

Brief Summary of Intellectual Property Activities

FUJITSU LIMITED
Nov. 2016

Business and Intellectual Property Strategy

The Era of Digital Transformation

- Utilizing the most advanced ICT to rapidly respond to business changes
- Collaboration and co-creation that transcend business and industry boundaries

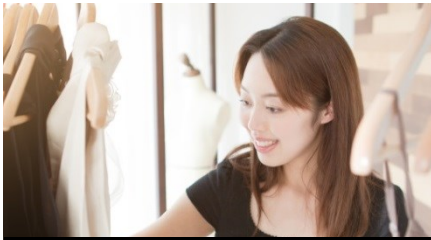


Customer Efforts toward Digital Transformation

- Promoting ecosystem building through co-creation with customers
- Carrying out over 300 PoCs※/operational trial

※ PoC : Proof of Concept (testing new technology and ideas)

Top 8 areas of PoC/operational trial



Customer analysis/
marketing
About 60 trials



Transport information/
disaster prevention
About 40 trials



Product traceability
About 30 trials



Factory visualization
About 30 trials



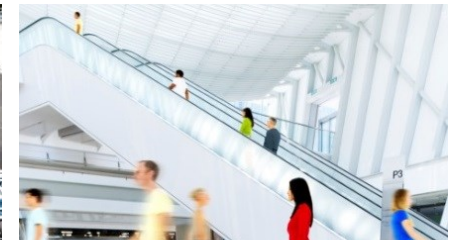
Safety
(seniors/children)
About 30 trials



Advanced agriculture/
husbandry
About 30 trials



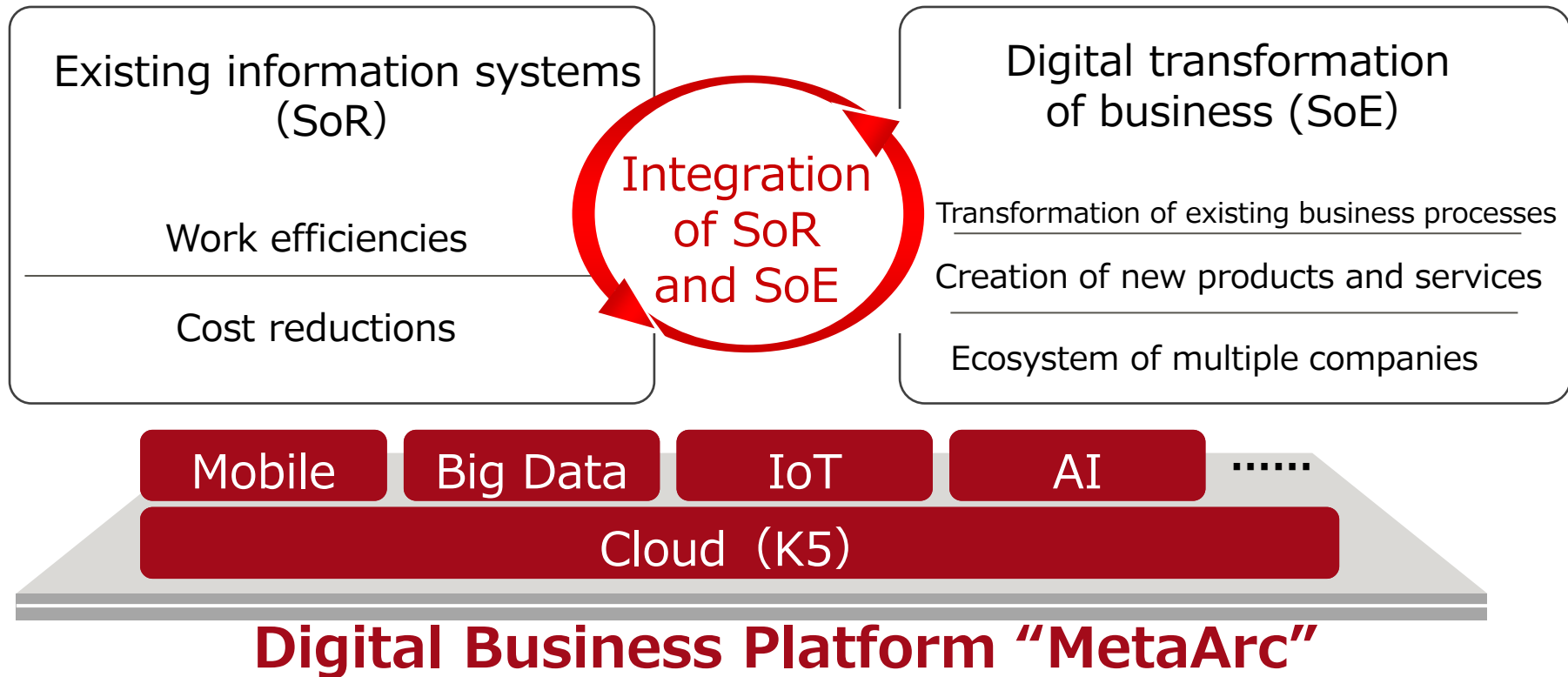
Facility monitoring/
maintenance
About 20 trials



Retail customer
movement analysis
About 20 trials

Fujitsu's Next-Generation Cloud-Based Digital Business Platform

- A platform that can achieve customers' digital transformations
- Provides the most advanced ICT, such as the cloud, mobile, big data, IoT, and AI



AI : Artificial Intelligence

SoE : Systems of Engagement (systems relating to people or things)

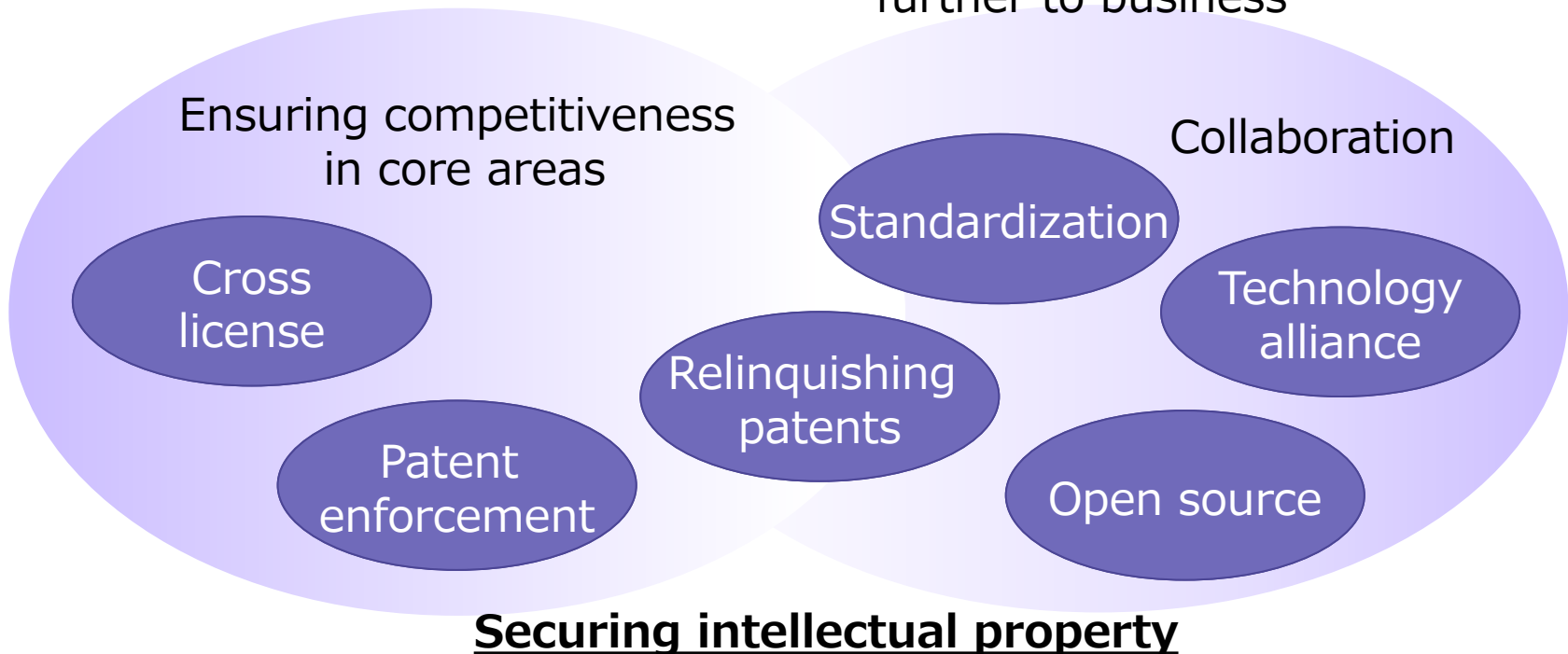
SoR : Systems of Record (systems that handle business processes and records)

(1) Standing as a technology company

Establishment of intellectual property rights for ideas generated through business or R&D, etc.

(2) Providing value appropriate to specific business

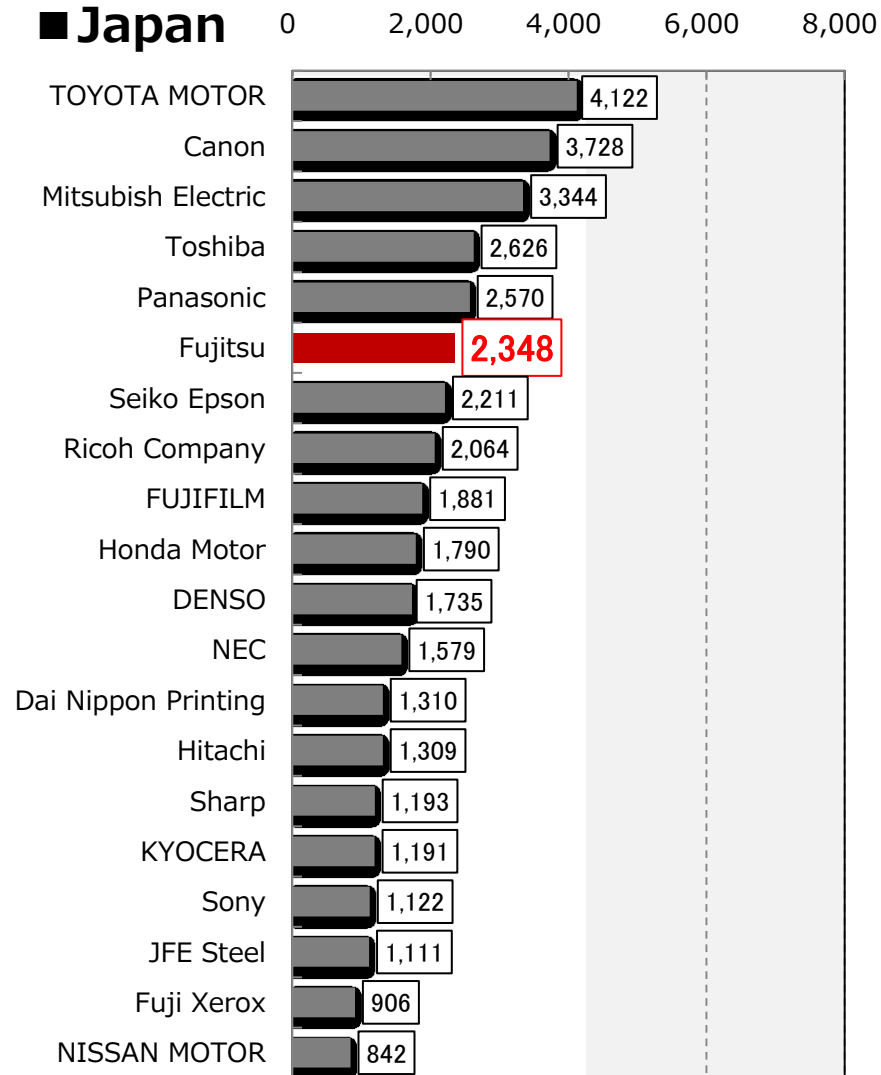
Creation and development of new intellectual property strategies with a broader vision for companywide utilization in order to contribute further to business



Standing As a Technology Company

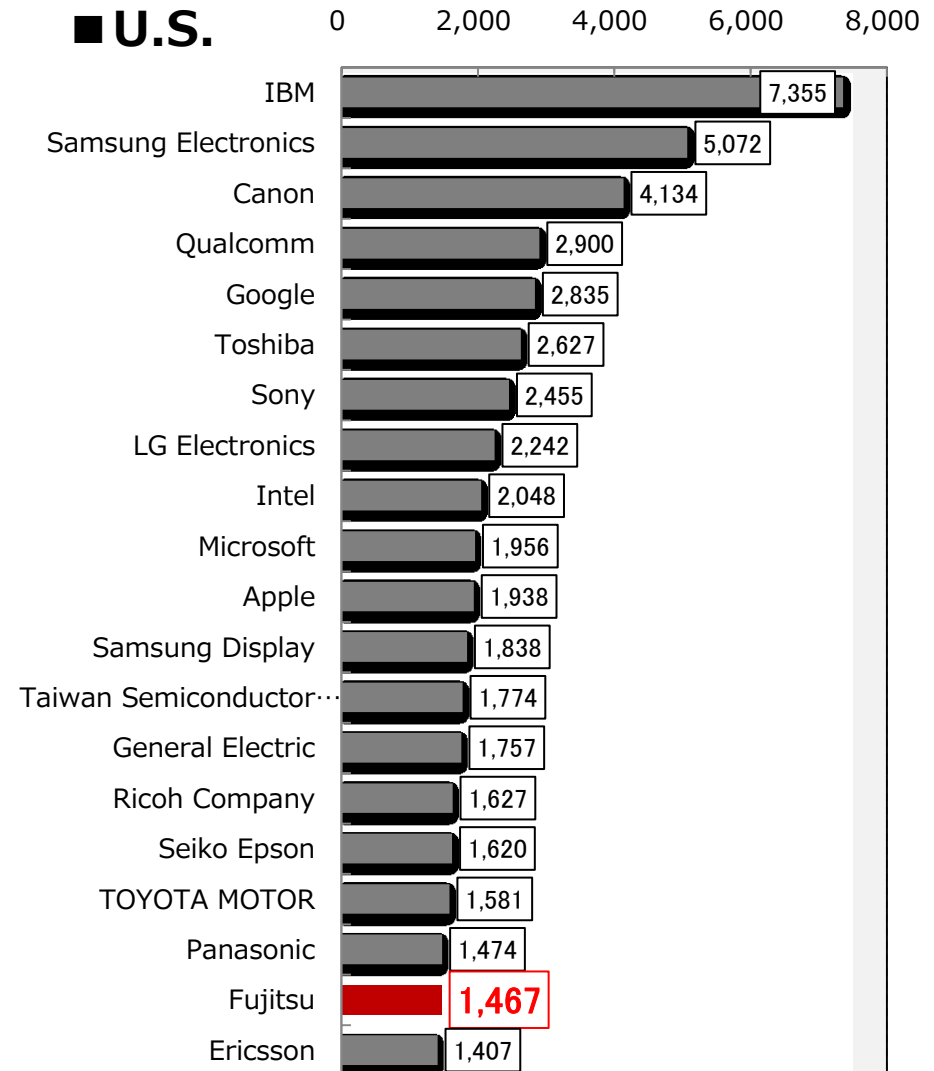
Ranking in Number of Granted Patents (2015)

■ Japan



All applicants were counted on the Patent Grants Issuance date
Source: In-house investigation based on data published by Japan Patents Office

■ U.S.



All applicants were counted on the Patent Grants Issuance date
Source: Data provided by IFI CLAIMS Patent Services

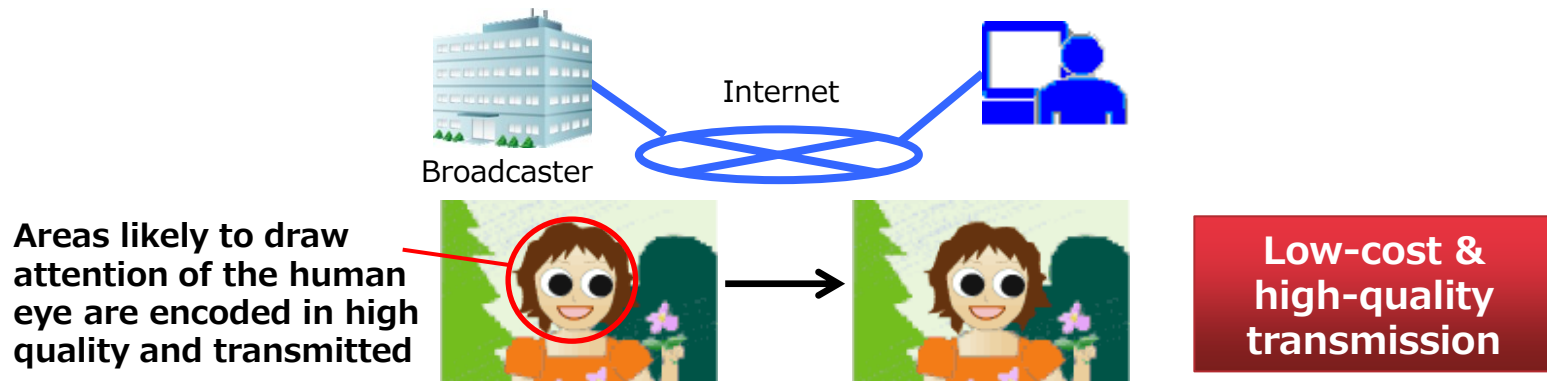
Awards Related to Technology and Patent (1)

Medal with Purple Ribbon* (Shiju Hosho) in the 2016 Spring Conferment

■ Akira Nakagawa, Fujitsu Laboratories

"Development of Encoding and Transmission Technologies for Digital Video"

These technologies greatly reduce the data volume of High-Definition (HD) video and enable HD video transmission through the public network.



Through these technologies, H.264 video transmission equipment was adopted at broadcast stations around the world. It contributes both to the development of HD video industry and to the growth of HD video on a global scale.(Representative patent No. 4454320)

* The most prestigious award in Japanese technology field

Awards Related to Technology and Patent (2)

■ Technology

Awarding Institution	Award Title	Title	Winner
Cabinet Office, the Government of Japan	Medal with Purple Ribbon (Shiju Hosho) in the 2015 Spring Conferment	Development of ferroelectric random access memory	Takashi Eshita (Fujitsu Semiconductor)
METI, MLIT, MHLW, and MEXT	The Sixth Monodzukuri Nippon Grand Award, the METI Minister's Prize	Manufacturing system for notebook computers	Masayuki Satou, Tatsumi Fukuma, Motoyuki Yamamoto, Yuma Watano (Shimane Fujitsu)

■ Patent

Japan Institute of Invention and Innovation (JIII)	National Commendation for Invention; Invention Award	Directional sound receiving method	Naoshi Matsuo (Fujitsu Laboratories)
Japan Institute of Invention and Innovation (JIII)	The Kanto Local Commendation for Invention Chairman's Award of JIII in Kanagawa Prefecture (Patent No.4821723)	Low delay video transmission equipment	Hidenobu Miyoshi, Akira Nakagawa, Kimihiko Kazui (Fujitsu Laboratories) Hisanari Kimura (Fujitsu Kyushu Network Technologies)

Providing Value to Business

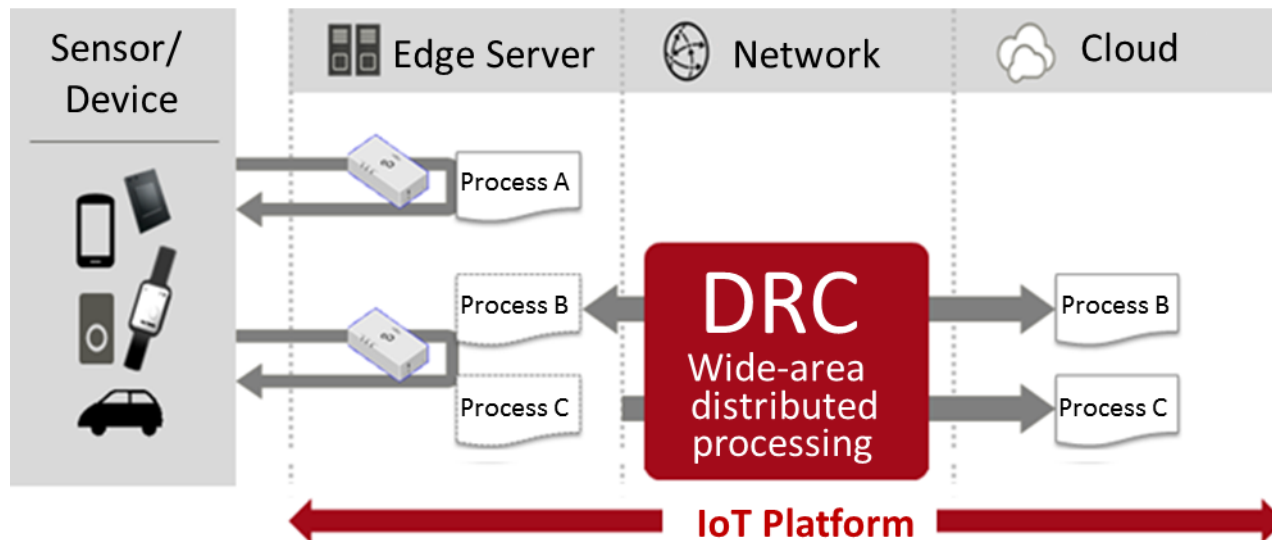
-intellectual property activity examples-

Proposals for IP strategies that fit the business model

■ Dynamic Resource Controller(DRC) of IoT Platform

Automated optimum distribution and deployment for application processing following infrastructure changes such as a change in the number of devices or volume of data (applicable to large scale systems).

Patent applications actively filed for core areas that form Fujitsu's strengths.

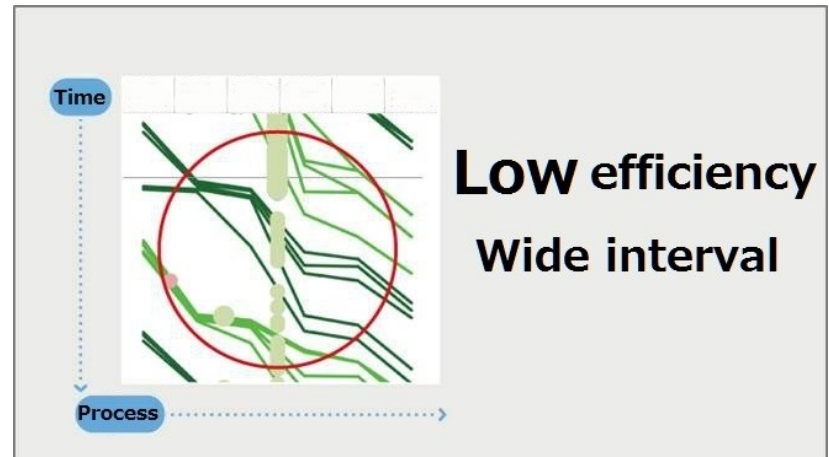
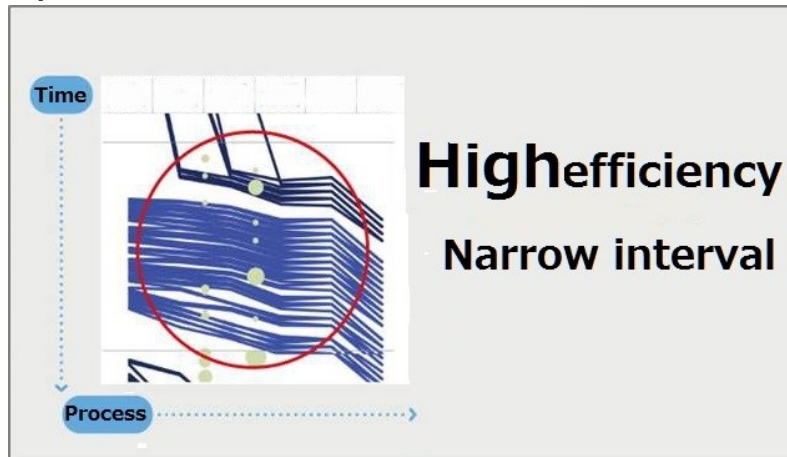


Patent acquisition from prototype development

■ Visualization of production line status

Using big data in factories and other production facilities

Visualization solutions that allow engineers onsite to identify points for improvement



FUJITSU JOURNAL, Apr. 20, 2015) <http://journal.jp.fujitsu.com/en/2015/04/20/01/>

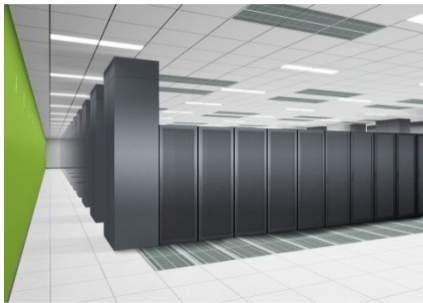
The intellectual property department was involved from the prototype development phase and evaluated for patent filing and protection prior to the disclosure of every new function. The “patent applied” marks on proposal materials showed our technological capabilities.

Patent applications have been filed in Japan and overseas through such early and organized activities.

Analysis and evaluation from the perspective of IP

■ Applications for fiber optic temperature measurement technology

Technology that uses optical fiber as a sensor to accurately measure indoor temperature distribution



Datacenter



Power plants/chemical plants

Analysis materials created by the intellectual property department were submitted to roll out fiber optic temperature measurement technology. Business conditions and patent holdings of competitors were analyzed to identify potential risks and issues for rolling out the technology, and patent applications were filed to protect and promote the technology for the purpose of obtaining new businesses.

< 4 > Turning image analysis technology into a new business

Encouraging innovation

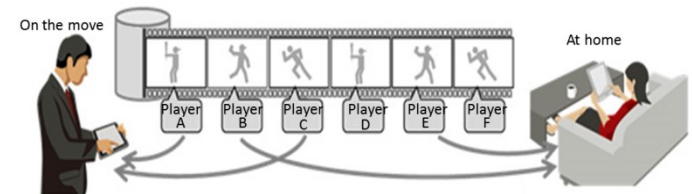
■ Game search service for pro baseball video

Technology that enables instant search for desired scenes using a player's name or batting results such as home runs or strikeouts.



Fujitsu employs its specialties in image analysis technology and investigates a business model with our customer. We filed many patents in Japan and overseas to create patent portfolio(s) that support and protect this service.

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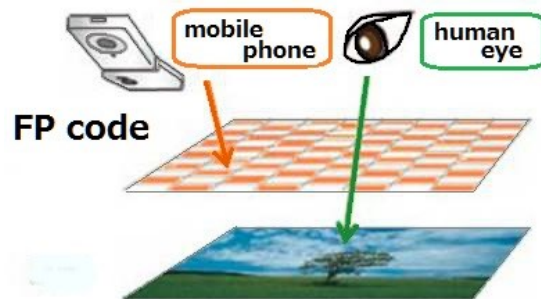
< 5 > Intellectual property matching

Community contribution utilizing intellectual property

Fujitsu contributes to the creation of new businesses for local companies by utilizing Fujitsu intellectual properties released for non-exclusive use.

KAIDO CO.,LTD.

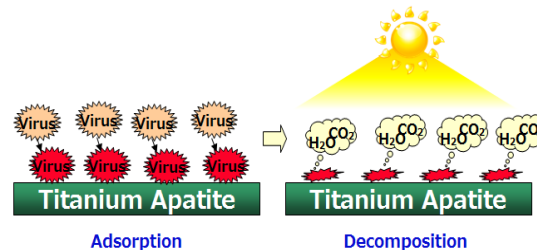
Code embedding technology for printed images



Printed Nanbu Senbei
(Nanbu rice crackers)

MAC Knife, Inc.

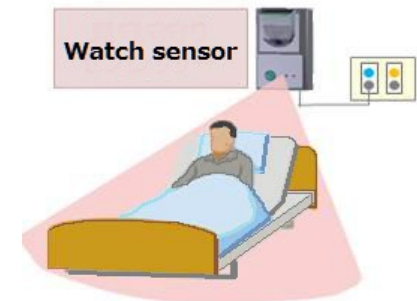
Photocatalytic Antibacterial Titanium apatite technology



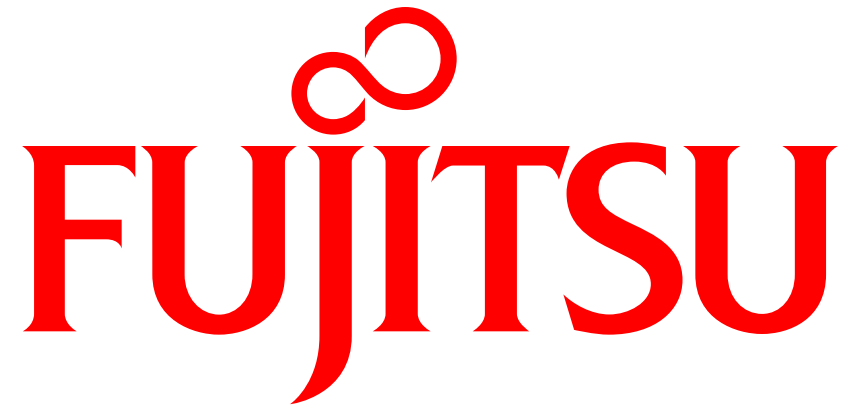
Antibacterial Knife

ALCO_EX, LTD.

Patient watching sensor technology



Signing ceremony



shaping tomorrow with you