FUJITSU

FUJITSU LIMITED

Intellectual Property Report 2012

shaping tomorrow with you

1 Introduction

Every year since 2006 we have made an Intellectual Property Report available on the Internet to provide our shareholders and the general public with information on Fujitsu's efforts concerning intellectual property.

We are engaged in the total solution business in the field of Information and Communication Technology (ICT) to provide not only individual services, but also comprehensive enterprise services, including activities for developing, manufacturing, selling, and maintaining high-performance, high-quality advanced products and electronic devices that support these services. Our intellectual property strategy is closely tied to each phase of these business activities.

In particular, Fujitsu has set a medium- to long-term vision of "realizing a human centric intelligent society" (realizing a society in which people can live more affluently and peacefully through the use of ICT). Fujitsu aims to acquire, maintain, and use intellectual property rights to help achieve this vision.

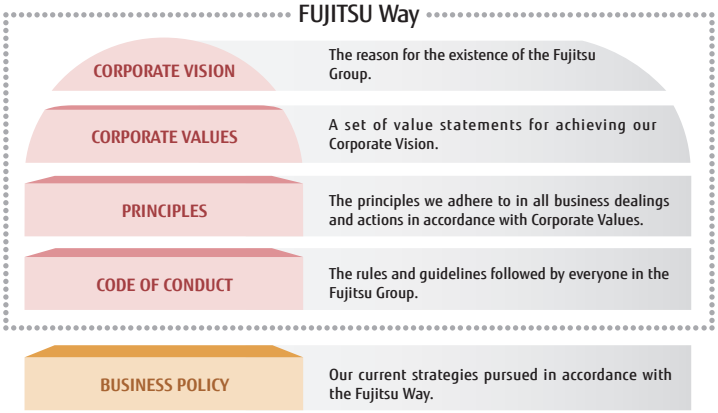
This Intellectual Property Report describes the role of Fujitsu's intellectual property strategy and the efforts being made in this area by our individual business units. It also includes statistics covering our intellectual property.

(Masahiro Kamei, President, Intellectual Property Unit)

2 Corporate Vision and Intellectual Property Strategy

Our Corporate Philosophy "FUJITSU Way"

FUJITSU Way embodies the philosophy of the Fujitsu Group, our reason for existence, our values and the principles that we follow in our daily activities.



Code of Conduct

- We respect human rights.
- We comply with all laws and regulations.
- We act with fairness in our business dealings.
- We protect and respect intellectual property.
- We maintain confidentiality.
- We do not use our position in our organization for personal gain.

One of FUJITSU Way codes of conduct clearly states that "We protect and respect intellectual property."

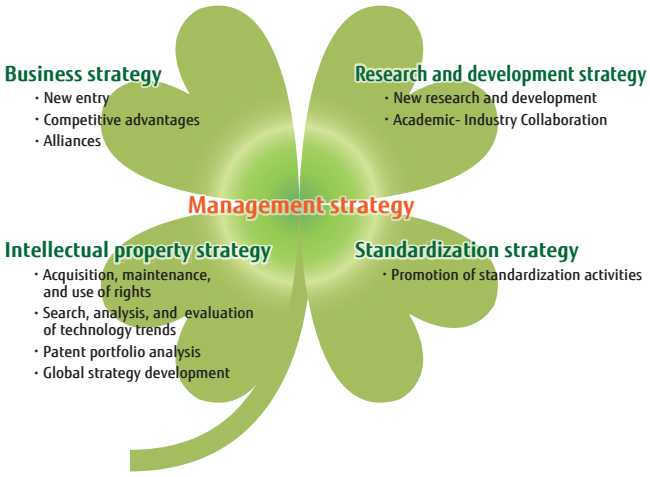
We are contributing to the establishment of a networked society by continuously creating new value and providing products and services on a global basis to meet customer needs. The intellectual property that results from our large investment in R&D is of great value to us. We conduct our business being fully aware that our intellectual property is a valuable resource and an essential management resource underpinning our business activities and the confidence our customers place in us. We will make every effort to obtain and maintain all necessary intellectual property rights, including patents, copyrights and trademarks, and utilize them effectively in growing our business.

We recognize that the knowledge and know-how held by each employee give us a competitive edge in our business activities. We respect third-party intellectual property and utilize it only after having properly secured rights to its use.

Role of our intellectual property strategy

At Fujitsu Group, our intellectual property strategy is based on our management strategy and is integrated with our business, research and development, and standardization strategies. To that end, from the earliest stages of our business activities, we implement a multilateral analysis focused on intellectual property to ensure that we can proceed based on the results of this analysis. By implementing our intellectual property strategy, we will endeavor to maximize the value of the intellectual property assets of the entire Fujitsu Group.

Role of intellectual property strategy



3 Relationship between Products and Services and Intellectual Property

Fujitsu Group products and services

Products and services provided by the Fujitsu Group are roughly divided into three solutions, each of which consists of business segments. The first segment includes technology solutions, which are typically servers, storage devices, mobile phones base stations, many software products, and services. The second segment includes ubiquitous product solutions, which are typically personal computers and mobile phones.

The third segment includes device solutions, which are typically semiconductor devices.

Technology Solutions

Fujitsu Technology Solutions headquarters in Munich

PRIMERGY RX350 S7 2-way 4U rack server

Services···Fujitsu provides solutions/system integration services focused on information system consulting and integration, and infrastructure services centered on outsourcing services (complete information system operation and management).

System Platforms···Fujitsu offers system products such as servers and storage systems which form the backbone of information systems, along with network products such as mobile phone base stations, optical transmission systems, and other communications infrastructures.

Ubiquitous Solutions

ESPRIMO EH30/GT desktop PC has a lightweight body and space-saving design

ARROWS Z ISW11F high-spec, WiMAX-enabled, water-resistant smartphone

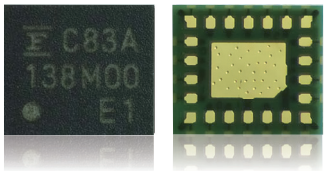
AVN-F01i car navigation systems

In PCs, Fujitsu is enhancing functionality through smartphone compatibility, energy efficiency, and a fast boot-up feature, and driving the development of tablet PCs. We also have a product lineup in the Japanese market that capitalizes on high domestic standards of quality.

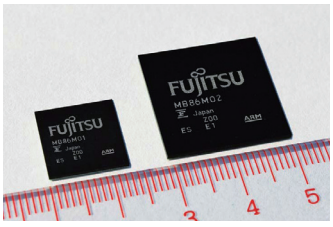
In mobile phones, along with conventional features phones, Fujitsu is developing smartphones and tablet devices under the new ARROWS brand.

In mobilewear, Fujitsu is answering diverse needs through "Connectivity Products," among them intuitively operated car navigation systems that connect with smartphones for a more enjoyable driving experience.

Device Solutions



MB86C83 multiband power amp for wireless mobile devices



MB86M01 and MB86M02 memory-embedded transcoders compatible with H.264 transrating

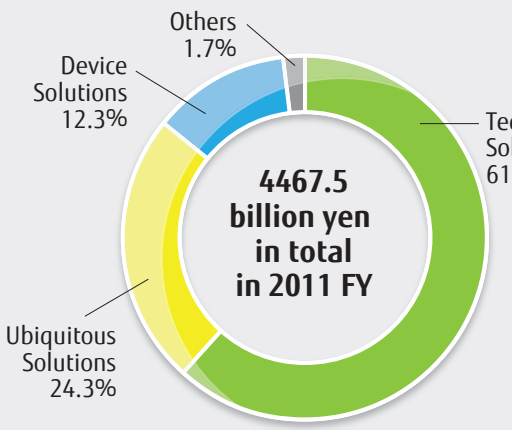
LSI devices and electronic components comprise Fujitsu's Device Solutions. Fujitsu Semiconductor*, the Fujitsu Group's operating company in semiconductors, provides LSI devices found in products such as digital home appliances, automobiles, mobile phones, and servers. Meanwhile, publicly listed consolidated subsidiaries such as Shinko Electric Industries, Fujitsu Component, and FDK provide semiconductor packages and other electronic components, as well as structural components such as batteries, relays, and connectors.

Patents by segment

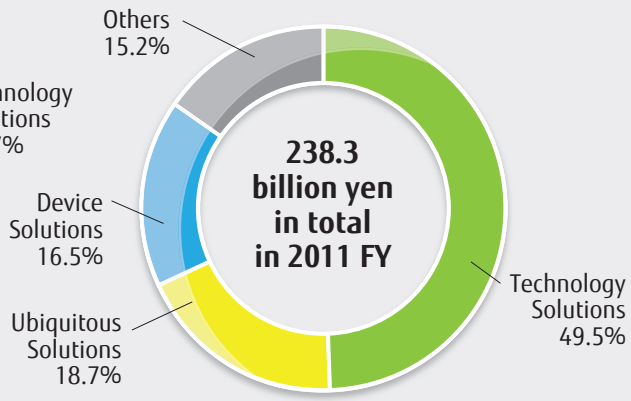
Fujitsu Group is enhancing its patent portfolio on a per segment basis.

The figures below show the sales and research and development expenditure by segment in 2011 FY. They also show the number of granted patents and patents pending by segment in 2011 FY inside and foreign countries.

Sales by segment

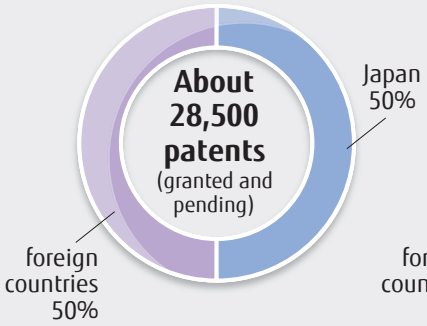


Research and development expenditure by segment

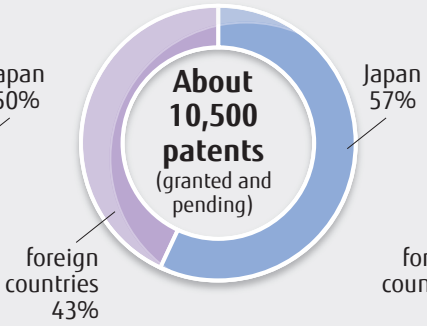


Breakdown of granted and pending patents in Japan and foreign countries by segments

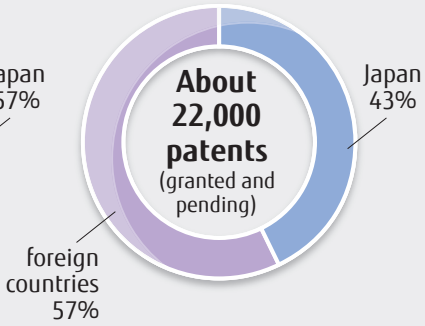
Technology Solutions



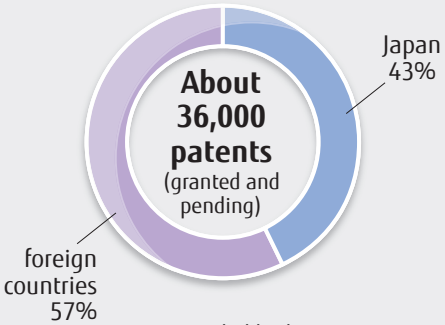
Ubiquitous Solutions



Device Solutions



Common Foundations and New Fields*



* Fujitsu holds about 36,000 patents as a result of our efforts in research and development in technologies providing common foundations supporting all Fujitsu businesses and new fields.

4 Intellectual Property

Our activities for acquiring patents

Fujitsu Group is actively promoting activities for acquiring patents because patents comprise an important management resource that helps guarantee our technological advantage.

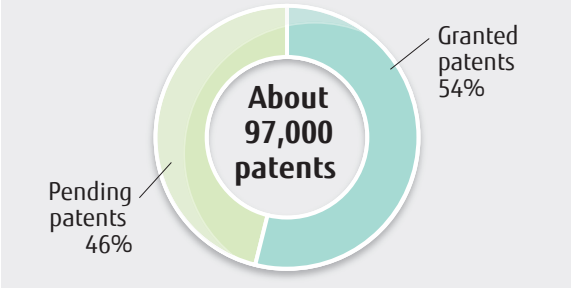
In particular, Fujitsu intensively creates inventions consistent with important themes based on the business and R&D strategies. It also acquires pertinent patents. Fujitsu makes efforts to enhance its patent portfolio by doing a prior-art search regarding all patents and examining the relevant prior-art documents before making any application and by regularly reviewing how technologies covered by patents pending are being used.

In addition, we are focusing our efforts on improving the patent application preparation process to ensure efficiency in our acquisition of high-quality patents both in Japan and overseas, by developing internal infrastructures and dispatching representatives to overseas bases.

Patent portfolio status

Currently, the entire Fujitsu Group holds about 97,000 patents worldwide.

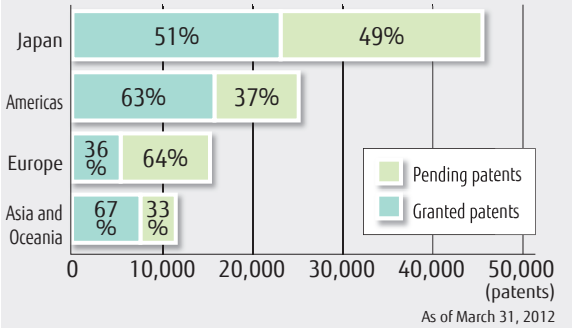
■Fujitsu Group's pending and granted patents worldwide



With the globalization of our business, the number of granted patents we hold in foreign countries has exceeded the number we hold in Japan. In order to enhance our patent portfolios, Fujitsu and the Fujitsu Group member companies are actively engaging in efforts to file patent applications globally, acquire patent rights, and extract inventions from the outcomes of the technological activities at our group member companies in the U.S., Europe, China, and other countries or areas.

The above data shows the cumulative number of patents that we had acquired as a result of our global efforts.

■Breakdown of granted and pending patents for each region



As of March 31, 2012
Source : Fujitsu internal statistical information

In 2011, the Fujitsu Group filed applications for around 4,550 patents in Japan and around 4,100 overseas.

■ Number of patent applications filed by Fujitsu Group in 2010 FY

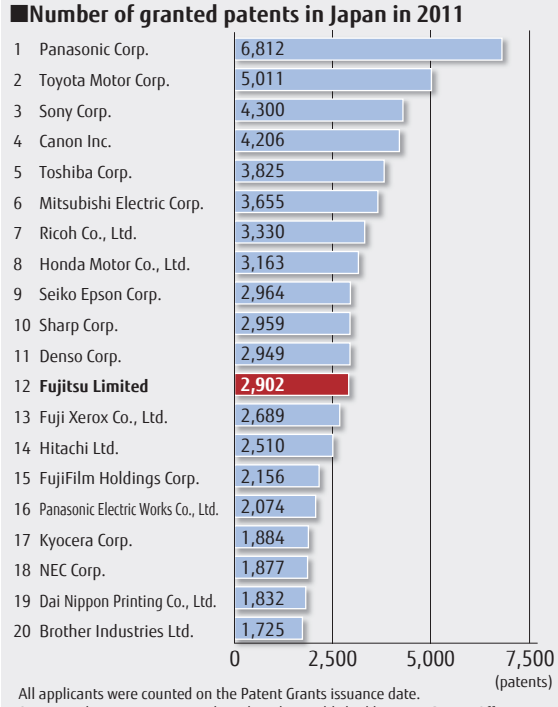
Number of patent applications filed in Japan*	Total number of patent applications filed foreign countries		
4,550	4,100		
	Americas	Europe	Asia and Oceania
	1,950	1,300	850

* This value includes patent applications filed in Japan based on the Patent Cooperation Treaty.

From April 1, 2011 to March 31, 2012
Source : Fujitsu internal statistical information

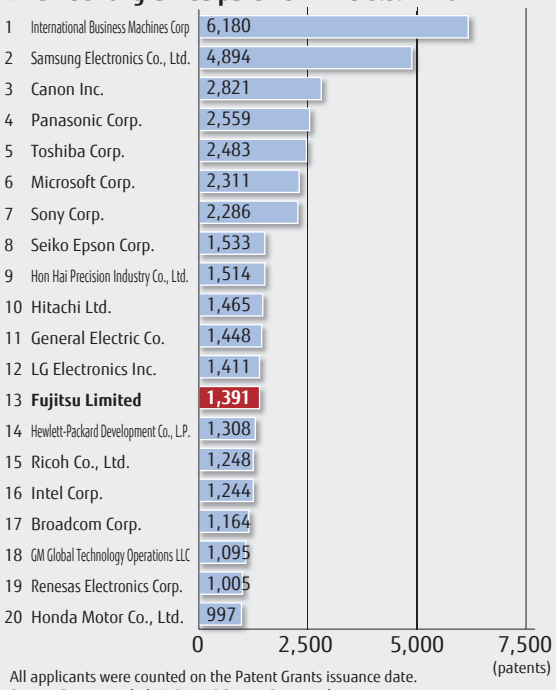
When Fujitsu's patent position is viewed in terms of the number of Fujitsu issued patents in Japan and in the U.S., in 2011, Fujitsu ranked 12th in Japan (based on our own research) and 13th in the U.S. (based on IFI CLAIMS Patent Services' research). The total number of patents issued to Fujitsu Group member companies came to 4,239 in Japan and 2,007 in the U.S. Breakdowns of the Fujitsu Group member companies' laid open patents or issued patents in Japan in 2011, based on the International Patent Classification (IPC).

■Number of granted patents in Japan in 2011



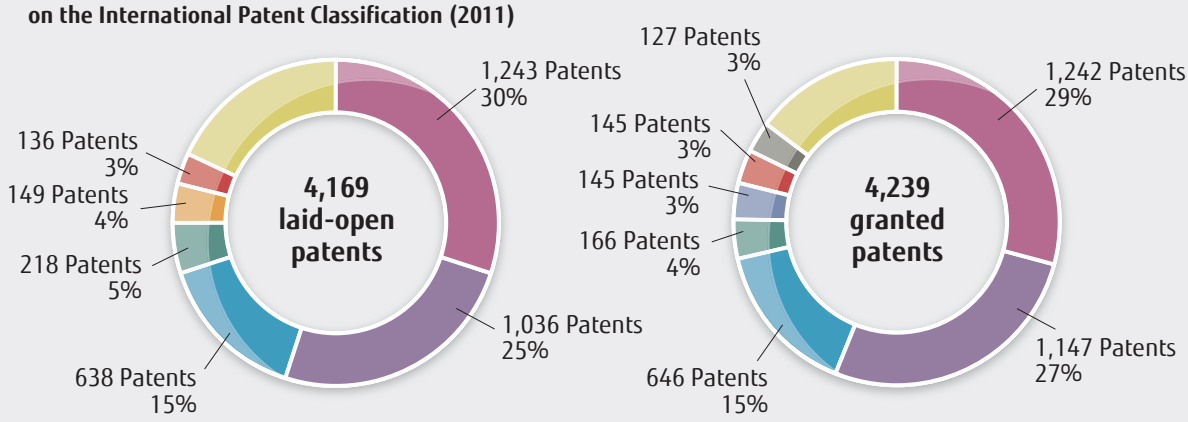
All applicants were counted on the Patent Grants issuance date.
Source: in-house investigation based on data published by Japan Patent Office
The number of patents granted to Fujitsu Group companies other than Fujitsu Limited is 1,337 (24 companies).
The total number of patents granted to Fujitsu Group: 4,239

■Number of granted patents in the U.S. in 2011



All applicants were counted on the Patent Grants issuance date.
Source: Date provided IFI CLAIMS Patent Services data
The number of patents granted to Fujitsu Group companies other than Fujitsu Limited is 616 (13 companies).
The total number of patents granted to Fujitsu Group: 2,007

■Number of Fujitsu Group is laid-open patents and granted patents in Japan sorted based on the International Patent Classification (2011)



(Patent applications field in Japan based on the Patent Cooperation Treaty are not included.
Source：in-house investigation based on data published by Japan Patent Office)

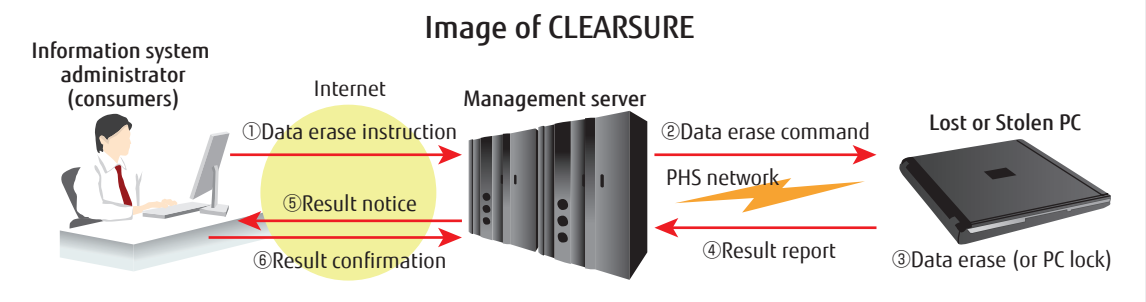
The upper pie charts show classes which have rates equal to or more than 3 percent.

Examples of activities for acquiring patents in 2011FY

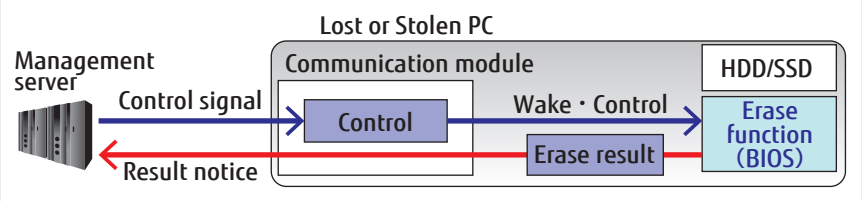
Here are two examples of our activities for acquiring patents in 2011FY.

(1) Remote data erasure, CLEARSURE

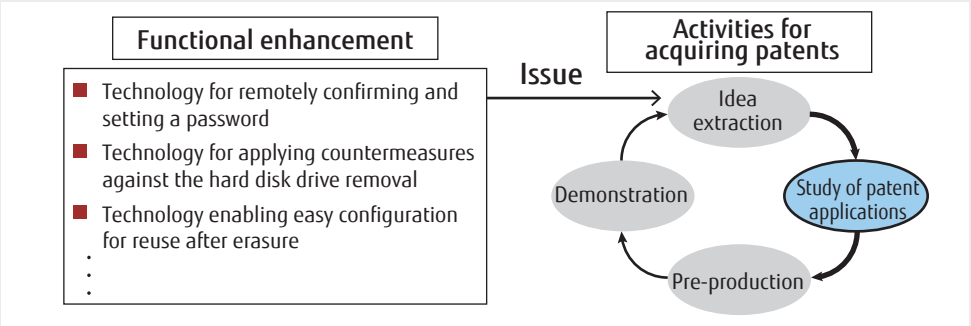
CLEARSURE is a technology for remotely locking or erasing the contents of a lost or stolen notebook PC, to prevent information leakage. While more and more companies are prohibiting their employees from taking PCs out of the office, this technology allows PC users to work without anxiety even if they take a PC with them when they are working away from their offices.



The invention that forms the core of this technology is the introduction of a communication module that is independent of the PC which, even if the PC is not turned on, will receive control signals from the management server, erase the data from the hard disk drive in the PC, and then notify the management server of the results.



In the development of this product, the research and development section joined forces with the intellectual property section to carry out the activities for acquiring the related patents. In the process for enhancing the functions of the product, a study of patent applications was added to the cycle of idea extraction, pre-production, and demonstration that was repeated to solve the issues that arose, ultimately leading to patent applications. To date, about twenty patent applications related to this technology have been filed.



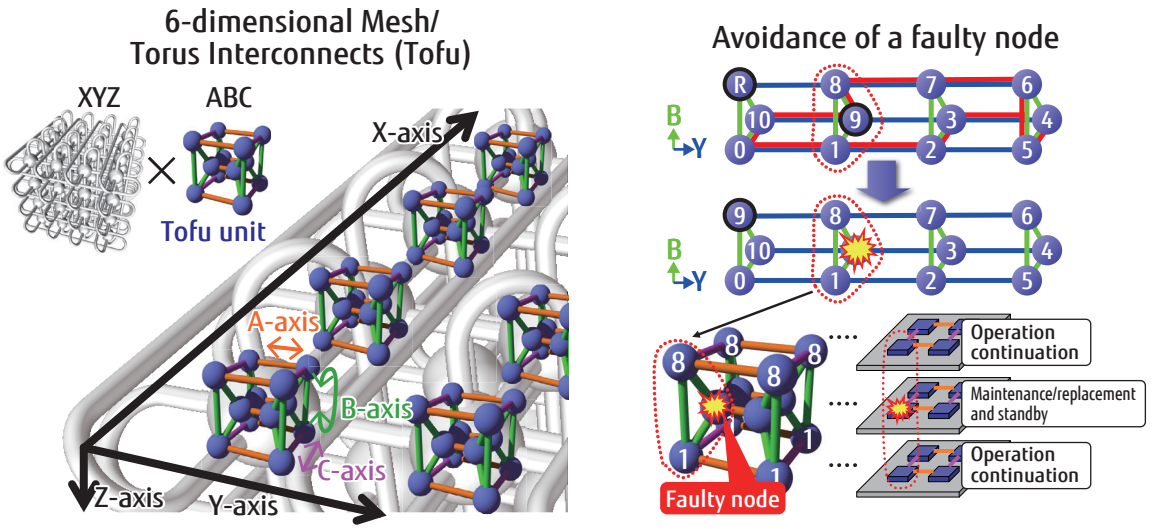
(2) Supercomputer K

The supercomputer "K" *1 (referred to as K in the remainder of this page) is a super-large-scale parallel computer system being developed jointly by Fujitsu and RIKEN.

K contains more than 80,000 CPUs, with the interconnects that exchange calculation results between these CPUs playing a very important role. By employing an innovative configuration called "6-dimensional Mesh/Torus Interconnects (Tofu)" (where Tofu units that connect multiple calculation nodes are interconnected in a mesh/torus pattern, as shown in the left part of the figure below), K provides a flexible and highly available system configuration.

For K to constantly maintain its maximum performance, it is important that, even if one portion becomes faulty, its effect on the whole system is kept to a minimum.

K is created in such a way that, to prevent computing performance from being reduced, any faulty node is bypassed and the connection is reconfigured. By making improvements to the mounting structure, the system board with the faulty node can be disconnected, so that maintenance/replacement is possible even while calculation is in progress. Through such technological contributions, K is now capable of executing super-large-scale simulations without interruptions to the calculation process, and thus has achieved the world's No. 1 level of performance *2.



For K, Fujitsu has actively researched and developed CPU, interconnect, and other hardware technologies, as well as OS, file system, operations management system, and other software technologies. For the inventions related to these technologies, we have filed a large number of patent applications in Japan and overseas (some of which have already been registered).

*1 Supercomputer K
"K (the K computer)" is a registered trademark of RIKEN. K is a four-figure unit representing ten peta (10 to the 16th power). In its original sense, the Chinese character "K" represents a large gateway, and speaks of our expectation for the computer to open a "new gateway to computational science."

*2 In the top 500 ranking of supercomputers in terms of performance, K was recognized as having the world's No. 1 performance two times in a row, June and November of 2011. "K" underwent its final operation validation tests in June 2012, and then went into practical use in the following September.

Design

We believe that all design activities are centered on people and that Fujitsu Group should build a positive relationship between people and ICT in order to contribute to the realization of an ICT society in which everybody can participate.

Fujitsu Group handles a broad range of design activities, including designing products such as PCs and smartphones, designing graphical user interfaces (GUIs) for Web sites and business systems, designing office and retail space for use in information systems, and creating visual designs for branding purposes.

In the belief that designs are valuable intellectual property assets because they link our customers to our products and services, Fujitsu has been active in acquiring design rights that will protect its designs. At present, Fujitsu holds about 540 design rights inside and foreign countries.

<Smartphone design>

In designing a smartphone, we define the potential users, and develop a charismatic, easy-to-use design, while introducing the latest technology.

The docomo NEXT series ARROWS X LTE F-05D won the Good Design Award 2011.

Magenta　　Blue Black

docomo NEXT series ARROWS X LTE F-05D

<Mobile Phone Application design>

Using communication design techniques, we are working on the development, demonstration tests, and spread of "Special Needs Mobile Phone Application" providing educational and social support for children with special needs, including those with learning disabilities and autism, as well as their parents and teachers. "Special Needs Mobile Phone Application," which supports living and studying with mobile phones, which are familiar ICT equipment, won the Good Design Award 2011 as well as Germany's Universal Design Award 2011. These are available free of charge from the i-mode site, "@F Keitai Ouendan."

Mobile phone application for supporting an understanding of time

For example, with the "Timer" application shown in the figure above, you can set a wait time (five minutes), and show a child the screen of the mobile phone, saying, "Wait until you can see a picture of a train." Then, by slowly fading in a picture of a train, you can make a child who does not understand the concept of time actually perceive remaining time.

Brand

Fujitsu Group regards our brands as one of our important management resources. We promote the spread of the brand promise "shaping tomorrow with you," announced in 2010. We have decided on a brand graphic that visually represents the brand promise, aiming to establish our brand image throughout the world. Fujitsu actively pursues the acquisition of trademark rights for the names of products and services that will effectively convey our brand image.

The design of the brand graphic is based on the "F" of the FUJITSU symbol mark, and the concept of "dialogs with customers," which will be the most important task related to putting the brand promise into action, thereby creating a visually unique and memorable impact.

Fujitsu is ranked 22th in Interbrand Corporation's "Japan's Best Global Brands 2012* ."

Fujitsu actively pursues the acquisition of trademark rights for the names of products and services to protect our brand value.

Currently, Fujitsu holds about 5,700 trademarks inside and foreign countries. In particular, we have acquired the trademark rights to the Fujitsu symbol mark in about 150 countries and regions.

* Released every year by Interbrand Corporation in order to rate the values and positions of globally expanding Japanese brands based on world standards.

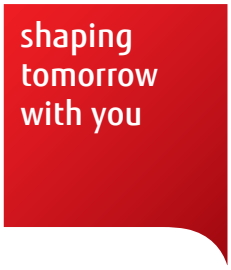
Symbol mark

FUJITSU

Symbol mark　　Brand graphic

Brand promise and Brand graphic (example)

shaping tomorrow with you



Copyrights

In the Fujitsu Group, copyrighted work constitutes part of our important management resources. For example, we not only maintain the licenses for our software products but also reuse our accumulated software resources so as to provide our customers with high-quality systems with a short delivery time.

In the future, changes to the business environment will provide an increasing number of opportunities for Fujitsu to collaborate with our customers and partners in offering services. The Fujitsu Group will respect other companies' rights while making careful use of our own copyrights.

Thorough information management

Proper information handling is not only the basis of Fujitsu Group's business activities, it is also vital to the company's success. However, any information even leaked due to a careless mistake will lose its value as intellectual property, possibly having an adverse affect on Fujitsu's business.

Therefore, Fujitsu Group has established detailed rules on handling information properly, and requires its employees to understand correctly and comply with these rules, and remain conscious of the importance of handling information properly.

More specifically, we properly manage information that is distributed internally as confidential information, separate from public information, so that it will not leak. If we disclose our confidential information to another company as part of our business activities, we will first conclude a nondisclosure agreement with that company before disclosing the information.

If we obtain confidential information from our customers and other companies, we will limit the users of the obtained information, implement education about the handling of that information, and properly manage the information so that no one except such limited users can access it.

Respect for other companies' intellectual property

Fujitsu Group believes that the policy of respecting the intellectual property of other companies is extremely important, not only to protect Fujitsu Group's business, but also to avoid causing unexpected problems for our customers.

Fujitsu Group requires its employees to survey intellectual property held by other entities, during both the research and development and product development phases. For patents, when a new technology to be included in a product under development is determined, a survey is conducted to investigate whether other companies already hold patents on that technology. When a new name is to be assigned to a product or a service, an advance trademark survey is conducted and a trademark applicationis filed. For copyrights, we adhere to the licensing conditions for other companies' copyrighted work. Before using free or open-source software, which has become popular in recent years, we carefully study the risks involved with applying it to our products.

Efforts in international standardization

Particularly in the ICT area, it is difficult for one company alone to create a market by depending only on its own technologies. A robust market is formed when multiple companies provide various products using standardized technologies and ensure that their products satisfy interconnectivity and compatibility requirements. Such a business environment is beneficial to companies that have developed technologies adopted as international standards and that hold patents on such technologies. Recently, it has also become important for a company to ensure superiority in business by successfully creating an area in which they can be competitive while making good use of standards.

Participation in international standardization is a crucial strategy for Fujitsu's business. Fujitsu is promoting, from the perspective of the entire Fujitsu Group, strategic standardization activities aimed at fostering the development of an information-oriented society. Fujitsu has established, within Intellectual Property Unit, a special organization that is responsible for drawing up and implementing standardization strategies, in order to encourage standardization activities across sectional boundaries within the Fujitsu Group. In addition to promoting activities for standardization-related patent acquisitions, Fujitsu is actively working to effectively use patents by participating in various patent pools* as a licensor.

* Fujitsu is participating as a licensor in patent pools relating to various standards such as AVC/H.264, MPEG-4 Visual, VC-1, W-CDMA, ARIB digital broadcasting standards, and digital cable broadcasting standards.

<International standardization of biometric authentication technology>

The Fujitsu Group's palm vein pattern recognition technology has earned high marks for usability and security. The technology enjoys widespread use in Japan and abroad, including at financial institutions for personal authentication and at companies for PC login and room access management. For instance, the technology is used by some seven million people at the ATMs of Brazilian bank Banco Bradesco S.A.—one of our overseas clients.

Fujitsu Group is promoting standardization activities to make our palm vein pattern recognition technology as international standards for biometric authentication in order for many people to use this technology at ease. In fact, researchers at Fujitsu Laboratories played a key role in ushering in the vascular image data format standard ISO/IEC 19794-9:2011 (issued October 1, 2011).

Fujitsu Group is also actively working on international standardization in areas related to biometric authentication, such as information security and IC card technology.

Personal authentication at financial institutions

PC login

Room access management

Contribution to global environmental protection

Based on the statement "In all our actions, we protect the environment and contribute to society," which is included in the FUJITSU Way Corporate Values, the Fujitsu Group contributes to the protection of the global environment from the perspective of intellectual property, while at the same time, responding to global environmental activities and regulations.

More specifically, we have positioned technologies that contribute to the protection of the global environment as one of our important themes, and are maintaining awareness of the environment by cooperating with the business unit as early as in the stage of searching for useful inventions. In addition, we are using such technologies strategically by, for example, applying them to products and using them for promotion in business negotiations.

To raise our employees' awareness of environmental issues, we have established a system for awarding those who have made remarkable contributions to the creation or use of intellectual property for the protection of the global environment.

<Contribution to global environmental protection using Smart Network technology>

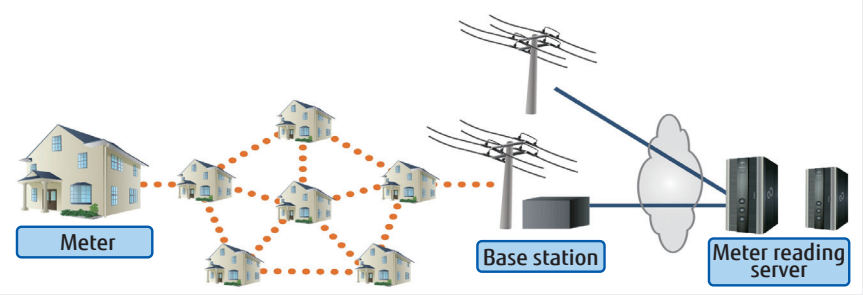
As the problem of global warming becomes acute, technologies for collecting and analyzing information such as energy use and realizing effective energy-saving measures include Fujitsu's WisReed. WisReed is an autonomous distributed network technology that enables the automatic construction of a network which is capable of auto restoration in the event of a failure. It can adapt to changes in the surrounding network environment.

WisReed consists of "ad-hoc communication technology" for transmitting information and "sensor middleware technology" for collecting and using that information.

For this technology, we have filed more than one hundred patent applications in Japan and overseas (five of which have already been registered).

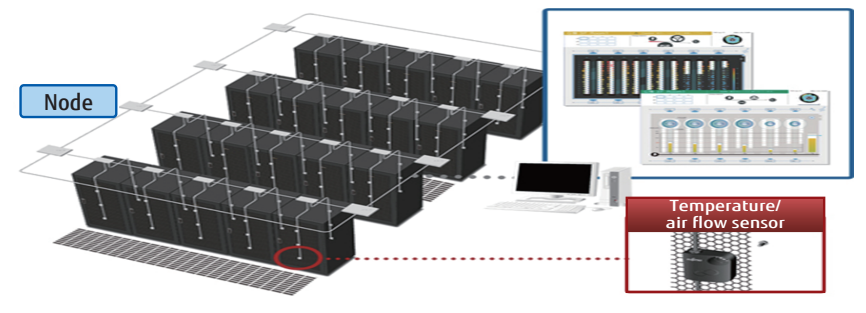
<WisReed application example 1　Remote automated reading of electric power consumption>

Using WisReed, a wireless network is set up to link meters and then automatically and periodically collect meter reading data. Because this allows electric power consumption to be monitored, countermeasures against peaks and so on can be taken promptly. In addition, it is also possible to charge electric power consumers precisely according to their consumption and provide them with services that encourage energy saving.



<WisReed application example 2　Visualization of an air conditioning environment>

In each of the server racks in a data center, a wired ad-hoc communication device is installed, with multiple temperature/air flow sensors connected to each. Thus in each server rack, heat accumulations can be determined precisely. Based on this information, air conditioning can be controlled more efficiently, providing pin-point cooling, for example. At the Fujitsu Tatebayashi System Center, such a system has been implemented in a step-by-step manner, with the aim of reducing facility energy consumption by about 40% during full operation.



5 Intellectual Property Related Organizations and Management Frameworks

Organizations and global management frameworks

Fujitsu established Intellectual Property Unit as one of its corporate centers. The Intellectual Property Unit deals with any activities relating to intellectual property, in areas ranging from the development and planning of the intellectual property strategies of the Fujitsu Group to the utilization of intellectual property, including licensing of intellectual property rights. It also performs activities to promote our strategic standardization activities. We also perform activities to promote our strategic standardization activities, and also take the initiative in activities relating to the intellectual property of the entire Fujitsu Group, as mentioned on the next page.

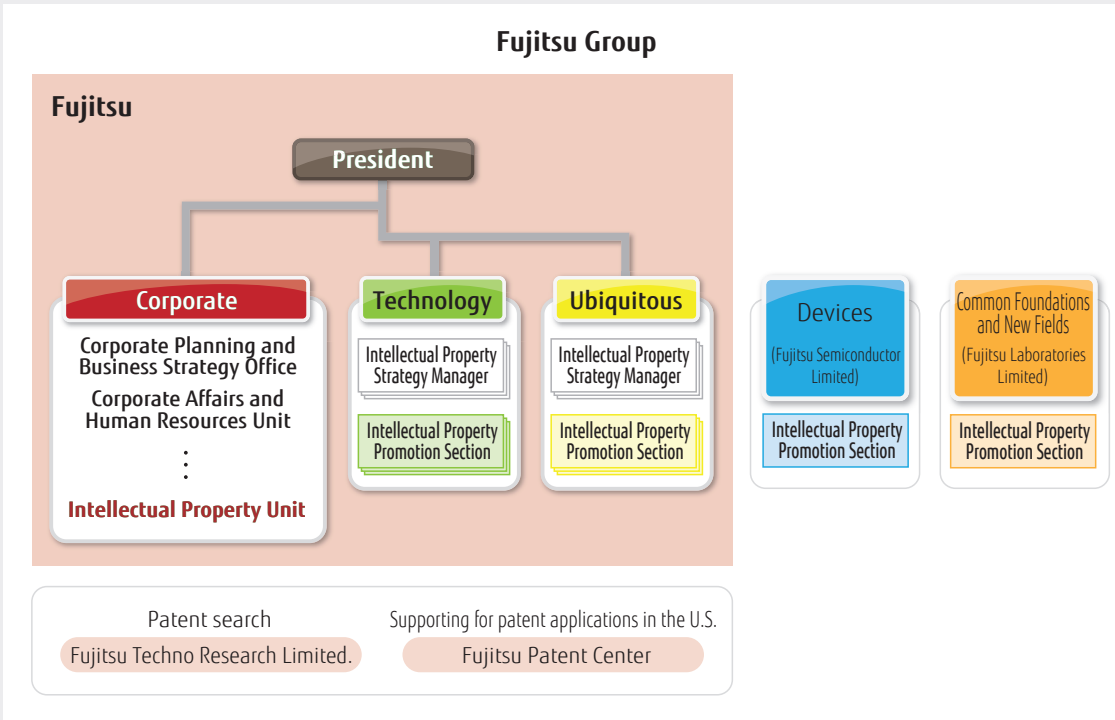
In each business group, an intellectual property strategy manager is appointed and assures seamless cooperation between the research and development sections and the intellectual property sections.

In addition, Fujitsu Techno Research Limited, a Group company, mainly conducts pre-application surveys of prior art to determine the appropriate scope of rights being claimed as well as pre-commercialization surveys to avoid infringement of patent rights owned by other companies.

Furthermore, to promote efficient global business operations, the Fujitsu Group is making efforts to appropriately acquire, maintain, and utilize its intellectual property throughout the world.

In particular, Fujitsu Group resident offices are located in China to ensure that all inventions produced as a result of efforts made in our research and development sites in those countries are identified without fail, and to promote applications for patents for those inventions. Furthermore, in the U.S., the Fujitsu Patent Center we established in 2008 in an effort to improve our ability to acquire patent rights is expanding its activities to increase the quality of our patents.

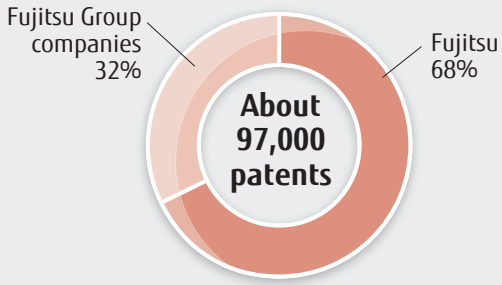
ORGANIZATION



Improvement of the value of the intellectual property of the entire group

Looking at the entire Fujitsu Group, the proportion of patents held by group member companies to the total number of patents held by the group is high (around 30% in fiscal 2011, as in the previous year), so that intellectual property activities that consider the entire group have become ever more important.

■**Breakdown of pending and granted patents by Fujitsu and Fujitsu Group companies**



With the aim of improving the value of our intellectual property assets so as to contribute to the improvement of the business competitiveness of the group, the Fujitsu Group is undertaking the following efforts so that the group member companies worldwide can collaboratively practice consistent intellectual property strategies:

- Information sharing by holding regular liaison conferences by group member companies
- Establishment of a framework that enables the use of intellectual property within the group
  - Mutual cooperation within the group for patent portfolio enhancement
  - Concerted standardization activities throughout the entire group
  - Creation and enhancement of common infrastructures for intellectual property related activities within the group

Education and enlightenment for effectively implementing our intellectual property strategy

Fujitsu Group places importance on the employee education required to implement our intellectual property strategy.

We believe that it is vitally important to foster our employees' awareness of the importance of intellectual property and to encourage them to integrate business, research and development, standardization, and intellectual property strategies when performing their activities.

As part of our efforts to this end, we are developing a training system for increasing awareness of intellectual property, while offering a large number of training programs to ensure effective and efficient training to fulfill the needs of individual employees in their respective careers, thereby providing strategic employee education. We provide two types of training programs, e-learning and classroom education, so that employees can select the type suitable for their purposes and conditions.

Patent promotion activities

Each Fujitsu Group company is working on the stimulation of invention creation activities by using an award system.

In fiscal 2011, Fujitsu established the "invention/right acquisition incentive award" as part of our internal awarding rules, in place of the "excellent invention award." This award is aimed at not only those who have developed inventions that greatly contribute to our business but also other contributors, such as those who have become the first named inventor in patent applications for the first time since joining the company, as well as those individuals (and teams) who have contributed to the acquisition of rights to inventions, thereby broadening a base of invention creation.

Systems for supporting tasks related to intellectual property

We have developed systems to support the intellectual property related tasks that become necessary in the course of our business activities, thereby improving the efficiency of those tasks.

For example, our patent search service allows researchers or developers to verify the novelty of their own inventions and to determine whether their inventions would relate to the patent rights of other companies. This service can be used by all employees, including those of Fujitsu Group member companies, over our intranet.

Our patent management system is used by our intellectual property sections when they initiate prosecution procedures, or manage our intellectual property rights, among others.

The know-how and techniques we have accumulated through our intellectual property activities are applied to our intellectual property solution ATMS for direct sales. ATMS is now widely used by customers as a solution that totally supports all tasks in the intellectual property life cycle.

<Intellectual property solution ATMS> http://jp.fujitsu.com/solutions/ip/

"An intellectual property solution that supports all tasks included in the intellectual property life cycle"

Fujitsu's ATMS offers various products that support activities throughout the entire intellectual property life cycle from the stage in which inventions are still mere ideas through the acquisition of rights and assistance in business strategy.

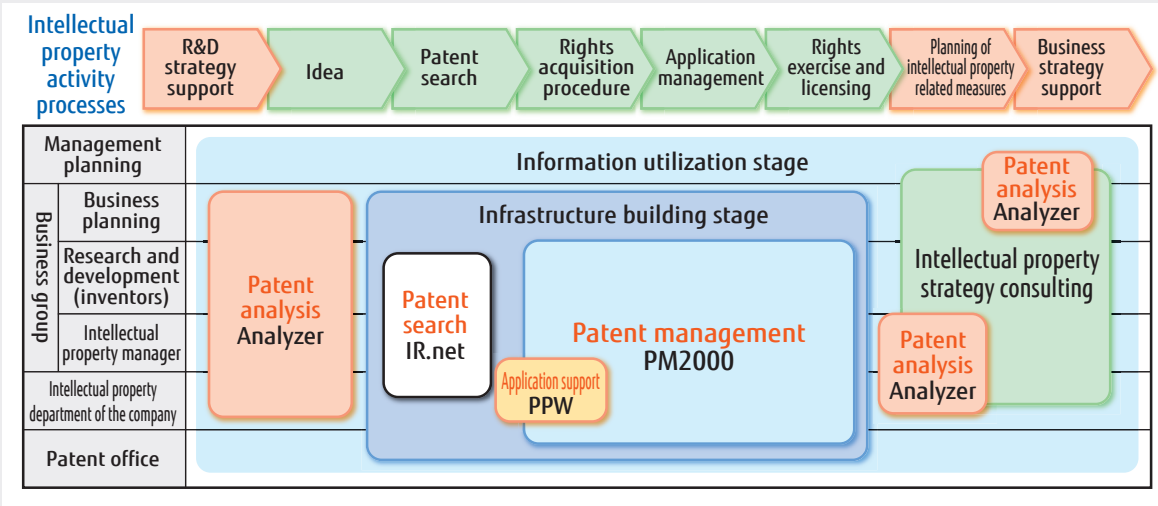
ATMS supports customers in a wide range of intellectual property activities by integrating the know-how and techniques Fujitsu and Fujitsu Group member companies have accumulated through their in-house practices.

The main ATMS-related products and services include the following:

- **Patent analysis system – ATMS/Analyzer**
  ATMS/Analyzer provides tools for mapping and "visualizing" technological trend analysis, which is indispensable for planning and implementing business and research and development strategies, and for valuation of products and services relative to those of competitors from large volumes of patent information, speedily and from a range of viewpoints through the use of the latest text mining technology.

- **Patent search service – ATMS/IR.net**
  ATMS/IR.net was designed by incorporating the search ideas used by our experienced patent survey engineers. It is a full ASP-type service that provides search functions that fulfill the needs from a wide range of users from people engaged in research and development to those engaged in managing intellectual property assets.
  We are planning to offer a new service in the future that will considerably expand that range of searchable patent information and provide users with a wide range of assistance functions.

- **Patent management system – ATMS/PM2000**
  We offer a comprehensive patent management system that fulfills the needs of users in various types of business to further improve the efficiency of patent management tasks that are characterized by increasing complexity and sophistication. As part of our recent efforts, we offer "PM2000 Smart," which provides carefully selected basic functions, based on the field-proven PM2000, so that it can be used even by those customers who make relatively few patent applications.



6 Capitalizing on Our Intellectual Property

Policy

By utilizing our intellectual property, we effectively differentiate our products and services from those of our competitors to secure "business competitive advantages". We also achieve "business flexibility" by partnering with other companies under favorable terms. Furthermore, we utilize our intellectual property to gain profits from our licensing and related deals.

For example, Fujitsu has concluded cross-licensing agreements with numerous companies to secure business flexibility.

Major companies that have signed cross-licensing agreements with Fujitsu include Intel Corporation, IBM Corporation, Alcatel-Lucent USA, Inc., Texas Instruments Inc., Microsoft Corporation.

Technology sales

Fujitsu Group no longer uses some of the patents it holds because of changes in its business strategy. Even those patents that Fujitsu currently uses may be available for widespread use by other companies to create more value. We are aggressively working to license to these patents and other know-how, as technology "seeds," to other companies to ensure that the outcome of our research and development work will be utilized widely in society and become a source of royalty earnings. These technology seeds serve as core technologies for customers and we support our customers' sales promotion activities for products developed from these seeds. We refer to all of these activities as technology sales activities.

In keeping up with the recent trend towards open innovation, many companies are actively working to introduce technologies from other companies as a step toward developing their own brands. For example, we conduct technology sales activities through coordination with local governments such as Kawasaki City, Yokohama City, and Sakai City and have succeeded in matching our seeds with the needs of small- and medium-sized companies. In this way, Fujitsu's technology seeds help other businesses create new value.

Fujitsu posts information on these technology seeds on a publicly accessible Web page, which outlines titanium apatite technology, Control unit technology, and other many attractive technologies. For more information on technology sales, please visit the "Patents available for sale" Web page at the following URL:

http://jp.fujitsu.com/about/ip/

7 Award-Winning Inventions/Activities

Awards related to inventions and standardization

Fujitsu's overall efforts relating to innovation and intellectual property have been widely recognized even outside the company and Fujitsu Group received various awards. The table below lists the main awards we have earned during 2011FY.

< Awards related to Invention >

Award Title	Awarding Institution
National Commendation for Invention; Invention Award Invention related to the method of switching between base stations in CDMA mobile telecommunications (Japanese Patent No. 3479935) (Note: This is introduced on page 8 of the Intellectual Property Report 2011. We encourage you to read this.)	(Public interest incorporated association) Japan Institute of Invention and Innovation
The Kanto Local Commendation for Invention and the Japan Patent Attorneys Association President's Encouragement Award 2011 Noise suppression method for clearer mobile phone communications (Japanese Patent No. 4520732)	(Public interest incorporated association) Japan Institute of Invention and Innovation

Topic <Introduction to award-winning inventions>

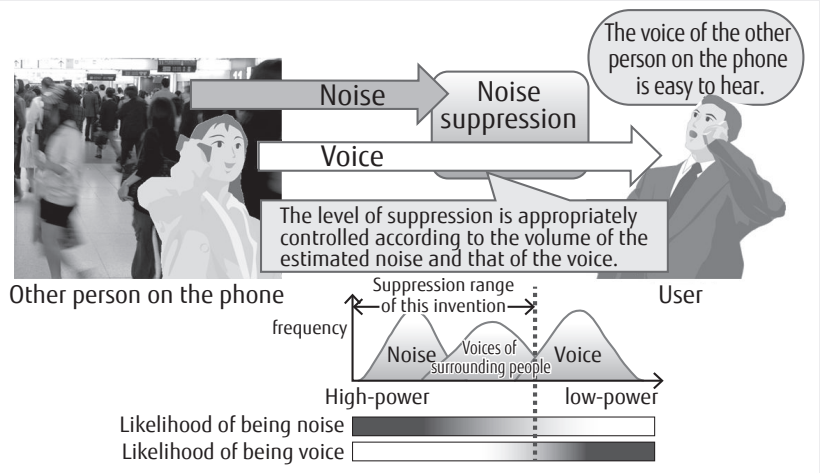
[Noise suppression method for clearer mobile phone communications] (Japanese Patent No. 4520732)

This invention relates to technology that makes it easier to hear the voice (sound) of the other person on the phone by accurately suppressing the noise contained in the speech received on a Mobile phone.

In the prior art, an interval that contains only noise is extracted from the received speech, and the average frequency characteristics are determined, based on which noise contained in the received speech is suppressed. This prior art presents a problem in that in situations such as railroad stations and crowds where the speech of surrounding people is likely to be picked up as noise, the voice (sound) of the other person on the phone cannot be distinguished from the voices (noise) of the surrounding people, with the noise being impossible to suppress sufficiently, leaving the voice hard to hear.

This invention estimates the likelihood of a sound being noise or voice according to its volume, and appropriately controls the level of suppression of the input sound based on the estimation results, thereby increasing the noise suppression performance. This enables the suppression of surrounding voices as noise, which is hard to suppress with the prior art, and thus successfully improves the quality of the speech received on the Mobile phone.

The technology of this invention is embodied as the noise suppression function of our Mobile phone products, such as our Raku-Raku Phones.



< Awards related to Standardization >

Award Title	Awarding Institution
International Standard Development Award ISO/IEC 19794-8:2011 Information technology -Biometric data interchange formats - Part 8: Finger pattern skeletal data	(General incorporated association) Information Technology Standards Commision of Japan, Information Processing Society of Japan
International Standard Development Award ISO/IEC 29109-8:2011 Information technology - Conformance testing methodology for biometric data interchange formats defined in ISO/IEC 19794 - Part 8: Finger pattern skeletal data	(General incorporated association) Information Technology Standards Commision of Japan, Information Processing Society of Japan
International Standard Development Award ISO/IEC 19794-9: Information technology - Biometric data interchange formats - Part 9: Vascular image data	(General incorporated association) Information Technology Standards Commision of Japan, Information Processing Society of Japan
2011 DMTF Star Award Contribution to the establishment of DMTF's first Japan branch	DMTF (Distributed Management Task Force)
International Standard Development Award ISO/IEC 29109-9: Information technology - Conformance testing methodology for biometric data interchange formats defined in ISO/IEC 19794 - Part 9: Vascular image data	(General incorporated association) Information Technology Standards Commision of Japan, Information Processing Society of Japan
Industrial Science and Technology Policy and Environment Bureau Director Award, Industrial Standardization Award 2011 Standardization activities concerning the promotion of character code standards	Ministry of Economy, Trade and Industry
Industrial Science and Technology Policy and Environment Bureau Director Award, Industrial Standardization Award 2011 Standardization activities in the areas of failure mechanisms/reliability tests for semiconductor devices	Ministry of Economy, Trade and Industry
Industrial Science and Technology Policy and Environment Bureau Director Award, Industrial Standardization Award 2011 Contribution to standardization in the area of discrete semiconductor microwave devices	Ministry of Economy, Trade and Industry
IEC1906Award（2011） Contribution to the development of standards relating to electronic packaging processes and test methods	International Electrotechnical Commission
JCP Member of the Year Contribution to the development of standards relating to electronic packaging processes and test methods	Java Community Process(JCP)
Standardization Contribution Award Standardization relating to the interconnection between information devices	(General incorporated association) Information Technology Standards Commision of Japan, Information Processing Society of Japan
Standardization Contribution Award Standardization relating to biometrics technology in ISO/IEC JTC1 SC37	(General incorporated association) Information Technology Standards Commision of Japan, Information Processing Society of Japan
Award of the Minister of Internal Affairs and Communications, Information and Communication Technology Award Contribution to standardization activities for transmission and subscriber systems	(General incorporated association) THE TELECOMMUNICATION TECHNOLOGY COMMITTEE(TTC)
Performance Award, Information and Communication Technology Award Achievement concerning the promotion of standardization relating to network management	(General incorporated association) THE TELECOMMUNICATION TECHNOLOGY COMMITTEE(TTC)
Chairman Award, IEC Activities Promotion Committee of Japan 2011 Pioneering activities for the international standardization of optical parts for optical communication	(General incorporated association) The Japanese Standards Association
ITU-AJ Award; International Activity Incentive Award Standardization activities for wavelength division multiplexing optical transmission system technology	(General incorporated association) The ITU Association of Japan (ITU-AJ)

Information contained in this document includes statements regarding future forecasts based on current business estimates or hypotheses. The actual results or events may differ from what is expressed or implied by these statements because of known or unknown risks and/or uncertain factors. Examples of risks and factors that may affect actual results and examples of events are listed below. (Note that they are only examples and the actual risks and factors are not limited to those listed below.)

- Economic trends in major markets (especially in Japan, North America, and Europe)
- Possible changes in high-tech markets (especially in the semiconductor, PC, and mobile phone markets)
- Trends in foreign exchange and floating interest rates
- Capital market trends
- Intensification of price competition
- Changes of competitors' positions in a market as a result of technological developments
- Changes in component procurement environments
- Changes in competitive relationships resulting from tie-ups, alliances, and technological licensing
- Possibility of projects becoming unprofitable
- Accounting policy changes

INTELLECTUAL PROPERTY REPORT 2012 Fujitsu

FUJITSU LIMITED
Shiodome City Center, 1-5-2 Higashi-Shimbashi
Minato-ku, Tokyo 105-7123, JAPAN
Tel. +81-3-6252-2220
www.fujitsu.com