

Japanese IP typhoon still not even a tropical storm

Despite a number of headline-grabbing IP litigations over the last several years, involving some of Japan's largest companies, the view that Japanese corporations are drastically changing their IP culture is seriously overstated

By **Terry Ludlow**

The headline grabbers have skewed the view. When Japan's Matsushita sued Korea's LG Electronics in 2004, the business world took notice. And the headline writers in business news grew even more feverish when 20 Japanese giants sued US IP holding company TPL (Patriot Scientific) in 2005, even though this was a countersuit in response to an earlier suit from Patriot.

Fed also by the Japanese government's emphasis on IP, as well as a wholesale revamping of the Japanese patent enforcement system, the IP world sensed a significant change in the wind. An epic IP typhoon out of the east was sure to lash foreign shores – especially those in the US – in the near future. But has it? Let's take a deeper look at the view that the IP culture in Japan has changed radically and see whether it stands up to scrutiny.

Japanese government revamps patent system

In February 2002, then Prime Minister Junichiro Koizumi made a speech advocating a stronger Japanese intellectual property system and encouraging more effective assertion of IP rights by Japanese companies. Since then, the Japanese government has formed a Strategic Council on IP, created a new Intellectual Property High Court, amended Japanese import laws to prohibit importation of goods that infringe Japanese patents and taken measures to improve patent examination.

In addition, Koizumi put into force a basic law on IP; adopted a strategic programme for the creation, protection and

exploitation of IP; and did everything in his power to promote change in the Japanese corporate view of IP. Put simply, Koizumi-san did his part.

Have Japanese companies followed his lead and become more effective in asserting their patent rights? Many commentators outside the country have looked at these government changes and concluded that the attitude to IP has changed permanently in businesses in Japan. With all due respect, however, the hard evidence seems to suggest that they are wrong.

Metrics and IP

American semiconductor companies, such as Texas Instruments and IBM, were among the first to assert their ownership rights over their IP in an aggressive manner through court action, actual or threatened – they were very willing to follow through with litigation if licensing negotiations failed with external target companies. Often these targets were Japanese firms, whose rapid financial and technological rise from the 1960s through to the 1980s was not matched by rapid IP strategy execution to protect their technologies.

Texas Instruments woke the semiconductor industry in the mid-1980s with an aggressive licensing campaign, backed by multiple litigations in federal court and at the US International Trade Commission. After the TI precedent, Japanese firms typically opted to settle IP disputes privately, by paying significant royalty fees before litigation became an issue. This state of affairs lasted for two more decades.

We can use three metrics that will help us elucidate how corporations and nations

use and defend their intellectual property. These metrics are:

- The number of patent applications.
- The number of IP litigations.
- The ratio of intangible to tangible assets in company market valuations.

We use patent application and litigation numbers from the US because most patent applications and most IP litigation occur in the US, for the simple reason that it is still the largest technology sales market in the world. To compare US and Japanese semiconductor companies, we used statistics for the 15 years from 1992 through 2006, from the top five semiconductor companies by revenue, from each country according to the 2006 rankings. This study group of companies comprises: Intel, Texas Instruments, AMD, Freescale and Micron in the US, and Toshiba, Renesas, NEC, Sony and Panasonic/Matsushita in Japan. Note that both Freescale in the US and Renesas in Japan were formed recently as spin-offs from a parent, Integrated Device Manufacturer (IDM); thus the data from each has a shorter history.

Number of patent applications

The number of patent applications a company makes indicates the size of the budget and the relative importance that the company places on IP, although it might reveal very little about the company's overall IP strategy. The term "relative" is used because a larger company will, in most cases, file more patent applications than a smaller one.

Japanese assignees are the largest single geographic origin for patents filed worldwide. According to the Derwent World Patent Index, in electronics and semiconductors they received about 52% of all patents granted worldwide in 2005. Japanese companies dominate the list of top patent grant owners in the US, as well. More than half of the top 10 annual assignees in the USPTO have consistently been Japanese companies over the last 15 years.

Japanese companies have steadily increased their investments in patents. Over the 15-year study period, the study group of the top five Japanese semiconductor companies has increased its collective total patent filings by about a factor of three. By contrast, however, the study group of the top five American semiconductor companies has increased its patent filings by a factor of almost nine! But despite this faster rate of increase, US companies still lag behind as

the Japanese industry started from a much higher base number of patent grants in 1991. In sheer numbers, Japanese companies are well armed with patents.

That said, it should be noted that the number of patents filed can be a misleading statistic. There is often a public relations aspect to having large numbers of patent applications. Being in the top 10 of patent filers can be used by a company as a marketing tool to increase its public profile, and to impress investors and stock markets.

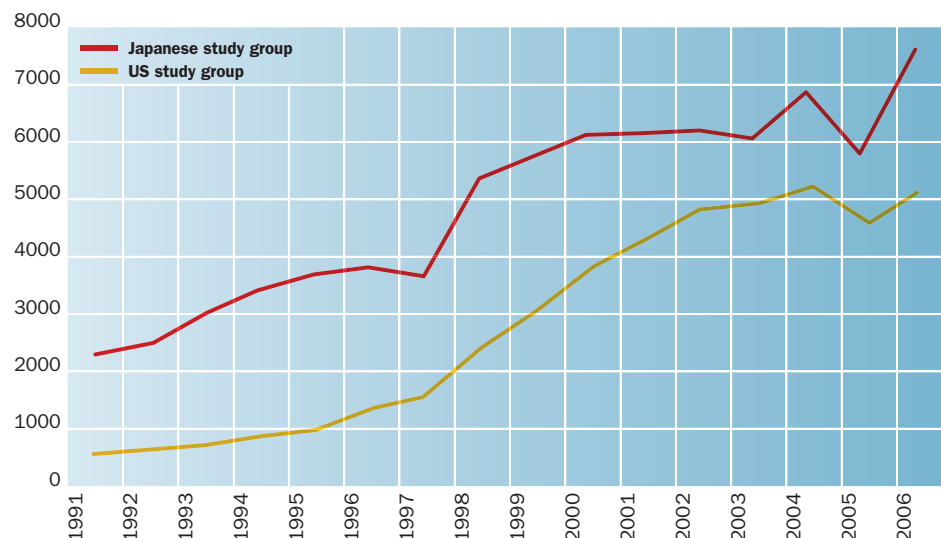
It is also expected that as a company grows in revenue, there will be a corresponding growth in the R&D budget, and therefore in the number of patentable inventions that a company's workforce creates. In the study group of top five US and Japanese semiconductor companies, the Japanese companies invest in almost three times as many patents per million dollars of revenue when compared to American companies. Note, once again, that the rate of investment at American companies is increasing significantly (ie, average revenue per patent is decreasing), while the Japanese rate of investment is holding steady.

Japanese government programmes to improve IP system since 2002

2002	
Feb 4	Policy speech by Prime Minister Koizumi advocates stronger IP system and more effective assertion of IP rights
Feb 25	Strategic Council on Intellectual Property inaugurated
Jul 3	Intellectual Property Policy Outline adopted
2003	
Mar 1	<ul style="list-style-type: none"> • Basic Law on Intellectual Property comes into force • Intellectual Property Policy Headquarters inaugurated • Secretariat of Intellectual Property Policy Headquarters established within Cabinet Secretariat
Jul 8	<ul style="list-style-type: none"> • Strategic Programme for Creation, Protection and Exploitation of Intellectual Property adopted • Task forces established
Dec 11	<ul style="list-style-type: none"> • Creation of Intellectual Property High Court • Comprehensive measures for expeditious patent examination
2005	
Feb 25	Promotion of Japan Brand Strategy
Apr 25	Measures to promote intellectual property strategy of SMEs and venture companies
Jun 10	Intellectual Property Strategic Programme 2004 adopted
2006	
Feb 24	Status of implementation of the basic law on intellectual property and future policy
Jun 8	Intellectual Property Strategic Programme 2005 adopted

Source: Intellectual Property Strategic Program 2006, Intellectual Property Strategy Headquarters, June 2006

Number of patents filed



To summarise, Japanese companies have maintained their high levels of spending on patents and their lead in patent applications, reflecting their significant contributions to technology R&D, but surprisingly, US companies have been closing the gap over the past 15 years – following the Japanese lead rather than the other way around.

Number of IP litigations

The number of IP litigations a company is involved in, year by year, can be an indicator of the changing attitude that the company

has to IP negotiations. More litigation may indicate a willingness to fight to defend intellectual property rights – or it may mean that the company is becoming known as a soft target for IP owners, one that settles rapidly when sued.

If we review the number of litigations per year for the same study group of companies we used for the number of patent applications per year, we can see a trend for Japanese firms. As well as filing increasing numbers of patent applications, they are involved in an increasing number of litigations. The top five Japanese semiconductor companies went from being involved in less than half the study group's litigations in the first five years of the study to being involved in more than two-thirds in the last five years of the study. In terms of total number of litigations, Japanese companies in the study group show a much sharper increase in litigation activity over the past 15 years, with a more than fivefold rate of increase. But does this mean that Japanese companies have become more willing to litigate to defend their IP rights?

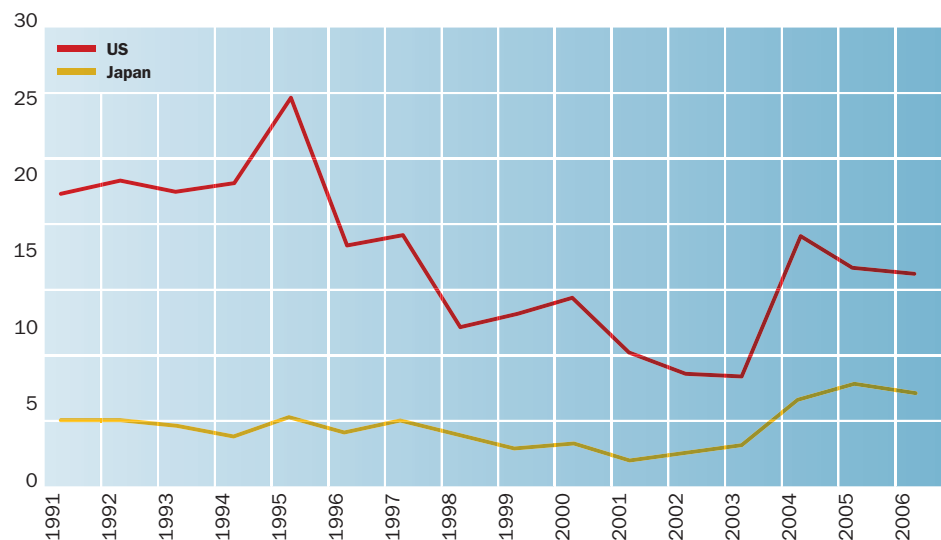
A closer scrutiny of the court docket summaries provides a clearer view of Japanese companies' litigation activities in the US. They show that Japanese companies remain overwhelmingly on the defensive. The increase in litigation activity is almost exclusively related to their attractiveness to patent trolls. Almost all patent suits filed by Japanese companies as plaintiffs are counter-complaints to a previously filed litigation.

In Japan, the JPO issues a summary of Japanese patent litigations. The litigation rate has been nearly static for many years. In Japan, the use of a customs action to exclude products incorporating patents held by Japanese companies saw a huge increase in 2004 when the rules changed. Since then, the number of actions has reached a plateau. In semiconductor and microelectronics, there have been only a few actions. Japanese technology companies claim that the issues are too complex to use this type of customs action.

Let's take a closer look at some of the annual litigation figures for Japanese firms in US courts:

- Toshiba was involved in a total of 55 US litigations from 2004-06. Toshiba was listed as plaintiff in only 10 of these actions. There were three separate defendants. The largest case, against Hynix, was a cross-complaint, with multiple actions filed on the same day

\$M of revenue per patent filed



with Toshiba as both plaintiff and defendant. A second group of cases were responses to a suit filed months earlier. Only one lawsuit appears to be a purely offensive patent suit, initiated by Toshiba to defend Toshiba's patent rights.

- Sony, for the same period, was involved in 67 US litigations. Again, only eight list Sony as plaintiff versus four defendants. Of these, five were counter-complaints against Kodak. Another was a response to Orion LLC. Of the remainder, one was a declaratory judgment action against another troll – Wireless Agents LLC. The only potentially purely offensive patent infringement action was against Guardian Media Tech.
- In 2004 and 2005, Matsushita was involved in 48 cases and, once again, only seven cases list Panasonic/Matsushita as plaintiff. Matsushita was involved in two cases against Guardian Media Tech with Sony and other plaintiffs. The company also participated in two group responses to offensive lawsuits by Technology Properties Limited/Patriot Scientific Corporation. Another was a late response to an action by Siliconix. Offensive patent infringement cases were filed against Exabyte and Mediatek.

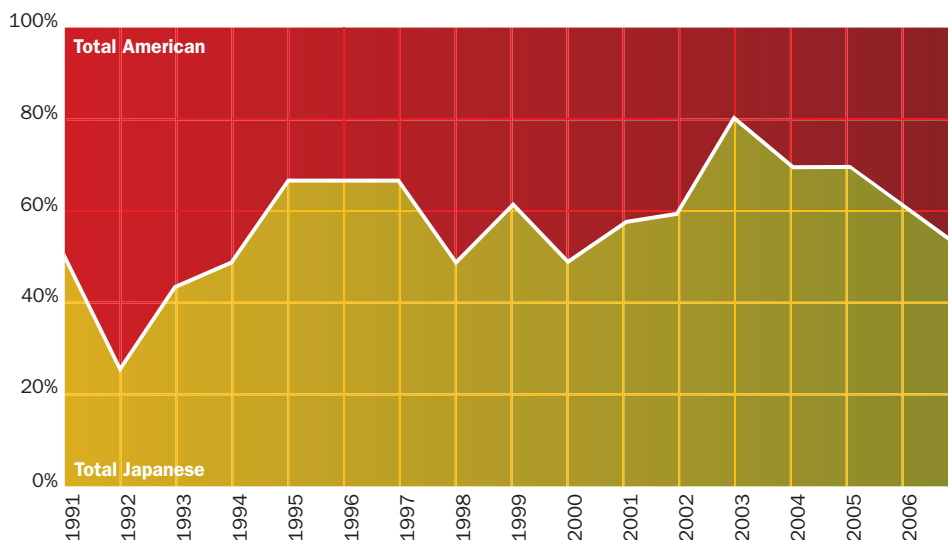
It appears that Japanese companies will litigate in special circumstances. In big patent cross-licence negotiations, in which large royalties are at stake, or in cases where market share is being lost to upstart competition, Japanese companies will use the litigation option. Notably, Matsushita has used various litigation venues effectively to protect its plasma television business against Korean manufacturer LG Electronics through patent lawsuits in Japanese and Korean courts, and Japanese customs actions. Matsushita's lawsuits against Mediatek in the US and Japan were also aimed at protecting market share, this time in the DVD chip market.

The overall conclusion still stands, however: little has changed in Japanese corporate culture when it comes to enforcing IP rights. Japanese companies are still a favourite target and seldom assert their rights despite owning large numbers of patents.

Ratio of intangible to tangible assets

The ratio of intangible to tangible assets, which Reuters calls "price to tangible book", shows the amount of market value that cannot be traced to tangible assets on the

Top US and Japanese semiconductor companies in US litigation



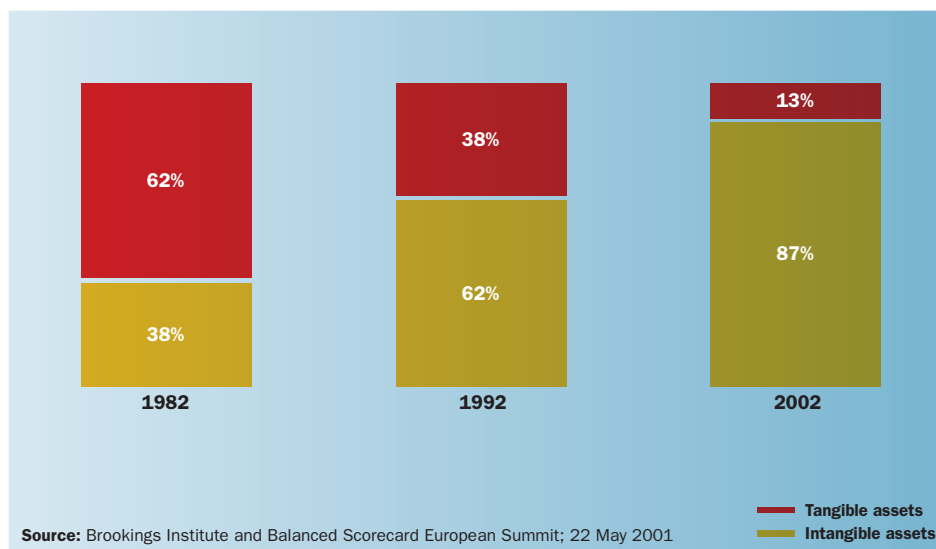
corporate books. The intangible assets ratio is calculated by taking the market value (of a share) and dividing this by the value of tangible assets represented by that share.

The predominantly American companies on the S&P500 have shown a dramatic increase of intangible to tangible assets over the last 30 years. Indeed, in 1982, 62% of a company's market value could be traced to tangible assets, but by 2002 only 13%, or about 1/8 of an average company's market value, was related to tangible assets. Some of the intangible value, and in some cases a great deal of the intangible value, in corporate valuations is sourced from intellectual property – primarily patents in technology companies such as semiconductor companies.

The intangible to tangible asset ratio shows a significant difference between US and Japanese companies. In the summer of 2007, we calculated the non-tangible to tangible valuation ratio for the top 20 US semiconductor companies to be 6.13 (total value to tangible), while the average ratio for the top 20 Japanese semiconductor companies was 1.86. US-based companies ranged from a low of less than 1 for Spansion to a high of almost 16 for Marvell. By contrast, the top 20 Japanese semiconductor companies are closely grouped from a low of just over 1 for Sanyo to a high of about 3 for Toshiba.

Clearly, while Japanese corporations have accumulated unrivalled quantities of patents, they are still far behind US-based companies in the market valuation of their

Components of S&P market value



intellectual property. This reflects how the Japanese corporate culture views and values its own IP.

Why is it that, despite significant changes in the patent system driven by the Japanese government and the prevailing view towards IP in US business, that Japanese corporations still take a largely defensive position when it comes to IP strategies?

Culture of consensus

It is not easy to change deeply held cultural values, even when those values impinge on business revenues. The structure of Japanese business is such that turning it in a new direction takes time and considerable effort.

The scarcity of lawyers in Japan is striking – Japan has only 4% the number of lawyers per capita compared to the United States. This fact may be attributable to the Japanese culture of consensus. This might also explain the Japanese corporation's aversion to public spats – such as litigation – and their preference for settling issues privately outside the courtroom. In patent negotiations, this aversion to litigation has been costly to Japanese companies.

There appears now to be a prevailing view outside of Japan that a recent but marked shift has occurred in how Japanese technology companies consider intellectual property. It is widely believed that the traditionally cooperative and risk-averse Japanese corporate world is showing a new aggressiveness, and a willingness to enter confrontational legal situations. But, in fact, the reality is that this is not the case. The

Japanese corporation is adapting very slowly and cautiously to the IP view prevalent among, say, corporations in the US.

Lost value

It is clear that Japanese businesses, for the most part, still tend to treat patents as an afterthought and patent litigation simply as a problem for the legal department. Important, yes; but IP is still not considered a key element supporting the corporation's overall business strategy. This is a crucial difference compared to the most progressive American and European corporations.

As they gain experience applying their significant and sizeable portfolios of valuable patents in successful patent litigations, Japanese companies should become increasingly willing to take on US and European companies threatening their IP, and give them a taste of their own medicine. However, it is clear that the Japanese business culture is not going to change overnight when it comes to its views on IP. Despite a few headline-grabbing actions, the idea that you can actually make money from asserting your patents has not penetrated deeply into Japanese corporate culture. Meanwhile, an article on the *International Herald Tribune* online site (www.iht.com – “The idea economy: battle over right to sell knowledge”, by James Kanter, 2nd October 2005) states that in 2004, IBM, for example, earned US\$1.2 billion from its IP, or approximately 15% of its total income of US\$8.1 billion.

Japanese companies are significantly undervalued as a result of their continuing refusal to act more aggressively and more proactively in today's IP marketplace. ■

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