

Hitachi Intellectual Property Strategy

17th April 2012

Takashi Suzuki

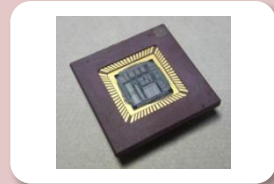
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Shift in Business Portfolio

Semiconductor



LCD Panel



HDD



Infrastructure Systems



Information &
Telecommunication Systems



Power Systems

Shift in IP Strategy

Electronics/Mass-product Industry

- Increase Licensing Income
- Reduce license payment
- Put weight on US patents

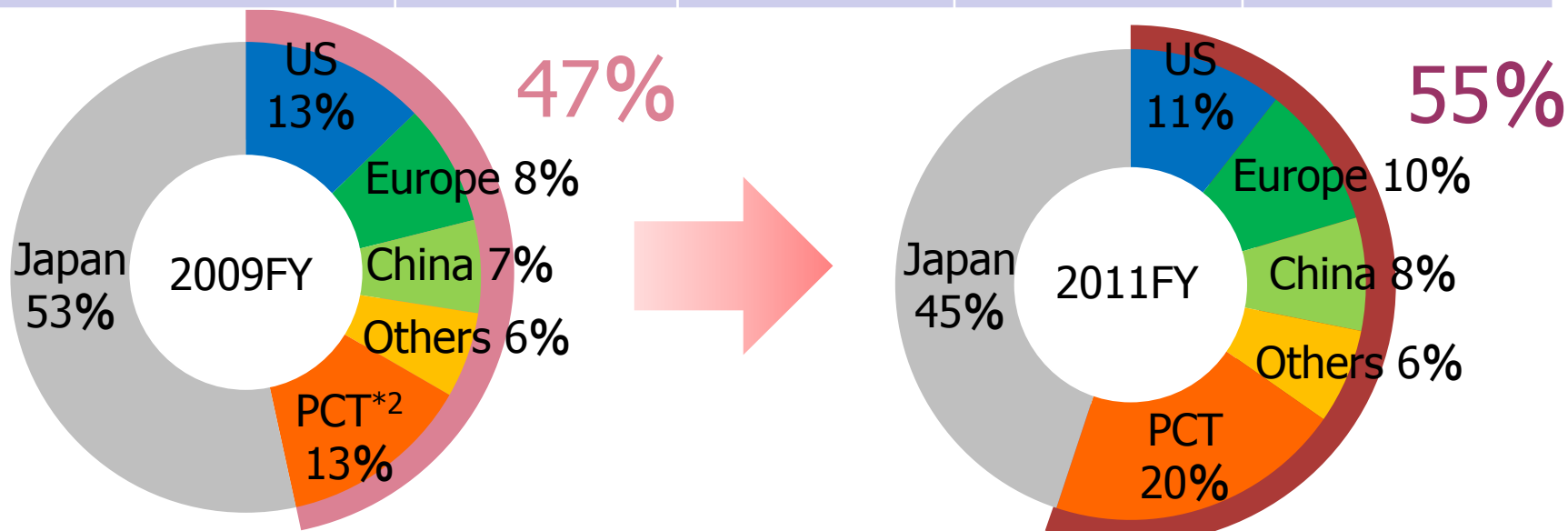
Social Innovation Business

- Protect business by IP
(Differentiation, Prevention, and Securement of free business activity)
- Promote globalization of patents according to globalization of our business

2. Globalization in our IP Activity

- FY2012 Target: Overseas Sales Ratio over 50%
- FY2012 Target: Overseas Patent Appl. Ratio*1 55% **Achieved in FY2011**

	2009FY	2010FY	2011FY	2012FY(Target)
Overseas patent Appl. Ratio	47%	51%	55%	55%



Decrease Japanese and US applications and Increase PCT applications

*1 Overseas Patent Appl. Ratio =

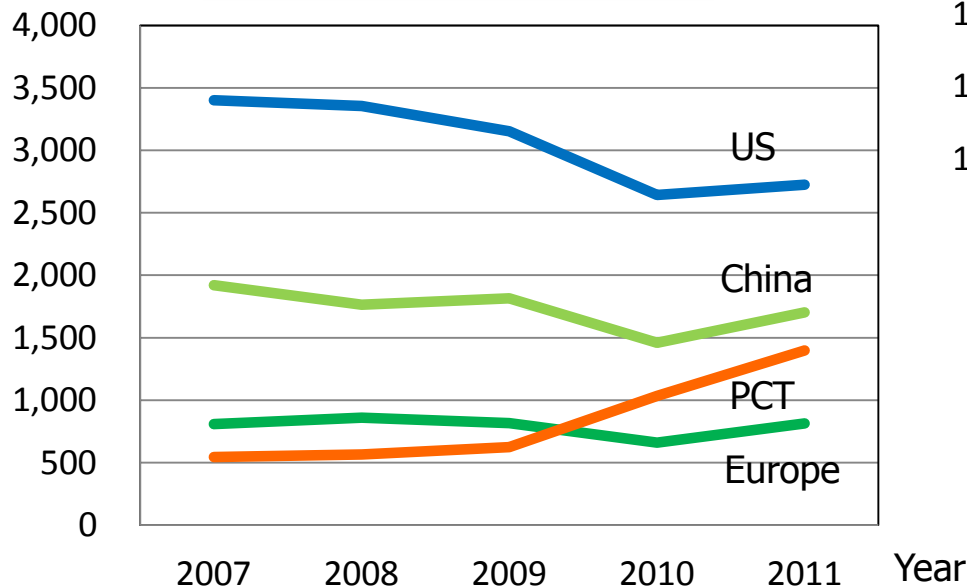
$$\frac{\text{The number of overseas patent Applications}}{\text{The number of overseas patent Appl.} + \text{The number of Japanese patent Applications}}$$

*2 PCT applications: Patent applications filed under the Patent Cooperation Treaty. For the overseas patent Appl. Ratio, we count expected number of countries where we plan to obtain patents for each PCT application.

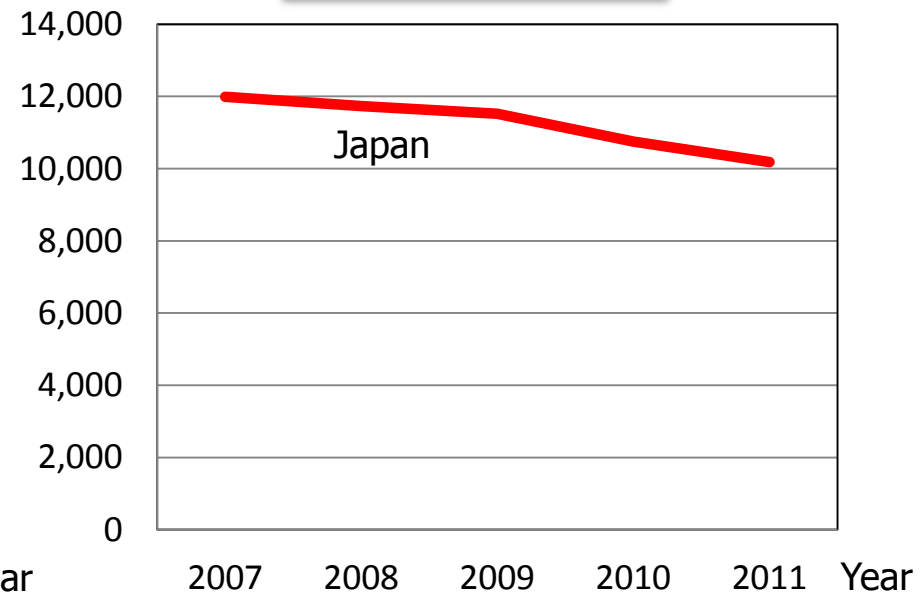
2. Globalization in IP Activity

Hitachi Group Published Patent Applications* (Recent 5 years)

Overseas Countries



Japan



Shift from Japan and US to Asian emerging countries by using PCT

2. Globalization in IP Activity

Patent Applications Published in 2011 (Granted patents for US)*

Japan

Corporate Group		
1	Panasonic	13,173
2	Hitachi	10,183
3	Toyota	9,769
4	Toshiba	8,548
5	Canon	7,294
6	Seiko Epson	5,836
7	Mitsubishi Electric	5,558
...		
18	GE	1,135
23	Siemens	239

US

Corporate Group		
1	IBM	6,192
2	Samsung	6,139
3	Panasonic	3,205
4	Canon	2,959
5	Hitachi	2,942
6	Sony	2,837
7	Toshiba	2,821
...		
11	GE	1,741
13	Siemens	1,664
22	Mitsubishi Electric	670

China

Corporate Group		
1	ZTE	5,354
2	Huawei	3,289
3	Hon Hai	2,831
4	Panasonic	2,655
5	Sony	2,497
6	LG	2,337
...		
11	Hitachi	1,702
12	Siemens	1,544
14	GE	1,312
19	Toshiba	1,138
21	Mitsubishi Electric	790

PCT

Corporate Group		
1	Panasonic	3,151
2	ZTE	2,834
3	Toyota	1,997
4	Huawei	1,835
5	Sharp	1,774
6	LG	1,771
7	Siemens	1,683
...		
10	Hitachi	1,398
15	Mitsubishi Electric	860
19	Toshiba	617
22	GE	464

Hitachi Group keeps competitive number of patents/patent applications

3. Case Study of Protecting Business by IP

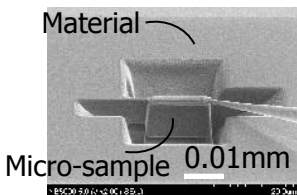
Focused Ion Beam (FIB) System of Hitachi High-Technologies

<Micro-sampling Technology>

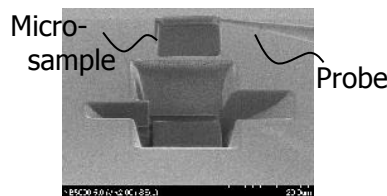
Technology for making and picking up a micro-sample from material precisely.

- Original Technology implemented in FIB systems of Hitachi High-Technologies
 - ⇒ Received Technology Award from Japan Society for Precision Engineering in 2001
- Hitachi High-Technologies owns several patents relevant to the Micro-sampling technology

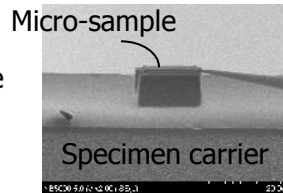
(1) Peripheral milling and bottom cutting to make the micro-sample



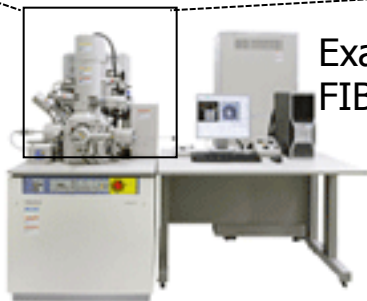
(2) Picking up the micro-sample by the probe



(3) Setting the micro-sample on the specimen carrier



Example of patented technology:
FIB system implementing steps (1)-(3)



A competitor implemented the Micro-sampling Technology to its products



Hitachi High-Technologies applied for suspension at Japanese border based on its patent in order to protect its business

4. Focused Technology Areas in IP Activity

Focused Technology Area	
(1)	Highly Reliable Cloud
(2)	Smart grids
(3)	Energy (Coal-Fired Thermal Power etc.)
(4)	Green Mobility (Inverter, Motor etc.)
(5)	Healthcare (Proton Beam Therapy System etc.)

Focus on No.1 technologies
supporting Social Innovation Business

5. International Standardization Activity

Select strategically important areas at the corporate level to facilitate standardization

Examples of standardization areas and achievement

Theme	Achievement	Objective
Smart City	Contributed to establish a new subcommittee, TC268 SC1 "Smart urban Infrastructure Metrics", in ISO*1	Provide common tools for international procurement in the urban infrastructure area
Smart Data Center	Ecma*2 standard "Smart Data Center Resource Monitoring and Control" was issued.	Expand a market of Eco-friendly IT systems

Industrial Standardization Award (Minister of Economy, Trade and Industry Award)

【Evaluated points】

- ◆ Standardization activities in wide areas, and contribution by sending talents to standardization organizations
ex. IEC*3 Vice President, IEC and JTC1*4 Committee Chairman
- ◆ Contribution to standardize Japan oriented technology
ex. Biometrics authentication, Encryption, RFID etc



*1 ISO: International Standardization Organization,

*2 Ecma: International standardization organization for information and communication technologies

*3 IEC: International Electrotechnical Commission

*4 JTC1: Joint Technical Committee 1 for Information Technology

HITACHI
Inspire the Next 