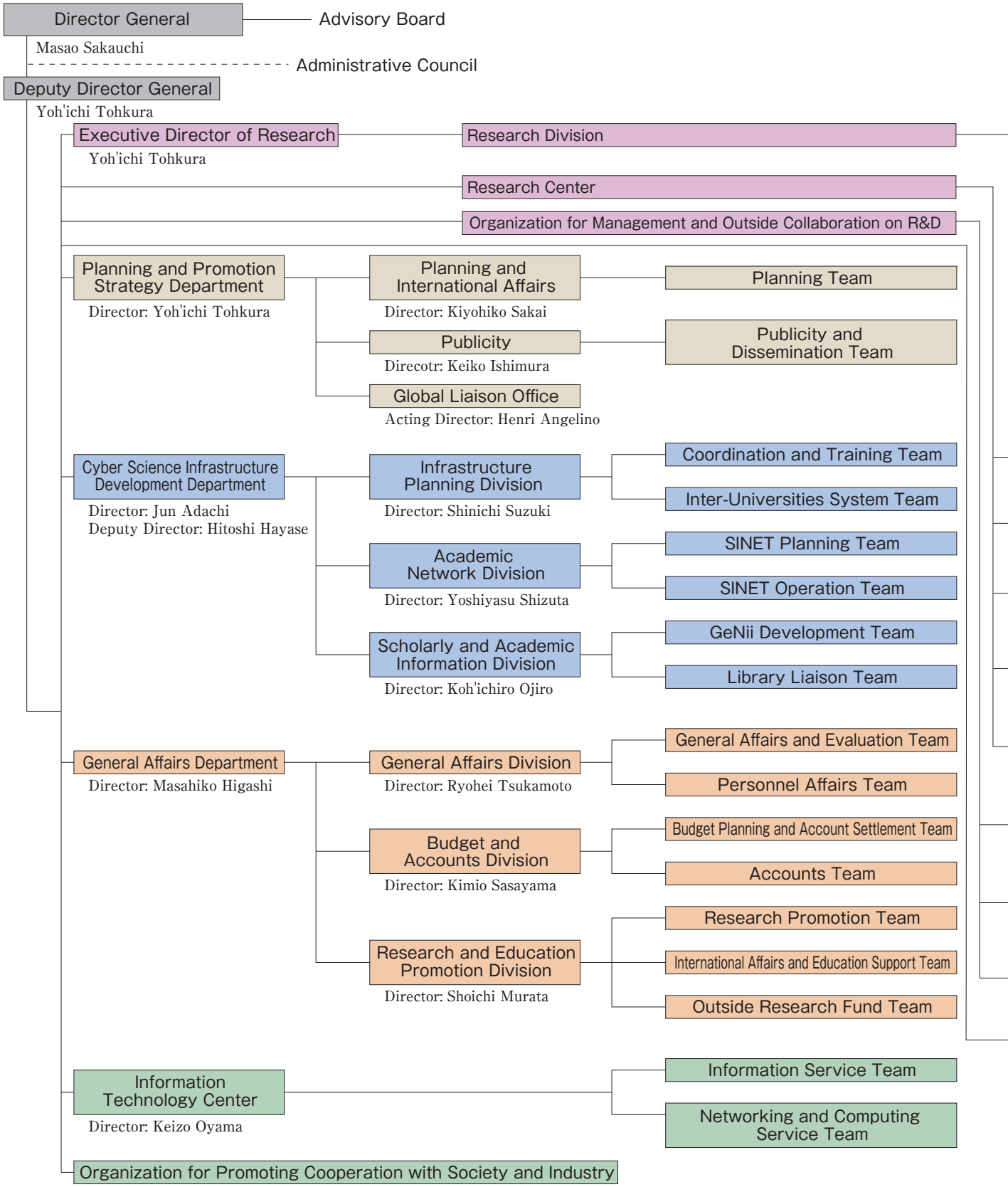
	Director General	Deputy Director General	Professors	Associate Professors	Assistant Professors	Subtotal	Other Employees	Total
Full-time Employees	1	1	37	32	13	84	66	150
Visiting Professors etc.			26	23		49		49
Coordinate Professors			2	2		4		4
Specially Appointed Professors etc. (Project-based)			6	8		14		14
Other Outside Researchers								113
Support Staff								43
Graduate Students								126

Budget (F.Y.2007)

(unit: thousand yen)



Organization



Principles of Informatics Research Division

Director: Asao Fujiyama

Professor	Katsumi Inoue	Ken Satoh	Makoto Tatsuta	Ken Hayami
	Asao Fujiyama	Yoshihisa Yamamoto	Hideaki Takeda	Keiichi Kuma
Associate Professor	Ryutaro Ichise	Tetsunari Inamura	Takeaki Uno	Kenichi Kawarabayashi
	Makoto Kanazawa	Nigel Henry Collier	Hiroko Satoh	Kazushige Terui
	Kae Nemoto	Keiji Matsumoto		
Assistant Professor	Yodai Watanabe			

Information Systems Architecture Science Research Division

Director: Shinichi Honiden

Professor	Shoichiro Asano	Shigeo Urushidan	Ichiro Satoh	Shin Nakajima
	Hiromichi Hashizume	Shin'ichi Hon'iden	Katsumi Maruyama	Ken'ichi Miura
	Shigeki Yamada	Tomohiro Yoneda	Kento Aida	Motonori Nakamura
Associate Professor	Shunji Abe	Yusheng Ji	Kensuke Fukuda	Hiroshi Hosobe
	Jun Matsukata	Takashi Matsumoto	Nobukazu Yoshioka	
Assistant Professor	Michihiro Koibuchi	Soichiro Hidaka	Hironori Washizaki	

Digital Content and Media Sciences Research Division

Director: Keizo Oyama

Professor	Akiko Aizawa	Jun Adachi	Keizo Oyama	Shin'ichi Satoh
	Akihiro Sugimoto	Atsuhiro Takasu	Akihiko Takano	Seiji Yamada
	Shingo Nishioka			
Associate Professor	Kenro Aihara	Isao Echizen	Norio Katayama	Asanobu Kitamoto
	Kazuya Kodama	Imari Sato	Frederic Andres	Helmut Prendinger
	Kazutsuna Yamaji			
Assistant Professor	Fuyuki Ishikawa	Masashi Inoue	Ikki Ohmukai	Hiroyuki Katoh
	Hiroshi Mo			

Information and Society Research Division

Director: Noboru Sonehara

Professor	Noriko Arai	Noriko Kando	Sumio Kakinuma	Hajime Kitaoka
	Teruo Koyama	Noboru Sonehara	Yoh'ichi Tohkura	Masamitsu Negishi
	Akira Miyazawa			
Associate Professor	Hitoshi Okada	Hironobu Gotoda	Morio Shibayama	Yuan Sun
	Masaki Nishizawa	Nobuhiro Furuyama		
Assistant Professor	Kouichirou Ueki	Masashi Ueda	Takashi Koga	Tetsuro Kobayashi

Center for Grid Research and Development

Director: Kenichi Miura

Research and Development Center for Informatics of Association

Director: Akihiko Takano

Strategic Research Projects Incubation Center

Director: Yoh'ichi Tohkura

Research and Development Center for Academic Networks

Director: Shigeki Yamada

Research and Development Center for Scientific Information Resources

Director: Hideaki Takeda

Organization for Science Network Operations and Coordination

Director: Masao Sakauchi

Organization for Scientific Resources Operations and Coordination

Director: Masao Sakauchi

Organization for Value Creation in Informatics

Collaborative Research Unit

Visiting Professor	Henri Angelino (Full-time)		Michael E. Houle (Full-time)	
	Keijiro Araki	Anthony Finkelstein	Yoshikazu Ikeda	Katsushi Ikeuchi
	Kazunori Ueda	Hitohide Usami	Atsushi Ohnishi	Hisamichi Okamura
	Kazuaki Kishida	Mitsuhiro Kishimoto	Masaru Kitsuregawa	Takashi Gojobori
	Kazunobu Konishi	Motoshi Saeki	Masato Takeichi	Yuzuru Tanaka
	Shigeaki Tanimoto	Shun Tsuchiya	Bashar Nuseibeh	Yoshiaki Fukazawa
	William John Munro	Shinichi Mineo	Hayato Yamana	Katsuya Watanabe
Visiting Associate Professor	Ichiro Ide	Tomo'o Inoue	Koji Eguchi	Haruhiko Kaiya
	Kyo Kageura	Ken Kaneiwa	Eiji Kamioka	Koichi Takeuchi
	Shigeru Chiba	Tao Zhang	Keita Tsuji	Mitaro Namiki
	Takaaki Nara	Yuko Noguchi	Toshihiko Nozue	Atsushi Fujioka
	Takayuki Fujino	Peter van Loock	Tomoko Matsui	Mio Murao
	Katsunori Yamaoka	Masaharu Yoshioka	Keiko Watanabe	
Coordinate Professor	Satoshi Tojo	Eiji Fujiwara		
Coodinate Associate Professor	Yasuo Tan	Tsuyoshi Murata		

Professor (by Special Appointment)	Shuichi Itabashi	Haruki Ueno	Kinji Ono
	Kenji Taguchi	Masami Nakamura	Jiro Makino
Associate Professor (by Special Appointment)	Yoshinao Isobe	Toshiyuki Kataoka	Kei Kurakawa
	Masaki Shimaoka	Yasuyuki Tahara	Yayoi Hirose
	Yuzo Marukawa	Yuko Murakami	

Facilities / Location

National Center of Sciences

The National Center of Sciences was established as a center for scientific research in informatics, for academic exchanges, for the dissemination of scientific information, and to provide to society as a whole the benefits of an infrastructure of academic research in Japan. Construction was completed in December 1999. The Center consists of three principal institutions: the NII, the Hitotsubashi University Graduate School of International Corporate Strategy, and the Center for University Finance. The Center aims to provide a developed base for intellectual creativity through the comprehensive application of the academic functions of each institute. Conference facilities are located in the lower floor of the building, including the Hitotsubashi Memorial Hall. These are available for use for various activities, such as international conferences, lectures, and other academic meetings organized by national universities.

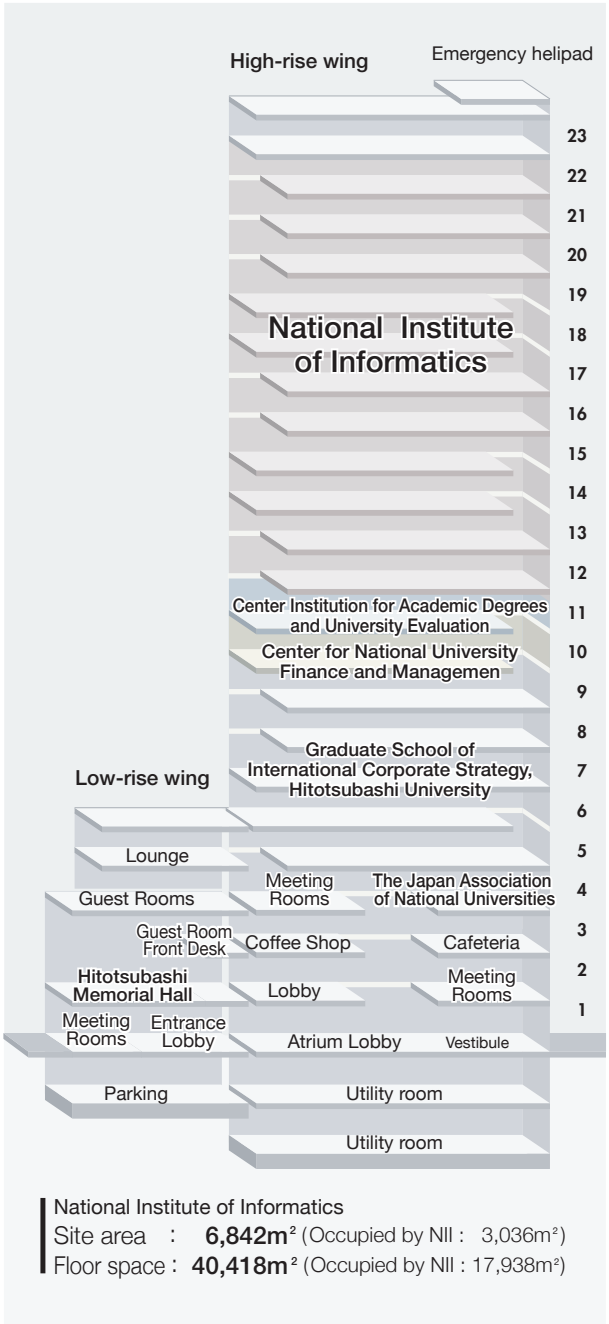
National Center of Sciences

Hitotsubashi Memorial Hall

National Institute of Informatics (NII)

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

National Center of Sciences Bldg. 2-1-2 Hitotsubashi, Chiyoda-ku, Tokyo 101-8430
TEL. +81-3-4212-2000 (Exchange)



National Institute of Informatics
Site area : **6,842m²** (Occupied by NII : 3,036m²)
Floor space : **40,418m²** (Occupied by NII : 17,938m²)

Center for Grid Research and Development

To promote more effective development of grid research, the center is situated in a building near the National Center for Sciences, which houses the Center for Grid Research and Development. Extensive close cooperation is anticipated among the government, academia, and the private sector at the center for Grid Research and Development.

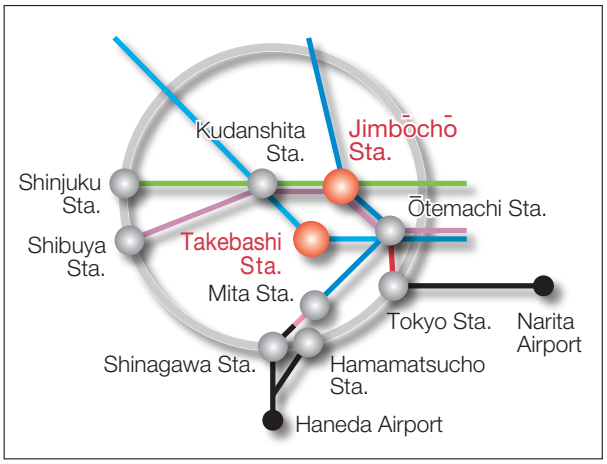
Center for Grid Research and Development

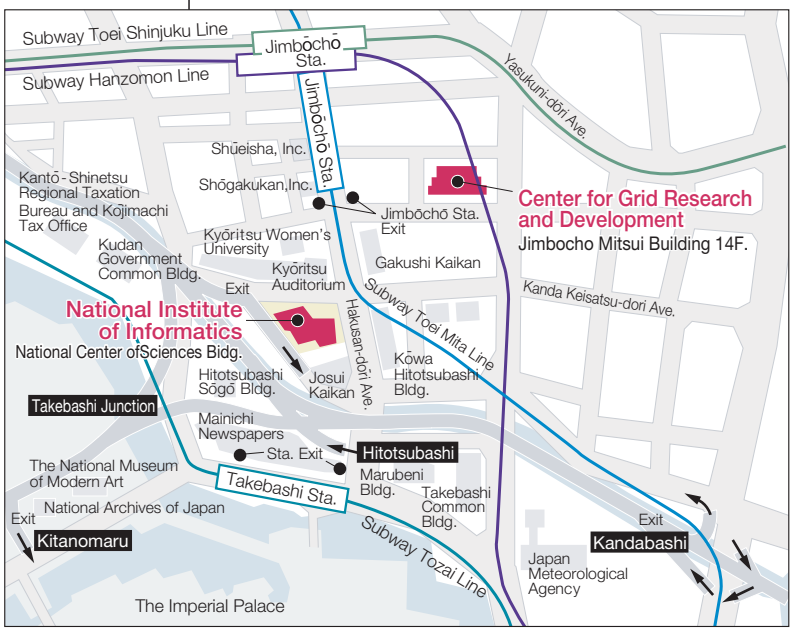
http://www.naregi.org/

Jimbocho Mitsui Building 14F, 1-105 Kanda-jimbocho, Chiyoda-ku, Tokyo 101-0051
TEL. +81-3-4212-2857

■Guide Map

■Route Map





Subway Toei Shinjuku Line
Subway Hanzomon Line
Subway Toei Mita Line
Subway Tozai Line

Facilities / Location

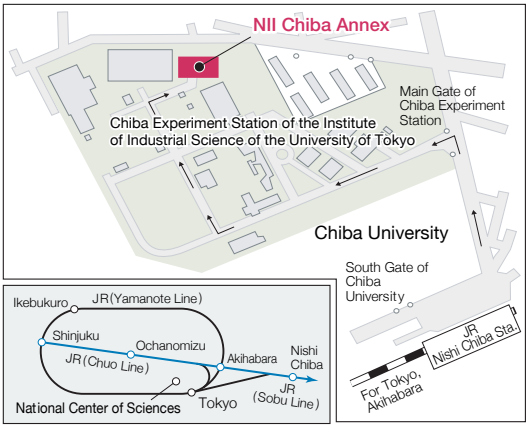
Chiba Annex (Inage-ku, Chiba City)

The Chiba Annex is a facility for computer systems and networking equipment used to operate the Science Information System and to provide scientific information services. It was built in November 1994 and is located in the Chiba Experiment Station of the Institute of Industrial Science of the University of Tokyo.

Chiba Annex

1-8 Yayoi-cho, Inage-ku, Chiba-shi, Chiba 263-0022
TEL. +81-43-285-4911 (Exchange)

Guide Map



Site area (rented) : **1,782m²**
Floor space : **3,943m²**

International Seminar House for Advanced Studies (Karuizawa Town, Nagano Prefecture)

The International Seminar House for Advanced Studies was built in March 1997 in Karuizawa, Nagano Prefecture, as a venue for international conferences, seminars, and training. It has a seminar room that can hold 46 persons, accommodations, and other facilities. It is widely utilized not only by the NII but also by various universities and research institutes.

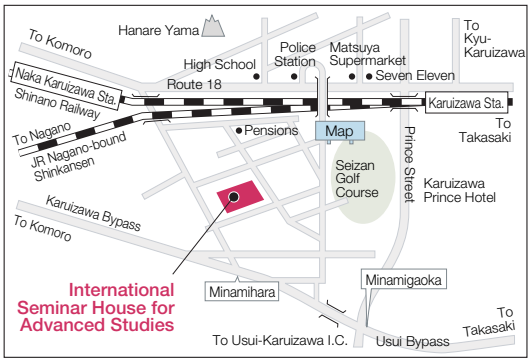
Seminar at the International Seminar House for Advanced Studies

International Seminar House for Advanced Studies Inose Lodge

http://www.nii.ac.jp/introduce/seminar1.shtml

1052-471, Okan Minamihara Nagakura, Karuizawa, Karuizawa-cho, Kita Saku-gun, Nagano 389-0111
TEL. +81-267-41-1083

Guide Map



Site area : **3,339m²**
Floor space : **667m²**

Contact: Budget Planning and Account Settlement Team, Budget and Accounts Division
TEL +81-3-4212-2060

Inter-University Research Institute Corporation
Research Organization of Information and Systems
National Institute of Informatics
NII