Hitachi’s IP Strategy

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Managing Director
Intellectual Property Group, Hitachi, Ltd.
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1. Basic Policy of IP Strategy

2. Patent Strategy
   ① Globalization
   ② Selection and Focus
   ③ Patent Portfolio Restructuring

3. Patent Exploitation Strategy
   ① Globalization
   ② Strategic Patent Use
   ③ Collaborative Creation–internal/external resources

4. Summary
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4. Summary
1 Basic Policy of IP Strategy

Vision: Creating IP Added Value

Mission

- Building a world-class patent portfolio — Patent Strategy
- Strategic IP use — Patent Exploitation Strategy

Goal

- Contribute to the enhancement of corporate value
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4. Summary
2-1 Patent Strategy - ① Globalization (1/2) -

— Building a world-class patent portfolio —

2010 Target:
Number of Overseas Applications > Number of Domestic Applications

Hitachi Group Domestic/Foreign Patent Applications

![Pie charts showing the distribution of patent applications in 2007 and 2010.](chart.png)
### U.S Patent Registration in 2007

<table>
<thead>
<tr>
<th>Company Gr.</th>
<th>Number of Patents (Rank)</th>
<th>2006 Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsung</td>
<td>3,263 (1st)</td>
<td>2nd</td>
</tr>
<tr>
<td>IBM</td>
<td>3,151 (2nd)</td>
<td>1st</td>
</tr>
<tr>
<td>Hitachi</td>
<td>2,302 (3rd)</td>
<td>3rd</td>
</tr>
<tr>
<td>Matsushita Electric Industrial Co., Ltd.</td>
<td>2,181 (4th)</td>
<td>4th</td>
</tr>
<tr>
<td>Canon Inc.</td>
<td>2,019 (5th)</td>
<td>5th</td>
</tr>
</tbody>
</table>

- Maintain a high position in the ranking on a consolidated basis in 2008 and beyond

Search system: IFIPAT/Questel-ORBIT (Prepared by IFI-CLAIMS) and MicroPatent
Flagship (FS) patent activities
- Invention creation activities subject to the R&D roadmap
- Selection of advantageous technology and invention creation for building the patent portfolio

Strategic Patent activities
Early selection of important patent applications
Promotion of intensive patent acquisition activities

5 Fighting Patents (FP) activities
Acquiring 5 patents (for each product and competitor) useful in litigation

Competitors’ information (market information, prior art search and so on)
Examples of themes for building a powerful patent portfolio
FS (Create), PPM (Refine) themes

<table>
<thead>
<tr>
<th>Theme</th>
<th>Business Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage systems (SAN/NAS storage solutions)</td>
<td>Information &amp; Telecommunication Systems</td>
</tr>
<tr>
<td>Next Generation Network (NGN)</td>
<td>Information &amp; Telecommunication Systems</td>
</tr>
<tr>
<td>Electric power-train systems (Motors used in Hybrid vehicle)</td>
<td>Power &amp; Industrial Systems</td>
</tr>
<tr>
<td>Eco-friendly technology (Gas/Steam turbine, etc)</td>
<td>Power &amp; Industrial Systems</td>
</tr>
</tbody>
</table>
Examples of Eco-friendly technology (Gas/Steam turbine, etc.)

- CO₂ capture and storage equipment will be constructed here.
- IGCC’s furnace.
- Gas turbine building.

Pilot plant of IGCC CCS testing will be held.

- Contributing CO₂ reduction through the high-efficiency and CCS technology.

3 Mega Watt A-HAT testing system.
Equal efficiency with combined cycle.

600 degrees C class high-pressure turbine.
One of the world's top efficiency.

IGCC: Integrated Coal Gasification Combined Cycle Power Generation
CCS: Carbon Capture and Storage

Plant of the Year (Power)
Best Coal-fired Project (Power Engineering)
Percentage of U.S issued patents for each Industry Segment

**2003**
- Electronic Devices: 35%
- Digital Media & Consumer Products: 11%
- Information & Telecommunication Systems: 27%
- Power & Industrial Systems: 21%
- High functional Materials: 5%

**2007**
- Electronic Devices: 23%
- Digital Media & Consumer Products: 46%
- Information & Telecommunication Systems: 11%
- Power & Industrial Systems: 13%
- High functional Materials: 7%

**Patent Portfolio in accordance with Business Portfolio**

- **2-5 Patent Strategy - ③ Patent Portfolio Restructuring**
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Global Licensing Activity

Domestic/overseas royalty income breakdown

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>65%</td>
<td>35%</td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Asia and others: 50%
- Europe: 15%
- U.S.A.: 6%
- Domestic: 29%
Diversification of exploitation activity

- Strategic exploitation
- Patent royalty income
- Cross licensing
- Silent Pressure

Maximize exploitation opportunity

Value


* Strategic exploitation: Exclusive Use, Technology Branding, Standardization, Sales Support, etc.

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Silent Pressure

Without exercising...

...gives the silent pressure

Royalty income

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Royalty</td>
<td>Income</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Difference between income and expenditures moved into the black

1985

Cross licensing

Competitors

Other industries

Suppliers

Strategic exploitation

- Standardization
- Exclusive Use
- Sales Support
- Technology Branding

Difference between income and expenditures
3-3 Patent Exploitation Strategy ③ Collaborative Creation — internal/external resources

---deal with open innovation trend (using external resource)

Example “Collaborative Creation”

**Resource**

- Technology
- Patent
- Human resource
- Channel

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**Examples “Collaborative Creation”**

- Standardization/patent pool
- Alliance
- Patent purchase (M&A), sale
- Joint development, technology introduction
- Practical use/applied technology development, etc.
### Examples of standardizations/patent pools

Standardization activities and patent pools Hitachi participated in

<table>
<thead>
<tr>
<th>Patent Exploitation Strategy</th>
<th>Collaborative Creation internal/external resources (2/4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Examples of standardizations/patent pools</strong></td>
<td><strong>3-4 Patent Exploitation Strategy</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standardization group</th>
<th>Patent pool management organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPEG-2, 4 (Image compression technique)</td>
<td>ISO</td>
</tr>
<tr>
<td>DVD-6C (Optical disk)</td>
<td>DVD forum</td>
</tr>
<tr>
<td>Blu-Ray (Optical disk)</td>
<td>Blu-Ray Disc Association</td>
</tr>
<tr>
<td>IEEE-1394 (Transmission interface)</td>
<td>IEEE</td>
</tr>
<tr>
<td>ARIB (Digital broadcasting)</td>
<td>ARIB</td>
</tr>
</tbody>
</table>

“One Stop Shopping” = Win-Win for licenser and licensee

(Collaborative creation with others)

ARIB: Association of Radio Industries and Businesses
MPEG LA, DVD-6C and ULDAGE are registered trademarks of their respective companies.
The case of FSW (Friction Stir Welding) …

→ Customizing the basic technology developed by The Welding Institute

Obtained non-exclusive license of two TWI’s patents

Hitachi customized the FSW for railroad car and built the patent portfolio (W/W: 440 patent)
3-6 Patent Exploitation Strategy

③ Collaborative Creation
internal/external resources (4/4)

Channel Finding

Effective utilization of outside resource

Patent purchase/sale
Partners (license agent)
Sublicense
Patent pool
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Mission

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- Strategic IP use

Multifaceted contribution to business by maximizing patent exploitation opportunity