National Institute of Informatics

2006-2007

NII

Contents

Introduction

Academic reserch organizations are now under increased pressure to clarify their mission and roles, plan and implant unique activities, and to effectively demonstrate their various successes.

The National Institute of Informatics (NII) has designed the following missions and roles: To create future value (create scholarship) as Japan's sole comprehensive academic research institute in field of informatics; to attain the status of national, center for informatics research activities; 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, and through the above efforts, realize the effective contributions to international as well as domestic society.

These missions have now reached a particularly important stage, after the ten year's history of 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' 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. There is therefore an urgent need to develop academic information infrastructure seamlessly toward the next-generation's one.

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.

April 2006

Masao Sakauchi

Director General, National Institute of Informatics
Inter-University Research Institute Corporation /
Research Organization of Information and Systems

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, 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 Academic Contents 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	Deputy Editor, Science and Medical News Section, 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	Senior Research Fellow, 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	Vice President, 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, Development and Operations 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 provide 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, National Institute of Informatics

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)

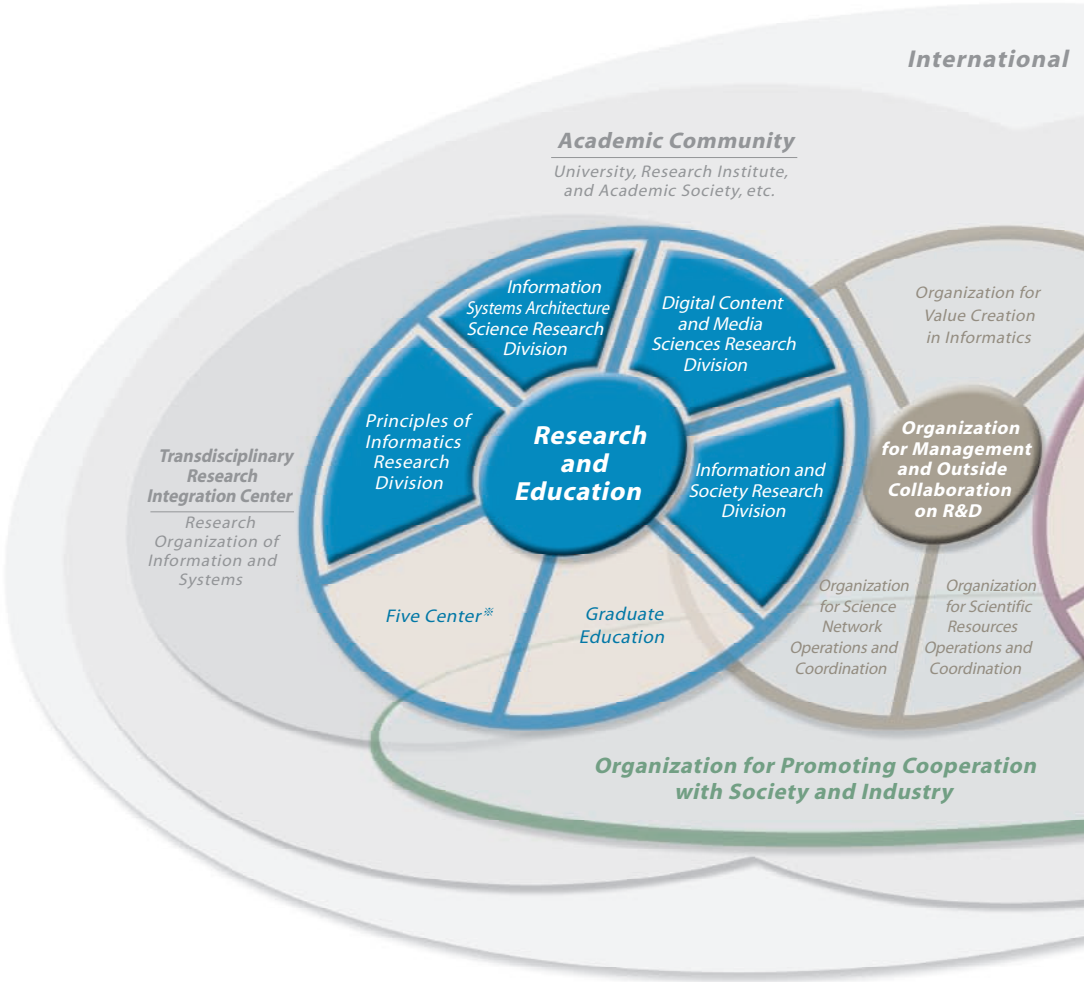
Takamitsu Sawa	Professor, Graduate School of Policy Science, Ritsumeikan University
Mitsutoshi Hatori	Professor, Faculty of Science and Engeneering, Chuo University
Yasuharu Suematsu	Former Director General, National Institute of Informatics
Eisuke Naito	Professor, Faculty of Sociology, Toyo University
Kinji Ono	Visiting Professor, Waseda University
Takeo Yamamoto	Former Director, Multimedia Information Research Division, National Institute of Informatics

Professor (by Special Appointment)

Kinji Ono	Visiting Professor, Waseda University

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

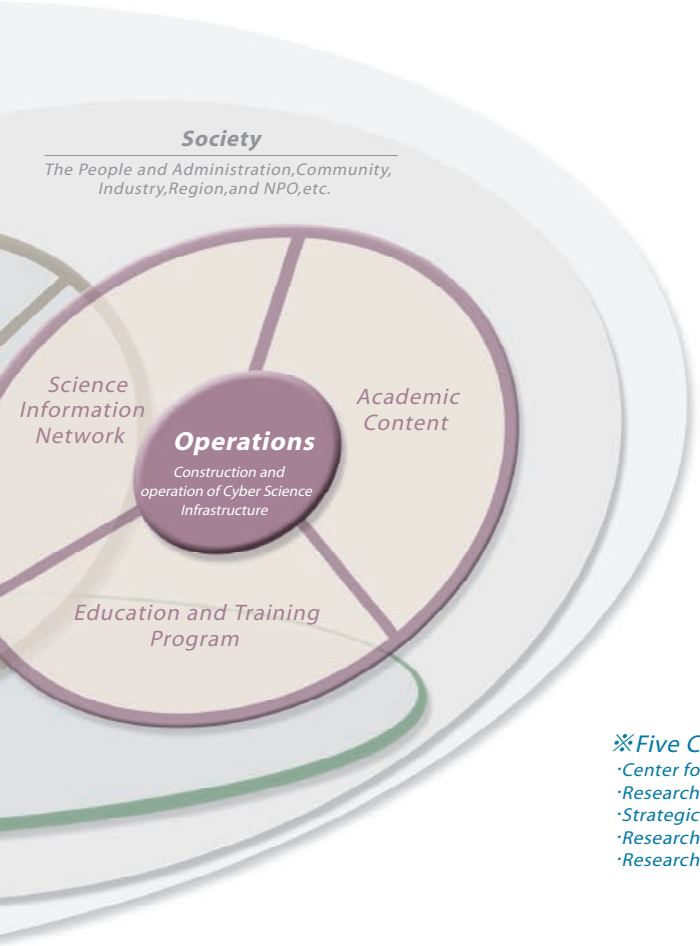
The NII seeks to achieve harmony between society, culture, and social systems, in addition to creating platforms and portals that encourage the establishment, searching, and use of content to develop, and enliven, and disseminate academic, cultural, educational, publishing, and environmental activities, 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 ofdeveloping 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

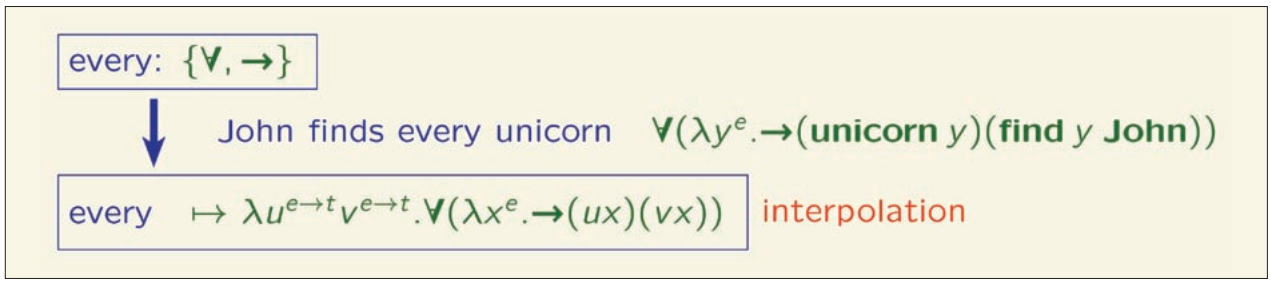
In the Principles of Informatics Research Division we seek to discover new principles, theories and methods in Informatics, and extend our goal to pioneering the frontiers to try and achieve a paradigm shift in informatics.

A Comprehensive Model of Grammar Based on the Typed Lambda Calculus

The Abstract Categorial Grammar (ACG) is a grammar formalism based on the typed λ-calculus. It generalizes and unifies diverse types of formalisms that have been proposed for the description of natural language, including many types of string grammars and tree grammars, as well as Montague-style compositional semantics. In collaboration with researchers at INRIA-Lorraine, we are trying to build a formal model of human grammar using ACGs that is comprehensive in the sense that it is equipped with theories and practical algorithms for parsing, generation, and learning.
We have shown that the string languages generated by ACGs form a natural class in that it is a substitution-closed full abstract family of languages. We are currently working on the implementation of an efficient learning algorithm for ACGs using a new algorithm for computing interpolants in the implicational fragment of intuitionistic propositional logic and an algorithm for solving a special case of linear higher-order matching.

(Makoto Kanazawa)

References: Makoto Kanazawa, Abstract families of abstract categorial languages, to appear.
Makoto Kanazawa, Computing interpolants in implicational logics, Annals of Pure and Applied Logic, to appear.

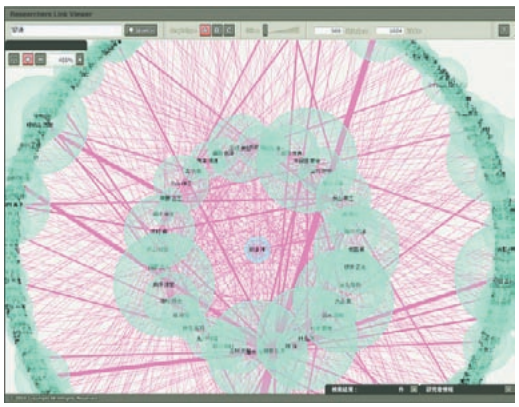


Knowledge Discovery Based on Semantic Information

With the recent development of computer networks, various types of information have become easier to obtain. However, in order to incorporate such information in the decision making process, it is necessary to conduct many forms of information processing, such as selecting important information from a large amount of information or inferring actions from integrated information. To solve such problems, we identified the semantic knowledge associated with relationships between information. Such examples include the development of a knowledge discovery system that identifies patient conditions using the relationships between medical test data over time, the development of a knowledge sharing system that aligns different ontologies in order to semantically integrate different types of information, and the development of a community mining system that allows researchers to identify relationships using bibliographical data.

(Ryutaro Ichise)

Reference: Ryutaro Ichise, Hideaki Takeda, Kosuke Ueyama: Community Mining Tool using Bibliography Data, Proceedings of the 9th International Conference on Information Visualization, pp. 953-958, (2005)



Community Mining System

Other Research

- The iterative solution of least squares problems and singular systems (Ken Hayami, Tokushi Ito)
- The numerical solution of systems of algebraic equations occuring in MEG inverse problems (Masayuki Ishii, Takaaki Nara, Ken Hayami)
- Graph Coloring and its algorithmic aspect (Ken' ichi Kawarabayashi)
- Efficient and practical fast algorithms for solving large scale problems arising from data mining and genome sciences (Takeaki Uno)
- Type theory, lambda calculus, and constructive logic, and their application to theory of programs (Makoto Tatsuta)
- Constructive logics and computational complexity (Kazushige Terui)
- Photonic quantum information systems (Yoshihisa Yamamoto)
- Quantum information and computation (Keiji Matsumoto)
- Quantum information/computation (Kae Nemoto)
- Relation among security notions in cryptography (Yodai Watanabe)
- Development of Japanese Bio-Portal site (Asao Fujiyama)
- Research on intelligent systems for solving practical problems in chemistry (Hiroko Satoh)
- Machine learning for semantic annotation of Web pages (Nigel Collier)
- Research on Program Generalization and Hypothesis Finding (Katsumi Inoue)
- Speculative computation in multi-agent systems (Ken Satoh)
- Knowledge sharing on the Internet with Semantic Web technologies (Hideaki Takeda)
- Development of e-Learning Platform WebELS for higher education (Haruki Ueno)
- Synthetic Study of Developmental Robot Intelligence based on Interaction and Experience (Tetsunari 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.

Research on formal verification with the model-checking methods

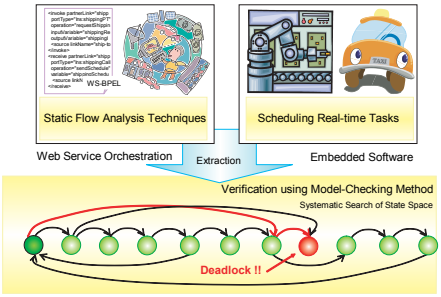
Formal methods, having a long history in academia, are now expected as the technology to ensure the correctness of the software systems in industry as well. The model-checking method, a branch in the formal methods, has been in particular found effective. Its basic idea is an exhaustive search of the large state-space extracted mainly from the control aspect of the target software.

Since there is no panacea, the successful application of the model-checking method requires to make use of the characteristics of the verification target. For example, the analysis of WS-BPEL programs for the Web service orchestration needs the techniques traditionally used in the compilers. As for the embedded software, taking into account the scheduling of real-time tasks can contribute to reduce the state-space size.

Software in general has both the data and control aspects, which results in a state-space explosion due to the vast number of the combinations of the data values. In order to overcome this problem in a systematic manner, a new verification tool to unite the model-checking method with the idea of the data-constraint system is now in progress.

(Shin Nakajima)

References: Shin Nakajima, Lightweight Formal Analysis of Web Service Flows, Progress in Informatics, No.2, pp.57-76 (2005). Shin Nakajima, Behavioral Analysis of Embedded Software Using a Variant of UML State-diagram, Journal of Information Processing Society of Japan, Vol.46, No.11, pp.2643-2653 (2005)



Research on moving networks (network mobility (NEMO))

Trends point to increasing user access of the Internet from wireless mobile terminals in environments in which the local networks themselves move, where network platforms include super-express trains and buses. In such mobile network (network mobility: NEMO) environments, access points between the user terminal or the local network and the Internet change continually. This suggests networks must incorporate autonomous control technologies that make it possible to deliver data (IP packets) without fail from the corresponding terminal (CN in the figure) through the mobile network to the mobile terminal (MNN in the figure).

We have recently proposed an IP routing optimization method called (MoRaRo: Mobile Router-Assisted Route Optimization) for transferring data through a direct route (PATH in the figure) to a destination terminal using a mobile router (MR in the figure) placed as a gateway of the mobile network. MoRaRo allows the mobile router to provide some of the functions conventionally provided by the mobile terminal (MNN in the figure), such as binding update function. Compared to conventional NEMO basic support protocol, the MoRaRo increases the packet delivery efficiency by more than 100%. It can also reduce packet transfer delays two- to four-fold, depending on conditions.

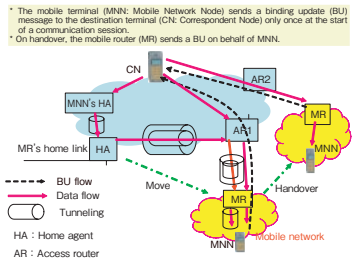


Figure: Router optimization method based on MoRaRo

(Shigeki Yamada and Eiji Kamioka)

Reference: Ved P. Kafle, Eiji Kamioka, and Shigeki Yamada, "MoRaRo : Mobile Router-Assisted Route Optimization for Network Mobility (NEMO) Support", IEICE Transactions on Information and System, Vol.E89-D, No.1, pp.158-170, Jan. 2006

Other Research

- High-level synthesis of asynchronous circuits (Tomohiro Yoneda)
- Integrated control technologies for next-generation all-optical networks (Shoichiro Asano)
- Survival of network operation against natural calamities (Shoichiro Asano)
- Researc on ubiquitous computing networks and privacy protection and security technologies (Shigeki Yamada and Eiji Kamioka)
- Researches on quality of service control in high speed network (Shunji Abe)
- Research on traffic characterization and control for providing the Quality of Service in multi-service networks (Yusheng Ji)
- Research on dependable and scalable operating systems (Takashi Matsumoto)
- Software platform for smart and federated distributed processing (Katsumi Maruyama, Kazuya Kodama, Soichiro Hidaka, Hiromichi Hashizume, Yusheng Ji)
- Software development and testing environment for mobile terminals (Ichiro Satoh)
- Constraint programming for graphical interfaces (Hiroshi Hosobe)
- Optimization of XML query language] (Soichiro Hidaka)
- Component-Based and Model-Driven Software Development (Hironori Washizaki)
- Human interface with computer augmented reality (Hiromichi Hashizume)
- High-level synthesis of asynchronous circuits (Tomohiro Yoneda)
- Integrated control technologies for next-generation all-optical networks (Shoichiro Asano)
- Survival of network operation against natural calamities (Shoichiro Asano)
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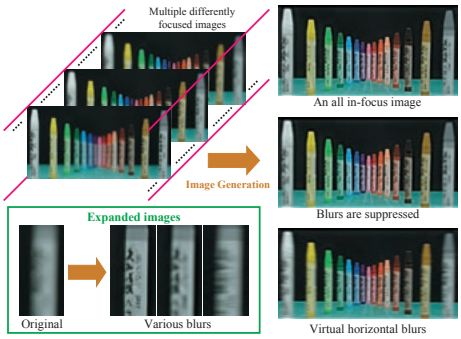
- Software platform for smart and federated distributed processing (Katsumi Maruyama, Kazuya Kodama, Soichiro Hidaka, Hiromichi Hashizume, Yusheng Ji)
- Middleware for ubiquitous, mobile and distributed computing (Ichiro Satoh)
- Constraint programming for graphical interfaces (Hiroshi Hosobe)
- Optimization of XML query language (Soichiro Hidaka)
- Reuse-Oriented Software Development and Quality Assurance (Hironori Washizaki)
- Human interface with computer augmented reality (Hiromichi Hashizume)
- Dynamic resource optimization technologies for multi-layer networks (Sigeo Urushidani)
- Flexible and safe contents distribution by mobile agents (Shinichi Honiden)
- Grid computing and super computing (Kenichi Miura)
- Measurement and analysis of internet traffic (Kensuke Fukuda)
- High-performance interconnection networks in multiprocessor systems (Michihiro Koibuchi)

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.

Virtual Image Generation from a Single System of Lenses

For utilizing image information at ease, it is very effective to construct more functional image information including additional data such as camera characteristics, conditions and environments of the image acquisition. Actually, for example, many camera users enjoy various kinds of Bokeh-Aji, which means a certain blur shape, by replacing lenses or irises even for acquiring images of a single scene. By combining acquired images with various kinds of information as stated above, we are able to arbitrarily change the conditions of capturing scenes even after acquiring images. In other words, the situation of capturing the same scenes can be virtually presented. Nothing prevents camera users from acquiring images of the scenes with various conditions until they are satisfied with virtually generated images. At present, we propose a method of generating images, which would be acquired with virtual irises, from multiple differently focused images. All-in-focus images and arbitrarily focused images, where the blurs of all regions are suppressed or emphasized naturally according to their depths, can be generated well. We also study virtual Bokeh generation from a single system of lenses.



(Kazuya Kodama)

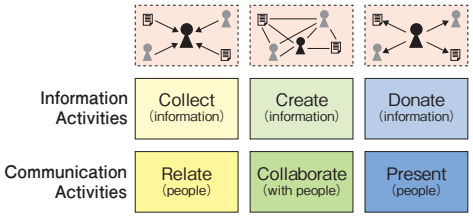
Reference : K. Kodama, H. Mo, and A. Kubota : "All-in-Focus Image Generation by Merging Multiple Differently Focused Images in Three-Dimensional Frequency Domain", Lecture Notes in Computer Science 3767, Springer, pp.303-314 (2005)

Research on information distribution support based on metadata and personal networks

As the volume of information found on the Web continues to grow by leaps and bounds, reliably finding the right information has grown increasingly difficult, even when using search engines. Additionally, growing numbers of users are beginning to use the Web as a means of social contact and communication. Examples include blogs and social networking services (SNS). These trends call for rapid, convenient information dispatch and information collection methods. Current research seeks to solve these two problems by focusing on the individuals who are the readers, writers, and editors of Internet content. The research uses the social networks in which individuals are embedded (personal networks) to implement new forms of information collection and communications. More specifically, our method is based on designing metadata, or information formats that computers can understand, and developing systems that permit users to create metadata. Based on such systems, we propose the distribution of information in personal networks and information collection based on degree of interest and degree of relationship. Our research also pursues methods for refining the accuracy of information collection by semi-automatically building a body of knowledge based on the results of information collected by individuals.

(Ikki Ohmukai)

References: Ikki Ohmukai, Masahiro Hamasaki, and Hideaki Takeda: "A Proposal of Community-based Folksonomy with RDF Metadata", Workshop on End User Semantic Web Interaction, ISWC2005, 2005.



Other research

- Research on parallel associative processing (Akihiko Takano)
- Application of text mining and use of electronic content (Jun Adachi)
- Image indexing (Shin' ichi Satoh)
- Human agent interaction (Seiji Yamada)
- Machine-learning based interactive document search and query expansion (Seiji Yamada)
- Resource construction and use of Construction and utilization of Web information resources based on classification and searching retrieval (Keizo Oyama)
- Research on model learning in for approximate matching (Atsuhiro Takasu)
- Research on knowledge and language linguistic resources construction from text corpora (Akiko Aizawa)
- Research on and development of techniques for measuring Sensing and understanding human behavior activities in our daily life environments (Akihiro Sugimoto)
- Simplified modeling of three dimensional shapes of objects (Akihiro Sugimoto)
- Realizing discrete cComputer vision under the existence of digitization errors (Akihiro Sugimoto)
- Research on methods for creating and retrieving information in large-scale image databases for earth sciences and cultural information resources (Asanobu Kitamoto)
- Research on archives of culture and art and their application to learning support (Kenro Aihara)
- Multi-lingual semantic management of image learning ontology (Frederic Andres)
- Geo-media database management (Frederic Andres)
- Cooperative monitoring control of cultural heritage information based on the Internet (Frederic Andres)
- Research on gazed presentation agents (Helmut Prendinger)
- Faster methods for databases used for large-scale image Data management technology for video corpus analysis (Norio Katayama)
- Research on Sstructured multi-dimensional image information (Kazuya Kodama)
- Creating, understanding, and searching Content analysis and information retrieval from a large-scale image archives for broadcasting broadcast video archive (Shin' ichi Satoh, Norio Katayama, and Hiroshi Mo)
- Research on query optimization for XML databases (Hiroyuki Kato, Soichiro Hidaka, Yasunori Ishihara (Osaka University), and Masatoshi Yoshikawa (Kyoto University))
- Analyses of object shapes and reflection characteristics based on pPhysics-based vision object shape and reflectance modeling (Imari Satoh)
- Real-space support for user electronic activities Creating Spatially Immersive Displays for Human Computer Interaction (Imari Satoh) Research on language models of topics and opinions statistical topic/sentiment models and their applications (Koji Eguchi)
- Cross-media searching retrieval (Masashi Inoue)
- Communication support on the Web (Ikki Ohmukai)

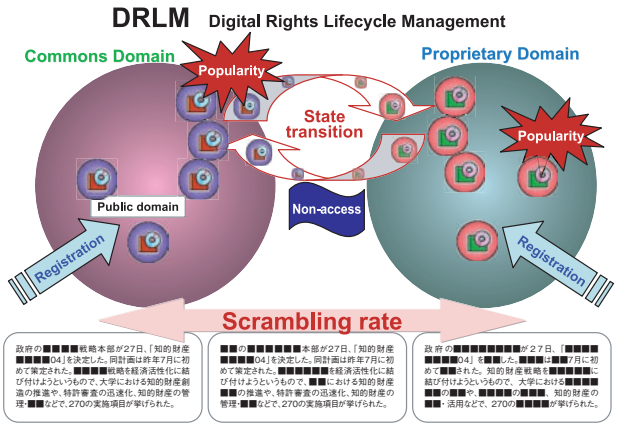
Information and Society Research Division

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.)

Research and development into Digital Rights Lifecycle Management (DRLM)

Posed by the digital revolution, various issues concerning the handling of intellectual property rights originate in the differences between continuous (analog) and discrete (digital) content. These issues require research and development on systemic designs, technologies and services, and distribution models suitable for the digital age. Network distribution of digital content is referred to as digital commerce. Enlivening such markets requires the development of products, technologies and services, and systems that satisfy the need to distribute information. To this end, the Information and Society Research Division is engaged in research and development on Digital Rights Lifecycle Management (DRLM) systems that will provide incentives to publish information by automatically increasing ratings in the commercial domain of information evaluated highly in the public domain.

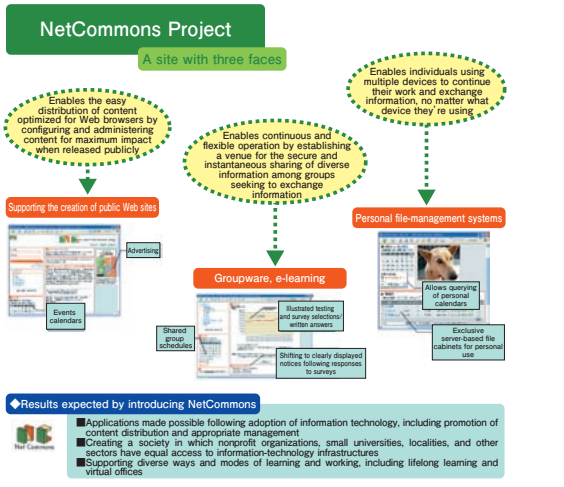
(Noboru SONEHARA)



The NetCommons Project

Software such as content management systems and communityware for promoting information-sharing continues to proliferate throughout society in systems that support knowledge-based collaborations via the Internet. In addition to the development of Internet environments and authentication systems, such Web-based information-sharing infrastructures are expected to evolve well beyond mere tools for gathering and sharing information into virtual shared research laboratories and individual virtual offices. As part of work on the development of information-sharing infrastructures for research and educational institutions nationwide, as well as broader society, the NII in 2005 released NetCommons 1.0.0, an open-source software project released under the GNU General Public License (GPL). The software release followed testing at some 70 organizations nationwide. Adopting a three-level structure consisting of pages for external release of information, group pages requiring login, and personal pages serving as individual information portals, this system provides 36 modules that provide enhanced groupware and e-learning functions. Through such efforts, the NII seeks to establish an infrastructure enabling a broad range of groups participating in knowledge-based collaborations to share information more easily. Today, NetCommons is used in numerous applications, serving (in one case) as an infrastructure for Web sites at elementary and junior-high schools. It's also used to create virtual shared research laboratories at universities and other institutions.

(Noriko ARAI)



Other research

- Knowledge representation and use (Teuo Koyama)
- Metadata Commerce Network (Noboru Sonehara)
- A study on information that ecologically constrains the coordination among speech, gesture and breathing movements within and between individuals (Nobuhiro Furuyama)
- Development of the next generation human interface (Kouichirou Ueki)
- Similarity-based retrieval system for three-dimensional models (Hironobu Gotoda)
- Relationships between ICT (Information and Communication Technology) and Humans (Yoh'ichi Tohkura)
- Building a Weblog Site for Online Law Information (Hitoshi Okada)
- Legal, institutional and policy research concerning access to government information (Takashi Koga)
- Empirical analyses on the role of Grants-in-Aid for Scientific Research for promotion of basic research (Masamitsu Negishi, Morio Shibayama, Masaki Nishizawa, Yuan Sun)
- Empirical Study on a Triple Helix of University-Industry-Government Relations (Yuan Sun, Masamitsu Negishi, Masaki Nishizawa, Akira Miyazawa)
- Research on the industry-university cooperation by patent application (Morio Shibayama)
- Evaluation of information access technologies (Noriko Kando)

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 (InterUniversity 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 reseach 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)

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

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

■**Academic Content Service**
http://www.nii.ac.jp/irp/index.html
Organization for Scientific Resources Operations and Coordination

■**UPKI (Inter-University PKI) joint public key infrastructure for universities**
Organization for Science Network Operations and Coordination

Informatics for future value creation

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

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

■**Science Grid**
MIURA, Kenichi

Next-generation software strategies

■**Next-generation operating system: SSS-PC**
MATSUMOTO, Takashi

■**Identifying basic software technologies**
MARUYAMA, Katsumi

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

Information environment/content creation

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

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

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

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

■**Thinking content - The Smartive Project**
http://smartive.jp/
HONIDEN, Shinichi

■**Digital cinema standards**
http://www.mpeg.rcast.u-tokyo.ac.jp/DECSDP/index.html
SONEHARA, Noboru

■**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/~ntcadm/index-en.html
KANDO, Noriko

Social/public contribution

■**Cultural Heritage Online** http://bunka.nii.ac.jp/
TAKANO, Akihiko

■**Information sharing sysmte - NetCommons**
http://www.netcommons.org/
ARAI, Noriko

■**Digital Silk Roads Project**
ONO, Kinji

■**Information reliability mechanism - Infotrustics**
SONEHARA, Noboru

Integrated informatics

■**Determing the genomic infrastructure of evolution and diversity through comparative genome analysis**
http://www.genome-sci.jp/
FUJIYAMA, Asao

Current Research Topics of Reseach Staff of NII

Principles of Informatics Research Division

Mathematical Informatics	
HAYAMI, Ken	●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
KAWARABAYASHI, Kenichi	●Graph coloring problems in discrete math ●Structural graph theory and its applications to algorithms ●Network flow and disjoint paths problem
UNO, Takeaki	●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	
KANAZAWA, Makoto	●Lambda calculus and formal grammar ●Logical semantics of natural language
TATSUTA, Makoto	●Type theory for classical logic ●Strong normalization of permutative conversions
TERUI, Kazushige	●Studies on linear logic, type theory and computational complexity
Quantum Information	
MATSUMOTO, Keiji	●Quantum information and computation
NEMOTO, Kae	●Quantum information/computation ●Quantum optics ●Theoretical physics
WATANABE, Youdai	●Security of quantum key distribution schemes ●Relation among security notions in cryptography ●Performance of probabilistic inference algorithms on graphical models
YAMAMOTO, Yoshihisa	●Photonic quantum information systems ●Electronic quantum simulation systems
Material and Life Informatics	
FUJIYAMA, Asao	●Comparative genomics research
SATOH, Hiroko	●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	
COLLIER, Nigel	●Machine learning for semantic annotation of Web pages ●Information extraction ●Ontology engineering ●Text mining
ICHISE, Ryutaro	●Machine learning ●Knowledge sharing ●Data mining
INAMURA, Tetsunari	●Human robot interaction ●Synthetic study of robot intelligence based on stochastic information processing ●Intelligent information processing based on embodiment of robots
INOUE, Katsumi	●Consequence finding and theory formation ●Induction and abduction ●Dynamics of knowledge and belief
SATOH, Ken	●Construction of multiagent systems with speculative computation ●Applications of AI to Legal Reasoning
TAKEDA, Hideaki	●Knowledge sharing system ●Community support system ●Design theory
UENO, Haruki	●Development of e-Learning environment for higher education WebELS ●Research on engineering ethics based on traditional culture

Information Systems Architecture Research Division

Network Architecture	
ABE, Shunji	●Researches on performance analysis based on communication traffic measurement and QoS control method ●Researches on photonic network architecture ●Researches on mobile IP communication
ASANO, Shoichiro	●Integrated control technologies for next-generation all-optical networks ●Survival of network operation against natural calamities
FUKUDA, Kensuke	●Measurement and analysis of Internet traffic ●Network science
Information Network	
JI, Yusheng	●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

KAMIOKA, Eiji	●Study on Ubiquitous Computing Networks ●Study on Context-Aware Information Networks ●Study on Seamless Service Mobility in PAN Environments
MATSUKATA, Jun	●Network control scheme for very fast Internet
URUSHIDANI, Shigeo	●Dynamic resource optimization technologies for multi-layer networks
YAMADA, Shigeki	●Research on context-aware and mobile computing networks ●Research on privacy protection and security technologies
■Computer Architecture	
HASHIZUME, Hiromichi	●Human interface with computer augmented reality ●Collaboration support systems ●Sensor applications
KOIBUCHI, Michihiro	●High-performance interconnection networks in multiprocessor systems ●Networks-on-Chips architecture ●Interconnects using Ethernet in PC clusters
MATSUMOTO, Takashi	●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
MIURA, Kenichi	●Grid Computing ●Supercomputer Architecture and Performance Analysis ●Parallel Numerical Algorithms for Large Scale Simulations, Monte Carlo Method, Nonlinear Dynamics
■Basis Software	
HIDAKA, Soichiro	●Optimization of XML query language ●Parallel processing environments for non-numeric applications ●Extensible and distributed operating systems
MARUYAMA, Katsumi	●Research on an extensible distributed operating system ●Research on a wide-area cooperative system
SATOH, Ichiro	●Middleware for ubiquitous, mobile and distributed computing
■Software Engineering	
HONIDEN, Shin' ichi	●Agent oriented software engineering ●Agent Architecture ●Advanced Application of Agent
HOSOBE, Hiroshi	●Constraint programming for graphical interfaces ●Theory and solution of soft constraints
NAKAJIMA, Shin	●Formal specification and verification of software (Application to Web service and embedded systems)
WASHIZAKI, Hironori	●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
YONEDA, Tomohiro	●High-Level synthesis of asynchronous circuits ●Mapping of asynchronous circuits to FPGA ●Formal verification of real-time software

Digital Content and Media Sciences Research Division

■Foundations of Content Management	
KATOH, Hiroyuki	●Optimization for casual queries to database ●Fundamental issues on optimizing queries to XML databases
TAKANO, Akihiko	●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
TAKASU, Atsuhiro	●Learnable approximate matching model ●Non-linear time series document analysis ●Distributed index processing
■Text and Language Media	
ADACHI, Jun	●Information retrieval and integration of heterogeneous data ●Modeling and implementation of high-performance information retrieval systems ●Text mining
AIZAWA, Akiko	●Identification and linkage of text information ●Analysis of textual data using statistical methods ●Automatic construction of linguistic resources
EGUCHI, Koji	●Research on web information retrieval methods and their evaluation ●Research on statistical topic/sentiment models and their applications
KATAYAMA, Norio	●Data Management Technology for Video Corpus Analysis
OYAMA, Keizo	●Research on techniques for utilizing web information ●Research on an integrated platform for scholarly information services ●Research on full text search technology
■Pattern Media	
KITAMOTO, Asanobu	●Data mining from large-scale scientific image databases ●Meteoinformatics ●Digital archives
KODAMA, Kazuya	●A Study on structure of multi-dimensional image information and communication systems of distributed shared image environment with real-time quality control
MO, Hiroshi	●A study on case based video indexing ●A study on intelligent video structuring
SATOH, Imari	●Physics-based object shape and reflectance modeling ●Creating spatially immersive displays for human computer interaction
SATOH, Shin' ichi	●A Study on video analysis, retrieval, and knowledge discovery based on broadcast video archives ●A study on image retrieval
SUGIMOTO, Akihiro	●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	
AIHARA, Kenro	● Computer supported lifelong learning by using digital archives about historical and artistic objects ● Information acquisition and utilization for field study environment
ANDRES, Frederic	● Multilingual semantic management for image learning ontology ● Geomedia Database Management ● Collaborative monitoring control of Cultural heritage sites over the internet
INOUE, Masashi	● Multi-source learning ● Cross-media information retrieval ● Communication understanding
OHMUKAI, Ikki	● Personal communication and interation in semantic Web environment ● Information sharing and distribution based on personal network
PRENDINGER, Helmut	● Life-like characters ● Multimedia/multi-modal presentation systems ● Physiologically interactive systems
YAMADA, Seiji	● Human-Agent Interaction ● Interactive Information Gathering/Retrieval

Information and Society Research Division

Information Use	
ARAI, Noriko	● Designing collaborative learning environment ● Knowledge sharing, distance learning ● Mathematical logic
GOTODA, Hironobu	● Similarity search for 3D models ● Visualizing citation links among research papers
KANDO, Noriko	● Evaluation of information access technologies ● Text structure and genre analysis ● Multi-faceted metadata and search user interface ● Cross-lingual information retrieval
KOYAMA, Teruo	● Term extraction from text corpora ● Structurization of terms ● Structural analysis of terms ● Knowledge representation and use
MIYAZAWA, Akira	● 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
NEGISHI, Masamitsu	● 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
UEKI, Kouichirou	● Development of the next generation human interface
Science Information	
FURUYAMA, Nobuhiro	● Motor coordination in communication
NISHIZAWA, Masaki	● 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
SHIBAYAMA, Morio	● Metrical analysis of research trends and research evaluation ● Statistical study on change of research environment ● Study on indentification of creativity in research activities
SUN, Yuan	● Bibliometric research on university-industry-government relations ● Structure analysis on network of informatics related research ● DIF research in Japanese achievement testing
Information Public Policy	
KITAOKA, Hajime	● 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
KOGA, Takashi	● Legal, institutional and policy research concerning access to government information ● Interdisciplinary research on recordkeeping and archival issues
OKADA, Hitoshi	● Research on critical growth factors of E-Commerce and E-Society ● Research on university security information policy portal (USIPP)
SONEHARA, Noboru	● Digital commerce (dCommerce) system ● Intellectual property rights lifecycle management system
TOHKURA, Yoh' ichi	● Relationships between ICT (Information and Communication Technology) and humans ● Science and technology for the society ● Transdisciplinary study on human information processing
UEDA, Masashi	● Information public policy ● Institutional information studies

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

NII joined the Graduate University for Advanced Studies (Sokendai, in Japanese) in April 2002, and established the Department of Informatics and its Ph.D. Programs. 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 22 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 77 subjects.

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

International Graduate Course

The International graduate course was established in October 2002 with the aim of providing education within an international atmosphere for talented applicants to foster highly creative researchers with a broad international outlook who can meet the new challenges of scientific research. All lectures are conducted in English on this course.

Lecture on informatics in the class room

Graduate students office

Enrollment (as of April 2006)

( ) Foreign students among total

Year of Admission(Fiscal Year)		General Course	International Course	Total
FY 2002	April	4	——	5 (0)
	October	1 (0)	0	
FY 2003	April	10 (2)	——	17 (7)
	October	3 (1)	4(4)	
FY 2004	April	6 (3)	——	15 (5)
	October	7 (0)	2(2)	
FY 2005	April	6 (1)	——	14 (3)
	October	7 (1)	1(1)	
FY 2006	April	9 (3)	——	9 (3)
Total		53(11)	7(7)	60(18)

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

Japan	· Hokkaido University · Tohoku University · University of Tsukuba · University of Library and Information Science · The University of Tokyo · The 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 · The University of Aizu · Keio University · Shibaura Institute of Technology · Seijo University · Tokai University · Tokyo Denki University · Tokyo University of Science · Nihon University · Hosei University · Waseda University · Doshisha University · The University of the Air
China	· East China Normal University · Harbin Institute of Technology · Nankai University · University of Science and Technology of China
Korea	· Seoul National University
Iran	· Amirkabir University
Viet Nam	· University of Natural Science
Bangladesh	· Dhaka University
France	· Institut National Des Télécommunications · Universite de Savoie
Germany	· University of Leipzig · University of Paderborn
UK	· University of Bristol
Sweden	· Royal Institute of Technology
USA	· University of Pittsburgh · Yale University
Other	· Asian Institute of Technology

Cooperation with Graduate Universities

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

Cooperative graduate universities

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. 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 2006)

University / Graduate School
Chiba University / Graduate School of Science and Technology
The University of Tokyo / Graduate School of Science
The University of Tokyo / Graduate School of Interdisciplinary Information Studies Interfaculty Initiative in Information Studies
Tokyo University of Agriculture and Technology / Graduate School of Engineering
Tokyo Institute of Technology / Interdisciplinary Graduate School of Science and Engineering
Japan Advanced Institute of Science and Technology (JAIST) / School of Knowledge Science
Keio University / Graduate School of Science and Engineering
Chuo University / Graduate School of Science and Engineering
Tokai University / Graduate School of 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.

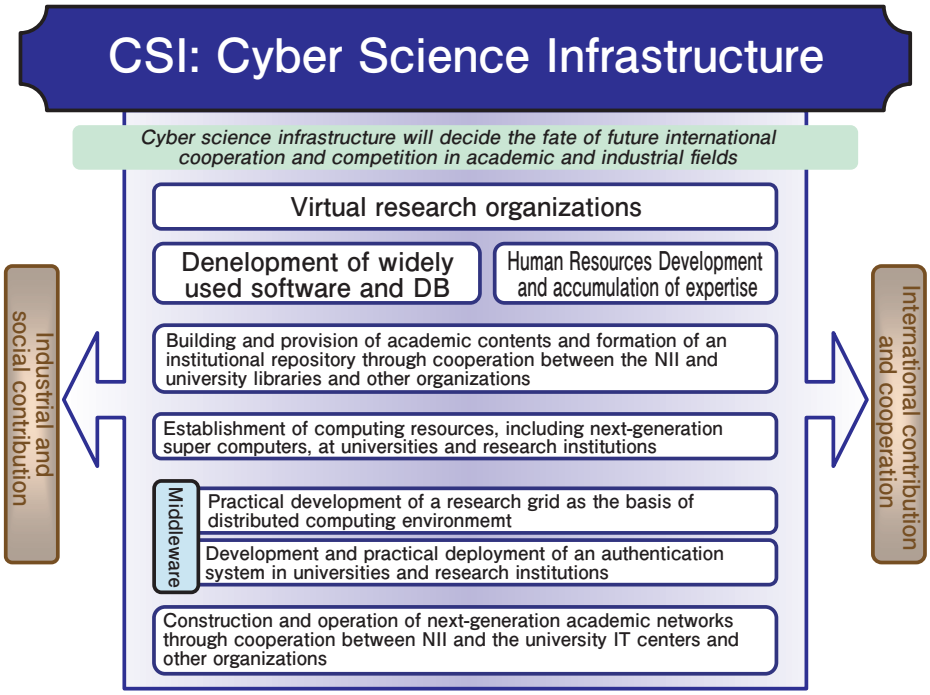
Students from other universities (as of April 2006)

Master Course	Ph.D. Course	Total
36	23	59

Contact: Research Cooperation Division, Graduate School Section
TEL: 03-4212-2110 FAX: 03-4212-2120 E-mail: daigakuin@nii.ac.jp

Construction of Cyber Science Infrastructure (CSI)

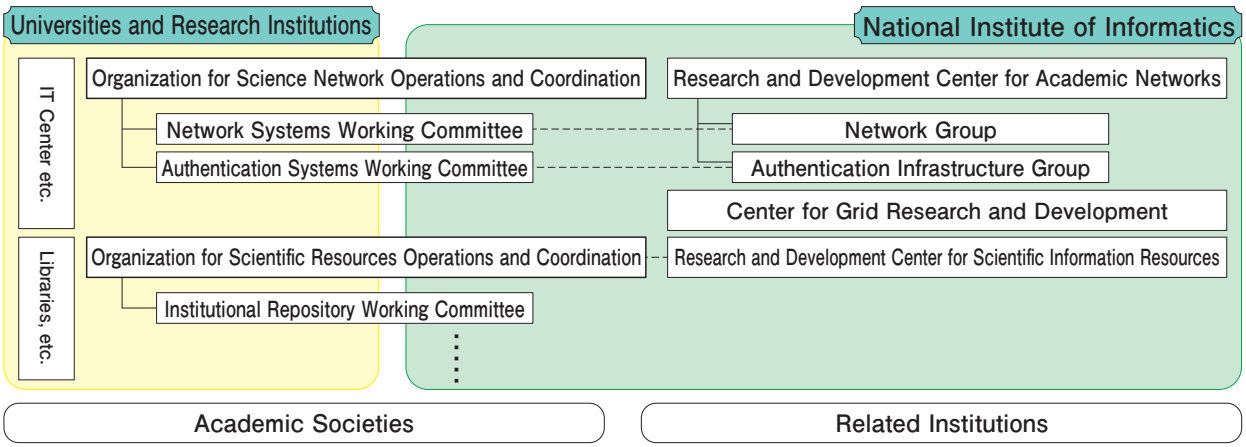
The National Institute of Informatics (NII) is promoting the construction of the Cyber Science Infrastructure (CSI) through cooperation with universities and other organizations, in order to promote Japan's academic research and educational activities and to further strengthen whose international competitiveness.



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 resoureces 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: Planning and Coordination Division, Planning and Coordination Section
TEL 03-4212-2215 FAX 03-4212-2230 E-mail:plan@nii.ac.jp

Science Information Network

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

The Science Information Network (SINET/Super SINET) is an information communication network
points); it is designed to promote research and education as well as the circulation of scientific in-
SINET is also connected to research networks such as Abilene*1 in the U.S. and GÉANT*2 in Europe
with research networks overseas.
tion with the TEIN2 Project*3. This development has further enhanced and reinforced efforts to pro-
On top of this, study has commenced toward full-scale introduction of a next-generation Science In-

Super SINET

Super SINET was launched in January 2002 to support the sharing and processing of vast amounts of data required by cutting-edge research projects that could not be handled in conventional network environments. Super SINET provides an up to 10-Gbps network environment to university institutes that participate in research projects dependent upon ultra-high-speed networks, such as those in high energy science, nuclear fusion, space science, astronomy, gene information analysis, nanotechnology, simulation sciences, and grid computing. Super SINET has resulted in a significant number of outstanding research findings.

SINET3

Efforts heretofore have focused on supply of two forms of infrastructure: the 1 Gbps SINET and the 10 Gbps Super SINET. However, in order to provide even faster, more high-quality, and more multifunctional services, work has begun toward construction of a next-generation Science Information Network (SINET3) that will integrate these two networks.
Scheduled to come on line in stages beginning in FY2007, SINET3 will provide an innovative research and educational environment to users through various service menus.

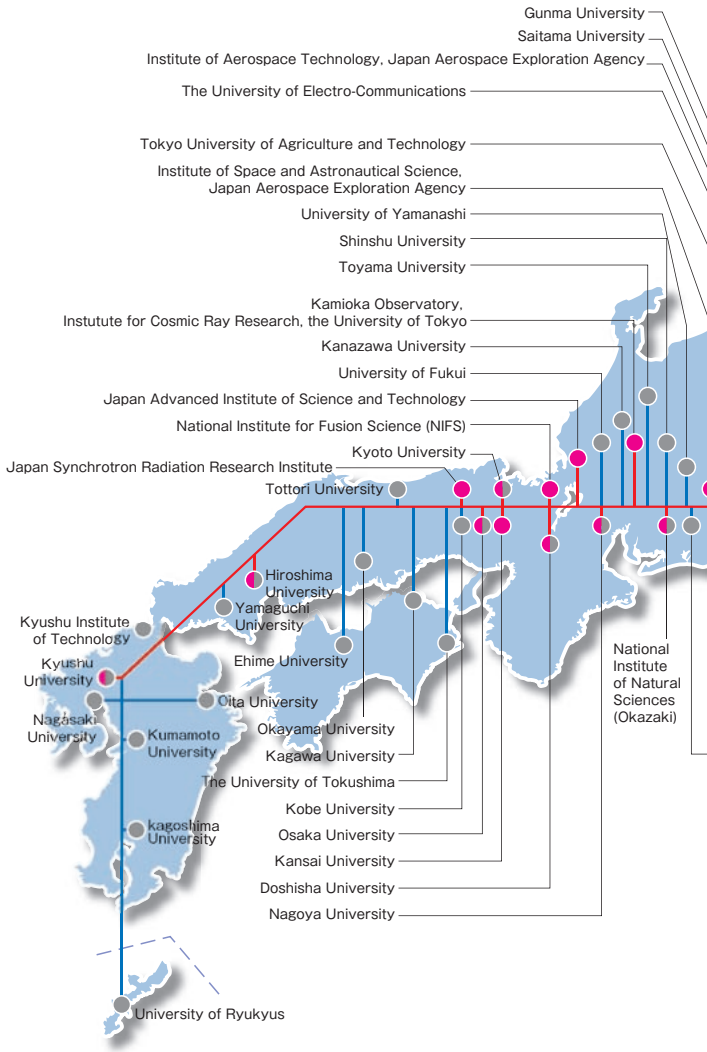
*1 Abilene is a testbed network operated by the next-generation Internet development project "Internet2" and involves more than 190 participating universities and research institutes across the US.
*2 GÉANT is a pan-European research network formed by the EC as a policy initiative, and covers more than 3,000 participating research and educational organizations in more than 30 countries.
*3 The TEIN2 Project is a scientific network project that links Europe with the Asia-Pacific region. It is operated by DANTE, a European non-profit organization.

Super SINET nodes

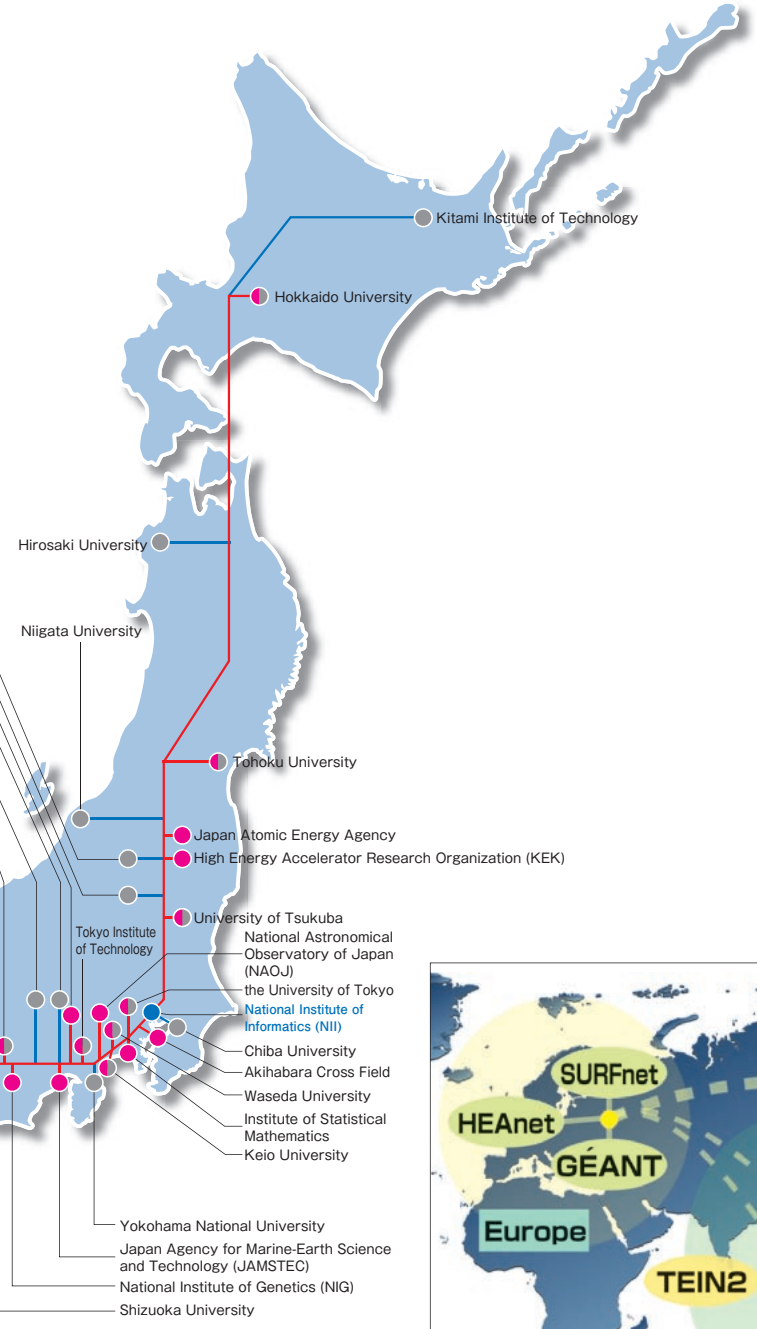
- Hokkaido University
- Tohoku University
- Institute for Materials Research, Tohoku University
- Institute of Fluid Science, Tohoku University
- University of Tsukuba
- High Energy Accelerator Research Organization (KEK)
- Japan Atomic Energy Agency
- University of Tokyo
- Institute for Solid State Physics, University of Tokyo
- Institute of Medical Science, University of Tokyo
- Tokyo Institute of Technology
- Institute of Statistical Mathematics
- National Astronomical Observatory of Japan (NAOJ)
- Waseda University
- Keio University
- Akihabara Cross Field
- Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency
- Institute of Aerospace Technology, Japan Aerospace Exploration Agency
- Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
- Japan Advanced Institute of Science and Technology
- National Institute of Genetics (NIG)
- National Institute for Fusion Science (NIFS)
- Kamioka Observatory, Instutute for Cosmic Ray Research, the University of Tokyo
- National Institute of Natural Sciences (Okazaki)
- Nagoya University
- Kyoto University
- Institute for Chemical Research, Kyoto University
- Doshisha University
- Osaka University
- Kansai University
- Japan Synchrotron Radiation Research Institute
- Hiroshima University
- Kyushu University
- National Institute of Informatics (NII)
- NII Chiba annex

Line speed (FY2006)

- Super SINET (10 Gbps)
  International lines
  (12.4 Gbps for the U.S. / 622 Mbps for Hong Kong / 622 Mbps for Singapore)
- SINET (1 Gbps)
- National Institute of Informatics
- Super SINET node organizations
- SINET node organizations
- Super SINET and SINET node organizations



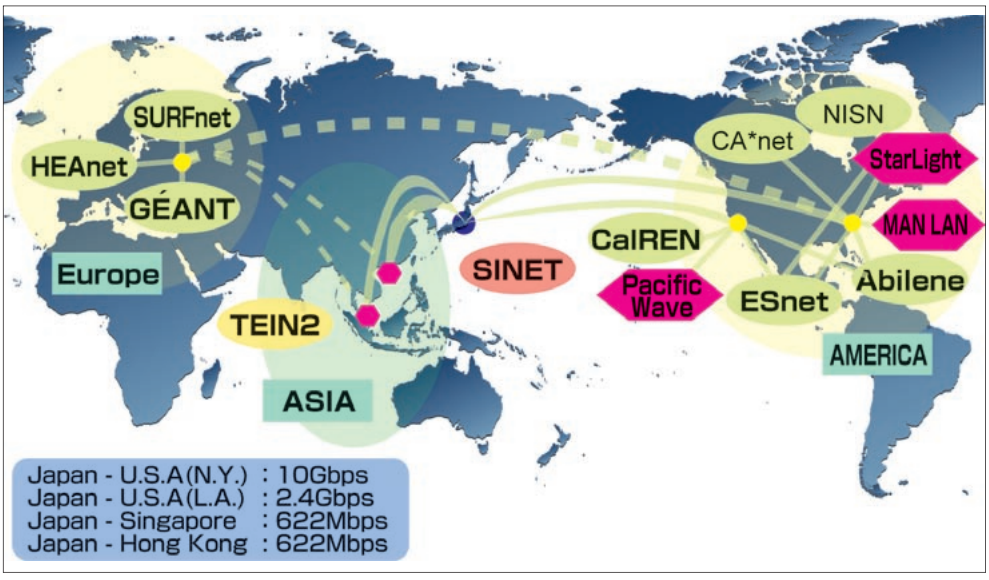
connecting universities and research institutions throughout Japan via nationwide nodes (connection formation among universities, research institutions, and similar entities.
to facilitate the international dissemination of research information and to promote collaboration In January 2006, Asian lines of SINET (Hong Kong and Singapore) were opened to users in coopera-mote the distribution of scientific research and information with the rest of Asia.
formation Network (SINET3) that will serve as the core of the Cyber Science Infrastructure (CSI).



Participating SINET Institutions
(end of March 2006)

National universities	80
Municipal universities	51
Private universities	274
Junior colleges	66
Technical colleges	41
Inter-University Institutes	14
Others	182
Total	708

Contact:
Network Division, Network Planning Section
TEL 03-4212-2255 FAX 03-4212-2270
E-mail : net6@sinet.ad.jp



International network collaboration

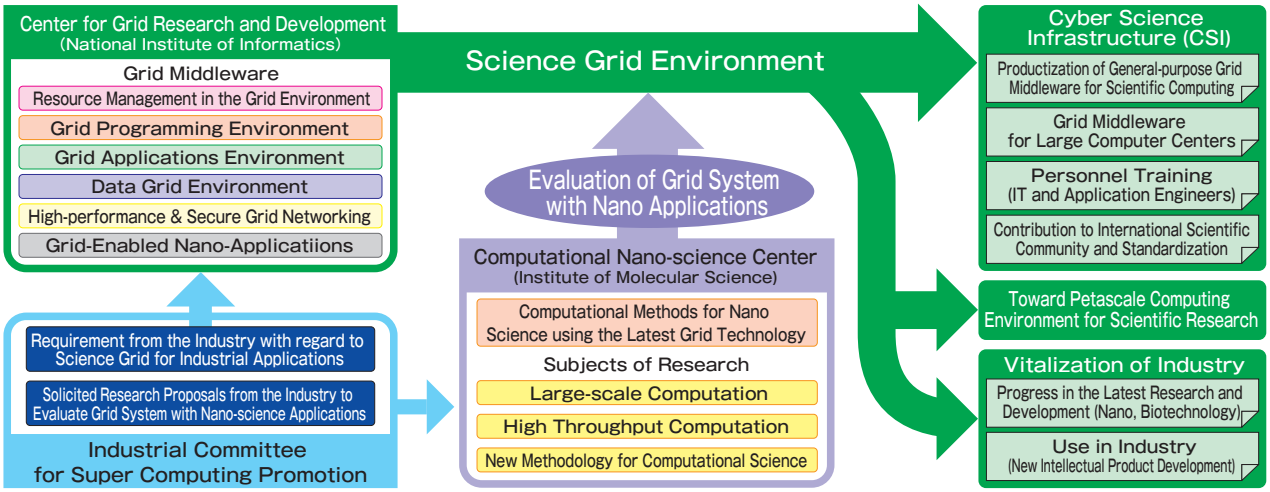
National Research Grid Initiative (NAREGI)

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 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 grid middleware is targeting the nano-field by researching and developing large-scale simulation software.



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 Envi-

ronment). 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

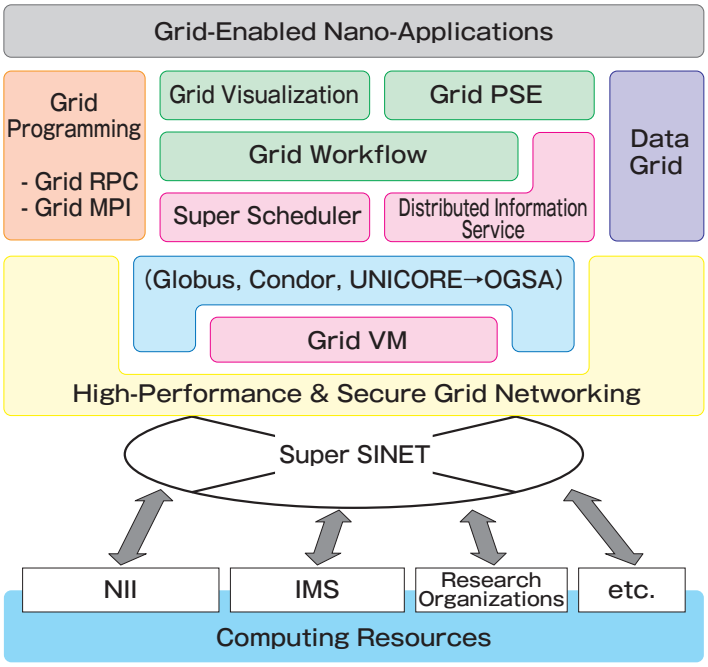
Theme ●Parallelized and decentralized nano-applications for the grid

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

Contact: Center for Grid Research and Development (Collaborative Center for Research Grid)
TEL: 03-4212-2857 FAX: 03-4212-2803 URL: http://www.naregi.org/

Establishment of the University Public Key Infrastructure (UPKI)

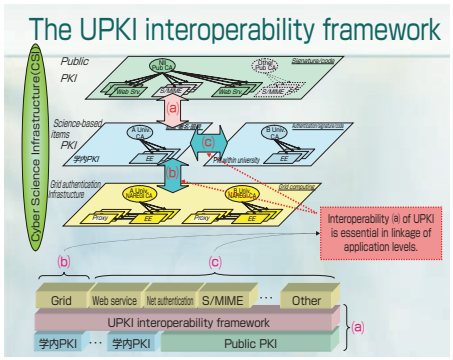
Plan for establishment of UPKI

The establishment of electronic authentication infrastructure is needed to support the safe and secure construction and use of the Cyber Science Infrastructure (CSI).

The University Public Key Infrastructure (UPKI) project is promoting safe and secure collaboration among universities by linking authentication infrastructure set up by participating universities and making mutual authentication possible. At the same time, the UPKI project is moving forward with formulation and disclosure of scheme policy toward linkage as well as development of the application technologies that will be needed for inter-university linkage. The project is proceeding based on opinions and requests received from each university, particularly Hokkaido University, Tohoku University, University of Tokyo, Nagoya University, Kyoto University, Osaka University, Kyushu University, Tokyo Institute of Technology, and High Energy Accelerator Research Organization.

PKI infrastructure established within universities that has not received WTCA (Web Trust for CA) certification may be used for local authentication; however, such infrastructure does not represent a public certification authority and thus cannot be used for external authentication. Consequently, the UPKI project is promoting linkage of PKI among universities together with use of public PKI that can be utilized outside universities.

For public PKI, studies are underway toward the implementation of digital signatures and codification of E-mail using web servers operated by each university as well as S/MIME.



Comparative study of UPKI authentication methods

A number of methods can be used for linkage of certification authorities, including bridge authentication and root authentication.

Because whether or not linkage of certification authorities established by universities can be accomplished smoothly and easily impacts on UPKI, a fact-finding survey of overseas cases will be implemented and studied.

For FY2006, an interoperation framework for UPKI will be formulated. Information on case examples, specifications, and know-how that will serve as references when universities introduce authentication systems will be shared and disclosed.

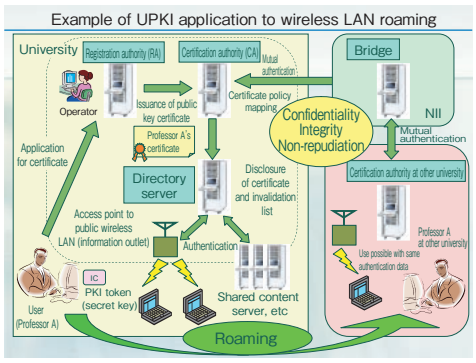
Comparison of the bridge authentication and root (hierarchal) authentication methods

	Bridge authentication method	Root (hierarchal) authentication methods
Conceptual image	Bridge certification authority; Certification authority; Certification authority; User; User	Root certification authority; Sub-certification authority; Sub-certification authority; User; User
Representative examples	F-PKI (US)/GPKI, JPKI, etc.	Certification authorities within companies/ companies that offer certificate issuance services, etc.
Merits	■Simple expansion of trust domain ■High independence of each domain ■Formulation of CP/CPS for each agency possible	■Making certification authority the trust point facilitates ease and understanding ■Simple certificate validation
Demerits	■Difficult to implement because specialized knowledge of policy mapping, etc., in construction of trust domain is required ■A function for establishment of certificate passes that uses the bridge certification authority is required, which leads to complications	■Root CA certification policy and certificate policy must be followed unconditionally ■Certificate policy to override root CA certificate policy cannot be defined ■Certificates equal or below root CA become invalid if the route signature key is corrupted, which makes re-issuance necessary

Examples of UPKI application

Wireless LAN roaming between universities, SSO (single sign-on) to web services provided by universities, linkage of academic systems for credit transfers and other services, and ubiquitous VoIP are among items being studied as applications for inter-university linkage.

The chart at right depicts UPKI application in wireless LAN roaming. It shows Professor A, who has been dispatched to another university, securely using his own university's LAN via wireless LAN roaming by utilizing UPKI authentication he has received from the university that received him.



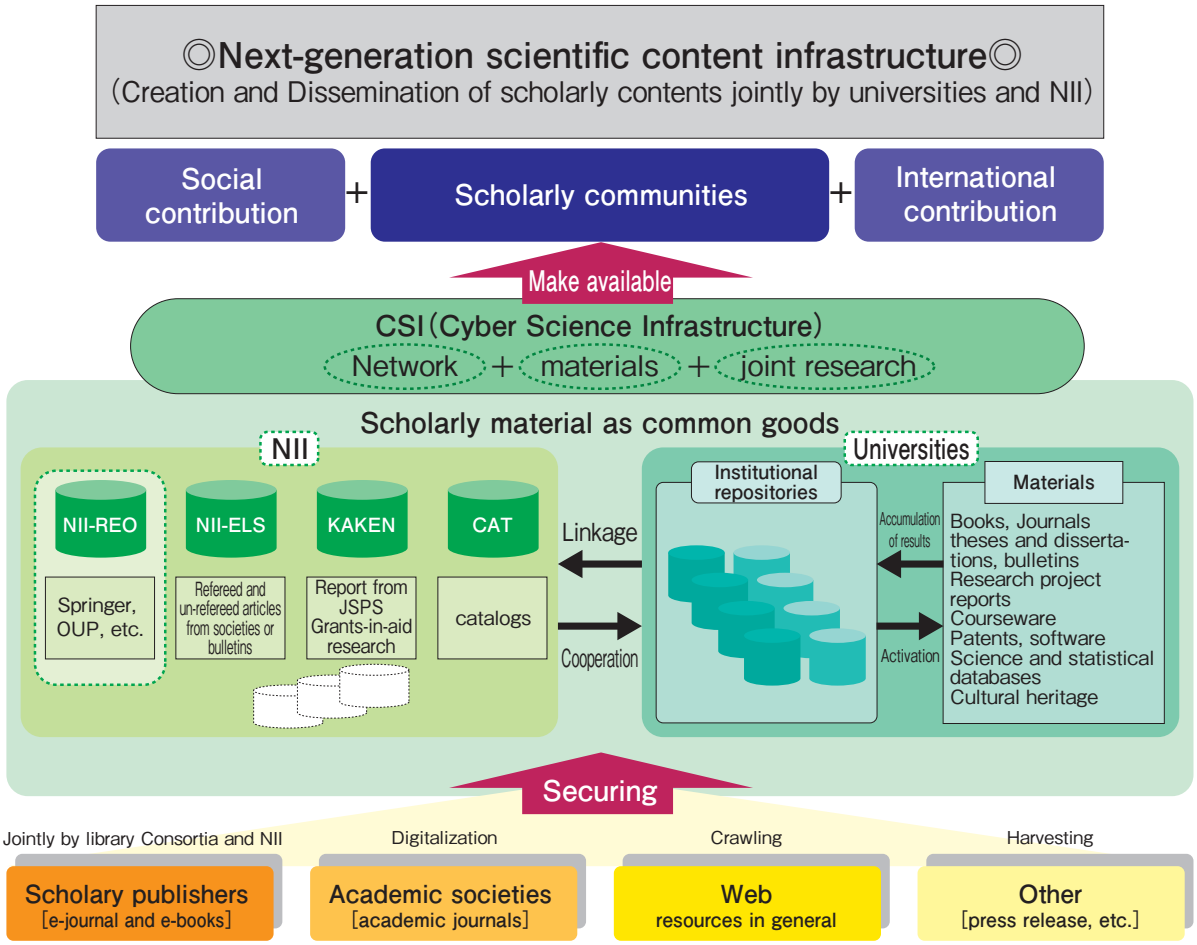
Contact: Planning Coordination Division, Inter-Universities System Office
TEL 03-4212-2213 FAX 03-4212-2230 E-Mail:upki@nii.ac.jp

Establishment of Next-Generation Scientific Content Infrastructure

Establishment of Next-Generation Scientific Content Infrastructure

The National Institute of Informatics is moving forward with establishment of a form of advanced science information infrastructure called Cyber Science Infrastructure (CSI). CSI serves as a foundation upon which computers and other facilities; fundamental software, content, and databases; human resources; and research groups can be shared on an ultra-high-speed network. In order to promote Japan's scientific research and education activities and to maintain the international competitiveness of research and activities, such advanced infrastructure for science information must be realized at an early stage.

Next-generation scientific content infrastructure is an important element of CSI. It serves as an information platform that will secure scientific content that is essential to the academic 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.



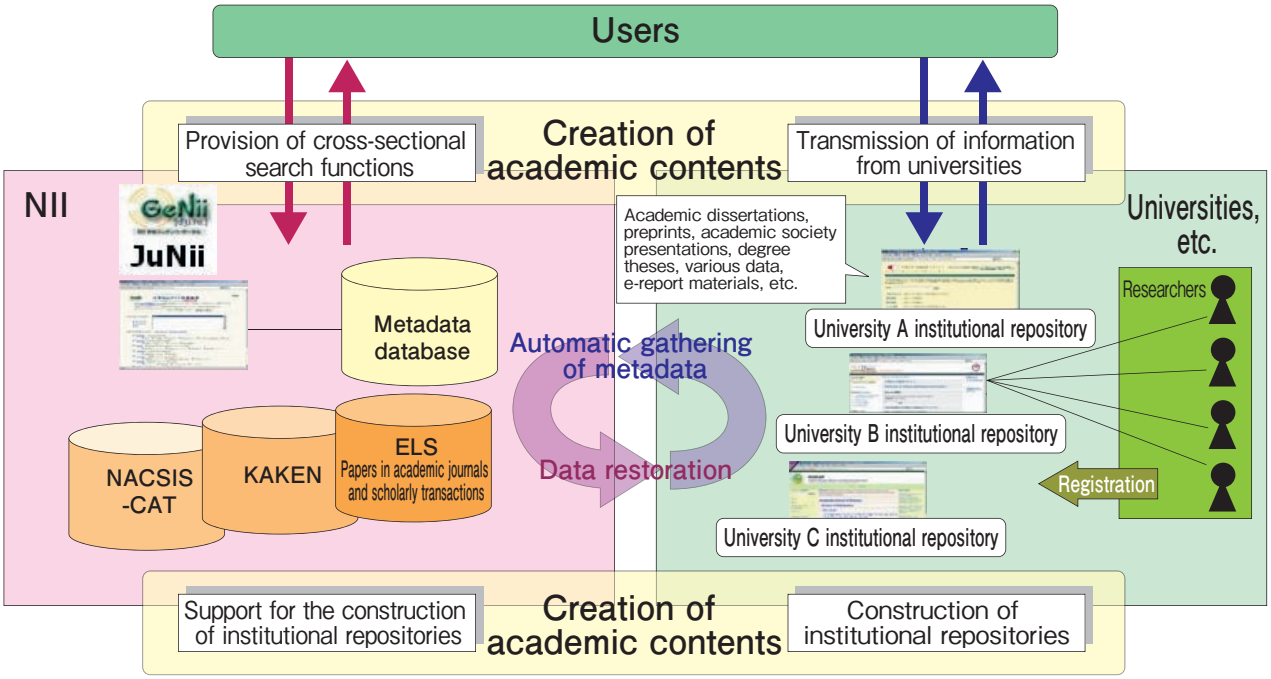
The National Institute of Informatics has contributed to the formation of various forms of scientific content in cooperation with universities and academic societies. Examples of such content include catalog information of books and journals, reports on JSPS grant-in-aid for scientic research, the full 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 scientific content infrastructure, the National Institute of Informatics established the Organization for Scientific Resources Operations and Coordination in collaboration with university research institutes. With this organization playing the central role, the NII will secure various forms of content needed by the academic community while also working toward reinforced dissemination of the valuable scientific information that is produced by universities and others.

Support for Linkage between Institutional Repositories

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

The National Institute of Informatics is collaborating with universities to secure various academic contents with the aim of creating next-generation academic contents infrastructure. Of these contents, "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 supports the creation of institutional repositories in universities as well as linkage between them, with a view to continuing and amplifying the results of previous contents-related projects, as well as contributing to the development of next-generation academic contents infrastructure.



Contact: Content Division, Academic Information Management Section II
TEL 03-4212-2350 FAX 03-4212-2370 E-mail:iradm@nii.ac.jp

JuNii (university information metadata portal)

http://ju.nii.ac.jp/

■Gathers and issues education and research results published on the Internet by Japanese universities, research institutes, etc., and other contents information transmitted by universities.

■**Stored databases** (as of March 2006) 80,000 documents

Contact: Content Division, JuNii Desk
TEL 03-4212-2300 FAX 03-4212-2375 E-mail: metadb@nii.ac.jp

International Scholarly Communication Initiative (SPARC/JAPAN)

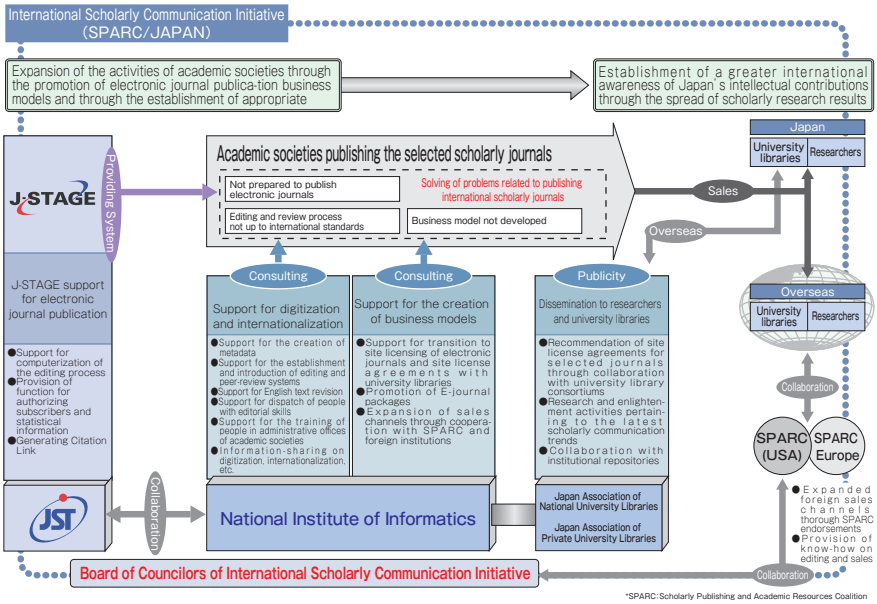
http://www.nii.ac.jp/sparc/

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 of 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 (USA).



Contact: Content Division, SPARC JAPAN Office
TEL: 03-4212-2360 FAX: 03-4212-2375 E-mail: sparc@nii.ac.jp

Catalog Information Service

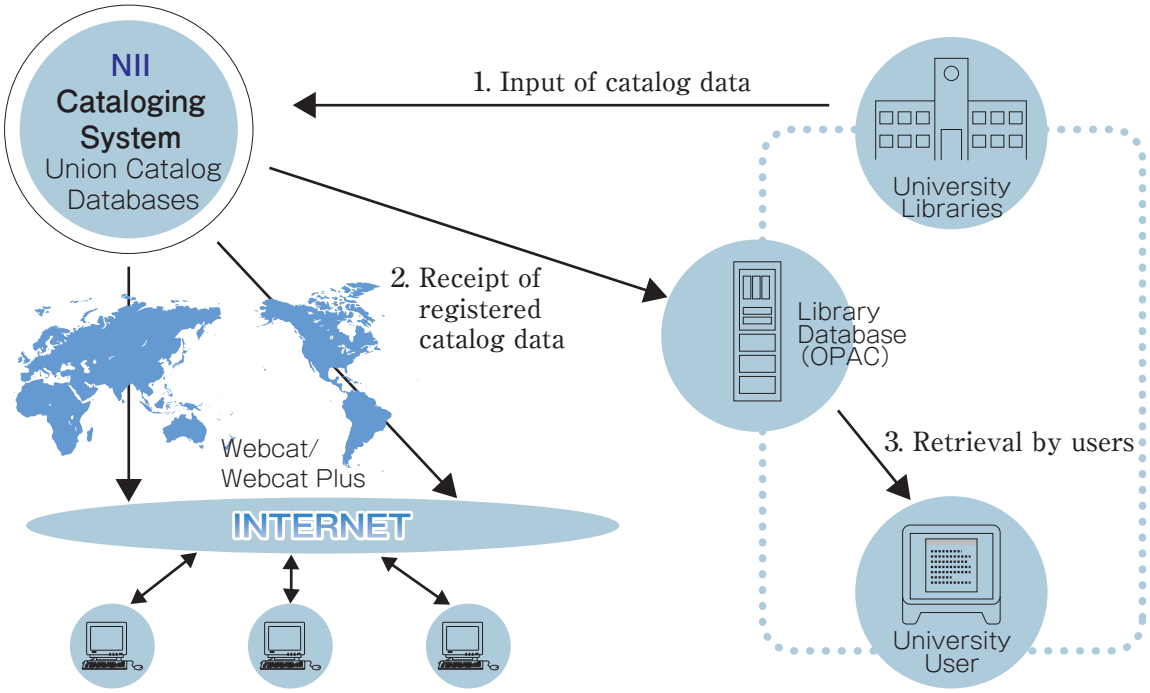
http://www.nii.ac.jp/CAT-ILL/

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

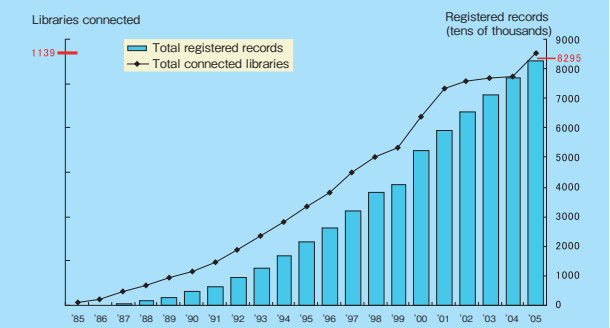
Cataloging System (NACSIS-CAT)

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 (RLG and 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 (end of March 2006)



Number of participating insitutions (as of March 2006)

Number of participating institutions	1,146
Domesitic	1,073
(Universities:48, Junior College:141, Technical college:59, Inter-University Research Institute Corporation:15, Other:183)	
Overseas	73
(Asia:48, Europe:23, North Amarica:2)	

Frequency of Webcat searches (April 2005 – March 2006)

17,644,000

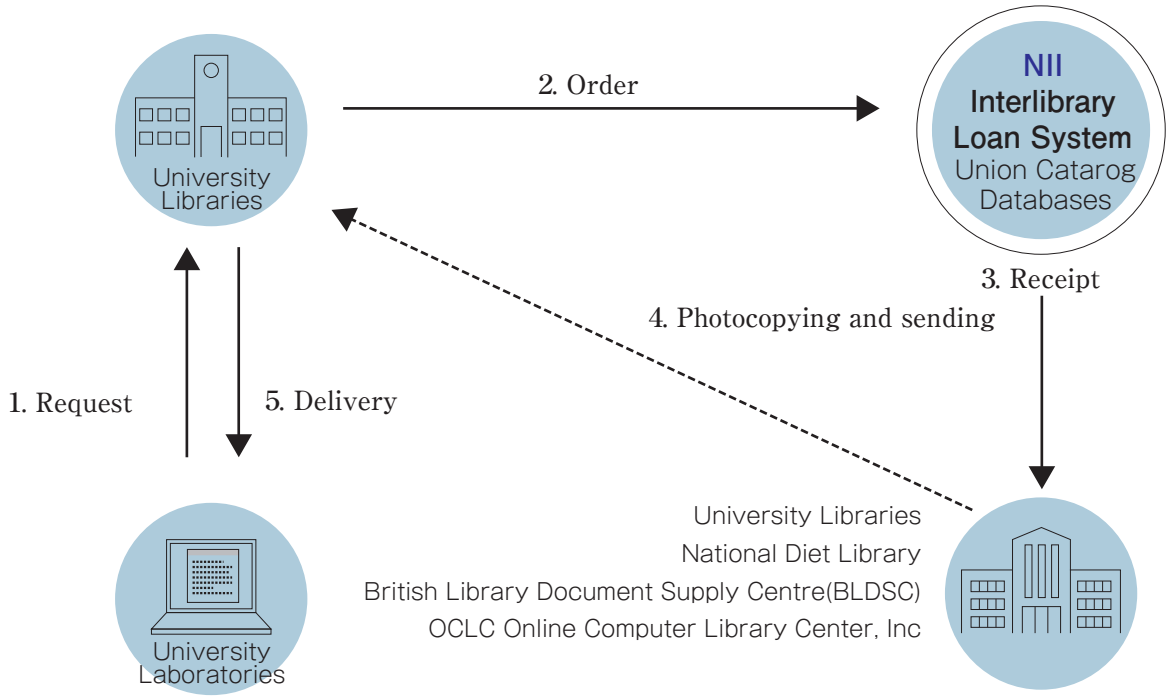
http://webcat.nii.ac.jp/

Contact: Content Division, Cataloging Information Management Section
TEL 03-4212-2310 FAX 03-4212-2375 E-mail:catadm@nii.ac.jp

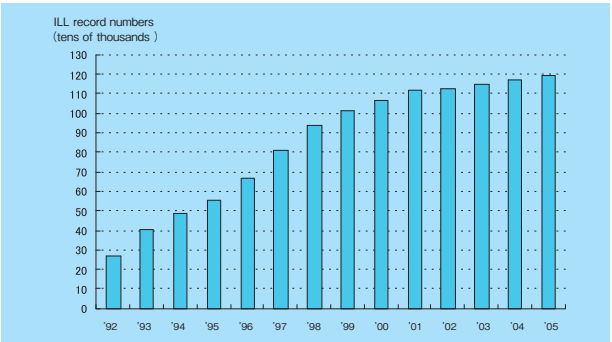
The National Center for Science Information Systems (NACSIS) was the forerunner of the National Institute of Informatics (NII). The acronym NACSIS is still used in the names of some NII services.

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 National Diet Library and 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 the introduction of an offsetting service for ILL document copying and other charges in FY2004.



State of use of the ILL system (end of March 2006)



User institutions (at end of March 2006)

User institutions	825
Institutions participating in ILL charge offsetting service	640

Global ILL (international ILL/DD) participating institutions

Japan-US ILL/DD:Japan 126	US 50
Japan-ROK ILL/DD:Japan 89	ROK 226

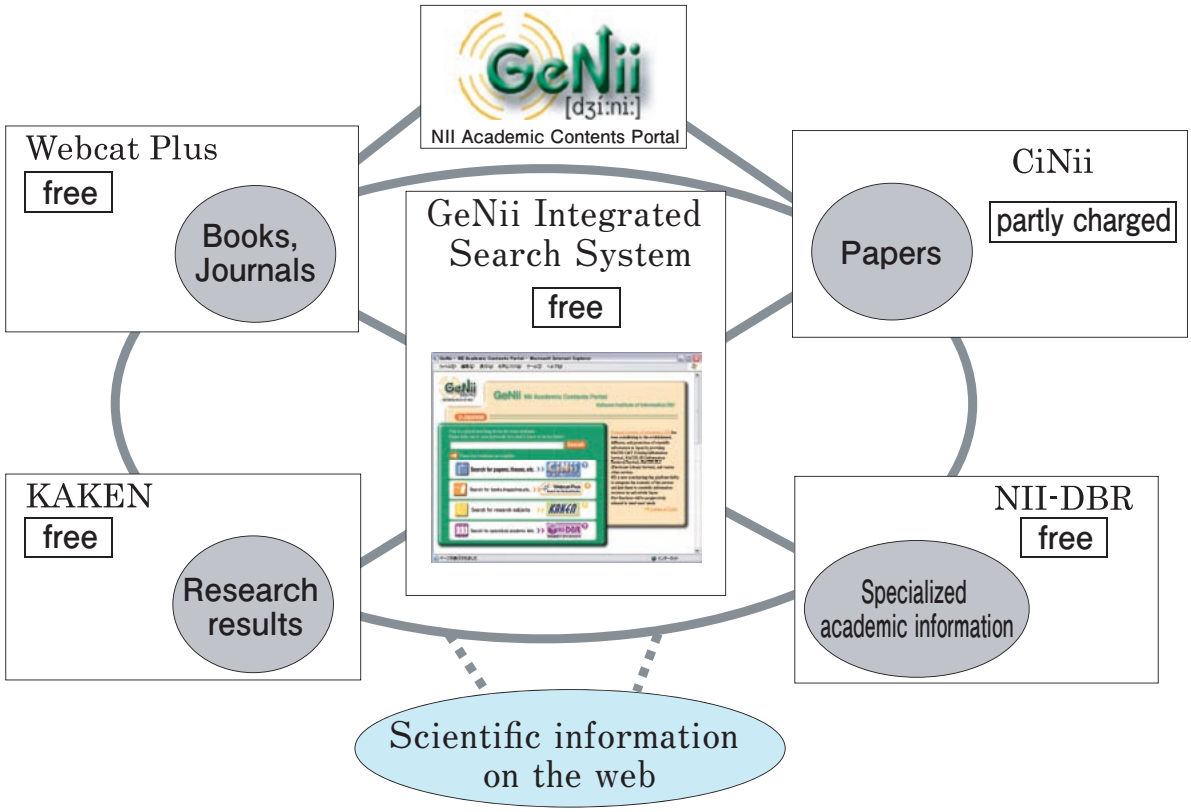
Contact: Content Division, Academic Information Service Section
TEL 03-4212-2320 FAX 03-4212-2375 E-mail:illadm@nii.ac.jp

GeNii (NII Academic Contents Portal)

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

GeNii is a web-based service offering comprehensive academic content created by the National Institute of Informatics in collaboration with university libraries, academic societies, and researchers.

Currently GeNii presents information in four major areas: (1) research 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: Content Division, GeNii Desk
TEL 03-4212-2300 FAX 03-4212-2375 E-mail:geniiadm@nii.ac.jp

CiNii (Citation Information by National Institute of Informatics)

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 bibliographic data (including 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 Japan Medical Abstracts Society Web, while expanding its own range of resources, including papers stored in the NII Electronic Journal Repository.
- CiNii is continually looking to enhance the citation navigation experience through the introduction of additional tools such as link resolvers and CrossRef.

Database volume by content type (as of March 2006)

Content		Items	Links to full text
NII citation index database (CJP)		Bibliographies = 1.1 million Cited papers = 11.4 million	
NII electronic library service (NII-ELS)	Academic journals	Bibliographies, abstracts and papers = 2.4 million	All
	University research bulletins	Bibliographies, abstracts and papers = 650,000 (with full text=200,000)	Some
Japanese Periodical Index		Bibliographies = 6.8 million	

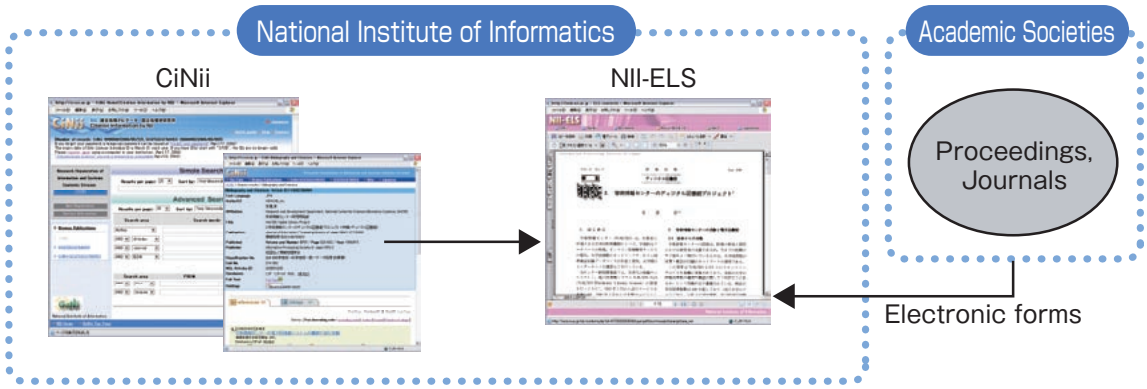
NII Electronic Library Service (NII-ELS)

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 2006)

Participating organizations	Journals (with full text of articles)	Research papers
1,200 (academic societies 270)	2,200	2.6 million

Contact: Content Division, Academic Information Management Section I
TEL 03-4212-2340 FAX 03-4212-2370 E-mail:els@nii.ac.jp



Contact: Content Division, CiNii Desk
TEL 03-4212-2300 FAX 03-4212-2375 E-mail:ciniiadm@nii.ac.jp

GeNii (NII Academic Contents 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 2006)

Books	Journals
12 million	290,000

Contact: Content Division, Webcat Plus Desk
TEL 03-4212-2300 FAX 03-4212-2375 E-mail:webcatplus@nii.ac.jp

KAKEN (Grant-in-Aid 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 grant-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 2006) 520,000 items

Contact: Content Division, KAKEN Desk
TEL 03-4212-2300 FAX 03-4212-2375 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 sociaties 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 20006) 1.5 million documents from 27 databases

Contact: Content Division, NII-DBR Desk
TEL 03-4212-2300 FAX 03-4212-2375 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 a consortium 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 2006)

Publishers	Titles	Research papers	Year of registration
IEEE Computer Society	25	130,000	2004−
Oxford University Press	150	130,000	1998−2003
Kluwer Academic Publisher	500	350,000	1997−2005
Springer Science+Business Media	800	1,600,000	(1850)−1996

Contact: Content Division, NII-REO-Desk
TEL 03-4212-2340 FAX 03-4212-2370 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 2006)

Number of registered Series	Number of registered scientific terms
22	128,000

Contact: Content Division, Academic Portal Section
TEL 03-4212-2330
FAX 03-4212-2375
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 2006)

Participating societies
956

Contact: Content Division, Academic Information Management Section I
TEL 03-4212-2340
FAX 03-4212-2370
E-mail:wwwsoc@nii.ac.jp

Education and Training Program

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 in order to expand opportunities of training.

■**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 the academic research support staff at universities and research institutes to learn the latest in specialized and advanced technologies.

■**NACSIS-CAT Advanced Training Course**
This course provides training for core staff members with responsibility for databases in NACSIS-CAT member libraries, as well as teacher training for NACSIS-CAT/ILL system course instructors.

■**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 training for core personnel in academic information literacy education

■**Seminar for University Librarians**
This course equips senior 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.

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

Academic Information Literacy Instructors Training Course
(Osaka University Hall)

■**Network Security Training Course**
This course provides training in practical security techniques to equip network security managers with the ability 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

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 text 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 activity support staff.

Contact: Planning and Coordination Division, Training Section
TEL 03-4212-2177 FAX 03-4212-2230 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.

Research Cooperation

Grants-in-aid for Scientific Research (as of March 2006)

Research Categories	Number	Awarded Amount (thousands of yen)
Scientific Research(A)	5	64,480
Scientific Research(B)	11	46,900
Scientific Research(C)	6	6,600
Exploratory Research	4	8,500
Encouragement of Young Scientists(A)	5	33,540
Encouragement of Young Scientists(B)	13	19,900
Scientific Research in Priority Areas	14	292,760
JSPS Fellows	4	3,700
Publication of Scientific Research Results	4	60,000
Total	66	536,380

Adjustment cost for the promotion of science and technology	3	230,233

University-Industry Cooperation and Collaboration (as of March 2006)

Research Categories	Number	Amount Received (Thousands of yen)
Joint Research with the Private Sector, etc.	5	37,095
Commissioned Research	20	174,027
Endowments	16	24,512

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 2006, 136 such projects were carried out.

NII Visiting Researchers (as of March 2006)

Visiting Researchers	(Foreign Research Scholars)	7
	(JSPS Postdoctoral Fellowship for Foreign Researchers)	5
	(Others)	3
Cooperative Scholars		3
Requested Researchers		1
Technical Assistants	(Research Support and Promotion Staff)	5
Project Researchers	(Part-time Researchers)	6
	(Scientific Research Support Staff)	6
	(Researchers Promoting Science and Technology)	26
	(Researchers for University-Industry Collaboration)	27
Research Assistants		45
Special Joint Researchers		17
Total		151

Contact: Research Cooperation Division, Research Cooperation Section
TEL 03-4212-2105 FAX 03-4212-2120 E-mail:kenkyou@nii.ac.jp

Intellectual Property

Total Number of Inventions and Applications for Patents (as of March 2006)

Total	Attribution		Patent Applications
	Organization Attribution	Individual Attribution	
20	20	0	15

Inter-University Research Institute Corporation/Intellectual Property Office

The Ministry of Education, Culture, Sports, Science and Technology accepted the application and subsequently approved the so-called "University Intellectual Property Organization Project," an initiative designed to help organize a system for the strategic creation, acquisition, and utilization of intellectual property in universities. Thirteen inter-university research institutes have combined forces in this endeavor, with the NII as the collective representative. This project consists of a five-year plan under which an intellectual property office is established within each Inter-University Research Institute Corporation to promote the distinctive intellectual property of each such institute and to develop positive applications for the use thereof.

Participating institutes in Inter-University Research Institute / Intellectual Property Office Organization Project

National Institutes for the Humanities:
National Museum of Japanese History, National Institute of Japanese Literature, International Research Center for Japanese Studies, Research Institute for Humanity and Nature, National Museum of Ethnology
National Institute of Natural Sciences:
National Astronomical Observatory of Japan, National Institute for Fusion Science, National Institute for Basic Biology, National Institute for Physiological Sciences, Institute for Molecular Science
High Energy Accelerator Research Organization:
Institute of Particle and Nuclear Studies, Institute of Materials Structure Science
Research Organization of Information and Systems:
National Institute of Polar Research, National Institute of Informatics, The Institute of Statistical Mathematics, National Institute of Genetics

Contact: Intellectual Property Office
TEL 03-4212-2125 FAX 03-4212-2187 E-mail:chizai-staff@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 2006, MOU institutes/universities are over 36 in 12 countries in Asia, North America, and Europe.

MOUs on cooperative research:	
People's Republic of China	Tsinghua University
	Institute of Computational Mathmatics and Scientific/Engineering and System, Sciences, Chinese Academy of Sciences
Thailand	Chulalongkorn University
	Asian Institute of Technology
	Kasetsart University
	NECTEC
Vietnam	International Research Centre Multimedia Information, Communication and Applications (MICA), Hanoi University of Technology
	Hanoi University of Technology
	Vietnam National University (Ho Chi Minh City)
Bangladesh	University of Dhaka
United States	School of Engineering and Computer Science, University of Michigan, Dearborn
	College of Engineering, University of Washington, Seattle
	TransPAC2 Project and Indiana University
	College of Information Technology, University of North Carolina at Charlotte
	Computer Science Department, University of Maryland
	New Jersey Institute of Technology
Canada	Faculty of Mathematics, University of Waterloo
France	Nantes Laboratory for Computer Science (LINA), University of Nantes
	French National Institute for Research in Computer Science and Control (INRIA)
	Grenoble Institute of Technology (INPG)
	University of Grenoble 1 (Joseph Fourier)
	Laboratoire d'informatique de Paris 6 (LIP6)
	Institut de Recherche en Informatique de Toulouse
	Université Paul-Sabatier, Toulouse III
United Kingdom	Department of Computer Science, Faculty of Engineering Science, University College London
	Faculty of Mathematics and Computing, Open University
Germany	Faculty of Applied Informatics, University of Augsburg
	German Research Center for Artificial Intelligence (DFKI)
Italy	Department of informatics, University of Torino
Czech Republic	Czech Technical University
MOUs on cooperative projects:	
United States	North American Coordinating Council on Japanese Library Resources
	Thomson ISI
	ARL (Association of Research Libraries)
Germany	Hochschulbibliothekszentrum des Landes Nordrhein-Westfalen (HBZ)
South Korea	Korea Education & Research Information Service (KERIS)
Europe	DANTE (Delivery 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 2005 fiscal year, the NII accepted a total of 17 interns from institutions with which it had concluded MOUs in six countries: China, Thailand, Vietnam, France, Germany, and the Czech Republic.

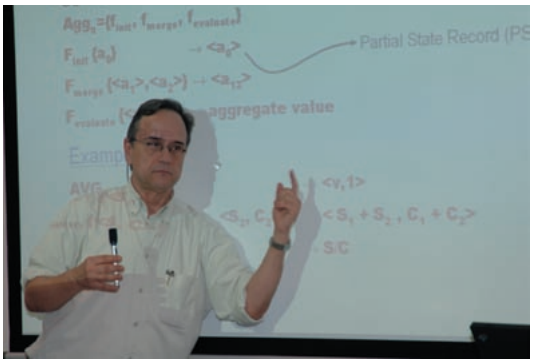
■Names of universities and other institutions sending interns during the 2005 fiscal year and their countries:

Name of university / institution	Country
Chinese Academy of Sciences (two interns)	China
Chulalongkorn University	Thailand
Kasetsart University (two interns)	Thailand
Asian Institute of Technology (three interns)	Thailand
Hanoi University of Technology	Vietnam
University of Augsburg (two interns)	Germany
University of Nantes	France
University of Paris 6 (two interns)	France
Grenoble Institute of Technology	France
University of Grenoble 1 (Joseph Fourier)	France
Czech Technical University	Czech Republic
Total: 17 interns	

Acceptance of researchers from abroad (2005 fiscal year)

Program		Number of researchers
Japan Society for the Promotion of Science	Postdoctoral Fellowships for Foreign Researchers	6
	Postdoctoral Fellowships for Foreign Researchers (Short-term; for researchers from Western countries)	1
	Invitation Fellowship Program for Research in Japan	1
Other researchers accepted (visiting researchers, visiting professor [International Affairs Division])		14

■NII researchers and other personnel on assignment overseas (2005 fiscal year)	2
■Guests accepted from abroad (2005 fiscal year)	105



Public lecture by researchers (visiting professors) invited from abroad (2005 fiscal year)

International symposia organized by the NII

The NII has hosted international symposia on a regular basis from the 2002 fiscal year.
On March 27, 2006 – during the 2005 fiscal year – the NII hosted a symposium entitled Intelligent Information Distribution for Promoting Science and Culture at the National Center of Sciences, Hitotsubashi Memorial Hall.

The 5th International Sympoium "Intelligent Information Science and Culture" Distribution for Promoting at the National Center of Science, Hitotsubashi Memorial Hall on March 27, 2006

Contact: International Affairs Division
TEL +81-3-4212-2165 FAX +81-3-4212-2180 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 Houses" to present its activities and research results to the public as well as to researchers and Ph.D. candidates.

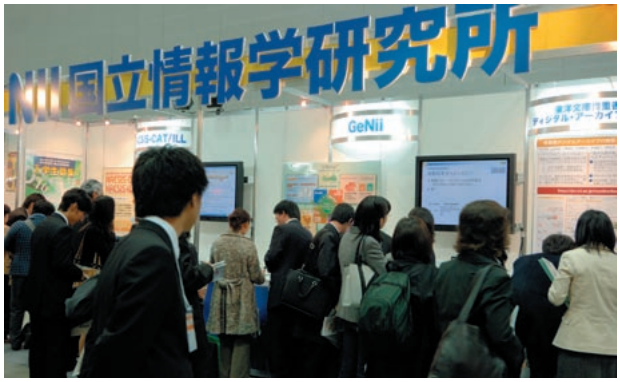
NII Open House (June, 2005)

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, 2005)

Contact: Publicity and Dissemination Division, Dissemination Section
TEL 03-4212-2145 FAX 03-4212-2150
E-mail:seika@nii.ac.jp

Open Lectures and Seminars

The NII also holds open lectures and seminars.
"The Karuizawa Saturday Salon", which is held at the International Seminar House for Advanced Studies with lecturers who are researchers and experts from various fields, is a community-based event.
Lecture records are actively published through a publication of lecture collections and video streaming.
Additionally, the NII regularly holds its "NII Public Lectures" on various informatics related themes.
Also, "NII Public Lectures with 8 words" is an open lecture on Informatics by reseachers of NII, which is held in the evening at National Center of Sciences.

Karuizawa Saturday Salon (July, 2005)

NII Public Lecture (September, 2005)

Publications

The NII publishes books and periodicals detailing its research findings.

Progress in Informatics (No.2)

Progress in Informatics

"Progress in Informatics" is published as an international peer-reviewed journal, aiming at the promotion of research and development in the broad area of informatics. (The first issue: March, 2005) 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. "Progress in Informatics" attempts to promote the exposure internationally, encouraging the electronic journal and participating in CrossRef.

NII Technical Report

The "NII Technical Report" provides the Institute's most recent research results, including research papers, presentation papers, and reference manuals. The report is also available through the NII website.

NII Series (Maruzen Library)

"NII Series" is published as a paperback edition with broad themes. The themes are set on the basis of the research results, accomplishments of development/projects at the NII, considering social request. This series targets general working people and college/high school students.

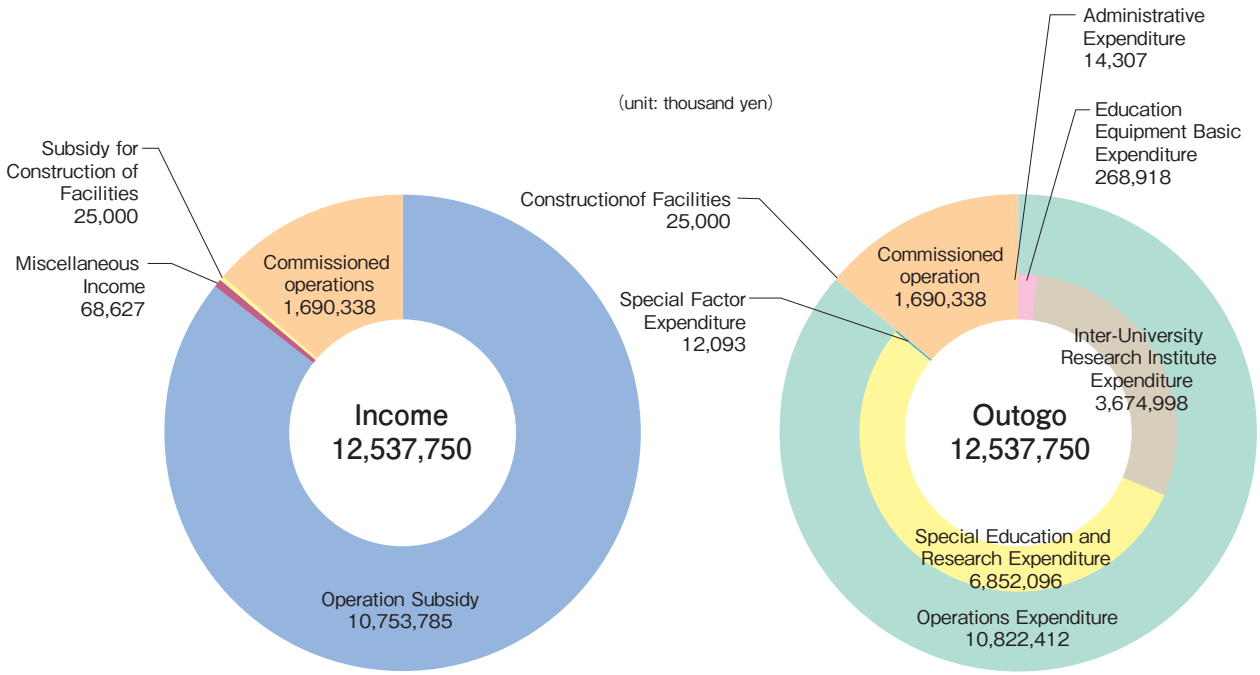
Staff / Budget

Staff (as of April 1, 2006)

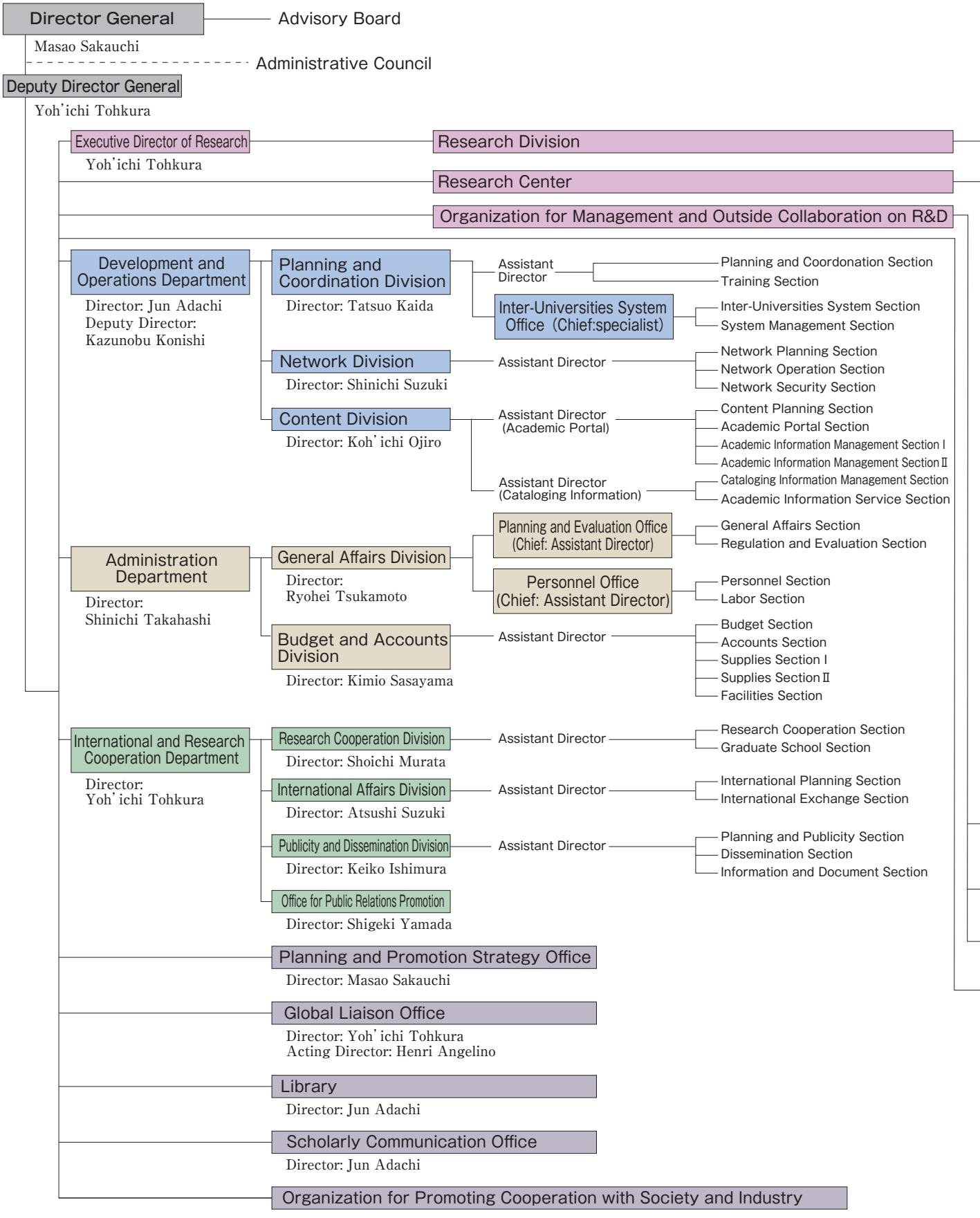
	Director General	Deputy Director General	Professor	Associate Professor	Assistant Professor	Subtotal	Other Employees	Total
Full-time Employees	1	1	33	27	15	77	65	142
Non-Japanese Visiting Professor			2			2		2
Visiting Professors etc.			15	16		31		31
Coordinate Professors etc.			2	2		4		4
Specially Appointed Professors etc.			7	7	1	15		15
Other Outside Researchers								93
Support Staff								44
Graduate Students								119

Budget (F.Y. 2006)

(unit: thousand yen)



Organization



Principles of Informatics Research Division

Director: Asao Fujiyama

Professor	INOUE, Katsumi	UENO, Haruki	SATOH, Ken	TATSUTA, Makoto	HAYAMI, Ken
	FUJIYAMA, Asao	YAMAMOTO, Yoshihisa	TAKEDA, Hideaki		
Associate Professor	INAMURA, Tetsunari	UNO, Takeaki	KANAZAWA, Makoto	KAWARABAYASHI, Kenichi	COLLIER, Nigel
	SATOH, Hiroko	TERUI, Kazushige	NEMOTO, Kae	MATSUMOTO, Keiji	
Assistant Professor	ICHISE, Ryutaro	WATANABE, Yodai			

Information Systems Architecture Science Research Division

Director: Shinichi Honiden

Professor	ASANO, Shoichiro	URUSHIDANI, Shigeo	SATOH, Ichiro	NAKAJIMA, Shin	HASHIZUME, Hiromichi
	HONIDEN, Shinichi	MARUYAMA, Katsumi	MIURA, Kenichi	YAMADA, Shigeki	YONEDA, Tomohiro
Associate Professor	ABE, Shunji	JI, Yusheng	FUKUDA, Kensuke	HOSOBE, Hiroshi	MATSUKATA, Jun
	MATSUMOTO, Takashi				
Assistant Professor	KAMIOKA, Eiji	KOIBUCHI, Michihiro	HIDAKA, Soichiro	WASHIZAKI, Hironori	

Digital Content and Media Sciences Research Division

Director: Keizo Oyama

Professor	AIZAWA, Akiko	ADACHI, Jun	OYAMA, Keizo	SATOH, Shin'ichi	SUGIMOTO, Akihiro
	TAKASU, Atsuhiro	TAKANO, Akihiko	YAMADA, Seiji		
Associate Professor	AIHARA, Kenro	KATAYAMA, Norio	KITAMOTO, Asanobu	KODAMA, Kazuya	FREDERIC, Andres
	PRENDINGER, Helmut				
Assistant Professor	INOUE, Masashi	EGUCHI, Koji	OHMUKAI, Ikki	KATOH, Hiroyuki	SATO, Imari
	MO, Hiroshi				

Information and Society Research Division

Director: Noboru Sonehara

Professor	ARAI, Noriko	KANDO, Noriko	KITAOKA, Hajime	KOYAMA, Teruo	SONEHARA, Noboru
	TOHKURA, Yoh' ichi	NISHIZAWA, Masaki	MIYAZAWA, Akira		
Associate Professor	OKADA, Hitoshi	GOTODA, Hironobu	SHIBAYAMA, Morio	SUN, Yuan	FURUYAMA, Nobuhiro
	NEGISHI, Masamitsu				
Assistant Professor	UEKI, Kouichirou	UEDA, Masashi	KOGA, Takashi		

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	OKAMURA, Hisamichi	KATO, Kazuhiko	KISHIDA, Kazuaki	KISHIMOTO, Mitsuhiro	SHIRAI, Yoshiaki
	SUGAWARA, Hideaki	TAKEICHI, Masato	TANAKA, Yuzuru	TSUCHIYA, Shun	NAKAMURA, Yuichi
	MATSUOKA, Satoshi	YAMANA, Hayato			
Visiting Associate Professor	CHIBA, Shigeru	NAMIKI, Mitaro	FUJIOKA, Atsushi	MATSUI, Tomoko	MURAO, Mio
	YAMAOKA, Katsunori	YONEDA, Susumu			
Coodinate Professor	TOJO, Satoshi	NAKAJIMA, Masayuki			
Coodinate Associate Professor	TAN, Yasuo	MURATA, Tsuyoshi			
Visiting Professor (Cooperation)	IKEUCHI, Katsushi	UEDA, Kazunori	KITSUREGAWA, MASARU	FUKAZAWA, Yoshiaki	
Visiting Associate Professor (Collaborate)	IDE, Ichiro	INOUE, Tomo'o	KAGEURA, Kyo	KANEIWA, Ken	TAKEUCHI, Koichi
	TSUJI, Keita	NARA, Takaaki	NOZUE, Toshihiko	FUJINO, Takayuki	YOSHIOKA, Masaharu
Non-Japanese Visiting Professor	ANGELINO, Henri	HOULE, Michael E.			

List of Graduate Students

Department of Informatics, Graduate University for Advanced Studies

(as of April 2006)

Austermann Anja	Yasushi Shinohara	Satoko Fujisawa
Jiro Araki	Akio Shimada	HUDA MD.NURUL
ALEXANDER IMRE KOVACS	Shunichiro Suenaga	Makoto Funakoshi
Kanokwan Atchariyachanvanich	Takaharu Takeda	PLATON ERIC
KAFLE BED PRASAD	THEPPARIT BANDITWATTANAWONG	Taisuke Horiuchi
Naoyuki Kawasaki	Trabzadeh Masoomeh	Shouichi Matsui
Wei Qi	Chikahito Nakajima	Mannakkara Chammika
Masashi Kiyomi	Takao Nakamura	Hideo Yamanaka
Seiji Koide	Kazuaki Naruse	Ruangchaijatupon Nararat
Hiroshi Sasaki	Kosuke Numa	LE DUY DINH
Masanori Sano	Kumiko Fujisawa	WANG YUXIN

Collaborative Graduate University

(as of April 2006)

Graduate School of Information Science and Technology, The University of Tokyo	Fuyuki Ishikawa	Masaharu Tatsumi
	Vu Quang Minh	Takuo Doi
	Eric Tschetter	Hiroyuki Nakagawa
	Shoko Osanai	Yasutaka Nishimura
	Hisashi Kurasawa	Fumitaka Fujiwara
	NGUYEN VU PHONG	Kazutaka Matsuzaki
	Jiang Shengyu	Fuminori Yamagishi

Commissioned Graduate University (Special Collaboration Research Students)

(as of April 2006)

Scool of Science, The University of Tokyo	Hamaji Shinichiro
Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology	Satoshi Suzuki
	Motohiro Mase
School of Knowledge Science, Japan Advanced Institude of Science and Technology JAIST	Toshiyuki Hirata
Graduate School of Science and Technology, Chiba University	Kosuke Satoh
	Yoshihiko Mochizuki

* Names provided with students' permission only

NII Library

NII Library

The 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 2006)

Document type	Books	Bound journals	Journals(in titles)
Domestic documents	8,819	8,728	211
Foreign documents	7,722	4,185	270
計	15,911	12,913	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.

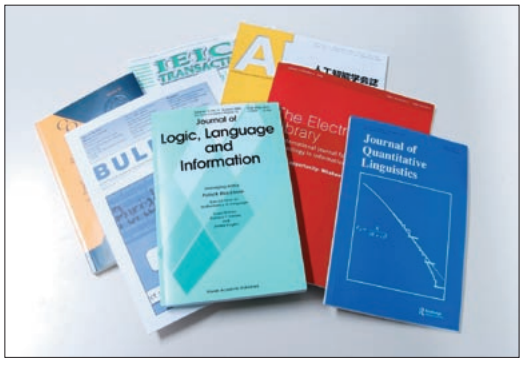
Facility, Equipment

	Reading room	Stack room
Area	180m^2	271m^2
Seats	8	3
PC for search	2	1
Other equipment	Automatic Book Circulation Machine (Sumitomo 3M ABC-III)	Micro reader printer (KonikaminoIta SP7000)
	Copier (FUJI XEROX ApeosPort C5540I)	

Reading room 1

Reading room 2

Stack room



Subscribed journals

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.

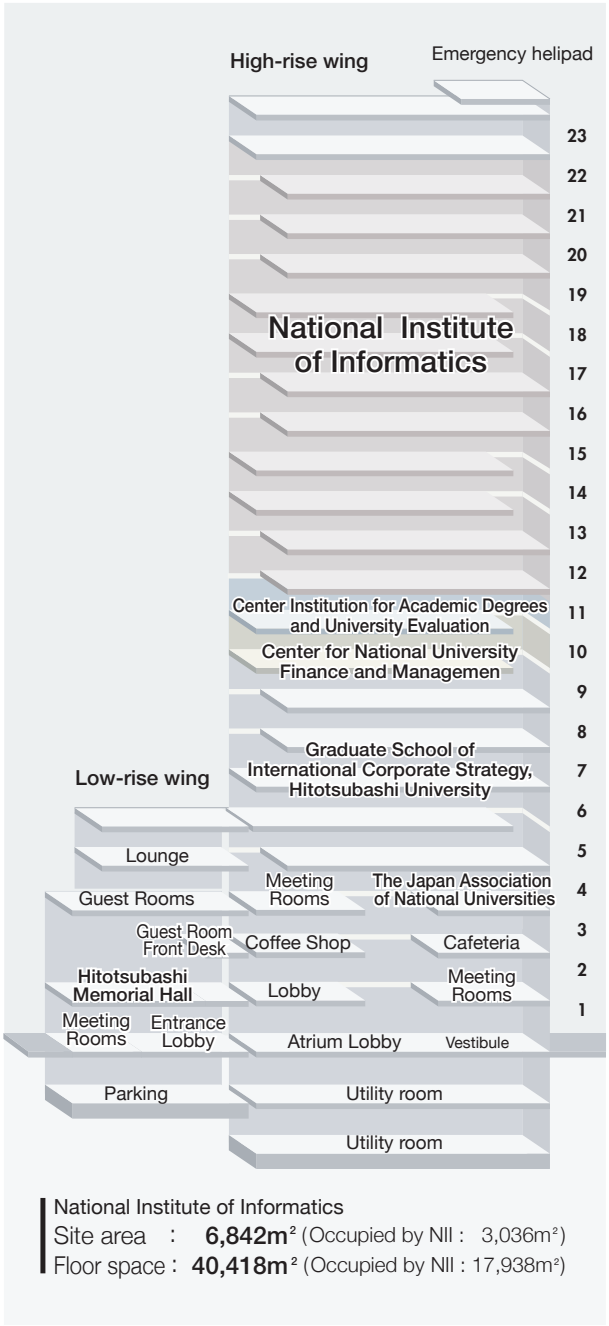
National Center of Sciences

Hitotsubashi Memorial Hall

National Institute of Informatics (NII)

http://www.nii.ac.jp/index-j.html

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.

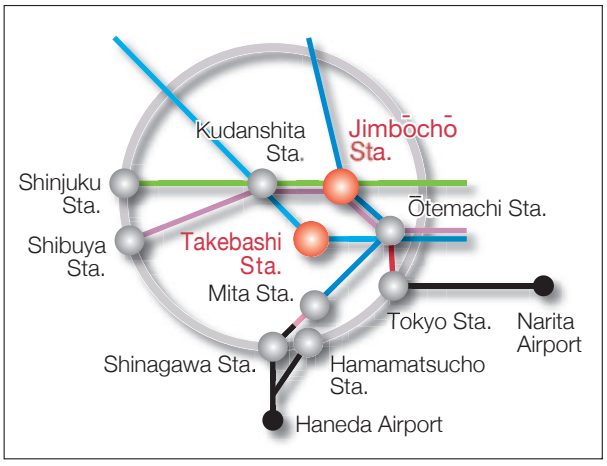
Center for Grid Research and Development

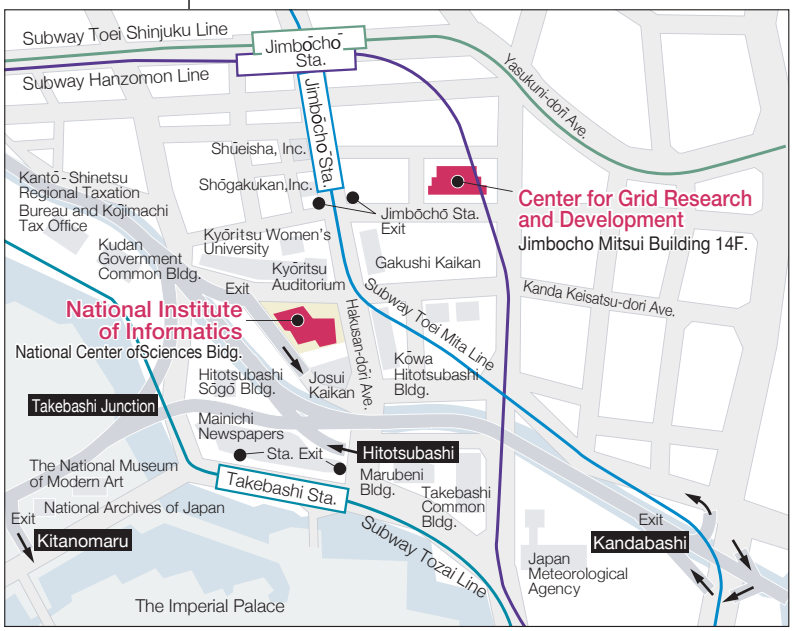
http://www.naregi.org/

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

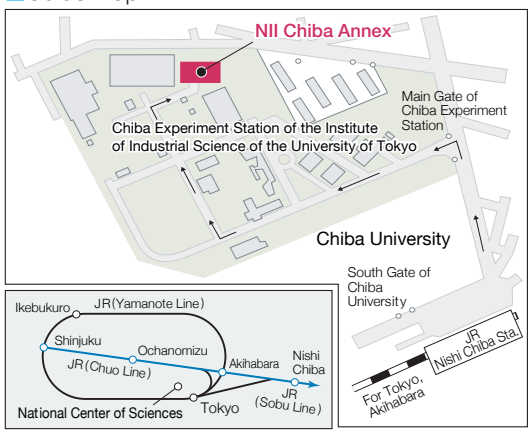
Chiba Annex (Inage-ku, Chiba City)

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.

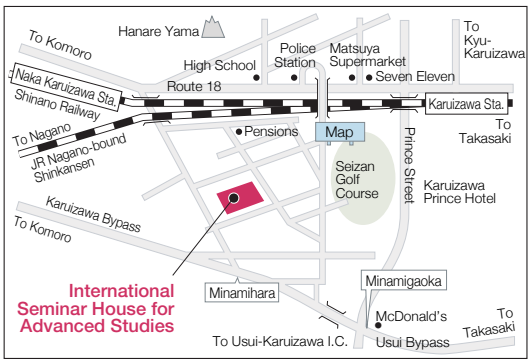
Seminar at the International Seminar House for Advanced Studies

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 Section, Budget and Accounts Division
TEL 03-4212-2060

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