

NTT Group CSR Report 2005



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Overview of the NTT Group

About NTT Group CSR Report 2005

In fiscal 1999, the NTT Group began publishing "NTT Group Environmental Protection Activity Report" and each group company also began to actively publish environmental reports. In fiscal 2005, we published our first Corporate Social Responsibility (CSR) report, titled "NTT Group CSR Report 2005," in order to gain broad understanding of the ongoing social and economic activities of the NTT Group as a whole.

This report publishes information on the CSR activities and concept of the NTT Group, and shares it with our stakeholders. At the same time, we consider it to be a communication tool for promoting CSR activities. We want to hear your comments and reactions. Please let us know what you think, using the insert questionnaire sheet, email, or our Web site survey. Your views will help us continue to improve the CSR activities and reports of the NTT Group.

- This report was made in reference to the Global Reporting Initiative (GRI) and Ministry of the Environment guidelines.
- In order to conserve paper, some of the information on the CSR activities of the NTT Group is abbreviated in this report. Please visit our Web site for more detailed information http://www.ntt.co.jp/csr e

Reporting Period/Scope/Other Matters

- This is a report of the activities of the NTT Group in fiscal 2004 (April 1, 2004 to March 31, 2005). It also includes some activities from after April 1, 2005, as well as future outlooks.
- The figures given for the NTT Group in fiscal 2004 are tabulated from data for NTT (Holding Company), NTT East, NTT West, NTT Communications, NTT DATA, NTT DoCoMo, and their group companies.
- Organization names are current as of end-March 2005.

Definitions of Names

■ In this report, the term "NTT (Holding Company)" refers to NIPPON TELEGRAPH AND TELEPHONE CORPORATION.



Composition of Each NTT Group Company

(As of July 1, 2005



	NIPPON TELEGRAPH AND TELEPHONE CORPORATION (NTT)
	3-1, Otemachi 2-chome, Chiyoda-ku, Tokyo 100-8116, Japan
nent	April 1, 1985
	¥937.95 billion
yees	2,792 employees
	201,500 employees (On a consolidated basis)
lidated Subsidiaries	397
	http://www.ntt.co.jp/index_e.html

tions Support	Group	
D NS I RPORATION NSAI	Engineering Businesses NTT INFRASTRUCTURE NETWORK CORPORATION AIREC ENGINEERING CORPORATION Telephone Directory Businesses NTT DIRECTORY SERVICE Co. NTT BUSINESS INFORMATION SERVICE,	Telemarketing Businesses NTT Solco Corporation Internet Related Businesses Plala Networks Inc. Others NTT CARD SOLUTION Inc.
TON RPORATION	INC	and others
ernational Com esses nc. n	munications Support Group Others Verio Inc. NTT WORLD ENGINEERING MARINE CORI	PORATION and others
is Support Grou	Ip DoCoMo Support, Inc. DoCoMo Systems, Inc.	DoCoMo Sentsu, Inc. DoCoMo Technology, Inc. and others
Support Group vices Iologies Inc. Ce corporation	Network System Services NTT DATA FINANCIAL CORPORATION	Others NTT DATA TOKYO SMS CORPORATION and others
es n Y corporation S	Financing Businesses NTT LEASING CO., LTD Real Estate Businesses NTT URBAN DEVELOPMENT CORPORATION	Administrative Service Businesses NTT BUSINESS ASSOCIE Corporation NTT BUSINESS ASSOCIE TOKYO Co., Ltd Others NTT LOGISCO Inc. NTT ADVERTISING, INC. NTT LEARNING SYSTEMS CORPORATION and others

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It has been 20 years since the principle of competition was introduced into the telecommunications field, when in 1985, Nippon Telegraph and Telephone Public Corporation was privatized, and the company Nippon Telegraph and Telephone Corporation ("NTT") was formed. Today, we are entering an age of ubiquitous broadband network access, with the number of mobile phone subscribers passing the number of fixed line telephone subscribers, the explosive growth of the Internet, and the ability to deliver large amounts of video data. The telecommunications industry is also being transformed: we are seeing an accelerated convergence of telecommunications and broadcasting, as well as an acceleration of "fixed mobile convergence" (FMC), in which fixed line and mobile phone services are fusing together.

Meanwhile, the greatest issue for the future of Japan is a declining population due to the rapid aging of our society. This will create social and economic problems for Japan, including labor shortages and decreased purchasing

power. In order to ensure the sustainable growth of our country, we have got to commit to tackling these problems head-on, increasing productivity, expanding consumption, and holding down social costs, and we feel that the active use of telecommunications technologies will be effective at achieving this.

Against this backdrop, we at the NTT Group have three missions: increase corporate value and answer the expectations of everyone including our shareholders; take responsibility for universal service and other regulations laid down in the NTT law (Nippon Telegraph and Telephone Corporation law); and contribute to the realization of Japan's IT strategy through the e-Japan Strategy and related initiatives. We are strongly committed to contributing to the sustainable growth of society, with an awareness of our corporate social responsibility, and this basic management stance runs through each of our missions.

We believe that fulfilling these missions, contributing to the spread of ubiquitous broadband services, and an

Kow Wada

NIPPON TELEGRAPH AND TELEPHONE CORPORATION

M E S S A G E	Μ	E	\mathbf{S}	\mathbf{S}	A	G	E
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active commitment to resolving these social and economic issues will make safe, secure, and convenient services available to all: and we feel that this is the true corporate social responsibility (CSR) of the NTT Group.

In November 2004, we formulated the NTT Group's Medium-Term Management Strategy, which focuses on how the NTT Group will accomplish these missions over the medium term, and we are currently working toward these targets. The NTT Group pledges that we will continue to provide these safe and secure services, and benefits to society as a trustworthy company. We are committed to helping to create comfortable lifestyles and a prosperous society.

We have updated the Environmental Protection Activities Report and published it as the CSR Report in order to communicate with our many stakeholders about what the NTT Group has done, and our CSR policy. We welcome your comments and feedback on this report of the social and economic activities of the NTT Group.



October 2005 Norio Wada

President & CEO NE CORPORATION

Future Goals of the NTT Group



^{%2} SMEs:Small sized and medium sized enterprises

※3 Digital divide: The gap between people skilled in the use of personal computers, the Internet, and other forms of information technology, and those without such skill

Creating a Prosperous Society

NTT Group's CSR and Medium-Term Management Strategy Group

As a leader in the telecommunications industry, the NTT Group has always been committed to fulfilling its responsibility to society in its businesses. The NTT Group considers fulfilling its corporate social responsibility (CSR) is to implement the three essential missions. In November 2004, we formulated the NTT Group's Medium-Term Management Strategy, which focuses on what we need to do in order to carry out these missions over the medium term.

In order to reach an age of safe and secure ubiquitous broadband society, we are working to enhance our CSR activities to overcome a wide range of social and environmental issues through our businesses as well as economic issues, while maintaining active communication with our stakeholders.

[NTT Group's Medium-Term Management Strategy] Management Objectives

- 1. Create a broadband and ubiquitous market and help achieve the e-Japan Strategy and the u-Japan Policy utilizing NTT Group's comprehensive strength.
- 2. Build a reliable, secure, and convenient communications network environment and broadband access
- phone services and from copper to optical fiber lines.
- 3. Improve corporate value and achieve sustained growth

Achieve the Management Objectives

- and mobile communications.
- 2. Build the next-generation network that is highly available, secure, and reliable.
- 3. Smoothly migrate from existing fixed line to IP phone services and from copper to optical fiber lines.
- 4. Expand business opportunities using broadband and ubiquitous services.
- 5. Strengthen competitiveness and financial base.

The NTT Group will Continue to Provide These Safe and Secure Services, and Benefits to Society as a Trustworthy Company



infrastructure, while achieving smooth migrations from fixed line phone to Internet Protocol (IP)

1. Develop and implement broadband and ubiquitous services that include the integration of fixed line

The NTT Group is Committed to Remaining a **Trusted Corporate Group.**

Corporate Governance

To maintain the public's trust and achieve sustained development, the NTT Group has singled out corporate governance as a critical management issue. As a member of society and an entity that depends on its relationships with the various stakeholders,

including customers, shareholders and investors, business partners and employees, we are creating a system characterized by healthy and transparent management practices and a high

Corporate Organization, etc of NTT (Holding Company)

NTT (Holding Company) ("NTT") maintains a board of directors with 12 members, including two outside directors. In principle, the board of directors meets once per month to make decisions and report on important management issues. The inclusion of outside directors with independent status on the board serves to bolster our capabilities for overseeing the fairness of business transactions.

With regard to matters concerning the appointment and compensation of directors, in order to improve objectiveness and transparency, NTT has established the Appointment and Compensation Council, comprising four directors, including the two outside directors. The Appointment and Compensation Council deliberates on matters concerning the appointment and compensation of directors before the board of directors' meetings in which final determinations of such matters are made.

NTT maintains a board of audit, which is composed of five members, referred to as corporate auditors, of whom two are

level of ethics.

Audits by the Auditors

independent corporate auditors. Each corporate auditor attends board of directors and other important meetings. Through this and other means, the corporate auditors monitor the execution of NTT's business and operations, as appropriate. The corporate auditors are assisted by their own organization and staff maintained for such purposes. NTT's board of audit works in collaboration with corporate auditors from the NTT Group companies in carrying out its audit functions

In addition, NTT institutes various meetings and forms committees as necessary for the promotion of effective grouplevel management in keeping with its status as a Holding Company with general control and coordination responsibilities for the NTT Group. To this end, these meetings and committees engage in ad-hoc discussions of key issues concerning management on both the corporate and group levels, and thereby assist appropriate decision-making.

Each corporate auditor of NTT audits the performance by

NTT's directors of their duties as appropriate. In addition,

the corporate auditors work to strengthen the auditing system

by working in close concert with the NTT Group's audit firm,

including periodic discussion of the audit plans and results.

Internal Controls

Based on the COSO framework*, NTT assesses the preparation and operation of internal controls for the NTT Group as a whole, executes audit reviews to assure the correctness of these controls, and carries out comprehensive audits with respect to high risk items common to all NTT Group companies.

* COSO stands for Committee of Sponsoring Organizations of the Treadway Commission and the COSO framework is an internal control framework outlined in the Commission's report

Corporate Governance Structure



Corporate Ethics System

The NTT Group has taken various measures to enhance corporate ethics based on our core belief that it is imperative to manage our business not only in compliance with laws but also based on high ethical standards.

Specifically, in November 2002, the NTT Group adopted the "NTT Group Corporate Ethics Charter" as a code of conduct for all directors and employees. We have also established an accountability system that includes those corporate ethics committees, departmental heads and personnel from departments of the NTT Group companies responsible for the implementation of the Charter. At the same time, we set up and launched a Corporate Ethics Help Line (Consulting Center) that is available to all NTT Group company employees. This includes not just an internal helpline for reporting and counseling, but also an external helpline utilizing the services of attorneys. These are measures the NTT Group has adopted to create a corporate culture of transparency and openness. The NTT Group is also striving to expand and strengthen its internal checks, through ongoing educational activities, including employee training sessions and lectures by outside instructors, and by conducting surveys to gauge employee awareness of corporate ethics.

NTT Group Corporate Ethics Charter

- 1. Recognizing the establishment of corporate ethics as one of its most important missions, top management shall exert its leadership to ensure that the spirit of this Charter is adopted throughout the company, and shall assume full responsibility for solving any problems when any event inconsistent with that spirit occurs.
- 2. Every person with subordinate employees shall not only act in a self-disciplined manner, but shall also always provide quidance and assistance to his/her subordinate staff to ensure that their conduct is in conformity with our corporate ethics.
- 3. Every officer and employee of NTT Group shall not only comply with all laws and regulations, social standards and internal company rules whether in Japan or overseas but officers and employees shall also hold the highest ethical philosophy within himself/ herself both in public and in any private situations.

Among other things, each officer and employee, as an officer or employee of a member of a Global Information Sharing Corporate Group, shall keep himself/herself fully aware that any disclosure of customer or other internal privileged information constitutes a materially wrongful act. Also, as a member of a group of companies which holds great social responsibilities, he/she shall strictly refrain from giving or receiving from customers, business partners and other interested parties excessive gratuities.

- 4. Each NTT Group company, at the first opportunity, shall take initiatives to provide training programs in order to help its officers and employees enhance their awareness of our corporate ethics.
- 5. Every officer and employee of NTT Group shall direct his/her efforts to prevent wrongful or scandalous acts which may potentially occur as specialization and advancement of our business proceeds. Each NTT Group Company shall improve its system to prevent such acts including for instance the re-assignment of contract representatives who have remained with the same customers for a long period of time, and the improvement of monitoring tools to protect customer and other information
- 6. Any officer or employee who may come to know of the occurrence of any wrongful act or any scandal shall promptly report the wrongful act or scandal to his/her superior or other appropriate persons.
- If he/she is not able to make such a reporting, he/she may contact the "Corporate Ethics Help Line (Consulting Center)". It should be noted that every officer and employee who reports the occurrence of any wronoful act or scandal shall be protected so that the reporting party shall not suffer any negative consequences due to such
- 7. In the event of an occurrence of any wrongful act or scandal, each NTT Group company shall be committed to the settlement of the problem by taking appropriate steps through a speedy and accurate fact finding process, and responding in a timely, suitable and transparent manner in order to fulfill its social accountability

Business Risk

The NTT Group considers that business risk must be properly managed, because inadequate control could cause the company physical and economic losses. We thus strive to deal with such risks properly.

Specifically, we have an accountability structure for business risk management, and a standard manual for unified control of business risk throughout the group. We work to prevent and predict risks, so that should they arise, we are able to continue our business activities to the maximum extent, and minimize the impact on our stakeholders.

Human Rights Education

The NTT Group respects human rights. A commitment to resolving human rights issues, including fighting discrimination, is vital for building a bright, prosperous society, and all companies and organizations in the group are committed to this issue.

Specifically, we focus on such human rights issues as discrimination, the disabled, foreign residents in Japan, the elderly, sexual harassment, and power harassment, as well as trends in human rights in Japan and internationally, and also provide a broad range of human rights education training, in order to promote the treatment of human rights issues as a personal issue by each employee, deepen their understanding and awareness, and enable them to base their day-to-day business activities on human rights.

Establishment of the Corporate Social **Responsibility Committee**

To establish a clear management structure directed toward enhancement of the NTT Group's corporate social responsibility, NTT created Corporate Social Responsibility Committee in June 2005. The Senior Executive Vice President of NTT serves as Chairman of this Committee. In addition to NTT executives, directors of the NTT Group companies may attend committee meetings depending on the topics to be discussed at the meeting. The Committee is a vehicle for ongoing discussion regarding the promotion of the NTT Group's Corporate Social Responsibility initiatives. We are also working to establish systems to promote these initiatives within each group company.

NTT is Fully Committed to Achieving the Age of Ubiquitous Broadband Society.

We are helping to resolve issues facing society using Information and Communication Technology (ICT), while working to make the Internet safe for children and improve security.

We are Helping to Resolve the Issues of Society by Speeding the Development and Implementation of Ubiquitous Broadband Services.

In November 2002, the NTT Group created the "Vision for a New Optical Generation: Broadband leading to the world of resonant communication" in order to achieve the era of ubiquitous broadband society. Since then, we have worked tirelessly to achieve this goal, including the popularization and growth of B FLET'S optical access service and FOMA third-generation mobile communications services. Specially, our commitment to optical-access services include providing full-scale high-quality IP telephony and rich content, and our commitment to third-generation mobile communications includes enhanced device functionality and expanded service areas.

We are also active at R&D. We are researching future applications in high-volume telecommunications networks, and conducted the world's first successful communications experiment multiplexing 1,000 wavelengths on a single optical fiber.

We remain committed to helping to resolve the issues facing

society, including support for nursing and care, and enhancing remote and preventive medicine, through the development and implementation of ubiquitous broadband services through the convergence of fixed and mobile communications and other efforts.



We are also Committed to Tackling Potential Issues from the Development of the Age of Ubiquitous Broadband Society.

Conducting a Wide Range of Research to Help Make the Internet Safe for Everyone

Giving everyone equal access to Internet and other telecommunications services, regardless of age, region, physical disability, or whether they use a personal computer or mobile device, is a true measure of a prosperous age of ubiquitous broadband society.

We are conducting research to analyze and propose solutions for a variety of issues. At NTT DATA Research Institute for System Science, NTT DoCoMo Mobile Society Research Institute, InfoCom Research and other facilities, the NTT Group is working to achieve an era of ubiquitous broadband society that is safe and secure for all, in partnership with experts and researchers both inside and outside the group. We will also continue to actively publish the results of this research. Improving Infrastructure Reliability (Network Security Measures)

As broadband access rapidly expands and grows in popularity, damages from malicious exploitation of vulnerabilities and information leaks are coming to the forefront of the public consciousness.

The NTT Group is researching and developing informationsecurity technologies to enable secure access to network services, including more secure encryption technologies, as well as technologies to counter distributed denial of services (DDoS) attacks^{**1}, combat spam and unwanted email, and prevent information leaks. At the same time, we are researching ways to build a broadband environment that is secure from a sociological perspective as well.

Activity Topics

Enabling Remote Medical Diagnoses

There is an increasing need for pathologists to analyze human tissue samples for cancer cells and other ailments. But rural medical facilities without resident physicians' expert at pathology must make clinical analyses by physically sending samples to other labs. This makes the results of testing take longer, creating a large gap in the level of services between regions.

The NTT Group conducted field trials of telepathology jointly with Iwate Medical University, in order to eliminate these regional gaps in medical services. In the trials, WarpVision high-quality communication services and B FLET'S optical access lines were used to confirm that it is possible to deliver

Giving Children Safe and Secure Access to the Internet and Mobile Phones

In June 2004, NTT Resonant began advocating the "7 Rules for Kids" at Kids' goo, the portal site for children it operates, in order to promote safe Internet use by children.

In February 2005, two different versions of a booklet teaching about the 7 Rules for Kids - one for elementary students and one for instructors - were created, and 530,000 copies sent out.

Then in May 2005, research training classes based on the booklets was conducted at elementary schools.

Additionally, in May 2005 NTT DoCoMo began teaching the DoCoMo Mobile Phone Safety Class, which teaches

Studying Issues in the Networked Era

Today, the Internet is becoming an increasingly integral part of our lives, and its uses are becoming more diverse. At the same time, a number of issues are arising involving the Internet. In order to resolve these issues, the NTT Group has been running an ongoing project to study safe and secure Internet use since 1999.

In fiscal 2004, we conducted a study of the causes of instability in the network society, and changes in the structure of the real society, with the topic "Searching for

An Effort to Provide Systems to Combat Information Leaks

For the past several years, leaks of personal and confidential information have become an issue, and the introduction of measures to counter information leaks is an urgent task for companies. NTT (Holding Company) has developed a "storage-centric security system"*², which combats information leaks. The system has been introduced at the NTT

microscope images as high-resolution video, enabling rapid remote diagnosis during surgery. We now plan to explain the results of the trials and their effectiveness to government and medical circles, while commercializing the services on a large scale and promoting its implementation in medical facilities after obtaining evaluations and cooperation from experts.

Field Trials of Telepathology



children the knowledge and etiquette to use mobile phones correctly and safely. In fiscal 2005, the company plans to give the classes at up to 200 schools, with the cooperation of elementary, junior high, and high schools, as well as other educational institutions.



Booklet for Elementary Students (Japanese)



DoCoMo Mobile Phone Safety Class

the Relationship between the Real and Network Societies: The threat of instability in the network society." Experts gathered for 8 workshops per year, and surveys of the literature and questionnaires



Public Symposium

were conducted, culminating on March 2, 2005, with a public symposium, at which the efforts of the project to develop a healthy Internet society were made public.

(Holding Company) home office building, and preparations are under way to enable the NTT Group companies to offer this system to their business customers.

*2 Storage-centric security system

^{%1} A distributed denial of service (DDoS) attack

A distributed denial of service (DDoS) attack is an attack that plants attack programs on many third-party PCs and servers connected to the Internet, and then attacks a specific server by sending it large volumes of data

This system enables operating systems, applications, and other software assets to be centrally managed on a storage device, rather than just by users, in order to make management of desktop-device security, data backup, and other maintenance tasks more efficient. It utilizes the "storage-centric network technology" developed by NTT Information Sharing Platform Laboratories

The NTT Group Has a Variety of Disaster Countermeasure Commitments Aimed at Providing Telecommunications Services Capable of Withstanding Disasters.

Communications services not only form part of the base of the information society, but also are indispensable essential to society by virtue of their functions as an integral part of the people and as a safety lifeline. The NTT Group employs multiple back-up measures at all times to prevent systemic damage due to any unexpected large-scale disaster, with a basic disaster countermeasure policy of reliability improvement of telecommunications networks, securing essential communications, and fast recovery of services.

Providing Disaster-resistant Telecommunications Services

Reliability Improvement of Telecommunications Networks

Taking lessons from major disasters in the past, the NTT Group is implementing a wide range of measures in order to improve the reliability of its communications networks. For example, we are working to disperse installation of toll switches and create multiple routing for toll transmission lines, so that services will not be interrupted if a communications center in which relay switches are installed or relay routes are damaged. Additionally, earthquake-proofing, as well as measures

Securing Essential Communications

When a disaster occurs, telephone calls flood into the affected region, as people call to check on the safety or offer their condolences to people in the area. This makes it difficult to make a telephone connection in the affected area. If this happens, restrictions are placed on general calls, important communications and calls to 110 (police emergencies), 119 (fire emergencies/ambulance), and other emergency calls are ensured, in order to enable rescue and recovery work, maintain public order, and the like. Additionally, measures are offered against strong winds and fires, are being put in place in buildings, towers, and indoor and outdoor telecommunications

equipment. We also have a continual 24-hour nationwide communications-network monitoring system in case of unforeseen anomalies.



24-hour Monitoring of Network and Telecommunications Equipment

to allow the general public to check on the safety of people in the affected area. People can dial Disaster Emergency Dengon Dial "171", or use the i-mode Disaster Message Board Service. Measures have also been taken to enable people affected by the

disaster to communicate. For instance, speciallyinstalled public telephones (toll-free) have been set up at evacuation centers.

nationwide set up wide-

area support organizations,

which together work to

quickly bring services

back online.



Specially-installed Public Telephones

Fast Recovery of Services

The NTT Group companies provide highly maneuverable facilities for implementing disaster measures nationwide with the aim of assuring quick recovery and communications in disaster areas. If disasters or other events cut off communications services, this disaster readiness equipment is used to speed recovery. When there is a large-scale disaster, disaster task forces and other emergency organizations are rapidly set up, and depending on the scale of the disaster, group companies and affiliates



Emergency Restoration of Communications Cables

Activity Topics

Measures for The Mid Niigata Prefecture Earthquake

On October 23, 2004, a magnitude 6.8 earthquake struck with an epicenter in the Chuetsu region of Niigata prefecture. The combined capabilities of the entire NTT Group were focused on ensuring communications services and bringing telecommunications equipment back online in the affected area.

Immediately after the earthquake, blackouts covered a wide area of Niigata prefecture. Commercial power to most telephone exchanges and mobile phone base stations was cut, and they switched over to backup battery and generator power. As the blackout wore on, there was concern that backup power would run out, but NTT Facilities and others brought 45 power supply vehicle and 14 transportable power generators to Niigata prefecture from around the country, ensuring a supply of power to telecommunications equipment.

Fixed-phone services in Niigata prefecture was affected



Mobile Phone Services Restored by Portable Mobile Base Station (Yamakoshi Village $^{\pm1}$)

Offering Means to Check Wellbeing in Times of Disaster

When there is a large-scale disaster or the like, means are provided to check the safety of relatives and friends. People can dial Disaster Emergency Dengon(Message) Dial "171", or use the i-mode Disaster Message Board Service. These services have been utilized by many people, especially during The Mid Niigata Prefecture Earthquake of October 23, 2004. We have offered chances to try



out these services during Disaster Prevention Week and Disaster Prevention and Volunteer Week, in order to teach customers how to use the systems before a disaster strikes. by landslides and other problems, which damaged optical relay cables. Toll transmission lines were damaged in large parts of the village of Yamakoshi^{*1}, and the towns of Oguni^{*1} and Koshiji^{*1}, and communications to these places were cut off. Additionally, roads to the affected areas were cut off, preventing entry by land to those areas. For this reason, NTT East flew in portable satellite communications equipment and generators to the town halls and evacuation centers of the affected areas by helicopter, and ensured communications by setting up specially-installed public telephones.

Meanwhile, mobile phone services in the area around the village of Yamakoshi were cut off, due to damage to the toll transmission lines to the base stations. For this reason, NTT DoCoMo sent portable mobile base station to the Takezawa district of Yamakoshi, ensuring communications in the main part of the affected area.

In addition to this, the NTT Group also helped victims contact friends and relatives. NTT East set up 378 specially-installed public telephones at the 129 evacuation centers and other locations, while NTT DoCoMo loaned 92 mobile phones and other equipment free of charge and provided about 2,400 battery adapters at evacuation centers and other locations.



Specially-installed Public Telephones Made Available Using Portable Satellite Communications Equipment (Koshiji Town $^{\ast 1})$

%1 Currently the city of Nagaoka

%2 Excluding January 1

The NTT Group, Always Listening to Customers, is Continually Striving to Provide the Best Telecommunications Services.

The Customer's Voice is the Starting Point of Our CS *1 Activities

At the NTT group of companies, customers may enquire about various services, including telephone services or fault assistance or give suggestions for the improvement of our services at a "Customer Assistance Centre" or by contacting us through our web site or email. Also, structures have been established to answer customer queries. For example, NTT East's "Smile Committee" and the NTT West's "Customer First Activities Working Group" which

Offering Easy-to-use Products and Services to Every Customer

The NTT Group believes that communication services are indispensable to allow for smooth communications among people and between people and society. Therefore, the NTT Group strives to develop and offer easy-to-use products and improve its customer services **² on the basis of its universal design concept so that they are used by as many people as possible. For example, NTT DoCoMo is establishing a DoCoMo hearty style consisting of three pillars-"development of products and services," "expansion of customer service windows **3" and "implementation of various customer support measures"-to foster friendly relationships with the customers.

Security of Information and Protection of Personal Information

As a communication company, the NTT Group has been striving to properly control personal information, including customer information. As the "Act on the Protection of Personal Information" were fully put into effect in April 2005, the NTT Group reinforced its organization for controlling the security of information*5. Specifically, the Group formulated an "NTT Group's Information Security Policy" and each member company of the Group formulated and announced its "Privacy Policy." In addition, the Group systematically reviewed its existing rules and regulations and revised them where necessary. The Group also has provided all its employees with various types of training and carried out enlightenment activities. To protect personal information, the Group also supervises its contractors strictly on a continual basis. Despite those efforts, quite regrettably, personal information leaked from a certain member company of the Group. We offer our sincere apology for having caused much

are internally inter-connected systems have been established and designed to enhance the ability of branch and main offices to share information and customer suggestions to implement improvements in company operations. NTT DoCoMo, too, gives due consideration to customers' opinions and requests in improving its products and services. **1 CS:Customer Satisfaction

Providing Highly Reliable Services

In order to provide communication services that are indispensable to support safe, secure and comfortable life of people, the member companies of the NTT Group closely cooperate to monitor the Group's communication network 24 hours a day, 365 days a year. If some trouble occurs with the network, the Group has an organization that rushes for repair from the nearest maintenance center **4.

%2 See "Universal design guidelines for Web production" in Activity Topics on page 13

- 3 See "Creating shops friendly to customers" in Activity Topics on page 13
 4 See "The communications network for the protection of islands" in Activity Topics on
- page 13

trouble to our customers. In the future, we intend to thoroughly review our system for controlling personal information in order to prevent the occurrence of similar troubles.

NTT Group's Information Security Policy

In order to continue supplying safe, secure services at all times and remain to be a company relied on by customers forever, the NTT Group, as one of the responsible companies that shoulder the information communication industry, shall strive to maintain the security of information and contribute to the sound development of ubiquitous broadband society in accordance with the following policy.

- With a strong recognition of the importance of information security in ubiquitous broadband society, the Group shall strive to create a safe, secure, convenient communication environment and maintain information security.
- 2. All the board members and employees of the NTT Group shall fully recognize that protecting information is the base of the Group's business activities and an important social responsibility of any company, and the Group shall strictly observe the secrecy of communications and comply with the relevant laws and regulations, including the Personal Information Protection Act.
- 3. The Group shall reinforce its organization for maintaining information security, take thoroughgoing measures to prevent illegal access to information and loss, alteration, leak, etc. of information and implement activities necessary for protection of information, including thoroughgoing employee education and proper supervision of contractors, on a continual basis.

%5 See "Promotion of information security management" in Activity Topics on page 13

Activity Topics

Universal Design Guidelines for Web Production

NTT Cyber Solutions Laboratories have developed guidelines for Web production that can be used by many people, including the elderly and the disabled. The NTT

Group introduces the guidelines to corporate users such as public offices and provides Web solutions based on them.

The guidelines consist of 61 items compatible with JIS X8341-3. For example, they describe in detail the expressions and design that should be provided to permit visually impaired persons to utilize

Voice Browser.



NTT ウェブコンテンツ

Universal Design Guidelines (Japanese)

The Communications Network for the Protection of Islands

In Japan, other than the five home islands, there are 6,847 islands^{*6} and many people make their living. Ensuring the maintenance of communications network that is a lifeline to these islands is an extremely important issue.

NTT East and NTT West have laid approximately 5,100 kilometers of under-sea cables and used extensive microwave transmission equipment to guarantee the communications network between these islands and the mainland as well as between the islands themselves. Currently, we ensure communications network for inhabited islands and that there are no inhabited islands without telephone access.

%6 Source 54th Japan Statistical Yearbook 2005

Promotion of Information Security Management

Each member company of the NTT Group implements information security management in a way appropriate to the mode of its business under the NTT Group's Information Security Policy.

For example, NTT Communications, as a global IP solution company, with security positioned as the top priority item in supplying services, positively tackles total information security management involving not only technology but also humans and processes. Having specified behavior that must never be allowed, the company strives to uplift the employees' security consciousness using a security policy handbook, enlightenment video and various other tools.

Creating Shops Friendly to Customers

Aiming to create shops that the customers can use with a sense of security, NTT DoCoMo began installing TV phones for supporting communications in the sign language in its shops and making the shops barrier-free in 2003.

In addition, the company has opened DoCoMo Hearty Plaza designed and equipped in accordance with the universal design concept. The Plaza has attendants who can talk with the signs and provides a variety of unique services

which make the customers feel at ease.



Customer Support by TV Phone



Wireless Transmission Equipment being Inspected



Security Card (Japanese)

The NTT Group Strives to Enhance Its Corporate Value and Improve the Transparency of Management.

Enhancing the Corporate Value

NTT Holding Company ("NTT") believes it is critically important to serve the best interests of its shareholders over the long run. The NTT Group has been making a concerted effort to enhance the corporate value and return

About NTT Stock

Since the privatization in 1985, shares held by the government have been sold to the public six times. As of the end of March 2005, the number of NTT shareholders was as many as some 1.350.000. The individuals have 20.3% of total NTT Shares. domestic financial institutions and business corporations have 16.3%, foreigners have 17.6%, and the government have 40.8%*.

* NTT repurchased its own shares on September 6, 2005, and the government sold a portion of the NTT shares. As a result, the proportion of the NTT shares owned by the government decreased to 33.7% and the large stock "overhang" (stock that, if put on the market, could upset the supply-and-demand balance and put downward pressure on share prices) almost disappeared

Disclosure and IR Activities

NTT has listed its share on several stock exchanges (Tokyo, Osaka, Nagoya, Fukuoka, Sapporo, New York and London), and has issued domestic and foreign bonds. Therefore, NTT considers it extremely important to establish and maintain relationships with its shareholders and investors on the domestic and foreign capital markets. In order to discharge its accountability as a business corporation and secure the transparency of management, NTT discloses information on a timely, proper and fair manner. To help the shareholders and investors to better understand its management strategy, NTT also stages IR activity positively. As a place for direct communications between the shareholders and top management of the company, NTT holds not only general shareholders' meetings but also various presentation meetings

Activity Topic

SRI (Socially Responsible Investment)

NTT is highly rated by SRI assessment organizations. It has been adopted by FTSE4 Good and MS-SRI.(SRI indexes renowned around the world)

to shareholders. At the same time, the NTT Group has been striving to improve the transparency of management through fair disclosure and IR activity so that they are duly evaluated by the shareholders, investors and other stakeholders.

Dividends

NTT has adopted as its basic principle the payment of stable dividends with due regard to overall operating trends and financial situation while acting to secure necessary levels of internal reserves. Since FY 2004, NTT has increased the dividend per share from ¥5,000 to ¥6,000.

(IR road show, corporate strategy meeting, financial results presentation, presentation meeting for debt investors.) NTT also strives to use the web site for fair disclosure to the shareholders, investors and other stakeholders. This web site provides material and streaming videos used for presentation at various meetings as well as earnings release and annual reports.



FTSE4Good

Inc. and the London Stock Exchange)

FTSE4Good



Annual Report 2005

MS-SRI モーニングスター社会的責任投資株価指表 Morningstar Socially Responsible Investment Index

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MS-SRI Janan's first SRI stock price index developed by Morningstar Japan, based Index based on the environment, society on the stock prices of 150 companies and human rights, developed by FTSE Inc. (joint venture of Financial Times listed on the domestic stock exchanges and selected as being excellent in terms of social bearings

Working in Close Cooperation with Its Business Partners, the NTT Group Offers Quality Services.

Working in Close Cooperation with Many **Business Partners**

In order for the NTT Group to provide the customers with good communication services, etc., the cooperation with many business partners is essential. The business partners of the NTT Group are in extremely diverse fields. They include, for example, vendors of communication facilities (switchboards, etc.) and communication equipment (telephones, etc.), contractors installing communication facilities and customer

Partnership with the Suppliers

In order for the NTT Group to continue providing the customers with competitive and most advanced services at reasonable costs, the Group considers it essential to introduce new technologies and new products that are highly costeffective on a timely basis.

Basic Procurement Policies

In order to establish a mutually dependable partnership in an open manner for the procurement activity of the NTT Group,

the Group has formulated and publicized its basic procurement policies. In addition, for the convenience of suppliers, the Group announces its procurement information on its web site. It also



NTT's Web site for Procurement Information (URL) http://www.ntt.co.jp/ontime/index e.htm

Green Procurement

The NTT Group early started a green procurement activity aimed to reduce the environmental impact. The Group prepared guidelines for green procurement in 1997, urging all the member companies and suppliers to observe them strictly. The guidelines represent the Group's basic concept of green procurement and describe the matters necessary for the Group and its suppliers to contribute to the protection of the environment on a consistent basis.



premise equipment, and dealers delivering the Group's products and services to the customers. In order to ensure that the customers can use the Group's communication services with a sense of security, the NTT Group and its business partners continue to maintain mutual trust, fulfill their responsibilities and strengthen their relationships so that they can keep growing.

To that end, it has become increasingly important for us to accurately grasp the customer needs, establish good partnership with the suppliers and make a concerted effort to realize ubiquitous broadband society.

has contact points for providing guidance and receiving inquiries about procurement not only in Japan but also in North America and Europe.

Basic Policy of the NTT Group Procurement

- 1. Conduct its procurement in an open and transparent manner, taking into account its business needs:
- 2. Provide non-discriminatory and competitive opportunities to both domestic and foreign suppliers; and
- 3. Conduct global and market-driven procurement of competitive products that meet its business needs.



Guidelines for Green Procurement (URL) http://www.ntt.co.ip/ontime/ea/areen/index.html

The NTT Group Endeavors to Create a More Secure and Comfortable Workplace to Help Employees Demonstrate Their Own Abilities as Professionals.

Achieving Diversity of Manpower

In its hiring activities, the NTT Group seeks out individuals who can respond effectively to the changes and increasing globalization of the market environment in the telecommunications field, and who will bear the responsibility for NTT's IP and broadband businesses, international operations, and other strategic fields.

For many years, we have worked to increase employment opportunities for disabled workers, but as of June 2005, the percentage of disabled employees in the NTT Group was about 1.6% *1, which is still below the mandatory level of 1.8%. All of the companies in the NTT Group will continue their determined efforts to further increase employment for the disabled *2.

Promoting Joint Participation by Men and Women

The NTT Group promotes joint participation by men and women in an effort to create a corporate environment in which men and women can actively work together. We have implemented numerous systems to support employees with special family circumstances; for example, the Group's system of temporary leave for employees rearing children or caring for disabled seniors exceeds legal requirements, and we also provide company information and support correspondence education courses to ensure that these employees can easily return to their former positions. We are also working to provide even more extensive information to employees on leave based on the intent of the "Law for Measures to Support the Development of the Next Generation." **4

%4~ See "Support for Employees Balancing Work and Private Life" in Activity Topics on page 17 $\,$

Safety at Work

The NTT Group considers work safety to be a top priority, and makes every effort to prevent accidents before they occur, for example by constantly reviewing work environments and operation manuals, promoting awareness reforms among employees by introducing case studies, and conducting regular safety inspections. In the event that an accident does occur, information is immediately shared throughout the NTT Group, and determined efforts are made to ensure greater work safety in the future by notifying all employees of the incident and drawing attention to safety issues, and by implementing systematic measures to prevent reoccurrences. The NTT Group has introduced a mandatory retirement age of 60, but from the perspective of promoting employment for seniors, we introduced a "Career Staff System" in 1999 that allows these mandatory retirees to be rehired, and to continue working up until the age of 65. Many of our valued senior employees have opted to take advantage of this system. We also support the creation of a wide range of employment opportunities by creating work environments that take advantage of ITC (Information and Communication Technologies) *3.

- **1 This figure refers to wholly owned the NTT Group companies and the three listed NTT companies (NTT DoCoMo, NTT DATA , and NTT Urban Development)
 ** 2 See "Promoting Employment for the Disabled (Establishment of NTT Claruty)" in
- Activity Topics on page 17 % 3 See "Creating Employment Opportunities through ICT Applications" in Activity Topics on page 17

Open Recruitment within a Company

The NTT Group has implemented a system of in-house recruitment in order to seek out and place employees with a strong desire to take on new challenges and an ability to contribute to the Group's business, and to create opportunities for these employees to try new work scenarios where they can demonstrate their own strengths.

Manpower Training

The NTT Group encourages independent career development among all employees by clearly indicating the characteristics of the "ideal employee" (business professional) in each business field, and provides suitable programs for achieving this goal, including training seminars, e-learning programs, and correspondence education.

We have also established programs for directors and managers, with level-specific management training designed to further increase employees' management skills.

Welfare Benefits

From the first day of employment until the day of retirement, NTT Group employees enjoy a wide range of welfare benefits. For example, the NTT Group companies offer a "Cafeteria Plan" that allows employees to freely choose their menus in keeping with their own personal lifestyles, and there are many training and counseling rooms to support employees in creating their own life designs. We have also implemented numerous health management measures, including a system for promoting mental health.

Activity Topics

Creating Employment Opportunities through ICT Applications

The NTT Group has created a home work environment using ICT (Information and Communication Technology) in order to create more employment opportunities for disabled individuals, people raising children, and others who have the desire, knowledge, and ability to work, but who are limited in terms of the "time" and "place" in which they can work.

For example, NTT Com Cheo has set up a system for responding to customer inquiries in which registered employees work from their own homes, answering questions by phone in cases where the inquiries do not involve the use of customer information. This system creates part-time employment for hundreds of employees who had no choice but to leave their full-time positions to care for children or to provide family care.

Two years ago, NTT NEOMEIT opened a "Virtual Factory" where telecommuters create and edit digital maps online

Promoting Employment for the Disabled (Establishment of NTT Claruty)

NTT Claruty which was established in July 2004 to further expand employment of the disabled in the NTT Group, received certification as a "Special Subsidiary"*⁵ in the NTT Group in June 2005.

NTT Claruty employs many individuals with disabilities, who work mainly in areas such as the operation of portal sites for seniors and the disabled, evaluations of Web accessibility, and the creation of electronic data from printed materials. When the company was established, the work environment was

Support for Employees Balancing Work and Private Life The NTT Group has put in place a support system to assist employees in balancing their work and private lives, particularly in cases where these employees are raising young children or providing family care. There are two childrearing support systems: one in which employees can take a temporary leave of absence for as long as three years after a new child is born, and one in which the employee can work on special schedule with shorter working hours while raising a child up to six years of age. Similarly, there are two support systems for employees caring for disabled seniors: these employees can take a "family care leave" of up to 18 months, and can work on special schedule with shorter working hours for up to three years, including the time taken for the family care leave.

The NTT Group has also created a "Child care and Family Care Support" site on its in-house intranet to ensure that all through a broadband network. Staff at the center use teleconferencing systems and virtual network software to support telecommuters 24 hours a day. Currently, we employ over eighty people in seven prefectures in the western Japan area who telecommute because they have personal reasons that prevent them from travelling to work.



Outline of Operations at the NTT Com Cheo Virtual Contact Center

made to accommodate even severely disabled employees, for example with slopes and vending machines designed to enable easy access to wheelchair users. This work environment

is constantly being modified to reflect the opinions expressed by disabled employees.



Carpets use color contrasts to assist visually impaired employees. Stronger contrasts enable these employees to move about more easily

385 A system in which subsidiaries designated by the Minister of Health, Labour and Welfare as having met certain fixed conditions for promoting employment of the disabled are included as offices of the parent company when calculating the ratio of disabled employees

employees can easily take advantage of the systems described above. The site introduces NTT systems related to caring for children and seniors, and provides information on public and private child care services, family care services, and social insurance systems. The Group actively promotes "Measures to Support the Development of the Next Generation," for example by providing employees on leave with information they might require from the workplace, and by offering

whatever support might be needed to ensure that these employees can return to work easily after fulfilling their responsibilities at home.

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The NTT Group "Child Care and Family Care Support" Homepage (Japanese)



As a Good Corporate Citizen, the NTT Group is Actively Involved in a Number of Activities to Contribute to Society.

The NTT Group's Philosophy on Contributing to Society

The NTT Group supports rich interpersonal communication through telecommunications services. It is also committed to a number of social contribution activities*1. Our concrete philosophy is that a company is also a member of society, and acts together with local residents as a good corporate citizen. In 1992, NTT created Social Contribution Committee and Social Contribution Office, which have actively worked to contribute to society ever since. Based on this basic philosophy, the NTT Group is currently contributing to society in a variety of ways, with each group company acting according to a policy suiting its own business characteristics.

The NTT Group's Support for Employee Volunteer Activities

The NTT Group is working to support volunteers in a number of ways. It believes that such activities are useful for contributing to the sound development of society, as well as diversifying employees' viewpoints through interest and involvement in society, and helping to foment rich sensitivity.

In order to support volunteers who focus on societal issues as contributing members of society, and work to resolve these issues, we implement support in three stages: cultivating a volunteer mindset, encouraging volunteerism, and supporting volunteers

%1 We report some specific activities. See the Activity Topics on pages 18-19 and 20-21 for some examples of efforts to contribute to society

Volunteer Activities of Retirees

People who have retired from the NTT Group also actively volunteer their time in activities throughout Japan. Individually or in groups, they volunteer in regional promotion, social welfare, environmental conservation and beautification, education and culture, international exchange, and other activities

Some specific examples of ongoing active commitments are: support activities at facilities for the elderly, disabled, and other locations; helping to promote local culture with the compilation of local histories and dialect glossaries and the like, and park cleanup.

Activity Topics

Social Welfare The NTT mimi-Project (Ear-Project)

The NTT mimi-Project, a working group for hearingimpaired and hearing employees from the NTT Group companies who provide services jointly to the hearing impaired, was started in 1998. The working group studies the NTT Group products and services from the point

of view of the hearing impaired. Also, in fiscal 2004

we offered sign-language workshops and activities to promote understanding of hearing impairments to NTT employees.



A Meeting of the NTT mimi-Project

Social Welfare and Sports Promotion Support for the Special Olympics

The Special Winter Olympics, a sporting competition for persons with intellectual disabilities, were held in Nagano from February to March 2005. The NTT Group provided support in the form of equipment, such as communication systems, as well as financial support. In addition, about

250 NTT Group employees volunteered at the venues and in management of the event, and also helped to cheer on the athletes.



Volunteers at the Sporting Venues

Social Welfare

Support for Newspaper Reading Service Team In 1985, a group led by the NTT Group retirees began services to read newspapers and other publications over the telephone for persons with vision impairments. The NTT

Group actively supports these volunteers, providing locations, telephones, newspapers, and other support.



Vision Impaired

Social Welfare and Promotion of Education and Culture NTT Group Presents NHK Symphony Orchestra Concert

Taking the concept that music is communication, since 1985 the NTT Group has organized NHK Symphony Orchestra Concerts in many regions with the cooperation of the NHK Symphony Orchestra, with the wish of enabling as many customers as possible to savor and be moved by fantastic music. In fiscal 2004, concerts were held in Tokyo, Kyoto, and Kagawa.

Persons with hearing impairments are also invited to the concerts and use "Tokimeki" vibrating live phones to enjoy the orchestra's powerful performances.



"Tokimeki" Vibrating Live Phones Use the Principle of Bone-conduction Technology

Promotion of Education and Culture Easy IT Classes and Other Events

The companies in the NTT Group offer IT classes and other opportunities designed to give the children who will lead the society of tomorrow first-hand experience with IT, and create opportunities for parents and children to interact.





NTT Communications Organized the Fasy Internet Class

Students on Summer Holiday

Regional Promotion and Interaction Participation in Local Events Nationwide

Branches and offices of the NTT Group companies nationwide are involved in projects in partnership with local communities. In particular, NTT employees actively participate in local events. We also work to interact with local communities. We independently plan events to help vitalize communities and create opportunities to interact with members of the local community.





Employees of NTT East Participate in Nebuta Festival (Aomori pref.)

Employees of NTT West Participate Hinokuni Festival (Kumamoto Pref.)

Creating a Prosperous Society [In Partnership with Our Stakeholders]



The NTT Group's Philosophy on Supporting Volunteers



This program matches donations made by employees, in support of employees' fundraising and charity activities

International Exchange and Contribution Supporting Relief to The Major Earthquake off the Coast of Sumatra

The NTT Group donated a total of about ¥60 million in grants, employee donations, and supplies to help victims of the tsunami tidal waves caused by a major earthquake off the coast of Sumatra in December 2004.

As one part of the NTT Group's donations of supplies, NTT DoCoMo built an FM radio station through an NGO specializing

in telecommunications in the city of Lhoksmawe, in the Indonesian province of Aceh, in order to help provide information to tsunami victims. The radio station began broadcasting in June 2005.



The New FM Radio Stati

Protecting the Natural Environment **Environmental Beautification Activities**

The NTT Group employees and their families work together with members of their local communities on

environmental beautification suited to the local situation. They also actively participate in cleanup programs organized by various groups, including the Tokyo Bay Cleanup Project.



NTT Facilities Employees and Their Families Pick Up Trash in an Environmental Beautification Project

Relationships with Society

Examples of Major Social Contribution Activities

Below are some of the main ways in which the NTT Group companies contributed to society in fiscal 2004, by genre.

Ge	nre	Example	Summary	Main implementing companies
		Donation to "KIDS"	Sponsorship of the NPO KIDS, which was established with the goal of nurturing autonomy and social skills in children with disabilities. Employees actively participate in and make donations to events organized by the NPO.	NTT East NTT DATA
	Support for Children	Participation in ASHINAGA P Walk 10	Group companies participated in the ASHINAGA P Walk 10 walkathon organized to support educational opportunities for children who are victims of illnesses, disasters, and the like (participation fee as donation).	NTT East NTT West NTT DATA NTT DoCoMo NTT Facilities
		Heart-warming Christmas	Since the Christmas of 1997, the company has collected funds through a "Heart-warming Christmas" charity auction held within the company. The money collected is donated to such NPOs as Peace Winds Japan and Save the Children.	NTT DATA
1. Social	Support for the Disabled	Distribution of "Please Call" Notebooks	Since 1983, the companies have been making "Please Call" notebooks. These notebooks are a communication tool, in which persons with speech or hearing disabilities write down a telephone number, name, and message, and ask a nearby person to make a telephone call for them. They are continuously distributed to persons with disabilities through government agencies, welfare groups, and others (220,000 copies distributed in fiscal 2004).	NTT East NTT West
Welfare	NTT DATA-style Valentine	On NTT DATA Valentine's Day, persons with disabilities sell sweets made at welfare work facilities, vocational facilities, and the like, and sell them to employees, with a donation included in the purchase. The company matches the donations collected from the sales of sweets one for one, and the donations go to support the activities of an NPO group in such fields as support for the disabled.	NTT DATA	
Donations to Welfare Groups, NPOs, Etc.	Donations to Japan UNESCO Federation and Others	The companies make donations to the Japan UNESCO Federation, which promotes the protection of world and cultural heritages, the Japanese Red Cross, Socienty which conducts international relief activities, and others on an ongoing basis.	NTT (Holding Company) NTT East NTT West NTT Communications NTT DoCoMo NTT Facilities	
	Donations of Used PCs	In order to help elder people gain access to computers, the companies donated PCs to NPOs, NGOs, and foundations active in this area.	NTT Communications NTT COMWARE	
Charity Bazaars		Charity Bazaars	Employees from each of the companies' offices donate charity goods, which are sold and the moneys collected donated to location welfare organizations. Main bazaars organized and participated in in fiscal 2004: Charity Bazaar to Celebrate Passing FLET'S 300,000 Subscribers (Kanagawa); Group Charity Bazaar (Iwate); Yamagasa Bazaar (Yamagata); Charity Aid Osaka (Osaka), etc.	NTT East NTT West
		NTT East Friendship Chat & Music	Since 1987, the company has organized the NTT East Friendship Chat & Music, which enables persons with vision impairments to enjoy music and conversation. In fiscal 2004, a poetry reading and a capella concert were held.	NTT East
2. Promotion of Education and Culture Painting & Arts	NTT DATA Concert of Concerts	Since 1996, the company has organized classical music concerts at Suntory Hall, with the aim of broadening communication with customers through arts and culture. Two concerts were in Tokyo held in fiscal 2004, with 3,000 people from the general public attending.	NTT DATA	
	Painting	DoCoMo Future Museum and Others	The companies organized the Children's Drawing Contest, DoCoMo Future Museum, and others, in order to support the futures and dreams of children. The drawing contest is open to pre-elementary children to junior high-school students, with awards presented for winning drawings.	NTT East NTT DoCoMo
	Promotion of NTT-ICC	The NTT Inter-Communication Center (ICC) was begun to commemorate the 100th year of the telephone. It opened in April 1997 in Tokyo Opera City (Shinjuku, Tokyo), as a new type of museum that will create arts and culture in the 21st century.	NTT East	

Ge	nre	Example	Summary	Main implementing companies
2. Promotion of Education and Culture	IT Education	Opening of Web site for Children	The companies offer the Web sites Super Media Kids and Communication World Adventure, which explain the combination of telephone and the Internet in an easy to understand way. *NTT East Super Media Kids (Japanese only) http://www.ntt-east.co.jp/kids *NTT West Communication World Adventure (Japanese only) http://www.ntt-west.co.jp/basic/faq/index.html1999	NTT East NTT West
3. Regional Promotion and Interaction	Support for Restoration	Support for Recovery from The Mid Niigata Prefecture Earthquake	The NTT Group has provided grants for The Mid Niigata Prefecture Earthquake, which struck in October 2004, as well as donations from employees. Additionally, a large number of employees were dispatched to assist in ensuring communications services and in the recovery of communications equipment in the affected area.	NTT (Holding Company) NTT East NTT West NTT Communications NTT DoCoMo NTT Facilities
	Education	Children Anywhere Stories	Children Anywhere Stories is a project that creates stories from images photographed by French and Japanese children using mobile phones, with the aim of promoting digital expressive power in children, and cross-cultural exchange. The children actively engage each other.	NTT DoCoMo
4. International Exchange and Contribution	Luucation	Aid for School Construction in Thailand	Since 1998, the company has supported the building of schools in Thailand jointly with Japanese and Thai NGOs, as part of efforts to build an educational environment. Starting in 2005, the company is also donating used PCs and supporting IT education.	NTT DoCoMo
	Nature Support for Indonesian Reforestation Program		The company conducts tree planting in Indonesia, where the ecosystem is in peril due to clearing of rainforest and slowness in implementing conservation measures. The efforts promote environmental conservation, habitat protection, and improvement of the standard of living of local communities.	NTT DoCoMo
	Cleanup	Participation in Environmental Beautification at Mount Fuji	Participation in the Mount Fuji Cleanup Program organized by the NPO Fujisan Club and the Association for a Beautiful Mount Fuji, which were established with the goal of beautifying the environmental of Mount Fuji, renowned worldwide for its beauty.	NTT DoCoMo NTT Facilities
5. Protecting the Natural Environment	Greening	DoCoMo Woods	Since 1999, the company has conducted tree planting, clearing of underbrush, and other activities at 26 DoCoMo Forests nationwide. The company plans to have DoCoMo Forests in all 47 prefectures by 2012.	NTT DoCoMo
	Others	Nature Network Project	The company agrees with the ideal of live broadcasts of wildlife and plants in their natural environment via the Internet, and has supported the program since its inception (2000). *Nature Network http://www.naturenetwork.net	NTT DATA
6. Promoting	Popularization	Sports Classes	The companies organize sports classes in close cooperation with local communities, including baseball, soccer, tennis, and badminton, with the goal of helping children grow up healthy through the promotion of sports. Employees volunteer at the classes.	NTT East NTT West NTT DoCoMo
Sports	Sports of Sports	NTT Triathlon Japan Cup	The companies organized the NTT Triathlon Japan Cup in order to help popularize and develop triathlons. The companies continually support the national triathlon team.	NTT East NTT West
7 Others		Establishment of NPO Mobile Communication Fund	The company presents awards, subsidizes organizations, and scholarships for personal study expenses for students from Asia, and other support with the aim of contributing to the creation of a healthy and prosperous society, and the development of telecommunications in the mobile and ubiquitous networking age of the 21st century.	NTT DoCoMo
1. 001015	Activities	Cooperation in Management of National NPO Search Site	The company cooperates as needed in the development and management of a Web site capable of searching for NPOs nationwide, in cooperation with Japan NPO Center. **NPO Plaza(Japanese only) http://www.npo-hiroba.or.jp	NTT Communications

Creating a Prosperous Society [In Partnership with Our Stakeholders]



The NTT Group's Commitment to Reuse and Recycling

If we do not make effective use of the earth's precious limited resources, we will not be able to build a bright future for the human race. It will also be impossible for companies to achieve sustainable growth. We at the NTT Group have thus long been focused on environmental issues, and we remain committed to a wide range of efforts to build systems and frameworks for the effective use of resources. In the next few pages, we showcase a few of these activities: reuse and recycling of telecommunications equipment, 100% recycling of mobile phones, closed-loop recycling of telephone directories, and total recycling of paper resources via MPM.

Appropriate Disposal of Used Telecommunications Equipment

"Zero Emissions" Achieved in Reuse and Recycling of Telecommunications Equipment

NTT East, NTT West, NTT Communications, and NTT DoCoMo have a wide range of communications equipment in order to provide telecommunications services. As we upgrade our equipment due to end of equipment lifetime, offering new services, and the like, some of our existing equipment is dismantled and removed from services. After equipment is removed from services, we actively reuse as much of it as possible within the NTT Group,



and recycle as much of the remainder as possible. One example is communications cables. We remove and palletize the sheathing of the cables, and reuse it to make new cable sheathing, and do other things to reuse communications cables at the material level. Through these and other efforts, in fiscal 2004 we achieved a 99.2% recycling rate for dismantled communications equipment, for the first time achieving "zero emissions" in this field.



Recycling Our Precious Resources

100% Recycling of Mobile Phones

NTT DoCoMo collects used mobile phone bodies, batteries, and other items at its DoCoMo shops, and recycles them. We use a unique tool called a "mobile phone punch" on collected mobile phones to protect the personal information they contain, crushing them in the customer's presence. We then finely separate the bodies, batteries, and other items into their various materials. Through the cooperation of disposal



companies and appropriate handling, we are able to recycle 100% of our mobile phones. For example, we use the copper, silver, and other metals we collect through separation and processing as recycled resources, while the slag left over during the manufacturing process is used as a material in concrete and cement.

The NTT Group's Commitment to Reuse and Recycling

From Used Telephone Directories to New Ones

Closed-loop Telephone Directory Recycling

NTT East and NTT West publish about 120 million telephone directories every year. NTT DIRECTORY SERVICES, which makes our telephone directories under contract, created a closed-loop recycling system that makes new telephone directories out of old ones, in order to reduce the amount of paper resources (virgin pulp) used in telephone directories.

We strive to collect old telephone directories when the new ones are delivered. If the customer is not at home, we leave a note stating that we will come again for the directory, and stating the date we will be back. We also take other steps to increase our collection rates, including making pick-ups at our customers' request.



Used Paper is Helping to Clean Our Air and Water

Total Recycling of Paper Resources through MPM

NTT Access Network Service Systems Laboratories has developed a new material called micro porous material (MPM) that has the ability to improve water quality and absorb toxic gasses using incinerated ash of waste materials (paper-plant sludge), which contains clay, etc. produced in the used-paper recycling process.

MPM is mainly made from clay. Thus, after it has been used



to purify water, it can be used as nutritive soil, enabling the total recycling of paper resources. A number of verification experiments have already been conducted jointly with local governments, in which MPM was used to purify the water of rivers and lakes. Efforts are currently under way to gain wider use of this material.

Ascertaining the Environmental Impact of Each Process in Our Business Activities, and Continually Striving to Reduce Each Impact.

Overview of the Environmental Impact of the Business Activities of the NTT Group

At the NTT Group, we believe that the basis of environmental management is to ascertain the environmental impact not only at the development of business activities, but also in each process of them. We are committed to monitoring and reducing the environmental impact on society of each process, from procurement, to distribution, to operations and provision of products and services.

Principle Activity Targets for the NTT Group (by 2010) and Level of Achievement in FY 2004

Prevention of global warming Reduce CO₂ emissions to no greater than 1990 levels.

Performance in FY 2004: 3,190,000 tons =1 (target: 1,690,000 tons) CO₂ emissions have increased due to increase of power use. %1 Does not include those from construction work and physical distribution

Energy saved and comsumed through use of IT (Estimated by NTT) Energy reduction *2 1.4% Energy consumption *2 0.9% Due to widespread IT, the amount of energy reduction has become 1.5 times that of energy consumption. *2 Percentage against the gloss energy consumption in Japan

Waste management

Reduce amount of waste to no more than 15% of 1990 levels. Performance in FY 2004: 57,000 tons (target: 72,000 tons) Cleared the target for the first time 6 years ahead of the plan.

Paper resource management Reduce amount of virgin pulp used to no more than 80% of 1990 levels. Performance in FY 2004: 33,000 tons (target: 84,000 tons) We have achieved this target for five straight years.

Please see the pages below for more information about the results of these activities. • Prevention of global warming pages 30-32

- Waste management pages 34-35
- Paper resource management page 33





^{*1} Products that met the severe environmental criteria defined by NTT E *2 Research and development by NTT (Holding Company) Laboratories

%2 Research and development by NTT (Holding Co
 %3 See page 32 for the details



aboratories

Based on the Concept of Ecology Program 21, Organize a Business-suited Group for Environmental Protection and Promote Effective Activities.

NTT Group Ecology Program 21

NTT Group Ecology Program 21 is the NTT Group's concept for contributing to the realization of a sustainable society. It features three core elements: NTT Group Global Environmental Charter; Contributions to Local Environmental Protection; and R&D of Leading-edge Environmental Technologies. The NTT Group is contributing to the realization of a sustainable society, carrying out a wide range of environmental-protection activities based on this concept.

The NTT Group Organization for Promoting Environmental Protection

NTT Group Global Environmental Protection Committee serves as the top decision-making body for the NTT Group for reducing the environmental impact of its business activities, as well as for effectively promoting the reduction of environmental impact in society as a whole through the use of IT. The committee is chaired by the Senior Executive Vice President of NTT (Holding Company). The committee presides over three subcommittees: 1) the Greenhouse Gas Reduction Committee; 2) the Waste Disposal and Recycling Committee; and 3) the Environmental and IT Committee. Issues are resolved by means of working groups consisting of committee members. The NTT Environmental Protection Office coordinates between NTT companies, and promotes environmental protection by liaising with each company's environmental organizations.

NTT Group Ecology Program 21



Three Green Guidelines Take Business Characteristics into Account

The businesses of the NTT Group feature the procurement of large quantities of products, possession of R&D divisions, and possession of a large number of buildings. We thus promote the effective reduction of environmental impact. In our more than 100,000 yearly procurement activities, we assess corporate organization and products via our Green Procurement Guidelines; in R&D, we assess R&D means and processes, and the reduction of environmental impact of its results, via the Green R&D Guidelines; and we assess extension of lifetime and six other categories relating to our buildings according to the Green Design Guidelines for Buildings.

The NTT Group Organization for Promoting Environmental Protection



The NTT Group Introduced Environmental Accounting in FY 2000, and is Implementing Environmental Management More Efficiently.

Environmental Accounting

The NTT Group introduced environmental accounting in fiscal 2000, in order to tie environmental-conservation activities to economic activities, and promote efficient environmental management. In order to make the cost-benefit relationships of environmental accounting clearer, in fiscal 2004 we began accounting for the benefits of risk avoidance as an environmental-conservation benefit, expressing the benefits gained from avoiding potential risks of legal violations, environmental pollution, and the like through proper handling beforehand. Environmental accounting in fiscal 2004 revealed environmental-conservation costs of 62,360 million yen, including 11,630 million yen for environmental investment and 50,730 million yen for environmental expenses. The quantitative benefit corresponding to these environmentalconservation costs was a 68,000-ton reduction in CO2 emissions. The economic benefits totaled 42,960 million yen, including the reduction of new procurement expenses through the reuse of telecommunications equipment, and reduced expenses from decreased energy consumption, as well as a

1.Scope of Inclusion

The companies subject to consolidated environment accounting are NTT (Holding Company), NTT East, NTT West, NTT Communications, NTT DATA, NTT DoCoMo, and their group companies (170 companies in total).

2.Accounting Time Frame

Data for 2004 report is from April 1, 2004 to March 31, 2005 Data for 2003 report is from April 1, 2003 to March 31, 2004

3. Method of Calculation

• Accounting is based on NTT Group Environmental Accounting Guideline. This guideline is in full compliance with the Environmental Accounting Guidelines (2005 Version) issued by the Ministry of the Environment.

• Conservation costs are expressed in currency units, while conservation benefits are classified into those that can be expressed in monetary units and those expressed in physical quantity.

• Conservation costs are tabulated separately as environmental investments and environmental expenses. Moreover, starting in 2003 depreciation expenses are included in environmental expenses. Personnel costs are also included in environmental expenses.

4.Deemed Effects

Deemed effects of decreased environmental load (quantitative benefits) derived by NTT customers and the NTT Group through the use of IT are not included in the environmental accounting described at the right, but are reported elsewhere in the report as follows: Pages 27 and 32

benefit of 430 million yen from our newly introduced risk avoidance, including avoidance of the risk of illegal dumping of industrial waste, and the risk of improper handling/nonthorough management of PCB.

Although our environmental-conservation costs increased by 8,960 million yen compared with fiscal 2003, this was due to costs from the installation of additional cogeneration equipment, and the costs of R&D to reduce the power consumption of fourth-generation mobile-phone transmitters. Meanwhile, the economic benefits increased by 7,500 million yen (excluding risk-avoidance benefits); this was due to our increased reuse of telecommunications equipment thanks to a more thorough program, and reductions in new-procurement costs.

Environmental Conservation Costs							
Ministry of the Environment	FY 2	2004	FY 2	FY 2003			
guidelines classification	Environmental investment	Environmental expenses	Environmental investment	Environmental expenses			
1. Business area cost	63.2	247.1	59.5	217.4			
Pollution prevention cost	0.5	3.7	1.0	7.1			
Global environmental conservation cost	55.7	96.4	56.0	68.9			
Resource circulation cost	7.0	147.0	2.5	141.4			
2. Upstream/Downstream cost	0.7	27.1	0.9	41.7			
3. Administration cost	1.4	55.2	1.1	62.5			
4. R&D cost	51.0	176.8	19.0	129.9			
5. Social activity cost	0.0	1.1	0.0	2.0			
6. Environmental remediation cost	0.0	0.0	0.0	0.0			
Total	116.3	507.3	80.5	453.5			

Environmental Conservation Benefits

		(100 1111101
Economic benefits	FY 2004	FY 2003
Reduced expenses from decreased energy consumption	46.8	48.6
Amount gained from recycling	26.7	22.1
Reduction of waste-disposal expenses with recycling	0.5	0.5
Reduced expenses of new purchases through reuse	327.3	252.0
Dismantling communications facilities	327.2	251.8
Office waste	0.1	0.2
Reduced postal expenses through digitization	17.1	12.3
Risk-avoidanse effect	4.3	_
Other economic effect	6.9	14.8
Total	429.6	350.3
		(10,000 tons)
Quantitative benefits	FY 2004	FY 2003
Reductions in CO_2 emissions through energy-conservation measures *	6.8	7.5
Total quantity recycled	78.2	77.7
*Reduced CO. omissions through one ray concernation measure	o oro o colculatio	n of the difference

Reduced CO₂ emissions through energy-conservation measures are a calculation of the difference between actual emissions and predicted emissions if those measures had not been put in place



Proactively Taking Actions to Prevent Global Warming through the Introduction of **Energy-efficient Facilities and Other Means.**

Promote Greater Energy Management through the Total Power Revolution (TPR) Campaign

Over 90% of the CO₂ emissions of the NTT Group are from power consumption. Thus, in 1997 we launched a campaign called Total Power Revolution (TPR) in order to reduce our power consumption. The TPR campaign promotes energy management at the approximately 4,000 buildings we own nationwide. The campaign has included efforts to introduce energy-efficient power and air-conditioning systems; convert servers, routers, and other IP equipment to use DC power in order to reduce power consumption; and improve energy self sufficiency through such clean sources of energy as solar and wind power systems. In fiscal 2004, we succeeded at reducing out power consumption by 180,000 MWh. Due to the growth of broadband services, however, we installed additional IP equipment, and installed new third-generation mobile-phone base stations. As a result, our power consumption has increased with each year; consequently, our CO2 emissions in fiscal

2004 were 3,190,000 tons, a 180,000-ton increase against the previous year. The NTT Group is committed to achieving an age of safety and security, and ubiquitous broadband and computing. In order to accomplish this, we will continue to work to expand the telecommunications infrastructure. We have thus changed the index used for our targets for global-warming prevention from total CO₂ emissions to CO₂ emissions per unit. We are committed to efficiently deploying telecommunications equipment, while reducing the environmental impact on society as a whole through the deployment of ubiquitous broadband services provided by the NTT Group.

New NTT Group Global Warming Prevention Targets

By 2010, achieve the following reductions in CO₂ emissions per unit compared to 1990 levels:

- Total for telecommunications carriers: Reduction of at least 35% per subscriber Telecommunications carriers: NTT East, NTT West, NTT Communications, and NTT DoCoMo
- Total for solutions companies: Reduction of at least 25% per unit sale Solutions companies: NTT DATA, NTT COMWARE, NTT Facilities, etc.

Note Divided into two groups in light of the business formats of the NTT Group companies

Power Usage

Energy generate



Amount of Clean Energy Generated



Other Greenhouse Gas Emissions N2O CH4 HFC PFC SF6 9.000 7.000 5.000 4,000 3.000 2,000 1.000 2004 (fiscal year

10.000

8.000

6,000

Number of Clean Energy Generators





Activity Topics

FOMA Base Station Using Solar and Wind Power In July 2004, NTT DoCoMo began operating a FOMAservice base station called the DoCoMo Eco Tower. In consideration for the global environment, the tower does not use commercial power; it is completely selfpowered, using solar and wind power. Located in the city of Tateyama, Chiba, the 32.5-meter tower's design evokes the image of a canola blossom, the Chiba Prefectural flower. The solar panels at the bottom are designed to look like leaves, the tower itself the stalk, and the windmill vanes the flower's petals. Its maximum power-generation capability is 8.5 kWh from solar power and 6.0 kWh from wind power. The NTT DoCoMo Group has 16 movaservice base stations that use solar and wind power, but this is the first such FOMA-service base station.

The NTT East Saitama Shintoshin Building: A State-of-the-art Energy Efficient Building

Construction of the NTT East Saitama Shintoshin Building (Saitama Media Wave) began in July 2004. The building features a system integrating the management of building air conditioning, electricity, fire prevention, security, and other equipment with telecommunications equipment using the IPv6 next-generation Internet standard. Support for IPv6 by the controllers for the building's equipment enables efficient scheduled operations using operationalstatus data from day-to-day operations. The system saves energy by eliminating needless operation. The building also actively incorporates natural lighting, natural ventilation, and other environmentally friendly features, and as much as possible, they are operated manually

NTT Facilities Given Control of New-energy On-site Research at Expo 2005 Aichi, Japan

The theme of Expo 2005 Aichi, Japan was "Nature's Wisdom." New Energy and Industrial Technology Development Organization (NEDO) conducted a New Energy Community Centered Research Project that had provided solar, fuel-cell, and other forms of new energy to supply the electricity used by the Japan Pavilion at the Expo's Nagakute venue. The NTT Energy and Environment Systems Laboratories and NTT Facilities were responsible for the Energy Control System for this project, which played one of the most vital roles in the research. The amount of power that could be obtained via natural energy differed depending on the weather conditions, and these fluctuations could impact the interconnected power grids of concerned power companies. The project has built an



rather than by machine. These and other features truly make this a next-generation energy efficient building.



NTT East Saitama Shintoshin Building

energy-control system that controls the output of fuel cells and charge and discharge of storage batteries, thereby compensating for these fluctuation in natural energy, and minimizes the load on the grid. The amount of the new energy-based power accounted for about 10% of that used by the venue as a whole. NTT Facilities has long

been committed to introducing clean energy. In recognition of its track record, it was given the most important role of the energy control system.



Control & Monitoring System



The Coming Age of Ubiquitous Broadband will Help Prevent Global Warming and Achieve both Environmental and Economic Goals.

Preventing Global Warming through IT

The Kyoto Protocol went into effect in February 2005. The Kyoto Protocol mandates an average 5.2% reduction in CO₂ and other greenhouse-gas emissions from 1990 levels by industrialized countries between 2008 and 2012. Under the Protocol, Japan is obliged to reduce emissions by 6%. In Japan, however, emissions of greenhouse gases are on the rise, and an increasingly active commitment to preventing global warming is expected.

Amidst these circumstances, the NTT Group is undertaking a number of commitments, with the belief that the increased use of IT can help greatly to reduce CO₂ emissions. According to actual calculations made by NTT, online eCommerce systems,

teleconferencing systems, supply-chain management (SCM) systems^{**}, and other systems that facilitate the movement of people and goods via IT can reduce Japan's total energy consumption by 3.9% by the year 2010. This study was undertaken in partnership with leaders in the field gathered together for the Conference for Research on the Evolution of the Ubiquitous Networked Society and the Environment, by the Ministry of Internal Affairs and Communications.



Activity Topics

B FLET'S TV Relay System Reduces CO₂ by 70% B FLET'S is a well known type of broadband services. In order to evaluate the benefit of reduction of environmental load from this service, NTT West's Hiroshima branch have undertaken a lifecycle assessment for a TV relay system using B FLET'S, which is offered to RCC BROADCASTING CO.,LTD. The results showed that a TV relay system using B FLET'S ^{#1} or FLET'S Spot ^{#2} could reduce total CO₂ emissions by 70% from those of a conventional microwave TV relay system. This is equivalent to a reduction of about 3.2t-CO₂/year.

Ordinary TV relay systems use microwave transmission system to broadcast video and sound from a filming location, via relay stations. On the other hand, TV relay systems using B FLET'S convert video and sound shot at a

Ultra High-definition Digital Cinema Delivery System Reduces Use of Materials and Energy

With current cinematographic film, it is impossible to avoid deterioration during the production process, and during repeated screenings in the theater. Digital cinemas overcome the problem of video deterioration by digitizing the video data. NTT Network Innovation Laboratories has developed an ultra high-definition digital-cinema delivery system using 8 megapixel ($4,000 \times 2,000$)-class video technology. Ultra high-definition digital cinema is fully capable of reproducing the quality of 35-mm cinematographic film. It has been adopted as the highest standard in digital cinema,

filming site into transmittable signals. They enable relaying to be performed very simply, requiring only equipment to convert the video and sound into digital data, and equipment capable of making a B FLET'S or FLET'S Spot connection. TV Relay System Using B FLET'S (Compared with System Using Microwave)



**1 Best-effort IP telecommunications services using optical-fiver access lines 22 Best-effort IP telecommunications services enabling connection to an IP telecommunications network while away from the home or office via wireless access points, using a notebook PC equipped with wireless LAM functionality used in the home or office *3 Line used to connect to an optical-fiber subscriber network via a PC or other terminal

stipulated by the Digital Cinema Initiatives(DCI) of Hollywood.

Using this system makes it possible to greatly reduce the amount of film required to produce and screen a movie. At the same time, it is an



Ultra High-definition Digital Cinema Deliver

environmentally aware cinema-delivery system that makes it possible to reduce the energy required to move people and goods to the theaters.

Committed to Reducing Our Use of Paper Resources by Collecting and Recycling Telephone Directories.

2010 Targets for Recycling Phone Books Achieved

The NTT Group uses vast paper resources in the publication of its telephone directories, and large amounts of virgin pulp in particular. For this reason, we continue to strive toward our target of reducing our paper usage to no more than 80% of 1990 levels (84,000 tons) by 2010. Our main activities consist of recycling telephone directories and increasing the ratio of used-paper content in our telephone directories and telegram paper, double-sided back-office printing, and paperless electronic payments. As a result of these activities, in fiscal 2004 we used 33,000 tons of virgin pulp, achieving our target for five straight years. Our continual efforts to increase the used-paper content of telephone directories and telegram paper have brought us to the technological limit, and double-sided

Activity Topics

Closed-loop Telephone Directory Recycling

Each year, we publish about 120 million telephone directories. These directories use about 100,000 tons of paper, accounting for about 0.3% of all paper used in Japan. NTT DIRECTORY SERVICES which is consigned of publishing of directories, has

consigned of publishing of directories, has built a closed-loop recycling system that reuses old telephone directories in the paper of new ones. The system was launched in April 2001. Customers have been

receiving telephone directories produced in this way since the September 2001 edition. In fiscal 2004, we worked to expand our collection ratio of old telephone directories to

Reducing Paper Consumption through Internet Billing Services

NTT East, NTT West, NTT Communications, and NTT DoCoMo offer Internet billing services for customers paying their phone bills by bank transfer. The server allows customers to view their phone bill invoices and other information via an Internet Web site, via email, mobile phones, and the like, and have them sent electronically as well. When customers use this service, we are also able to reduce the paper needed to create phone bills. In fiscal 2004, the billing services had a total of about printing and electronic payments have become widespread in each of our companies. Thus, as of end-fiscal 2004 we declared the target met. We will now strive to maintain our current virgin pulp usage levels, and work toward further reductions.





serve as the material for new ones, collecting about 64% in collection ratio, about 50,000 tons in total. The recycled-paper content of our directories reached about 67%.

3.044 million users across the NTT Group, enabling us (tons) to use about 560.1 tons fewer paper 450 resources per year (equivalent to 140 300 million sheets of A4-sized paper) 150 compared to our old method. 0





Building a Commitment to Reuse and Recycling in Order to Reduce Waste.

Achieving the 2010 Target for the First Time by Improving Recycling Rate, etc.

The NTT Group promotes the "three Rs"-reduce, reuse, and recycle-on four categories of waste from its business activities (dismantling communications facilities, construction works waste, civil works waste, and office waste), in order to help achieve a closed-loop economy. In fiscal 2004 the amount of waste we sent to final disposal (landfilling) was 57,000 tons, achieving our 2010 target of 72,000 tons six years in advance. Our main activities are described below.

· Dismantling communications facilities: As a rule, we reuse our unneeded telecommunications equipment, including switching equipment, telephone poles, public phones, and communications cables, and actively recycle what cannot be reused. In fiscal 2004, our recycling rate was 99.2%,

achieving our target of "zero emissions" in this field.

- · Construction works waste: We have succeeded at reducing our building waste by 38,000 tons from last year through such measures as increasing the service lives of communications and other buildings. We also slightly improved our recycling rate, which enabled us to reduce the amount of landfilled waste by 9,000 tons from the previous year, to 36,000 tons.
- Civil works waste: We improved the recycling rate by 3.1% from the previous year, as a result reducing the volume of landfilled waste by 5,000 tons from the previous year, to 9,000 tons total
- · Office waste: By separating out paper, plastic, and other combustible waste, we were able to improve our recycling rate by about 10% from the previous year, reducing the amount of landfilled waste by about 11,000 tons.

Landfilled Waste and Emissions by the NTT Group



Waste and Excess Soil Produced by Civil Works



Waste and Excess Soil Produced by Construction Works



Amounts of Office Waste Produced



Activity Topics

Achieving Zero Emissions in the Field of Dismantling Communications Facilities

The NTT Group utilizes a wide range of communications facilities in order to offer safe and secure telecommunications services. Waste is created when these facilities are dismantled and disposed of. The NTT Group is thus committed to properly disposing of dismantled switching equipment, communications cables, concrete telephone poles, and other communications equipment, and is also committed to reuse and recycling. In fiscal 2004, the NTT Group as a whole reused 2,106 km of communications cables, and recycled 13,000 tons of switching equipment, 25,000 tons of communications cables, and 156,000 tons of concrete telephone poles. As a result, we achieved "zero emissions" in this field, with a recycling rate of 99.2% for communications facilities as a whole.

Collecting and Recycling Used Communications Devices, Batteries, and the Like

The NTT Group collects and recycles communications devices and ancillary products when they are no longer needed by the customers. For example, NTT East and NTT West collect and recycle the small secondary batteries (nickel cadmium or lithium ion) used in cordless phones, as well as toner cartridges for faxes that use ordinary paper. Additionally, NTT DoCoMo collects and recycles 100% of mobile phones and other terminals, batteries, and chargers. With the cooperation of their customers, in fiscal 2004 NTT East and NTT West collected 250,000 small secondary batteries, while the NTT DoCoMo group as a whole collected 5,580,000 mobile phones and other terminals, 4,880,000 batteries, and 1,690,000 chargers.

Prototype Mobile Phone Made from Plants

NTT DoCoMo has created a prototype mobile phone whose case is made from plant material. The prototype is a mova series mobile phone created jointly with Sony Ericsson Mobile Communications Japan, Inc. using a type of plastic made from plants. The main ingredient of the plastic is corn, and the plastic is based on a polylactide made from this. The use of this plastic instead of ordinary plastic, which is made from petroleum, makes it possible to conserve more non-renewable resources, and also generates less greenhouse gas.

Additionally, NEC Corporation has created a prototype FOMA phone using kenaf-reinforced bio-plastic. Kenaf-reinforced bio-plastic consists of polylactide made from plants, and reinforced by added kenaf fibers. It is more heat resistant and stronger than conventional bio-plastics. Both prototypes were used for communication between DoCoMo staff at Expo 2005 Aichi, Japan, and were on exhibit at the Expo.



Waste Produced by Dismantling Communications

Numbers of Used Communications Devices, Batteries, and the Like Collected





Prototype Phones Using Plastic Made from Plants

Committed to Avoiding Overall Environmental Risk by Preventing Environmental Pollution.

Measures against Environmental Risk by the NTT Group as a Whole

The NTT Group is involved in a number of efforts to avoid such environmental risks as environmental accidents and pollution that could cause major losses and damage to society. We are committed to preventing accidents and pollution through regular soil and water surveys, chemical management, removal and storage of items using PCB, and the like, in

accordance with our guidelines.

In fiscal 2004, however, we had an accident in which wastewater including alkaline waste liquid erroneously leaked to a general river and the wastewater criteria of the Water Pollution Control Law was surpassed. We quickly remedied the problem and put measures in place to prevent a re-occurrence, including a revision of our detection and alarm system and our daily inspections and work procedures.

Activity Topics

Studies on the Impact of Radiation from Mobile Phones on Living Organisms

Our four mobile-phone carriers have been studying the affects of radiation from mobile phones on living organisms since 2002. As part of these studies, in April 2004 Mitsubishi Chemical Safety Institute Ltd. reported the results of an experiment on cells conducted on contract from NTT DoCoMo. According to the report, "It was found that the radiation from mobile-phone base stations have absolutely no affect on the proliferation or related genetic behavior of cells, which form the building block of life." In experiments before this one, there had been no hard evidence on the affects of this radiation on the

NTT Communications Embarks on a New Service to Support Green Procurement Management and Chemical Content Management

proliferation rates, genetic behavior, breaks in the DNA

In February 2005, NTT Communications started "Green Procurement Support Services" in response to the EU's restriction on chemical substances contained in products. Electric and electronics industries worldwide are actively participating in the green procurement that focus on compliance with European environmental regulations, such as RoHS, ELV, WEEE directives.

With NTT Communications' new services, companies that design, manufacture or market product will be able to analyze or detect hazardous chemical substances in products. Moreover, companies can be globally used such chemical contents as green procurement data, chemical substance data and environmental regulations.

On the strength of each field of expertise, from information service technology to chemical analysis, the Green Procurement Support Services enable users to make chain, or the like in cells, but NTT DoCoMo set strict conditions on the intensity of radiation from its mobilephone base stations, in the range of the protection guideline



value to 10 times that level. It also contracted studies on nearly half of the roughly 40,000 genes commonly working in the human genome. NTT DoCoMo plans to continue with these types of cell experiments, and continue to publish their results.

Overview of One-stop Support Services for Green Procurement and Chemical Content Management

Our ser	(Future planned services	
Chemical information support services	Establishing traceability of hazardous chemical substances on trade and logistics	
Green procurement request- response support Composition table preparation support Formerstel production constants	method) • Precision measurement and microanalysis • Issuance of analysis reports • Provision of information on	Trade and customs component table and green- procurement sheet information management
 Environmental regulation searches Chemical database searches 	rousion of information of infor	Extended common- component content database
Analysis of high-r	Extended material content database	

content-processing requests over the Internet, through a Web interface.

Major possible users of this service are assemble/set manufactures, parts/components manufactures and chemical/material manufactures, supplying electrical and electronic products.

Encouraging Communication with Our Stakeholders through Environmental Protection Activities.

Encouraging Dialog

The NTT Group conducts a wide range of activities in order to encourage a dialog with its stakeholders on its

Activity Topics

Promoting a Wide Range of Active and Continuing Environmental Communication

Since fiscal 1999, the NTT Group has created and published the Environmental Protection Activity Report in order to gain understanding of the environmental activities of the group as a whole. Starting in fiscal 2005, this will change to the CSR Report that includes the NTT Group's environmental activities as well as the social and economic activities.

We also actively place environmental advertisements in newspapers, magazines, and other publications. In fiscal 2004, the NTT Group ran four newspaper advertisements and two magazine advertisements.

We also feel that it is vital to hold exhibits at environmental expositions nationwide, as one part of our efforts to

Our Dialog with Our Stakeholders is Growing Even More Active (Active Use of Web Site and Other Means)

The reason we aim to hold an active dialog with our stakeholders through environmental communication is that in addition to promoting understanding of the NTT Group, it also helps to increase the awareness of environmental protection by the NTT Group employees. In awareness of this, we are involved in a number of activities through environmental pages on our Web sites. In fiscal 2004, we began an "NTT Group employees talk about the environment (Visiting Version)" Web site. The forum is visited by experts in a wide range of fields - not just the environment - and the NTT Group employees from various fields are able to discuss the environment, based on that person's work and experiences. The NTT Group is committed to incorporating the views and thoughts of these experts into our environmental activities. We also have other commitments apart from our Web sites. We are committed to encouraging communication using Environmental Protection Activities by the NTT Group: What IT Can Do for the Earth, a video showcasing



environmental-protection activities, including reports, the Internet, advertisements, and exhibits at events.

encourage communication about the environment. In fiscal 2004, we exhibited at New Environmental Exposition 2004 Tokyo, Enviro-Shiga 2004, and other events.

We will continue to actively communicate about the environment, in order to deepen our mutual understanding with our stakeholders.

Newspaper Advertisement Promotes the Role of IT in Reducing Environmental Impact



the NTT Group's environmental activities, as well as other media. These videos are also used in our new-hire training and in employee seminars. On the other hand, we continuously hold workshops for environmental leaders nationwide. We held four workshops in fiscal 2004, attended by 271 employees.



Researching and Developing Leading-edge Environmental Technologies to Contribute to the Creation of a Sustainable Society.

R&D to Help Reduce Environmental Impact

In 1999, the NTT Group created the NTT Group Ecology Program 21 with the goal of contributing to the creation of a sustainable society. One of the three core concepts of the program is R&D on environmental technologies. Research in this field is broad, encompassing clean energy, environmental

monitoring systems, energy-efficient devices, and more. And it does not stop at these fields: we also conduct R&D on the environmental impact of telecommunications itself, including verifying environmental impact through life-cycle assessment of telecom systems, quantifying the environmental contribution of IT services, and the like.

Activity Topics

Creation of New Portable Fuel-cell Prototype In February 2005, the NTT Energy and Environment Systems Laboratories created a compact proton exchange membrane fuel cell (micro PEFC) fueled by hydrogen gas, and capable of being equipped directly in a mobile phone. A mobile phone equipped with the prototype successfully started up, and sent and received calls. The labs also developed a device to automatically refill the micro PEFC with hydrogen.

As the performance and functionality of mobile phones and other portable electronic devices continue to grow, the lack of capacity of the batteries that power them is becoming an issue. Hopes are rising that fuel cells, with their low environmental impact, will be the breakthrough technology that resolves this issue. Currently, attention

Environment and Disaster-prevention Monitoring System Using Multi-hop Wireless LAN

It is important to be able to rapidly collect information and monitor the environment, illegal dumping, and the like, even in areas lacking telecommunications networks. To meet this challenge, NTT Energy and Environment Systems Laboratories are researching an environment and disaster-prevention monitoring system.

This system consists of an ad-hoc temporary network system using the multi-hop wireless LAN that enables easy construction of wireless broadband networks at anytime and anywhere. Using this system can reduce CO₂ emissions by about 99% over the wired networks created by laying optical fiber or the like in areas without network infrastructure, because it reduces the

is being focused on a type of fuel cell that is fueled by methanol. Methanolpowered fuel cells, however, produce the greenhouse gas CO₂ when they generate



Prototype Micro Fuel Cell (Left) and Hydrogen Charger (Right) power. Additionally,

they have insufficient output densities, making them difficult to miniaturize. The micro PEFC use hydrogen gas as fuel, and thus do not produce CO2 when generating power. Additionally, they have high output on a par with modern lithium-ion batteries, enabling the creation of compact fuel cells.





construction and power consumption requirements. This system is also effective for disaster monitoring in times of emergency.

Activity Topics

NTT Successfully Develops Ultralow-power High-speed Single-electron Memory

NTT Basic Research Laboratories have successfully developed a new "single-electron" memory. This new type of memory is able to store massive amounts of data, by manipulating electrons one by one. Single electrons are accurately transferred to the memory node (see the right figure), thereby information can be represented and stored by the number of electrons. This increases the memory capacity of a unit device five-fold.

The single-electron memory, however, stores about one ten-thousandth the total electrons stored by conventional memory, and power consumption can be reduced accordingly. This will help to reduce environmental impact. Other features are that the memory operates at room temperature, and does not require special materials

New High-performance Semiconductor Laser Effectively Detects CO₂, NOx, and Other Substances

NTT and NTT Electronics have successfully developed semiconductor laser light sources capable of emitting at 2.0 μ m to 2.1 μ m, using an application of design and fabrication technologies for optical-communications light sources cultivated at NTT Photonics Laboratories.

At wavelengths of above $2\mu m$, light absorption by CO₂, NOx, and other important environmental substances is high. Until now, however, there have been no compact, high-performance semiconductor lasers capable of emitting at this wavelength. The newly developed distributed-feedback (DFB) laser emitting beyond 2μ m

Eco-efficiency and Factor of IP Connection Services

Some believe that in order for a society to develop in a sustainable way, we should create more profits and value with less environmental impact (for example, energy consumption or CO₂ emissions). Eco-efficiency*1 and Factor ** have been advocated as a quantitative index of reduced environmental impact and increased value. The NTT Information Sharing Laboratory Group evaluates the environmental load of telecommunications services using life-cycle assessment (LCA). The group evaluated the eco-efficiency and factor of telecommunications load per second for IP connection services. The results showed that B FLET'S, FLET'S ADSL, and FLET'S ISDN have excellent eco-efficiency (in that order). Calculating the factor with FLET'S ISDN as the baseline, B FLET'S and FLET'S ADSL were found to have dramatically improved factor, of 2,360 and 79, respectively. The group continues

For Sustainable Global Environment



New "Single-electron" Memory

or manufacturing techniques; it can be fabricated using existing semiconductor-processing technologies.

The technology is currently at the basic-research stage of a discrete device, but it is getting more attention as a future technology to replace DRAM (dynamic random access memory) and flash memory.

is much more sensitive than conventional semiconductor lasers. For instance, it can use a CO2 absorption line about 10 times more intense than communication wavelength band.



source will enable creation

2-plus µm DFB Laser Light Source (Butterfly Module)

of much more precise systems than previously possible, including real-time monitoring of CO2, NOx, and other substances, as well as automobile engine-exhaust control systems.

to work toward decreasing environmental load and increasing value through LCA of environmental load.

Eco-efficiency	and	Factor	of IP	Connection	Service

		IP c	connection serv	ices
Index	Unit	FLET'S ISDN	FLET'S ADSL (More)	B FLET'S (Family type)
Value (max communication speed)	kbps	64	6,500**3	100,000
Environmental load (CO ₂ emissions)	kg-CO ₂	78.2	101.7	52.3
Eco-efficiency	kbps/kg-CO2	0.81	63.9	1,912.0
Factor	-	1	79	2,360

%1 Eco-efficiency = Envir

%2 Factor = Eco-efficiency of product/service being evaluated Eco-efficiency of baseline product/service

3 Average of upstream speed (1Mbps) and downstream speed (12Mbps)

Breakdown of Operating Revenues (FY 2004)

Mobile voice

services 30%

rixed vo transmiss services 33% Fixed voic

Other 6%

Report on Results of FY 2004 Activities in Figures.

Operating Income

(hundred millions of yen)

8.34 8,000

2000

(hundred millions of yen)

4,060

R&D Expenses

615

2001

2001

Number of B FLET'S/FLET'S ADSL Subscribers

(Supply of B FLET'S started in earnest in August 2001)

2002

2003

FLET'S ADSL B FLET'S

4,929

2003

13 636

2002

18.000

16.000

14.000

12.000 10,000

6,000

4,000

2,000

4 500

4.000

3,500

3,000

2,500

2,000

1,500 1.000

500

7.000

6.000

5,000

4,000

3 00

2 00

2000

(thousands of subscribers)

27 27

2001

2002

2000

Consolidated Financial Statement for Fiscal Year 2004

Our internet protocol (IP) revenues increased consequent to the increase in subscribers to B FLET'S, FLET'S ADSL, and other services, and revenues from systems integration also increased. Nevertheless, the size of the market for fixed line continued to shrink, and we provided rate discounts in order to make ourselves more competitive in the mobile communications market. As a result, our operating revenue declined, resulting in a decrease in operating income. Note that through the sale of shares in AT&T Wireless, and the sale of stock consequent to the listing of NTT Urban Development on the stock market, we ended with an increase in net income.





Number of Telephone and INS-Net Subscribers





2004 (fiscal year)

2004 (fiscal year)

6.872

2004

(fiscal year)

2003

Sale of equipment 6%

egratior 8%-



Employees (persons) 250,000 г 215 000 213 000 207 400 205 300 200,000 150.000 100 000 50,000 2000 2001 2002 2003 2004 (fiscal year)

Number of Mobile Phone Subscribers



The NTT Group Carries on Continuous CSR Activities.

History		Main social and environmental activities
NIPPON TELEGRAPH AND TELEPHONE PUBLIC CORPORATION established	1952	
	1963	Model 600 telephone units provided based on reuse
	1966	Participation in Japan Overseas Cooperation Volunteers to back it up started
	1970	Supply of welfare equipment started
	1973	Clean Recycle Committee established
	1975	Use of recycled paper for telephone directories initiated
INS Concept announced	1979	
	1982	Orange Activity (public hearing activity) started
	1983	Distribution of "Please Call Notebooks" started
NIPPON TELEGRAPH AND TELEPHONE	1985	Companywide ASK activity (NTT version of QC activity) started
CORPORATION (NTT) incorporated as a private company		Newspaper reading service (using by telephone) for the blind started
		NTT Group Presents NHK Symphony Orchestra Concert stated
		"Operation Clean Environment" started
NTT listed on the Tokyo Stock Exchange	1987	"Save POWER" (reduce energy consumption) campaign started (~1995)
NTT DATA CORPORATION starts operations	1988	
VI&P Concept announced	1990	NTT corporate philosophy established
	1991	TOPICS activity (NTT version of CS activity) started
		NTT social contribution activity policy established
		Global Environment Protection Promotion Committee installed and NTT Global Environment Charter established
NTT Mobile Communications Network, Inc.	1992	Social Contribution Promotion Committee installed
(presently NTT DoCoMo) started operations		Social contribution activity commendation system started
Basic Conception for the Coming Multimedia Age announced	1994	Volunteer gift system started
NTT DATA CORPORATION listed on the Tokyo Exchange	1995	Matching gift system started
		New use of CFCs totally abolished
		NTT environmental homepage opened
		"Super Save POWER" (reduce energy consumption) campaign started (~1997)
21st-Century R&D Vision announced	1996	
Digitalization of communications network in	1997	NTT-ICC (base of Mecenat activity) activity started
Japan completed		Green Procurement Guidelines established
		"Total Power Revolution (TPR)" campaign started
		Green Design Guidelines for Buildings established
		NTT Materials Procurement Department secures ISO 14001 certification for the first time in NTT
Global Information Sharing Concept announced	1998	Basic policy for preventing sexual harassment formulated and window for providing
NTT DoCoMo, Inc. listed on the Tokyo Stock Exchange		
NTT's operations were reorganized into a Holding	1999	NTT Group Global Environmental Protection Promotion Committee installed
Company structure, and it transferred its businesses to		NTT Group Ecology Program 21
three new wholly owned subsidiaries, NTT East,		(Basic policy on promotion of environmental protection by the NTT Group) enacted
NTT West, and NTT Communications		Issuance of NTT Group Environmental Protection Activity Report started
	2000	Green R&D Guidelines established
	2001	Closed-loop telephone directory recycling system built
		Waste optical cable recycling system developed
"Vision for s New Optical Generation" announced	2002	NTT Group Corporate Ethics Charter established and window for providing guidance in corporate ethics help line installed
		NTT Group environmental information database system put into operation
NTT URBAN DEVELOPMENT CORPORATION listed on the Tokyo Stock Exchange	2004	
NTT Group's Medium-Term Management Strategy announced		
	2005	NTT Group's information security policy established
		CSR Committee installed

Social Environmental