Intellectual Property Strategy
toward a Global Major Player

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General Manager
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1. Intellectual Property (IP) Activities
toward a Global Major Player
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3. Creating and Utilizing IP Portfolio for Hitachi’s Business
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1. IP Activities toward a Global Major Player

Respond to global needs through the Social Innovation Business

Industrial, Transportation and Urban Development Systems

Information and Communication Systems

Power Systems

Vision: Construction of IP Organization to Survive Global Competition

◆ Globalization in IP Activities
◆ Creating and Utilizing IP Portfolio for Business
2. Globalization in our IP Activities (Applications)

◆ 2012 Target: Overseas Patent Appl. Ratio*1 55% ⇒ Achieve 57%
◆ Japan & US Focus ⇒ PCT*2 Appl. Focus for Global patent portfolio

*1 Overseas Patent Appl. Ratio = The number of overseas patent Applications / The number of overseas patent Appl. + 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 our IP Activities (Applications)

Patent Applications Published in 2012 (Granted patent for U.S.)*

<table>
<thead>
<tr>
<th>Corporate Group</th>
<th>Japan</th>
<th>U.S.</th>
<th>PCT</th>
<th>China</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Panasonic</td>
<td>11,400</td>
<td>IBM</td>
<td>6,500</td>
<td>ZTE</td>
<td>Siemens</td>
</tr>
<tr>
<td>2 Hitachi</td>
<td>10,000</td>
<td>Samsung</td>
<td>6,300</td>
<td>Panasonic</td>
<td>Samsung</td>
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<td>3 Toyota</td>
<td>9,600</td>
<td>SONY</td>
<td>3,600</td>
<td>Huawei</td>
<td>LG</td>
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<tr>
<td>4 Toshiba</td>
<td>8,600</td>
<td>Panasonic</td>
<td>3,600</td>
<td>Siemens</td>
<td>GE</td>
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<tr>
<td>5 CANON</td>
<td>8,000</td>
<td>CANON</td>
<td>3,300</td>
<td>Huawei</td>
<td>BOSCH</td>
</tr>
<tr>
<td>6 EPSON</td>
<td>5,500</td>
<td>LG</td>
<td>2,800</td>
<td>SHARP</td>
<td>Qualcomm</td>
</tr>
<tr>
<td>7 Mitsubishi Electric</td>
<td>5,400</td>
<td>Toshiba</td>
<td>2,700</td>
<td>Hitachi</td>
<td>Philips</td>
</tr>
<tr>
<td>8 NEC</td>
<td>5,000</td>
<td>Hon Hai</td>
<td>2,700</td>
<td>BOSCH</td>
<td>ZTE</td>
</tr>
<tr>
<td>9 Fujitsu</td>
<td>4,800</td>
<td>Microsoft</td>
<td>2,600</td>
<td>Samsung</td>
<td>Panasonic</td>
</tr>
<tr>
<td>10 Fuji Film</td>
<td>4,800</td>
<td>Hitachi</td>
<td>2,600</td>
<td>LG</td>
<td>800</td>
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</tbody>
</table>

* Based on Hitachi’s survey using Shareresearch, Patol, IFIPAT/Questel-orbit, and Pat-List/CN. Ranking is based on the number of the patent applications without rounding off.

Receive TOP100 Global Innovators Award

- Excellent in “Volume” and “Influence” of the portfolio
- Superior in “Grant Ratio” and “Globalization of the Portfolio”
2. Globalization in our IP Activities (Overseas Offices)

Expand Overseas IP Offices align with Global R&D Formation

- **Munich**
  - From April, 2013

- **Shanghai**
  - From October, 2012

- **Washington D.C.**
  - 1 staff increase from April, 2013

- **San Francisco**
  - 1 staff increase from April, 2013

Support IP activities (ex. obtaining patents, educating local staffs) in overseas countries
3. Creating and Utilizing IP Portfolio for Hitachi’s Business

Contribution to Social Innovation Business

1. Creating IP Portfolio in Major Markets
   ◆ Automotive Parts (Air Flow Sensor)
   ◆ Railway Car (Body and Driving System)

2. Utilizing IP Portfolio for Supporting Business
   ◆ Barriers to Entry (Anisotropic Conductive Film)
   ◆ Appealing Technology (WAN Accelerator)
Creating IP Portfolio in Major Markets

**Air Flow Sensor**

- WW No.1 share
- Create Barriers to Entry to Major Markets with IP Portfolio
  ⇒ Increasing German and Chinese patent applications

**Railway Car**

- Number of Maintained Patents*1
  - Hitachi Gr.
  - Company A
  - Company B

- Number of Applications for Europe*2
  - Selected as Preferred Bidder for IEP*3
  - Accept an Order

*Wide range of IPs (including FSW*4 Patents and Design Patents)*

<Number of Patents>

- Japan: 600
- Overseas: 600

Strengthen IP Portfolio in Europe since Targeting IEP

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*1: Based on Hitachi's survey using Sharereasearch
*2: EPO, PCT and Design applications
*3: IEP: Intercity Express Programme in UK
*4: FSW: Friction Stir Welding. Hitachi has been licensed from TWI (The Welding Institute) and developed applied technologies for railway cars. © Hitachi, Ltd. 2013. All rights reserved.
Utilizing IP for Supporting Business: Anisotropic Conductive Film “ANISOLM*1”

Adhesive Film used for Circuit Connection Developed by Hitachi Chemical Co., Ltd.
- WW No.1 Share
- Global Patent Portfolio (600 Patents in WW)
- Receive Prime Minister Invention Award and Purple Ribbon Medal

Korean Company Manufactures and Sells Anisotropic Conductive Film for Touch Panels

February 2013
File a Lawsuit with Seoul Central District Court for Patent Infringement and Seek for an Injunction

*1: “ANISOLM” is a registered trademark in Japan and other countries.
*2: TAB: Tape Automated Bonding
*3: COG: Chip On Glass
3. Creating and Utilizing IP Portfolio for Hitachi’s Business

Utilizing IP for Supporting Business: WAN Accelerator

Appeal IP Portfolio by indicating “Hitachi has filed patent applications related to “WAN Accelerator”, mainly on high-speed communication technology, in a number of countries.”

* http://www.hitachi.com/products/it/network/wan/index.html (Global)

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4. International Standardization Activities

Strategically Focus on Important Areas in Group Wide to Facilitate Standardization

Examples of Standardization Activities

<table>
<thead>
<tr>
<th>Theme</th>
<th>Achievement in 2012</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart City</td>
<td>Contributed to obtain Secretariat Position in a Sub-committee of ISO*¹</td>
<td>Publish a case study report to, and take alliance with WBCSD*² to promote Smart City Metrics.</td>
</tr>
<tr>
<td></td>
<td>Sent Chairperson from Hitachi</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Prize Winner</th>
<th>Evaluated Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yukiyasu Shirasaka</td>
<td>Convener in a Working Group of IEC Standardized Insulation Test Method for UHV*⁵ Power transformers in IEC</td>
</tr>
<tr>
<td>Shoichiro Koseki</td>
<td>Convener in a Working Group of IEC Standardized Efficiency Measurement Method for Power Convertors of Power Electronics in IEC</td>
</tr>
</tbody>
</table>

*¹ International Standardization Organization,  *² World Business Council for Sustainable Development
*³ System, provided by Japanese Industrial Standards Committee, to accelerate international standardization
*⁴ International Electrotechnical,  *⁵ Ultra High Voltage