Ministry of Education, Science, Sports, Culture and Technology

# National Institute of Informatics 2000/2001





## Contents

Foreword · · · · · · · · · · · · · · · · · · ·
Mission and Strategies of the National Institute of Informatics · · · · · 2
1. Scope of the Research at National Institute of Informatics · · · · · 3
1-1 Research Programs
Information Foundation Research Division · · · · · · · · · · · · · · · · · · ·
Infrastructure Systems Research Division · · · · · · · · · · · · · · · · · · ·
Software Research Division · · · · · · · · · · · · · · · · · · ·
Multimedia Information Research Division · · · · · · · · · · · · 7
Intelligent Systems Research Division · · · · · · · · · · · · · · · · · 8
Human and Social Information Research Division ••••••••
Research Information Research Division ••••••••••••••••••••••••••••••••••••
1-2 Research Center for Testbeds and Prototyping
1-3 Research Center for Information Resources · · · · · · · · · · · · · · · · · · ·
1-4 Collaborative Research · · · · · · · · · · · · · · · · · · ·
1-5 Dissemination of Research Results · · · · · · · · · · · · · · · · · · ·
2. Development Work and Projects · · · · · · · · · · · · · · · · · · ·
2-1 Science Information Network · · · · · · · · · · · · · · · · · · ·
2-2 Catalog Information Service · · · · · · · · · · · · · · · · · · ·
2-3 Information Retrieval Service ······ 20
2-4 Electronic Library Service · · · · · · · · · · · · · · · · · · ·
2-5 Career Information Service/Academic Society Home Village · · · 23
2-6 Surveys of Academic Research Activities · · · · · · · · · · · · · · · · · · ·
2-7 International Activities of NII Services · · · · · · · 23
2-8 Education and Training Program · · · · · · · · · · · · · · · · · · ·
3. Board of Councilors, Advisory Council for Research and
Management, Advisory Board, Professors Emeritus · · · · · · · · 20
4. Organization · · · · · · · · · · · · · · · · · · ·
5. Facilities · · · · · · · · · · · · · · · · · · ·
6. History ••••••••••••••••••••••••••••••••••••
Contact Information · · · · · · · · · · · · · · · · · · ·



## Foreword

The National Institute of Informatics (NII) was founded in April 2000 as an Inter-University Research Institute, to implement comprehensive research in the field of information science. Its aims are to encourage the rapid advancement of research in the information science field in Japan, and to make a significant contribution to the development of all fields of scholarly endeavor, as well as industry, culture, and the lives of the people by constructing and providing access to an advanced infrastructure for science information.

Since the launch of **NACSIS** (National Center for Science Information Systems), the predecessor of NII, in 1986, Japan's transformation into "advanced information and communications technology society" has been accelerated its pace. This strongly indicated the necessity of significant advances in research related to information technology and computers. Taking account of report that entitled "Policy for Promoting Informatics Research" by the Science Council, the Ministry of Education, (Monbusho) undertook preliminary investigations and preparatory work for the establishment of a core institute of informatics research. In consequence of this work, NII was founded by reorganising and expanding NACSIS.

"Informatics," the focus of NII's activities, is a new field of science oriented toward the twenty-first century. Scholarship in informatics develops out of a wide range of fields of study related to information and computers. These include subjects in the life sciences, humanities, and social sciences, in addition to computer science and information engineering. Informatics will develop remarkably through interdisciplinary work based on in-depth research in various fields and cooperation among them. Consequently, informatics is expected to be an academic infrastructure that will provide support for all aspects of our social and economic activities. The fruits of informatics research should be broadly disseminated throughout the society. In order to achieve this, NII is placing great emphasis on actual applications aimed at construction of infrastructure

for science information (information research and a networked environment) from the outcomes of basic research. We also consider it important to provide practical benefits back to society by choosing research subjects which can be found along the construction of this infrastructure. Another issue is the advances in computers and communication equipment which can be typically found in the advance of the Internet. These bring highly information oriented society, however, These also bring negative aspects such as network or security. Informatics is also required to address these social issues in the network era.

I am sure that the role of NII as a core institute for informatics research and dissemination of science information will be continuously in accordance with advancement of information and communications technology in society. The all of the staff of NII will carry out our work with eagerness in order to respond to social needs faithfully. I sincerely hope for the advice and support from all the parties concerned.

### July 2000

## Hiroshi Inose

Director General, National Institute of Informatics



NII was founded in April 2000 as an Inter-University Research Institute, in order to under take comprehensive research on informatics and to develop advanced infrastructure for the flow of science information. NII aims to provide broad coverage, in a long-term perspective, of research on basic through applied subjects in fields related to information science, such as software, information infrastructure, and information media. At the same time, it endeavours to advance informatics research comprehensively through an emphasis on partnership with universities, national research institutes, and other private research organisations including private companies.

### Comprehensive Research Ranging from Basic to Applied Subjects

NII develops highly academic research in the field of information science over the long term and in a wide array of subjects, varying from the natural sciences to the human and social sciences. And NII implements various research coherently, which covers subjects ranging from the basic to applied, and from the theoretical to the practical.

### Interdisciplinary Approach

NII promotes interdisciplinary work, including across-the-board cooperative research in diverse fields, and collaboration among broad academic disciplines, and contributes to the development of entire academic field providing an effective means for more sophisticated and comprehensive academic research.

### Partnership with Industry, Government, and Academic Sectors

NII promotes close partnership with universities, national and private research institutes, and endeavours significant development in the informatics research in Japan. At the same time, NII implements project-type joint research in cooperation with these and promotes the utilization of the outcomes of research in society.

### International Research Activities

NII endeavours to disseminate its research information internationally, promoting exchanges of researchers between foreign institutes involving and conducting international joint research. Also, NII endeavours to contribute international standardization activities.

### Development of Infrastructure for Science Information

NII plays key role in the development of an infrastructure for science information in Japan through the construction and operation of the Science Information Network, the production of union catalog database of academic books and serials in university libraries, the creation of science information databases, and the education and training programmes for staff of university library.



## **1** Scope of the Research at National Institute of Informatics

"Informatics," the focus of NII's work, is a new field that embraces a broad range of themes in areas such as the humanities, social sciences, and life sciences, as well as computer science and information engineering. The seven research divisions listed below are charged with carrying out core informatics research from a mid- to long-term perspective, and ranging from basic to applied themes.



Informatics aims to encourage in-depth research in areas related to research and education as well as spurring the rapid advancement of interdisciplinary research involving collaboration between different fields of study. It is hoped that this will result in the formation of a scholarly infrastructure capable of supporting all aspects of our socioeconomic activities. NII is a unique institution charged with promoting joint research among Japanese and overseas universities and research institutions as an inter-university research institute. In addition, NII is building an infrastructure for academic information in Japan and operating a number of information services. It is hoped that this organic synthesis of advanced informatics research and a practical environment will enable NII to produce exciting new results in response to the demands of universities and the wider society.

NII's wider goals include promoting closer linkages between universities, national research institutes, and research facilities operated by the private sector, encouraging joint research involving such institutions, and facilitating the practical application within society of the fruits of that research.

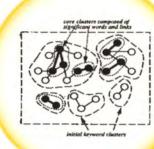
## Information Foundation Research Division

Multifaceted research on information is conducted in a comprehensive manner from a variety of viewpoints, such as computational theory, information mathematics, semiotics and media theory, cognitive science, and bioinformatics, with the aim of developing a basic concept and theory of informatics. In addition, new architectures for computers and information processing methods are proposed in order to create applications for these concepts and theories in practical systems.

- Algorithm Foundation Research
- Mathematical Informatics Research
- Semiotics Research
- Cognitive Science Research
- Bioinformatics Research (Visiting)

#### Automatic generation of multilingual clusters of synonymous terms

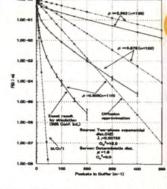
The performance of information retrieval tasks could be improved dramatically by translating and expanding the meanings of the queries using synonymous terms dictionaries. This research proposes a graph-based method to automatically generate Japanese and English keyword clusters of technical terms. This method indicates various advantages in the practical date retrieval applications.



#### Research on knowledge of natural laws

By classifying and reconfiguring natural laws (such as Ampere's law) used by industrial equipment of various types, it is possible to recognize commonalities in previously hidden applications for such laws by other types of industrial equipment. This methodology can be applied in design systems for developing new industrial products.





AS #

AS #d

Figure 1: An example of tail probability by the diffusion approximation

Analysis of Japanese compound words

Counting the co-occurrence of technical terms is the common method in the compound word analysis. (A large number of Japanese technical terms are compound words like joho kensaku, which means "information retrieval.") But this method also has a limitation since it is based on statistics. This research takes into account Japanese grammatical rules (e.g., joho kensaku can be rephrased as joho wo kensaku suru, both of which mean "information retrieval") to improve analysis accuracy.

運転 (drive) 管理 (control) []\_ACT ON-[]<sub>\nu</sub>] (6) [] x CONTROL [BECOME []<sub>\nu</sub> BE AT-[CONTROLLED]\_]]](7)

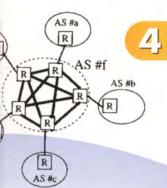
#### National Institute of Informatics

## Infrastructure Systems Research Division

- Network Architecture Research
- Functional Network Research
- Information Networking Research

Research is conducted on implementation methods for computer systems and computer networks -- the fundamental elements of information technology.

Through cutting-edge research, highperformance computer systems will be developed that are capable of complex data processing operations not possible with conventional computers, and high-performance computer networks will be built to support the distribution of information in a smooth and secure manner. In these ways we hope to propose a new type of information infrastructure to support an informationcentered society.



#### Research on application of router administration data

To ensure the correctness and security of a computer network, it is necessary to monitor comprehensively many protocol layers. An effective way of accomplishing this is to thoroughly analyze administration data from the routers that compose the network. This research focuses on such techniques.

#### igure 1: IBGP connection

#### Research on models for improving communications quality

The larger and more complex communications networks become, the more difficult it is to understand their operating characteristics, such as packet delays. Nevertheless, it is essential to be able to predict such values in order to assure communications quality. This research aims to approximate traffic and other characteristics of the behavior of communications networks through the use of mathematical models.

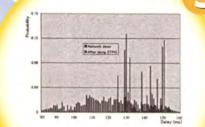


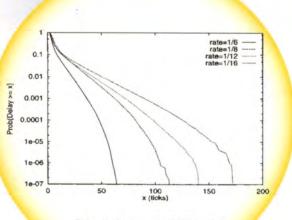
Figure 5: The distributions for burst delay.

#### Research on multimedia synchronization

When multimedia data such as TV programs is transmitted via information networks, separate channels could be used for the video and audio portions. Some delay inevitably occurs during the data transfer, and the amount can differ between the two channels. If nothing is done to resynchronize them, the video and audio portions of the program will not match up properly. This research focuses on methods for preventing this problem.

#### Research on traffic control for assuring the quality of services in high-speed networks

As network bandwidth is increasing, and different types of traffic, including audio, video and data are being transmitted over it, it is important to satisfy the different quality requirements of each of these types of communication traffic. This research examines the characteristics of traffic patterns and try to schedule different applications in a manner that is optimal for each.



Delay distribution under WFQ algorithm

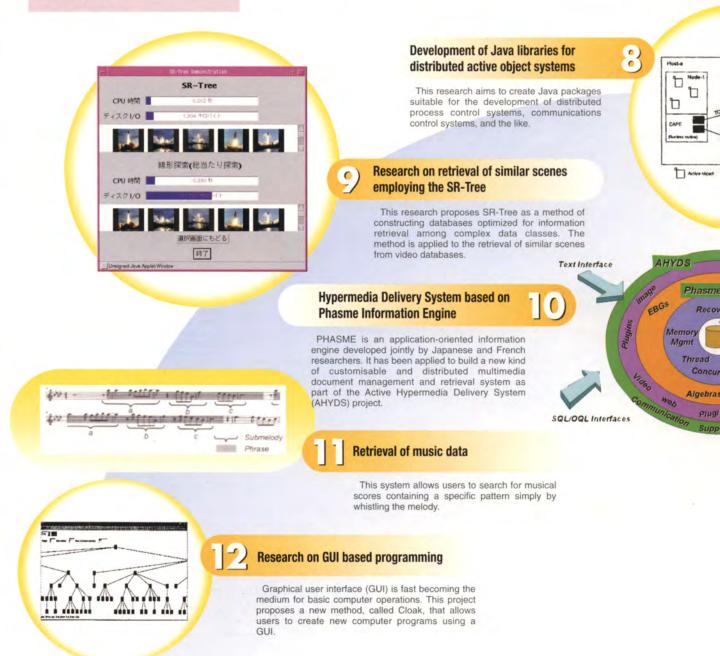
#### National Institute of Informatics

## Software Research Division

Research is performed on various concepts related to software; the core element in information processing. Through the systematic study of software aspects such as programming languages, data processing, and software developing methods, we aim to create new software concepts.

Such research will enable substantial improvement on software capabilities, productivity, and reliability, and thereby make possible the development of more complex and sophisticated systems.

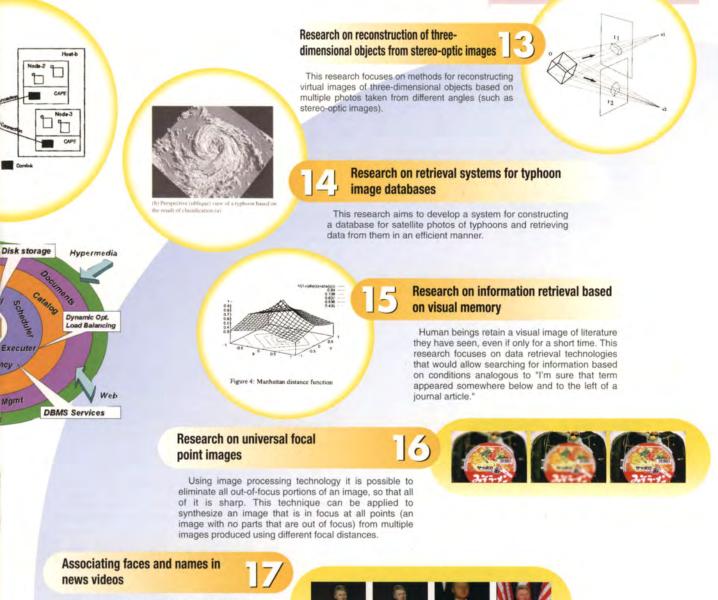
- Programming Languages Research
- Software Engineering Research
- Data Engineering Research
- Distributed Processing Research
- Large-scale Software Research
   (Visiting)



## Multimedia Information Research Division

- Image Processing Research
- Multimedia Processing Research
- Information Retrieval Research
- Computer Vision Research (Visiting)

The data handled in informatics research is in a variety of media formats, including text, images, and audio. Information media research aims to provide effective processing methods for expressing, analyzing, and retrieving data in various media formats. Through this work we hope to gain insights into the technical aspects of interaction between people and information media.



This research addresses content-based video indexing. The system associates faces and names in news videos as video annotation taking advantage of integrating image understanding and natural language processing techniques.



## Intelligent Systems Research Division

By analyzing a variety of activities involving intelligence that can be observed in the natural world, such as the activities of human beings, this area of research explores ways to build systems and computers capable of "intelligent" behavior and systems for solving problems through appropriate collaboration with people.

The ultimate aim of this type of research is the creation of systems that can support the intelligent activities of human beings and in some cases substitute for them. Knowledge Systems Research

- · Human-Machine Symbiosis Research
- Robotics Research (Visiting)

## Research on access to information space based on classification of texts

A support vector machine (SVM) can be used to introduce information on the degree of relatedness of the content of multiple documents for the purpose of cluster classification.

This research aims to develop a sophisticated information retrieval interface by applying this technique to conversations between people and computers.

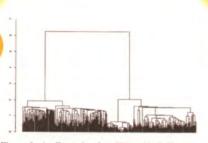
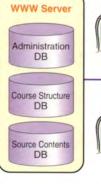
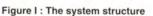


Figure 6: An Example of an Hierarchical Clustering of Documents (technical papers and articles of Journal of Japanese Society for Artificial Intelligence)









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#### **Research on distance learning**

The importance of distance learning is getting higher as the needs on higher education and lifelong learning pick up.

This research currently takes as its application NACSIS-ILL (the inter-library loan system operated by NII) and aims to develop advanced distance learning environments utilizing the internet and the WWW.

WWW Client

Browse

## Human and Social Information Research Division

- Information Management Research
- Information Use Research
- Library and Information Research
- Information Institution Research

This area of research examines issues related to information in the societal environment. Research topics include interaction between people and information in society; the distribution, management, and utilization of information; and social and systemic issues related to information. The ultimate aim is the systematization of informatics research from the viewpoint of the humanities and social sciences.

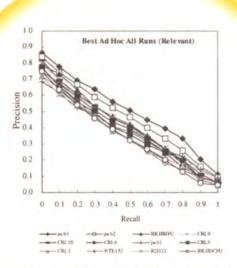
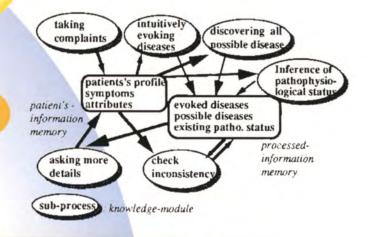


Fig. 3 Top Ad Hoc All Runs (Relevant Level)

#### Research on information retrieval evaluation and test collections

With the prosperity of the Internet, the importance of research in Information Retrieval (IR) and related technologies is increasing dramatically. Research and development of IR systems always requires solid evidence based on retrieval testing to show the superiority of a proposed system over previous ones. A test collection is a data set usable for such testing. We have placed emphasis to the investigation on evaluation methods and test collections relevant to the user community.



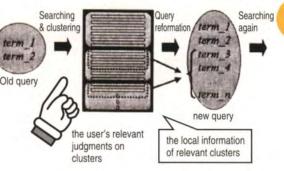
Research on generation of optimal search conditions using cluster methodology

In recent years the difficulties facing information retrieval technology have less to do with an inability to find information than with a tendency to find too much information.

By sorting search results automatically and reconstructing search conditions in order to identify the desired information clusters, information retrieval can be made more accurate.

# Application of distributed knowledge-bases to medical systems

This research involves the building of distributed knowledge-bases for use in medical diagnosis employing object oriented modeling technology.



## **Research Information Research Division**

Academic researches in various fields require all sort of information as the input and they also produce new information as the fruit of the researches. This research division focuses on the role of this information and on systems for disseminating it effectively. In this way, we aim to promote sophistication of academic information infrastructure and to establish the informatics tailored scholarly information.

- · Humanities and Social Sciences Information Research
- Science and Engineering Information Research
- Biosciences Information Research

Characteristics of Japan and USA in medical research:

#### Analyzing international research trends based on databases of scholarly publications

Large databases containing abstracts of academic papers have been compiled to assist researchers and some of them are made available through NII to researchers. In addition to their usual use of searching relevant papers, these databases are also being subjected to sophisticated statistical analyses in order to identify trends in scholarly research.

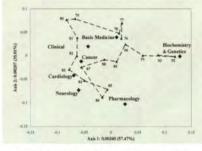
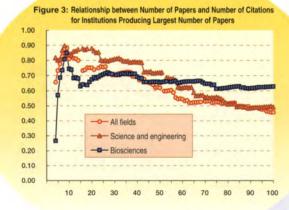


Fig8. Yearly trajectory of the US's publication relative to seven medical-related fields





#### Analyzing characteristics of universities based on number of citations to scholarly papers

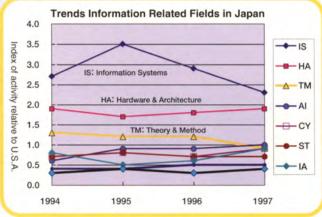
This project analyzes the level of activity of countries and institutions by examining the number of citations found in citation index databases. The number of times a paper is cited can be used as an index of the degree of its utilization. There is a particular need for citation analyses of this type focusing on Japanese academic papers.



#### International comparisons of information related research

The true state of informatics research in Japan and overseas can be elucidated by examining databases such as directories of researchers. By utilizing databases of academic information in this

way, we hope to analyze the present state of scholarly research in every field and contribute to the development of an effective infrastructure for academic information, research system, science policies and the accountability of researches.





## 1-2 Research Center for Testbeds and Prototyping

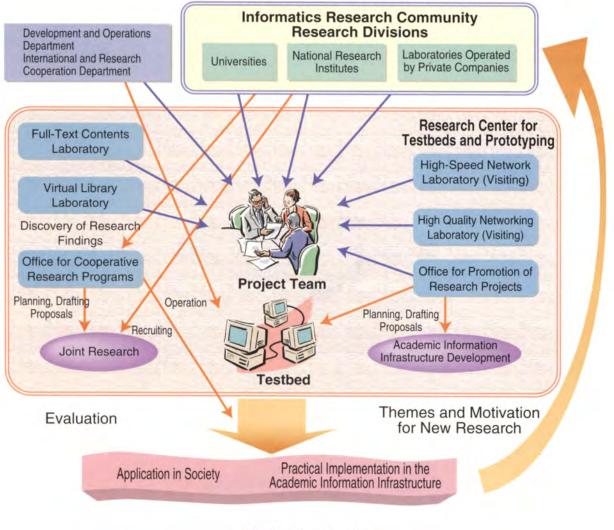
The Research Center for Testbeds and Prototyping provides testbed facilities and promotes prototyping research for real field application. These activities are carried out as projects with universities, other national research institutes or laboratories in commercial sectors, as well as projects within NII. The aim is that fruits of empirical research of this sort will be incorporated into the academic information infrastructure and provide themes and inspiration for new research.

The Research Center for Testbeds and Prototyping plays the role of a common-use facility, offering a development environment for testbeds and prototypes that individual universities or research divisions cannot provide on their own. It also promotes joint research and academic information infrastructure development in the form of projects.

The Office for Promotion of Research Projects draws plans for projects such as testbeds for

high-speed networks or online journals as well as academic information infrastructure development, while the Office for Cooperative Research Programs plays a similar role for joint research projects. Projects advance under the direction of visiting researchers assigned to the above offices or to the research divisions, with the collaboration of outside researchers, and with assistance provided by the Development and Operations Department.

- Office for Promotion of Research Projects
- Office for Cooperative Research Programs
- High-Speed Network Laboratory (Visiting)
- High Quality Networking Laboratory (Visiting)
- Full-Text Contents Laboratory (Visiting)
- Virtual Library Laboratory (Visiting)



## 1-3 Research Center for Information Resources

As the volume and variety of information available in digitized form grows, attention is being focused on the content of this information, and the integration of diverse types of information is becoming an increasingly active research topic. It has also become standard to use "content" as a general term to refer to sites on the World Wide Web and databases. A majority of research in the informatics field concerns the processing and utilization of content. To enable these sorts of research to expand and grow, it is important to develop new content to serve as a basis for it, to pursue research on software for processing that content, and to work to establish standards for the digitization of information.

The Research Center for Information Resources is a research facility that has been established within NII to perform the following functions:

- 1. Promotion of research on information resources, particularly content
- Collection and provision of information resources necessary for the pursuit of informatics research
- Promotion of joint research employing information resources

Promotion of research activities involves collection and collation of data, in collaboration with universities and private companies, in order to develop content on the large scale required by researchers.

The Research Center for Information Resources presently comprises two departments. The Office for Research Coordination and Promotion, which is staffed by permanent employees, performs planning work for a variety of different products and undertakes research on information resources. The Data Collection Laboratory, staffed by visiting researchers, is engaged in the development of test collections for use in Japanese text information retrieval and holds workshops promoting the common use of these test collections.

- Office for Research Coordination
   and Promotion
- Data Collection Laboratory (Visiting)

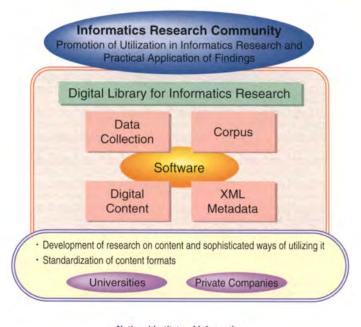
#### Utilization of Content in Informatics Research

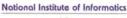
Search engines are used to locate specific information on the Internet. As part of research on the core technology behind all search engines, information retrieval, we are creating databases called "test collections." These test collections consist of (1) large-volumes of content data containing several million records, (2) test queries of various types, and (3) correct responses to each of the test queries. Test collections are necessary for comparing the results produced by different research groups under identical conditions.

#### Utilization of Multimedia Content

Research on the processing of video and audio data required samples of still image, moving picture, and spoken word content. Also, text and spoken word content are needed to perform research on natural language.

It is necessary that this data be in standardized formats in order to allow utilization of large volumes of content. This has caused attention to be focused on standards such as XML as well as metadata.







### 1. Promotion of Collaborative Research Projects

NII positively promotes research projects in order to encourage across-the-board collaboration in research fields within the institute and also to spur work aimed at finding practical applications for the fruits of basic research performed at institutions such as universities.

In addition, collaboration with national research institutes affiliated with other governmental ministries and agencies as well as research facilities operated by the private sector is aimed at enhancing the depth of scholarly endeavors. It is hoped that positive cooperation with research facilities in the humanities and social sciences as well as the natural sciences will make it possible for scholars to respond adroitly to changes in technology and in society.

### 2. Promotion of International Research Activities

In view of the fact that information is international by its very nature, NII works positively to contribute to international research work and to promote the internationalization of the institute itself. To achieve these goals, NII is operated in a way that is open to international users and participants. Experts in the information field and well-known researchers are invited from abroad to participate in the institute's programs. NII also promotes international exchanges of personnel, appointing researchers from overseas to staff positions, inviting scholars from overseas to work at the institute, allowing graduate students at overseas universities to participate in projects, and dispatching young researchers to overseas assignments.

In addition to the above, NII is aggressively promoting international collaborative research projects involving overseas institutions and participating activities for international standardization.

### 3. Collaboration with Graduate Schools

Building on a distinguished record of research on science information databases and on information communications infrastructure, NII is working in collaboration with the graduate schools of the University of Tokyo and the University of Library and Information Science. For instance, graduate students from the University of Tokyo receive research guidance as special collaborative researchers assigned to NII. This is just one example of the positive way in which NII contributes to education at the graduate level.

Making use of a practical environment in which comprehensive research systems in the field of informatics, which is the focus of the institute's work, and R&D work on academic information services take place as two aspects of an unified whole, NII envisages participation in The Graduate University for Advanced Studies at some future date. In this way the institute will be able to contribute to the education and training of researchers with a broad viewpoint and sophisticated knowledge. We feel that it is researchers such as these who truly possess the ability to solve important problems.

## 1-5 Dissemination of Research Results

NII works to disseminate the results of informatics research throughout the wider society by activities such as those highlighted below.

### Public Lectures and Presentations

Through public lectures and presentations the results of research conducted by NII is introduced to the public at large.



International Symposium AdInfo 2000 (March 2000)



### Symposia

Scholars from Japan and overseas discuss topics in informatics research from a wide range of viewpoints at symposia sponsored by NII.



International Symposium AdInfo 2000 (March 2000)

### Publications

NII publishes books and periodicals detailing its research findings.



National Institute of Informatics

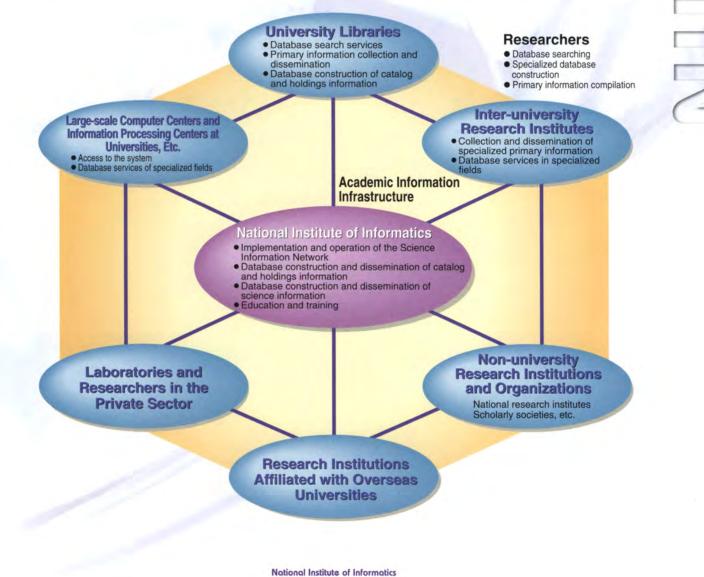


## **2 Development Work and Projects**

Once of the major roles of NII as an institution is the development and implementation of an advanced infrastructure for the distribution of science information. An science information infrastructure of the sort required to promote scholarly research must cover the aspects of networks, content, and applications, and there is a need to implement all three of these aspects in as advanced a manner as possible. This goal can be accomplished by applying the fruits of informatics research to the implementation and enhancement of the science information infrastructure in a rapid and timely fashion. For future informatics research to succeed, both of these activities need to proceed as one as with the two wheels of a car.

The Development and Operations Department of NII is responsible for the building and operation of the science information infrastructure, collaboration with university libraries and academic societies, and systems development and operation. Through tight cooperation with research organizations, organizations and systems are being constructed to allow researchers to participate in the implementation of the science information infrastructure. By then applying the fruits of this research in a practical way, NII is contributing to the implementation and reinforcement of Japanese science information infrastructure.

NII continues to work to enhance this science information infrastructure by carrying on the tasks begun by its predecessor, NACSIS. These include the expansion and operation of the Science Information Network and the provision of science information services such as databases and library catalog and holdings information.



## 2-1 Science Information Network

In order to promote the distribution of informatics research and scholarly information among researchers at universities and research institutes throughout Japan, NII operates the Science Information Network. Its purpose is to interconnect the LANs, etc., to which the researchers' terminals are connected.

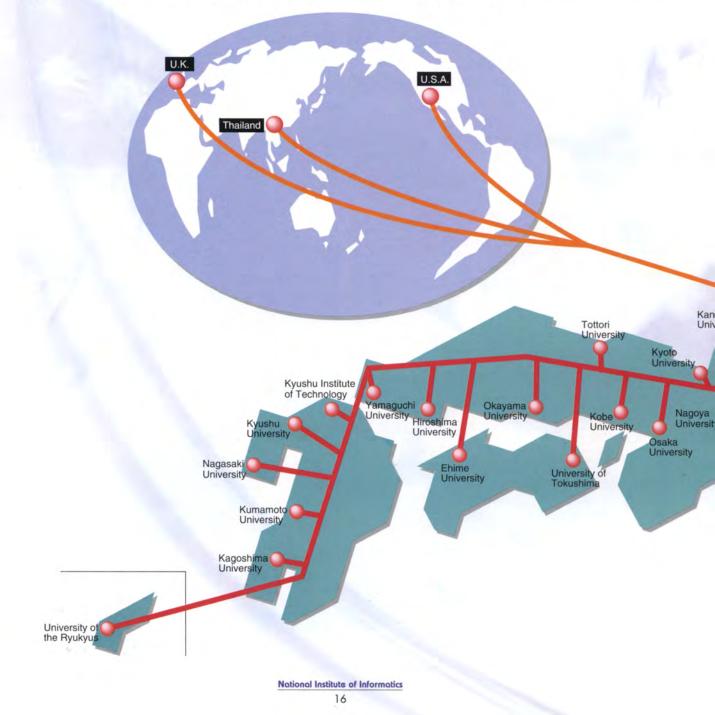
The network consists of nodes (i.e., ATM switches or IP routers) located throughout Japan, which are interconnected using high-speed digital links. Together they form an information communication network dedicated to academic research work.

The Information Retrieval Service (NACSIS-IR) and

Electronic Library Service (NACSIS-ELS) provided to researchers by NII are also implemented via the Science Information Network.

The Science Information Network is also linked to networks in the U.S.A., U.K. and other countries in order to promote international exchange of information.

To promote the exchange of research information among the industry, government and academic sectors, the Science Information Network is also connected to the Inter-Ministry Research Information Network (IMnet) and networks operated by the private sector.







nstitutions Parl	ticipating in the	Science Informa	ation Network			(Current a	as of April 20
National Universities	Municipal Universities	Private Universities	Junior Colleges	Colleges of Technology	Inter-university Institutes	Other	Total
94	51	289	102	44	14	158	752

http://www.sinet.ad.jp

## 2-2 Catalog Information Service

The Catalog Information Service consists of a Cataloging System and an Interlibrary Loan System.

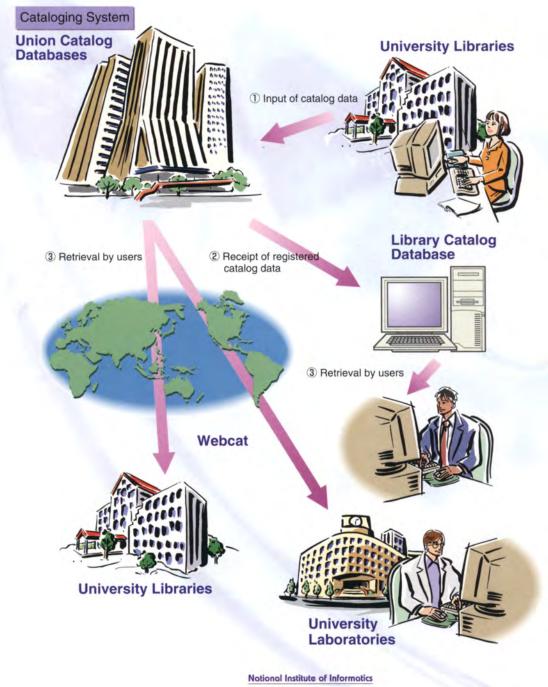
### Cataloging System (NACSIS-CAT)

The Cataloging System (NACSIS-CAT) comprises union catalog databases of academic documents (books and serials) in the collections of institutions such as university libraries. These databases were compiled to support the research work of scholars and can be searched to determine instantly where specific materials are housed.

Standardized cataloging data (MARC) is referred to

when constructing databases in order to improve efficiency, and the work of inputting records is shared by university libraries and similar institutions throughout the country.

The union catalog of books and serials, which consists of the databases compiled in this manner, can be accessed on the World Wide Web through the Webcat service.



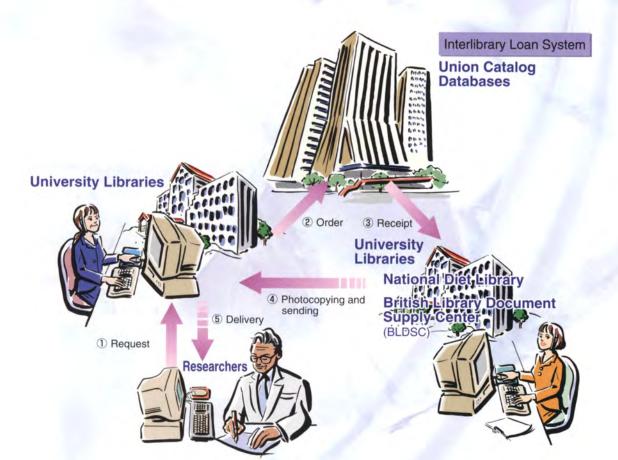


## Interlibrary Loan System (NACSIS-ILL)

The Interlibrary Loan System (NACSIS-ILL) supports exchange of information among libraries to enable them to provide documents to researchers at universities and other institutions.

The service employs latest information from the union catalog databases constructed by NACSIS- CAT for improved efficiency and to ensure 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 Center (BLDSC).



#### **Participating Institutions**

(Current as of May 31, 2000)

Type of Institution	Number
National Universities	99
Municipal Universities	55
Private Universities	342
Inter-university Research Institutes	14
Junior Colleges and Colleges of Technology	136
Other	89
Total	735

### Number of Database Records

(Current as of May 31, 2000)

Data	base Name	Number
Books	Bibliography	5,260,921
	Holdings	45,265,371
Serials Bibliography		228,110
	Holdings	3,417,699

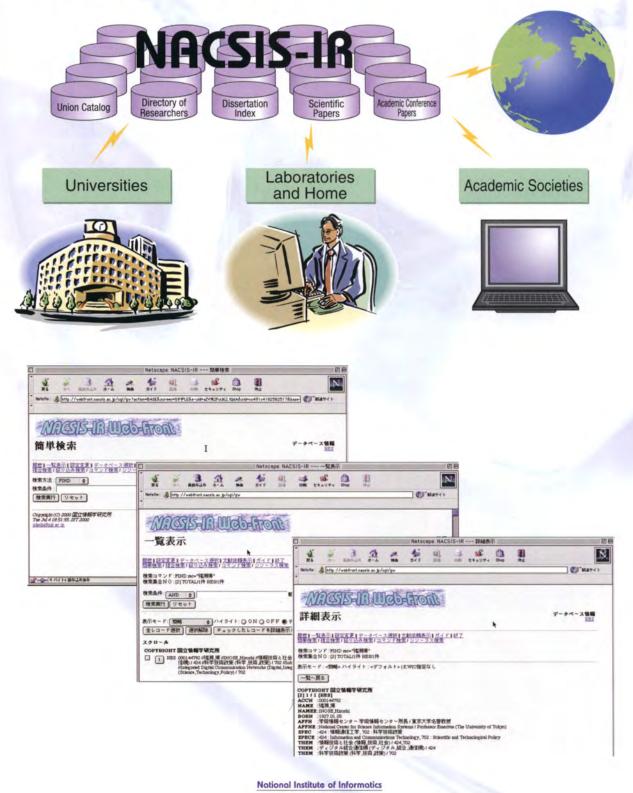
http://www.nii.ac.jp/CAT-ILL/welcome.html

## 2-3 Information Retrieval Service

The Information Retrieval Service (NACSIS-IR) has accumulated some 100 million records covering all fields of the humanities, the social sciences, and the natural sciences in order to provide researchers speedy and precise access to science information. This information can be accessed online.

comprises databases planned and created by NII (creating databases), databases obtained from database compiling institutions overseas and elsewhere (importing databases), and databases accepted from other researchers and institutions (assimilating databases).

The information available through NACSIS-IR





(Current as of April 1, 2000)

**Assimilating Databases** 

Bibliography of Japanese Sociology

Summary of Materials of Ishin History

bibliographia germanistica japonica

Chemical Sensor Database

of Engineering Societies

RAMBIOS

**Chemical Education Database** 

Inventory of Japanese Historical Documents

University of Education

Directory of Special Collections of National University Libraries

Database on Bibliography for Scientific Studies on Cultural Properties

Researcher Directory of Buddhist and Indic Studies in Japan Database of Japanese Traditional Music by Modern Composers

Catalog of Collection related to Curriculum Development and

Instruction in Japanese Language Teaching, held by Naruto

Hokkaido University Northern Studies Collection Database

Researcher Directory of Asian Historical Studies in Japan

Bibliography of Central Asian Historical Studies in Japan

Japanese Slavic and East European Studies Database

Index to Papers of Architectural Institute of Japan

Database of Geographical Studies in Japan

Database of Medical Conference Proceedings in Japan

Index for General Information of Home Economics Research

Bibliography of Islamic and Middle Eastern Studies in Japan

Database of Dossiers related to Japan in Russian Diplomatic Archives

Calendar of Academic Meetings, compiled by Japan Federation

### List of Databases Accessible through the Information Retrieval Service

#### **Creating Databases**

Laws in Force Economic Titles Japan Scientific Papers (Physical Sciences, Chemistry, Electronics) Clinical Case Reports Grant-in-Aid Scientific Research Register of Grant-in-Aid Scientific Research Dissertation Index Calendar of Academic Conferences,compiled by Science Council of Japan Current Contents of Academic Serials in Japan Academic Conference Papers Citation Database for Japanese Papers Directory of Researchers Database Directory Private Grants-in-Aid Research Union Catalog (Books, Serials)

#### Importing Databases

Arts and Humanities Citation Index Social Sciences Citation Index Harvard Business Review Science Citation Index Expanded List of Conference Proceedings in Science and Technology ISTP&B ISTP MathSci COMPENDEX PLUS EMBASE National Diet Library Catalog of Foreign Books Japanese Periodical Index Register of Private Grants-in Aid JPMARC LCMARC (Books, Serials)

#### Utilization of NACSIS-IR

#### **User Qualifications**

- (1) Faculty, graduate students, graduate researchers, and students of universities (national, municipal, or private), junior colleges, colleges of technology, inter-university research institutions, and institutions under the jurisdiction of the Ministry of Education, Science, Sports and Culture or the Agency for Cultural Affairs.
- (2) Regular members of academic societies, research staff and library personnel of National Research Institutes or publicly owned research organizations, and research staff affiliated with research and higher educational institutions overseas.

#### Fees for Use

- (1) Creating and importing databases: 50 yen/minute connected, 13 yen per hit
- (2) Union catalogs and assimilating databases: 30 yen per connection

#### Service Hours

The service is available continuously with the following exceptions: 8:00 to 9:00 a.m. each Monday, March 31, periods of system maintenance

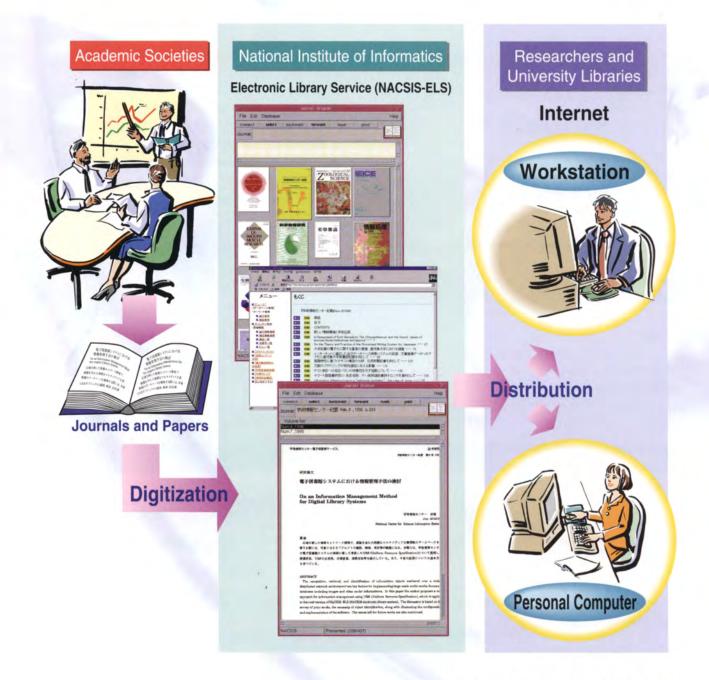
http://www.nii.ac.jp/ir/ir-j.html

## 2-4 Electronic Library Service

The Electronic Library Service (NACSIS-ELS) is an information service that enables users to retrieve via the Internet material from page image databases containing photographic reproductions of academic journals and magazines as well as with bibliographic information.

Researchers can search for journal articles by title, author, or keywords from their computers. They can also select articles from tables of contents or by browsing through pages. Users can use local printers to make high-quality printouts of desired pages.

Currently the database includes mainly academic journals published by Japanese academic societies. The range of information available will expand in future as the number of participating academic societies increases.



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



## 2-5 Career Information Service/Academic Society HomeVillage

### **Career Information Service**

Public advertisement of research posts at universities and other institutions has been recommended in reports by the University Council as an effective system for increasing the mobility of staff and for acquiring superior personnel with varied backgrounds and experience and one which should be utilized more actively in the future.

In response to these recommendations, the Career Information Service (NACSIS-CIS) was established to provide information on recruitment advertisements collected from universities. An overview of the service is as follows:

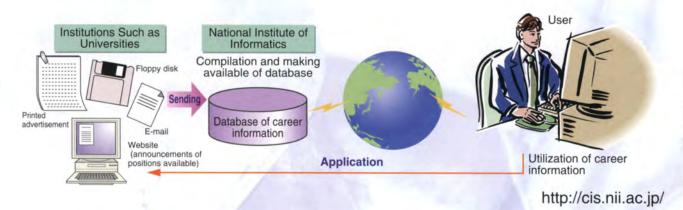
### (1) Collection of Information on Recruitment

#### **Advertisements**

Recruitment advertisements for posts at Japanese universities, junior colleges, colleges of technology, inter-university research institutions, etc., are sent to NII by mail, as e-mail attachments, or as pointers to a relevant Website.

#### (2) Provision of Career Information

The collected information is added to the database at NII and made available immediately via the World Wide Web.



### Academic Society HomeVillage

The Academic Society HomeVillage is a listing of links to the Websites of academic societies. It is maintained as a service to these academic societies in order to assist them in disseminating information.

The service also includes a search tool that allows users to locate Websites on the list using keywords. This provides an efficient way to obtain the latest research findings released by these societies.

The links are listed both alphabetically by society name as well as classified into the fields defined by the Science Council of Japan.



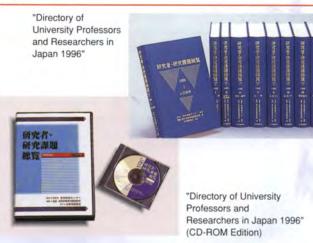
## 2-6 Surveys of Academic Research Activities

In order to collect basic information needed to facilitate academic research work, promote sophistication and comprehensiveness of research and research cooperation in Japan, and encourage the utilization of the outcomes of research within the society, NII conducts surveys of the academic research work by researchers at universities and research institutes throughout Japan. The result of surveys are compiled as databases, which are released by NII.

### Survey of Academic Research Activities

NII carries out the "Survey of Research Activities" annually in order to monitor status in the work of researchers affiliated with Japanese universities and research institutes. The latest information gathered from this survey is then compiled into the "Directory of Researchers", which is released in the Information Retrieval Service (NACSIS-IR). The data of this directory also published as "Directory of University Professors and Researchers in Japan 1996" (in both print and CD-ROM editions), and some key data are available to the public in the "Directory of Research Activities and Resources".

NII also issues to universities the directory data of themselves. Amount of Data: Approximately 160,000 records of researcher information based on the 1999 survey.



### Survey for the Compilation of Database Providing a Conspectus of Research Activities at Universities and Other Institutes

NII carries out surveys to collect information on the research resources, researchers, subjects, laboratory equipment and facilities of universities and research institutes in Japan, in order to provide information on Japanese universities and research institutions, and the researchers, as well as promoting efforts to secure excellent researchers, effective distribution of research resources, and encourage joint research in partnership with industry, academic, and governmental sectors. The "Directory of Research Activities and Resources (NACSIS-DiRR)" is produced on the basis of the results of this survey. It is

released on World Wide Web. This database service is a joint project conducted by NII and the Japan Science and Technology Corporation (JST).

Amount of Data: 12,690 records of research institute and subject information, 1,909 records of research resource information, and 113,496 records of researcher information, based on the 1999 survey.



### Survey of Status of Academic Information Databases

NII carries out the "Survey of Science Information Databases" annually to accumulate information on databases which are produced for science research in Japan. The "Database Directory" is produced on the basis of the latest information of this survey. It is released through the Information Retrieval Service (NACSIS-IR). In addition, the result of this survey is published under the title of "Status Report on Science Information Databases", that is essential data sources indicating current status of science databases in Japan.

Amount of Data: Approximately 3,000 records of database information based on the 1999 survey.

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Status Report on Academic Information Databases



# 2-7 International Activities of NII Services

In order to raise the standard of science research, it is essential to promote the distribution of science information on a global scale. NII, with the participation and cooperation of universities and research institutes overseas, is developing in an international framework a number of projects for the development and operation of the infrastructure for science information. These efforts help to improve access to information possessed by universities and research institutes overseas. In addition, NII contributes to efforts to distribute science information on science research being conducted in Japan internationally and to standardize its format.

## Cataloging System (NACSIS-CAT)

Fifteen universities and research institutes in Europe and Asia participate in NII's Cataloging System project and provide access to the NACSIS-CAT service. These include major research libraries, which have collections of Japanese language materials, such as the British Library, and other institutes devoted to research on Japan and East Asia. They have registered more than 140,000 academic books and materials. In addition, the "Science Information Exchange Project with China" was initiated in fiscal 1998. NII has been assisting computerization of the catalog records of the Beijing Center for Japanese Studies with the assistance of the Japan Foundation.

### Participating Institutes

- · Oriental and India Office Collections, The British Library
- · Cambridge University Library
- · Bodleian Library, University of Oxford
- · School of East Asian Studies Library, University of Sheffield
- · Scottish Centre for Japanese Studies, University of Stirling
- · School of Oriental and African Studies, University of London
- · The Japan Foundation London Language Centre
- · Japan Cultural Center, Bangkok, The Japan Foundation

- · Beijing Center for Japanese Studies
- · Department of Japanese Artiquities, The British Museum
- · Institute of East Asian Studies, Duisburg University
- · East-Asien Library, Katholieke Universiteit Leuven
- Department of Japanese Studies, University of Heidelberg
- Institute of Japanese Studies, Hallym Academy of Sciences, Hallym University
- · China Agricultural University Library

## Inter-Library Loan System (NACSIS-ILL)

NII's Inter-Library Loan System (NACSIS-ILL) is linked to the Inter-Library Loan System (ARITel) of the British Library Document Supply Centre (BLDSC). This makes it possible for researchers to apply remotely to BLDSC for the photocopying or loan of documents in the same way such requests are submitted to libraries in Japan.

## Information Retrieval Service (NACSIS-IR)

NII provides universities and research institutes overseas with access to its databases in order to promote the development of higher education and academic research worldwide. Databases and compiled by NII as well as those compiled by other institutes, which are produced and researchers, are utilized by universities and libraries in Asia, Europe and U.S.A. through NACSIS-IR.

## Electronic Library Service (NACSIS-ELS)

NII began access to the Electronic Library Service (NACSIS-ELS) for universities and research institutes worldwide in 1999. This enables overseas to researchers utilize academic journals published by academic societies in Japan.

## Improvement of Information Access between Japan and the U.S.A.

NII is working for improvement document delivery service between Japan and the United States, in response to the action agenda from the United States. - Japan Conference on Cultural and Educational Interchange (CULCON).

## 2-8 Education and Training Program

#### **Advanced Training Programs**

NII carries out various education and training programs designed to provide opportunities to catch up specialized and advanced technologies for staffs dedicating to support academic researchers at universities and research institutes.

#### **NII Seminar**

This seminar trains leading staffs for supporting academic researchers by providing hands-on experience performing actual research work.

#### **Network Training Course**

This course provides opportunities to catch up recent and advanced network technologies for staffs administering and operating network services at universities and research institutes.

#### NACSIS-CAT Advanced Training Course

This course trains leading staffs of NACSIS-CAT service in the participating university libraries.

#### NACSIS-IR Advanced Training Course

This Course trains instructors of guidance or training courses on how to use the NACSIS-IR service held at their institutions.



NACSIS-CAT Advanced Training Course

#### **User-Training and Guidance Program**

NII offers user-training courses and guidance courses in NACSIS services.

Regional courses are also offered in conjunction with university libraries in order to expand the range of opportunities.

The following types of user-training courses and guidance course are offered:

- NACSIS-CAT Training Course
- NACSIS-ILL Training Course
- NACSIS-IR Guidance Course

In addition to the above, Web based training environment of NACSIS-ILL(NACSIS-SL/ILL) is offered.



NACSIS-CAT Training Course

#### Support for User Training Sponsored by Universities

In order to support guidance or user-training course of NACSIS services sponsored by universities and academic societies, NII offers some support programs, such as to provide training text or materials, to advice about curriculum, and to assign of user-ID.

#### **International Training**

In cooperation with related organizations, NII carries out training for staffs dedicating to support researchers at academic research institutions in foreign countries.



NACSIS-CAT Training at the Beijing Center for Japanese Studies (November 1999)



National Institute of Informatics



## 3 Board of Councilors, Advisory Council for Research and Management, Advisory Board, Professors Emeritus

## **Board of Councilors**

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

Toshiharu Aoki	President and Chief Executive Officer, NTT Data Corporation	Yoshihide Kozai	Director, Gunma Astronomical Observatory
Hiroo Iguchi	Professor Emeritus, University of Tokyo	Yasuharu Suematsu	President, Kochi University of Technology
Yoneo Ishii	President, Kanda University of International Studies	Hirotaka Sugawara	Director General, High Energy Accelerator Research
Michiyuki Uenohara	Professor Emeritus, Tama University		Organization
Hitoshi Osaki	Director General, Center for National University Finance	Junjiro Takahashi	Vice President, Keio University
Masanori Otsuka	Professor Emeritus, Tokyo Medical and Dental University	Michiko Tenma	Professor Emeritus, Tsuda College
Kimio Ohno	President, Hokkaido Information University	Tatsuo Nishida	Professor Emeritus, National Center for Science
Takayasu Okushima	President, Waseda University		Information Systems
Tsutomu Kimura	President, National Institution for Academic Degrees	Yoichi Matsuno	Director General, National Institute of Japanese Literature
Masaaki Kubo	Professor Emeritus, University of Tokyo	Wataru Mori	Professor Emeritus, University of Tokyo
Nobuaki Kumagai	Professor Emeritus, Osaka University	Hiroyuki Yoshikawa	President, The University of the Air.

### Advisory Council for Research and Management

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.

Setsuo Arikawa	Head of Library, Kyusyu University Library	Katsumi Wakabayashi	Professor Emeritus, Gunma University
Yasuyoshi Inagaki	Professor, Graduate School, Division of Engineering, Nagoya University	Takamitsu Sawa	Planning and Coordination Director (Deputy Director
Hitoshi Inoue	Professor Emeritus, National Center for Science Information Systems		General), NII
Haruo Kuroda	Director, Research Institutes for Science and	Kinji Ono	Executive Director of Research, NII
	Technology, Science University of Tokyo	Takashi Hamada	Director, International and Research Cooperation
Masao Sakauchi	Director General, Institute of Industrial Science, University of Tokyo		Department, NII
Ryuei Shimizu	Professor, Faculty of Commerce, Tokyo International University	Mitsutoshi Hatori	Director, Development and Operations Department, NII
Mikio Takagi	Professor, Faculty of Science and Technology, Science	Shoichiro Asano	Director, Infrastructure Systems Research Division, NII
	University of Tokyo	Katsumi Maruyama	Director, Software Research Division, NII
Norihisa Doi	Professor, Faculty of Science and Technology, Keio University	Haruki Ueno	Director, Intelligent Systems Research Division, NII
Hisao Yamada	Professor, Faculty of Information Science, Chukyo University	Eisuke Naito	Director, Human and Social Information Research Division, NII
Kahei Rokumoto	Professor, The University of the Air.	Masamitsu Negishi	Director, Research Information Research Division, NII

## **Advisory Board**

Members provide general advice and suggestions to the Director General regarding informatics research and the development and implementation of an infrastructure for dissemination of academic information, in response to with the Director General's requests.

Is	ao Amagi	Director General, Institute for Higher Education	Lewis M. Branscomb	Professor Emeritus, Center for Science and International Affairs
K	eijiro Inai	President, Japan Audio-Visual Education Association		John F. Kennedy School of Government Harvard University U.S.
K	en-ichi Inaba	Professor Emeritus, Osaka University	Edward E. David, Jr.	President, EED, Inc. Former Science Advisor to the
S	ougo Okamura	President Emeritus, Tokyo Denki University		President of the United States
M	lichio Okamoto	Special Advisor, International Institute for Advanced Studies	Lotfi A. Zadeh	Professor in the Graduate School and Director, Initiative
M	asahiro Kawasaki	President, The Japan Science and Technology Corporation		in Soft Computing University of California at Berkeley U.S.
Н	iroshi Kida	Advisor, New National Theatre Foundation	James L. Flanagan	Vice President for Research, Rutgers, the State University
Н	iroshi Koyama	Professor Emeritus, National Institute of Japanese Literature		of New Jersey U.S.
T	sukasa Shimizu	President, Tokyo Kasei University	Arno A. Penzias	Former Senior Technology Advisor, Bell Laboratories,
M	lasao Tobari	Chief Librarian, National Diet Library, Japan		Lucent Technologies U.S.
S	aburo Nagakura	Chairman, Kanagawa Academy of Science and Technology	Walter L. Engl	Professor Emeritus, Rheinisch-Westfälische Technische
T	eruo Fukumura	Professor Emeritus, Nagoya University		Hochschule Aachen (RWTH) Deutschland (Germany)
T	atsuo Matsuda	Professor Emeritus, National Institute of Polar Research		

## Professors Emeritus (NACSIS: National Center for Science Information Systems)

Kimio Ohno President, Hokkaido Information University Atsunobu Ichikawa Tatsuo Nishida Hisao Yamada

Professor, Faculty of Information Science, Chukyo University

Hitoshi Inoue

## 4 Organization



Budget (Fiscal 2	2000)				(Unit:1,000 yen)	Mitsutoshi Hato Deputy Director Shigeru Takano
Classification	Salaries	Running Expenses	Computer Rental	Other	Total	Administration Department
Amount	1,136,792	8,136,872	1,117,878	65,716	10,457,258	Director: Norio Matsuoka

Associate Research Professors Associates Subtotal

17

2

(17)

Administrative Officials	Technical Officials	General Employees	Subtotal	Total
				② (17)

10

78

149

Development and Operations Department Director :

International and Research

Cooperation Department

Takashi Hamad

Director:

69 Circled figures () indicate non-Japanese visiting research scholars. Figures in parentheses () indicate Japanese visiting researchers.

34

Director

General

1

Planning and

Coordination

Director (Deputy Director General)

1

Professors

2

(9)

26

(8)

26

National Institute of Informatics 28

34



	Mathematical Informatics Research
nformation Foundation Research Division	Semiotics Research
Director: Kinji Ono	Cognitive Science Research
hrector. Kinji Ono	Bioinformatics Research*
	Network Architecture Research
nfrastructure Systems Research Division	Functional Network Research
Director: Shoichiro Asano	Information Networking Research
Irector. Shoichiro Asano	Programming Languages Research
	Software Engineering Research
oftware Research Division	Data Engineering Research
	Distributed Processing Research
Director: Katsumi Maruyama	Large-scale Software Research*
	Image Processing Research
	Multimedia Integration Processing Research
Aultimedia Information Research Division	Information Retrieval Research
Director: Mitsutoshi Hatori	Computer Vision Research*
to Warred Custome Desperate Division	Knowledge Systems Research
ntelligent Systems Research Division	Human-Machine Symbiosis Research
Director: Haruki Ueno	Robotics Research*
	Information Management Research
luman and Societal Information Research Division	Information Use Research
	Library Information Research
Director: Eisuke Naito	Information Institution Research
	Humanities and Social Sciences Information Research
Research Information Research Division	Science and Engineering Information Research
Director: Masamitsu Negishi	Biosciences Information Research
hrector. Masamitsu regism	Office for Promotion of Research Projects
	Office for Cooperative Research Programs
	High-Speed Network Laboratory*
Research Center for Testbeds and Prototyping	High Quality Networking Laboratory*
Director: Akira Miyazawa	Full-Text Contents Laboratory*
	Virtual Library Laboratory*
	Office for Research Coordination and Promotion
Research Center for Information Resources	Data Collection Laboratory*
Director: Jun Adachi	* Sections staffed by visiting researchers.
	Planning and Coordination Section
Planning and Coordination Division	Information Infrastructure Development Section
	Users Support Section
Director: Hiroshi Watanabe	Network Planning and Development Section
Network System Division	Network Construction and Operations Section
	Network Security Section
Director: Mitsuaki Fuchigami	
	Contents Management Section
Contents Division	Text Contents Section
	Image Contents Section
Director: Toru Kyoto	Contents Assessment Section
	System Development Management Section
Application Division	Data Processing Technology Section
	Network Software Technology Section
Director: Isamu Fuse	General Affairs Section
General Affairs Division	Planning and Regulation Section
Director: Katsumi Tokiwa	Personnel Section
Director: Katsumi Tokiwa	General Affairs and Audit Section
	Budget Section
	Government Property Section
Budget and Accounts Division	Accounts Section
Director: Hideyasu Yoshida	Supplies Section
noorden naoyada noonaa	Facilities Section
Research Cooperation Division	Research Cooperation Section
Director: Kazukiyo Matsui	International Affairs Section
	Publicity and Survey Section
Publicity and Survey Division	Information and Document Section
Directory Kozuc Akiyoma	International Activities Section
Director: Kazuo Akiyama	
	Planning Section
Dissemination Activities Division	Planning Section Dissemination Section

### Office for Public Relations Promotion Supervisor: Akira Miyazawa

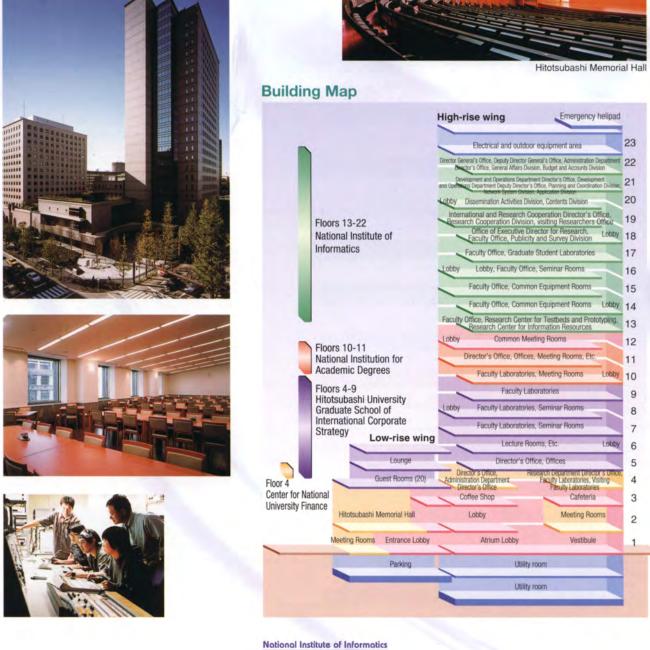
## National Institute of Informatics 29

## **5** Facilities

### **National Center of Sciences**

The "National Center of Sciences" was established as a focal point for science research in informatics fields, academic exchanges, the dissemination of science information, and partnership with society, in order to promote academic research infrastructure in Japan. Its building was completed in December 1999. The Center has 4 institutes: NII, the Hitotsubashi University Graduate School of International Corporate Strategy, the Center for National University Finance, and the National Institution for Academic Degrees. The Center aims to form a sophisticated base for intellectual creativity by utilizing in a comprehensive manner the academic functions of each institute. In the lower floor of the building, there are conference facilities, including the Hitotsubashi Memorial Hall. These are available for use for a various activities, such as international conferences, lectures and other academic meetings, organized by national universities.





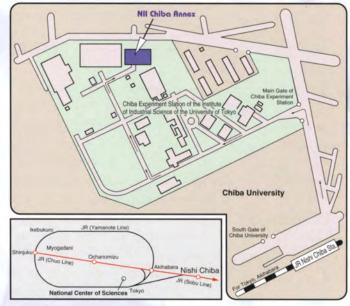


### **Chiba Annex**

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



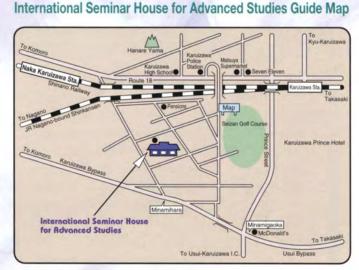
#### Chiba Annex Guide Map



### International Seminar House for Advanced Studies

The International Seminar House for Advanced Studies was completed in March 1997 in Karuizawa, Nagano Prefecture, as a venue for international research and academic exchange. It has a seminar room (capacity: 46 persons), accommodations, and other facilities in order to be used for international conferences and seminars. It is widely utilized not only for NII but also for other universities and research institutes.







Exit National Route 18 at the Karuizawa Police Station overpass.

Seminar Room

31

# 6 History

A proposal is made to achieve an "Improvement of a Distribution System for Academic Information"
in the Third Report (Basic Policies for the Promotion of Scholarship) of the Science Council.
An inquiry entitled "A New Plan for Academic Information Systems" is placed before the
Science Council by the Minister of Education, Science, Sports and Culture. The Science Council
responds in January 1980.
The Research Center for Library and Information Science (RCLIS) is established at the University
of Tokyo.
The Center for Bibliographic Information is established at the University of Tokyo. (This
involves reorganizing the Center for Information and Library Science.)
The Catalog Information Service is started.
The National Center for Science Information Systems (NACSIS) is established. (This involves
reorganizing the Center for Bibliographic Information, University of Tokyo.)
Operation of Science Information Network and Information Retrieval Service (NACSIS-IR) is started.
The Electronic Mail Service (NACSIS-MAIL) is started.
The Science Information Network is linked to the National Science Foundation (NSF), U.S.A.
The Science Information Network is linked to the British Library (BL), U.K.
The Inter-Library Loan System (NACSIS-ILL) is started.
Operation of Internet backbone network service (SINET) is started.
Mutual utilization by Japan Information Center of Science and Technology (JICST) users and
NACSIS users becomes possible via a gateway connection.
NACSIS-ILL is linked to the British Library Document Supply Centre (BLDSC).
An international connection is established, linking the Science Information Network to Thailand.
NACSIS-ILL System is connected with the National Diet Library (NDL).
International Seminar House for Advanced Studies (Karuizawa, Nagano Prefecture) is completed.
The Electronic Library Service (NACSIS-ELS) is started.
Operations move to building of National Center of Sciences (Hitotsubashi, Chiyoda-ku, Tokyo).

December 1997	An Advisory Panel on a Core Institution for Scientific Research in the Information Field is
January 1998	established by the Ministry of Education, Science, Sports and Culture. A proposal entitled "Promoting Computer Science Research" is published by the Science Council of Japan
	It calls for a core informatics research institution be established as an inter-university research institute
March 1998	The Advisory Panel on a Core Institution for Scientific Research in the Information Field issues its report
April 1998	The Core Institution for Scientific Research in the Information Field Coordination Office is established, and a committee is formed in May.
March 1999	The Core Institution for Scientific Research in the Information Field Coordinating Committee issues its report.
April 1999	The Core Institution for Scientific Research in the Information Field Preparatory Office is established, and a committee is formed in May.
July 1999	The Core Institution for Scientific Research in the Information Field Preparatory Committee issues its interim report.
March 2000	The Core Institution for Scientific Research in the Information Field Preparatory Committee issues its final report.

April 2000 The National Institute of Informatics (NII) is established. (This involves the reorganization of NACSIS and assumption of its functions.)

National Institute of Informatics 32



## **Contact Information**

General information about NII Tel. 03-4212-2000

Information about publicity Publicity and Survey Division Tel. 03-4212-2132 Fax: 03-4212-2150 E-mail: www.adm@nii.ac.jp

Information about joint research Research Cooperation Division, Research Cooperation Section Tel. 03-4212-2105 Fax. 03-4212-2120 E-mail: kenkyou@nii.ac.jp

Information about international exchange Research Cooperation Division, International Affairs Section Tel. 03-4212-2110 Fax. 03-4212-2120 E-mail: kenkyou@nii.ac.jp

Information about the Science Information Network Network System Division, Network Planning and Development Section Tel. 03-4212-2255 Fax. 03-4212-2270 E-mail: net6@sinet.ad.jp

Information about applying to use information services Planning and Coordination Division, Users Support Section Tel. 03-4212-2225 Fax. 03-4212-2230 E-mail: user-request@nii.ac.jp

Information about the Catalog Information Service (NACSIS-CAT/NACSIS-ILL)

Information about catalogs of books Contents Division, Contents Management Section Tel. 03-4212-2355 Fax. 03-4212-2375 E-mail: catadm@nii.ac.jp

Information about catalogs of serials Contents Division, Text Contents Section Tel. 03-4212-2360 Fax. 03-4212-2375 E-mail: catadm@nii.ac.jp

Information about the Inter-Library Loan System (NACSIS-ILL) Contents Division, Contents Assessment Section Tel. 03-4212-2365 Fax. 03-4212-2375 E-mail: illadm@nii.ac.jp

Information about the Information Retrieval Service (NACSIS-IR) (how to use, description) Application Division, System Development Management Section Tel. 03-4212-2305 Fax. 03-4212-2330 E-mail: irhelp@nii.ac.jp

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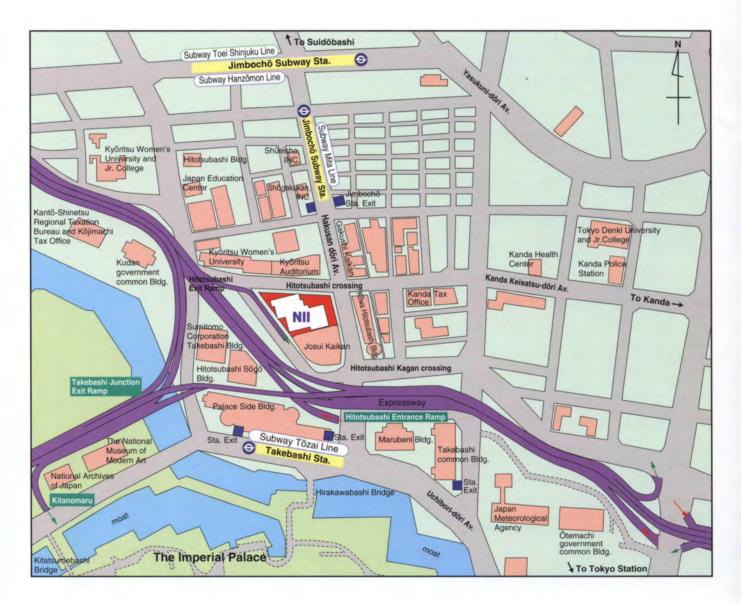
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