

Overview

Hitachi's IP Strategy for Business Growth

Takashi Suzuki

Mina Maeda

RELATIONSHIP BETWEEN BUSINESS STRATEGY AND IP STRATEGY

INTELLECTUAL property (IP) strategy is one element of business strategy. This means that IP strategy needs to express how IP is to be exploited in achieving the company's vision and mission. Because business strategy changes in response to changes in the business environment, IP strategy, too, must adapt accordingly.

Hitachi has made major changes in its business portfolio since 2000. It has divested its electronic businesses that dealt with products such as semiconductors, liquid crystal display (LCD) panels, and hard disks, and instead expanded its Social Innovation Business⁽¹⁾, which combines infrastructure technology with advanced information technology (IT). Based on the slogan, "Serving the World with Our Social Innovation Business," Hitachi is building up its service business based on a model of

collaborative creation with customers that involves sharing customers' management challenges and working with them to create and provide solutions.

Along with this transformation in business strategy, IP strategy has also changed due to the change in what management expect from IP. Accordingly, this article looks back at how IP strategy has adapted to this change in business portfolio, and describes the future directions for IP management.

CHANGE IN IP STRATEGY DRIVEN BY CHANGE IN BUSINESS PORTFOLIO

Hitachi has made major changes in its business portfolio since 2000 (see Fig. 1).

Back when electronics made up a considerable part of its business portfolio, the role that management asked of IP was to increase income from license royalties and reduce license payments. Accordingly, the main objectives of IP management were to

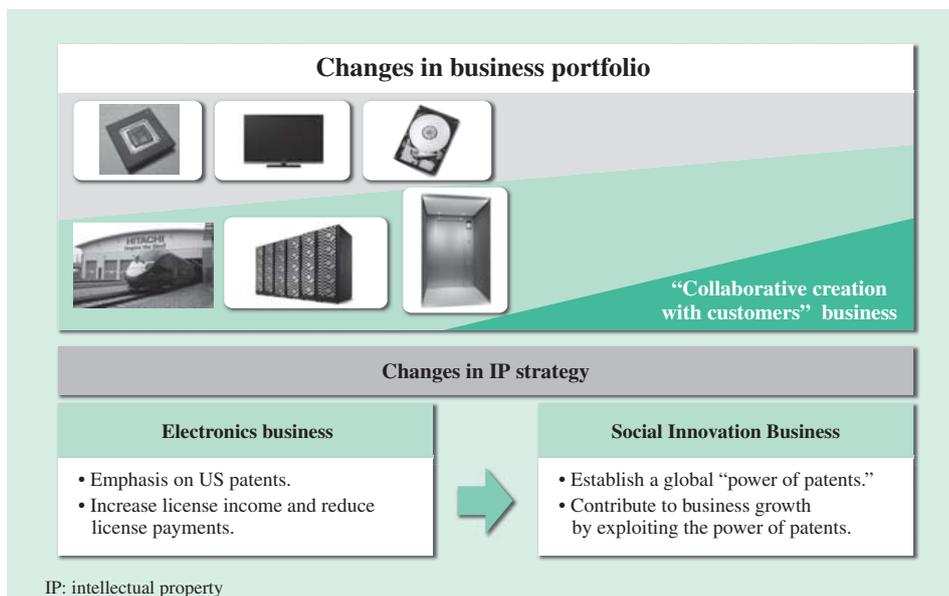


Fig. 1—Changes in IP Strategy in Response to Changes in Business Portfolio. Hitachi has made major changes in its business portfolio since 2000. This has meant changes in IP strategy also.

establish cross-licensing with European and American companies to reduce royalty payments on the one hand, while collecting royalties from emerging Korean and Taiwanese companies on the other. One effective tactic for improving license revenue was to leverage patent lawsuits in the USA. This meant that obtaining US patents was a priority.

However, the majority of Hitachi's electronics IP was divested along with the businesses themselves. Along with redirecting its business strategy toward building up its Social Innovation Business, Hitachi also made major changes in IP strategy away from its focus on license revenue improvement. Now, Hitachi has shifted its IP management focus toward activities aimed at building the "power of patents" in the main markets for each of its businesses, and exploiting this power for business growth pursuing a business strategy that targets global business growth through entry into overseas markets.

BUILDING GLOBAL "POWER OF PATENTS"

The first initiative was to build a global "power of patents." In the case of IT platforms, a sector in which both the major markets and major competitors are based in the USA, Hitachi started to work on building up its portfolio of US patents at a comparatively early stage. In the case of other businesses, however, where the focus of operations had been on the Japanese market, particularly social infrastructure, Hitachi built up a portfolio of primarily Japanese patents. Accordingly, to give root to the policy of applying for patents in key markets, and prompted by the 2012 Mid-term Management Plan target of achieving an overseas revenue ratio above 50%, Hitachi adopted a medium-term IP target for its "overseas patent application ratio^(a)" of exceeding 55%. The reason for choosing a target of 55% rather than 50% was because the power of patents must be built up in target markets to protect its businesses in advance of establishing overseas operations. The target was achieved in FY2011, and the overseas patent application ratio for Hitachi Group in FY2013 was 59% (see Fig. 2).

(a) Overseas patent application ratio

The ratio of overseas patent applications relative to the combined total of domestic and overseas applications. PCT applications are counted as multiple applications in accordance with the number of countries in which Hitachi intends to obtain the patent.

(b) PCT

Abbreviation of "Patent Cooperation Treaty." The treaty is managed by the World Intellectual Property Organization. It enables a single application made in the applicant's own national patent office (provided the country is a treaty member) using internationally standardized application documents to be recognized as the

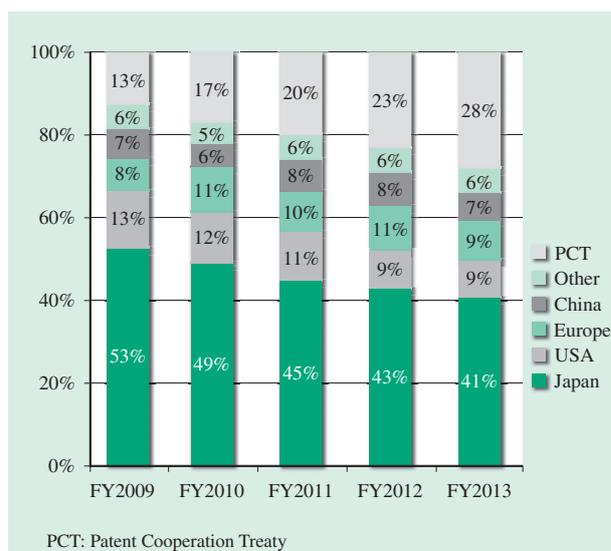


Fig. 2—Trend in Overseas Patent Application Ratio. Hitachi achieved its target of an overseas patent application ratio of more than 55% in FY2011. The overseas patent application ratio for FY2013 was 59%.

Looking at a regional breakdown of patent applications, the proportions accounted for by Japan and the USA have fallen, whereas the proportion of applications made through the Patent Cooperation Treaty (PCT)^(b) route has increased. The reasons for the increase in the proportion of PCT applications are, (1) because they are a more cost-effective option when applying in multiple countries, PCT applications are a good match for Hitachi's need to obtain patents in a number of different national markets due to the global scope of its business activities, and (2) because of the frequent instances in which Hitachi needs to take advantage of the 30-month grace period that PCT provides for choosing the country in which it tries to obtain a patent, given that global operations face a high degree of uncertainty.

To establish the global power of patents, Hitachi has also made changes in its process for deciding where to apply for patents. In the past, its practice for new inventions was to apply first in Japan, and then to take advantage of the one-year right of priority^(c) granted by the Paris Convention to decide whether

equivalent of submitting applications in all active member countries. However, the country in which the patent is issued still depends on the examination by each national patent office. Applying for a patent under the PCT scheme is called a PCT application or international patent application.

(c) Priority right

This confers the right to have an application submitted in a second country within a specified time (priority period) after the initial application in the first country to be treated as if it were made at the same time as the initial application. In the case of a patent, the Paris Convention stipulates a priority period of one year.

applications in other countries or regions would also be necessary. That practice was based on an export-oriented patent application process. Now, however, when investigating whether to apply for a patent for a new invention, Hitachi also considers where it should initially apply for a patent. That is, the practice of first applying to patent in Japan has been superseded, and instead the initial application is made in the country that is to be the primary market, which will not necessarily be Japan. As a result, PCT is being used for an increasing number of initial applications and, while the number is still small, there are also instances of inventions for which patent applications are first made outside Japan. An example of this, in the escalator and elevator business, is the China-first strategy^(d) described in one of the articles in this edition of *Hitachi Review*.

HITACHI'S IP SLOGAN, "LET'S MAKE IT HAPPEN WITH THE POWER OF PATENTS," AND THE EXPLOITATION OF IP

With the aim of extracting value from IP (the power of patents) and exploiting it to grow its business, Hitachi came up with the IP slogan, "Let's make it happen with the Power of Patents" in FY2014 (see Fig. 3). The "it" that Hitachi wants to make happen is an improvement in its business position and business growth.

Because, IP, particularly IP rights, is based on exclusive rights, its likely uses are in activities directed at competitors. This means using IP as a barrier to market entry against competitors. In other words, as a way to protect and maintain Hitachi's competitiveness over other companies. Even if this ultimately results in granting a license to the competitor, by limiting the license scope, it still commonly provides a way to protect Hitachi's own markets. There have been instances at Hitachi where it has sought to protect its business by exercising its IP rights against companies that were copying its technology. An article in this issue provides an example of this involving IP management at Hitachi Chemical Co., Ltd.

Pre-emptively reducing IP risk by checking whether there is any IP owned by other companies that will act as a barrier to entry by Hitachi is also an important part of the IP strategy. Hitachi makes

(d) China-first strategy

Hitachi's patent strategy for its escalator and elevator business. To strengthen its patent portfolio in the key market of China, Hitachi submits its first patent application for some inventions in China rather than submitting a Japanese or PCT application.

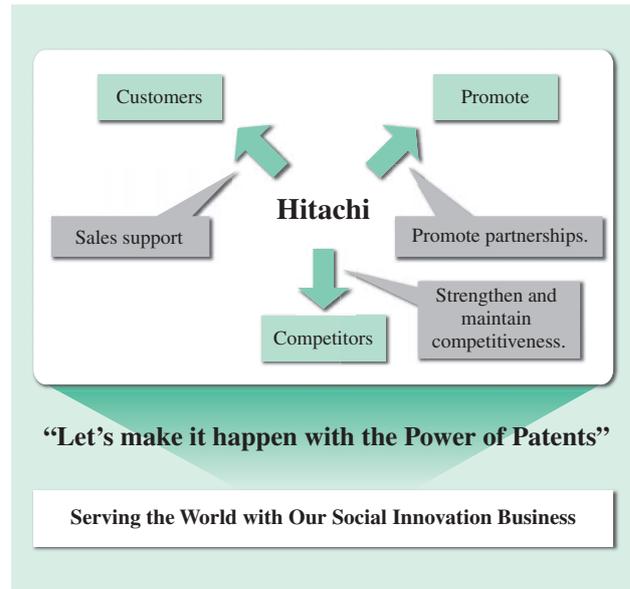


Fig. 3—Application of Power of Patents to Business. Hitachi came up with an IP slogan with the aim of extracting value from IP (the power of patents) and exploiting it to grow its business.

an effort to avoid IP right infringement in its product development, with a code of conduct that includes: "We will respect the intellectual property of other parties. We will prevent violations of other parties' intellectual property rights in advance and, for the smooth progress of business, we will investigate other parties' intellectual property rights beforehand when engaged in research, development, design, production and sales of new products or new technologies, and implement appropriate measures when any doubts arise."⁽²⁾ Because IP risk is particularly high in countries where IP lawsuits are common or where Hitachi is entering for the first time, Hitachi puts a lot of effort into IP "clearance" (checking for potential IP infringement) in those countries. Examples include the USA, for the IT platform business; China, for the escalator and elevator business; and the UK, for the rolling stock business.

Furthermore, the use of IP for customers and other partners can also underpin business growth. For example, IP can be exploited to assist sales by using it as a promotional tool for marketing to customers. Examples of this are described in articles on the IT platform business, the escalator and elevator business, and finger vein authentication. In those businesses the patent portfolio is used for promotional purposes at events such as technical presentations and trade shows or in marketing material. IP can also be exploited as a currency for promoting business partnerships.

For example, in joint research and development, the background IP of its participants can be used among them for creating new technologies. In mergers and acquisitions (M&A) or in establishing a joint-venture company, contractual measures become important for enabling the new business to continue to use background IP. The article in this issue about finger vein authentication describes an example in which Hitachi partnered with another company to develop multi-modal techniques that combine fingerprint and finger vein authentication. In this case the patent rights to finger vein authentication held by Hitachi served as a foundation for building the partnership relationship.

IP STRATEGY THAT IS ALIGNED WITH BUSINESS STRATEGY

In order to use the power of patents to underpin business growth, it is important that this is done in accordance with business strategy. Because Hitachi operates such a diverse range of businesses, the role expected of IP is different in each case. Accordingly, Hitachi formulates separate IP strategies for each business (see Fig. 4).

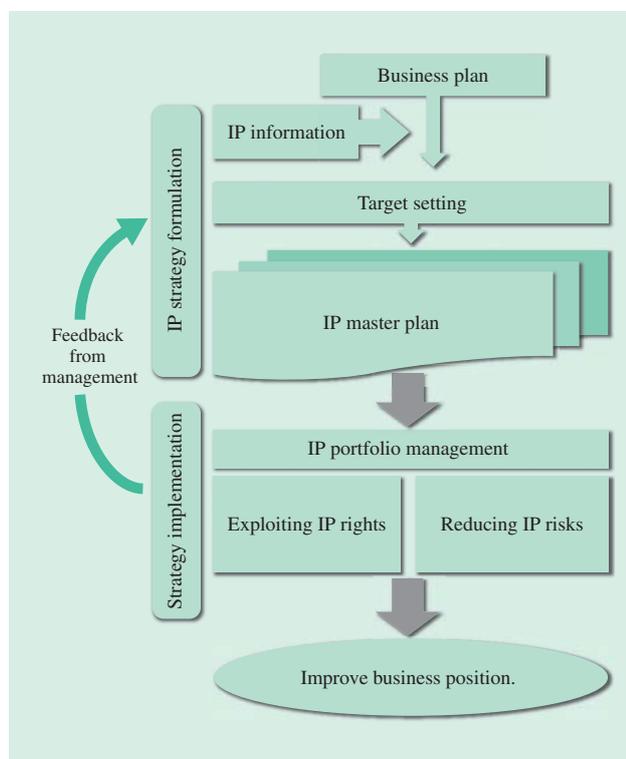


Fig. 4—Formulation and Implementation of IP Strategy. Hitachi has formulated IP master plans for each business in accordance with business strategy, and has implemented these with the help of feedback from management.

First of all, we decide on the objectives of IP management (how to exploit IP for business growth) based on the business strategy and IP information (IP rights belonging to competitors, partners, and customers, or lawsuits and other measures for IP management). The next step is to assess the gap between these objectives and the current situation, and to formulate a plan, synchronized with business milestones, for what the IP portfolio should contain; where and when the rights should be acquired; when and how the portfolio should be exploited for the benefit of the business; and the extent of risks relating to IP owned by other organizations, and how and when to reduce them. Those objectives and plans are combined into an IP master plan that also specifies the organizational structure for implementing the plan and its activity budget. At an annual IP strategy conference attended by management from the business units and the IP Division, the progress of the IP master plan is reviewed, future plans are debated, and feedback is obtained from managers.

To implement an IP strategy that is aligned with the business strategy, it is particularly important to, (1) be conversant with the business strategy during the IP strategy planning stage so that the role that IP is expected to play from a business management perspective can be set as targets for IP management, (2) set milestones for IP management that are synchronized with business milestones so that the role that IP is expected to play from a business management perspective can be fulfilled in a timely manner, and (3) have the business units (business managers) and the IP Division work through the plan, do, check, and act (PDCA) cycle for IP management together.

BUSINESS BASED ON COLLABORATIVE CREATION WITH CUSTOMERS AND FUTURE IP MANAGEMENT

With its slogan of, “Serving the World with Our Social Innovation Business,” Hitachi is currently strengthening its service businesses based on collaborative creation with customers that share these customers’ business challenges based on an understanding of their business environment and working with them to develop and provide solutions to these challenges.

This is bringing Hitachi’s IP strategy to a new turning point (see Fig. 5).

The IP strategy required by Hitachi’s product-centered businesses that deliver technically superior

| | Product business | “Collaborative creation with customers” business |
|-----------------------------|---|--|
| | Competition strategies | Collaborative creation strategies |
| Role of IP | Strengthen and maintain competitiveness. | Build and promote partnerships with customers and partners. |
| Main IP activities | <ul style="list-style-type: none"> • Acquire IP to protect points of difference. • Use IP as a barrier to entry. • Reduce IP risk. | <ul style="list-style-type: none"> • Obtain IP for points that appeal to customers. • Use IP to build and promote partnerships. • Appropriate use of IP belonging to customers and partners |
| Main applicable types of IP | Patent rights, design patent rights, trademark rights | Patent rights, design patent rights, trademark rights, copyright, trade secrets |

Fig. 5—Role of IP under Competition Strategies and Collaborative Creation Strategies.

To strengthen businesses based on collaborative creation with customers, IP strategy requires collaborative creation as well as competition strategies.

equipment and other systems to customers has primarily been a competition strategy aimed at strengthening and maintaining Hitachi’s competitiveness. Accordingly, IP management has focused on maintaining technical points of differentiation by obtaining patents and other IP rights and utilizing them as a barrier to entry by competitors, and on reducing the business risks associated with IP rights held by other companies.

Businesses that involve collaborative creation with customers, on the other hand, require a collaborative creation strategy in addition to the competition strategy. This means a strategy that supports building and promoting partnerships with customers and partners. Accordingly, this requires not only obtaining IP that can be used for appealing to customers and utilizing it to build and promote partnerships, but also consideration of how to handle the IP obtained from customers and other partners appropriately. Examples of IP management aimed at promoting partnerships contained in articles in this issue include obtaining IP covering design tools and initiatives for converting rules that promote the effective use of technology for dealing with societal challenges into an international standard.

Note that the IP referred to here includes not only patent rights, design patent rights, and trademark rights, but also copyrights and trade secrets. In the case of big data analytics, for example, the challenges for IP include how to handle the original data that belongs to the customer (assets), the data obtained by processing (know-how), and the resulting solutions (know-how, software, or inventions). As the roles that this IP is called on to fulfill grow, so too does the associated IP.

Also needed is a “Glocal” transformation of the IP Division, meaning that the operation of the division needs to become simultaneously more local and more

global. The IP-related challenges that arise in service businesses based on collaborative creation with customers need to be resolved based on understanding customers’ management challenges. This is because IP-related challenges are also customers’ management challenges. Accordingly, it is necessary to provide IP support for customer-facing departments to offer solutions that include an IP solution for customers. Considering the locally led deployment of collaborative creation with customers in different parts of the world, there is a need to station local IP staff at each operational site and to have greater local management of IP functions in support of customer-facing departments. In parallel with this, there is also a need for globalization involving the formulation and promulgation of a shared vision and mission for the local IP offices scattered around the world, together with the establishment of global platform functions for IP that promote the standardized adoption of best practices.

DEVELOPING “COMPETITION” AND “COLLABORATIVE CREATION” STRATEGIES

This article has described how Hitachi’s IP strategy has evolved as its business portfolio has shifted from the electronics business to its Social Innovation Business.

With social innovation achieved through collaborative creation with customers as a pillar of its management strategy, Hitachi believes that “competition” and “collaborative creation” strategies are required for our IP strategy. By combining those “competition” and “collaborative creation” strategies, Hitachi intends to continue deploying measures for exploiting IP in its Social Innovation Business.

REFERENCES

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- (2) Hitachi website, "5.3 Management and Preservation of Company Assets," (2), <http://www.hitachi.com/corporate/about/conduct/index.html#aid8013480>

ABOUT THE AUTHORS



Takashi Suzuki

Intellectual Property Division, Hitachi, Ltd. As a Corporate Officer and General Manager of the Intellectual Property Division, he is responsible for Hitachi Group IP management.



Mina Maeda

Customer Co-Creation IP Center, IP Business Division, Intellectual Property Division, Hitachi, Ltd. She was engaged in corporate IP strategy (as of March 2015).