

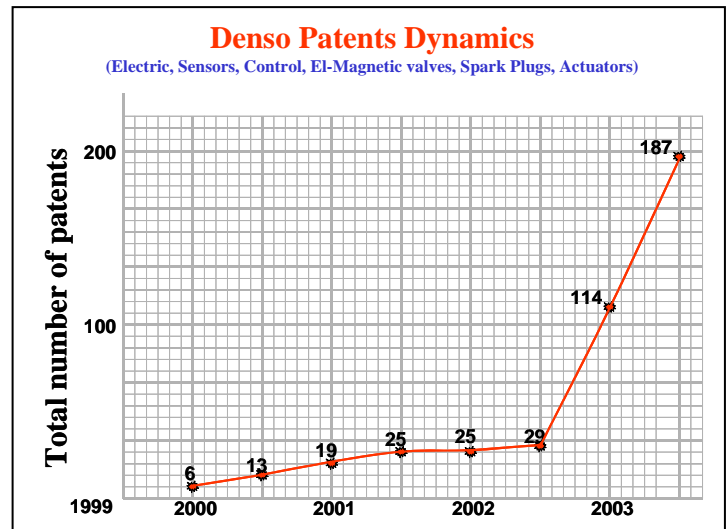
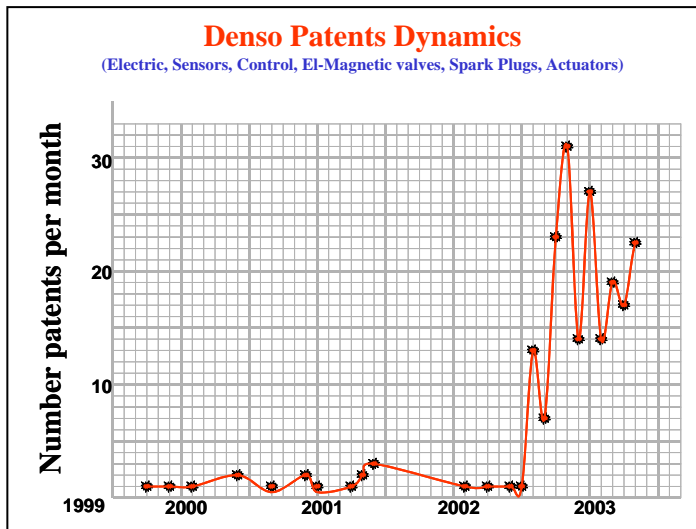
Recent trends in IP protection

Economic crises and patent wars

History has clearly shown that economic crises are typically associated with the intensification of wars in the area of intellectual property. This is quite understandable: in an economic boom it is better to invest in expanding the market through the enhancement of technologies, products, marketing, advertisement, etc. During a recession, when market growth stops or the market starts to shrink, it is more important to focus on protection from competitors, attempts to obtain additional profit from licensing, and so on. In this situation, patents and patent initiation become an important part of a company's plan for survival.

Strategy changes made by Japanese companies

Japan was the first country hit by the recent world economic crisis, and it is no coincidence that it was there that many companies first entertained serious changes in patent strategy. Below are typical examples of the recent patent dynamics of a Japanese company obtaining patents in the U.S.



Possible patent strategies

Patenting represents a special way of regulating the market. A patent provides its owner with a monopoly (for a limited time) on producing a certain product or providing a service, as well as protection from competitive pressure. In many cases, a patent is the only protection that a weak market player can have against strong market leaders.

A patent is a product that complies with the rules governing a normal market environment. Its value depends on many factors, in particular:

- Market share covered by the patent
- Patent strength (the probability of invalidation or circumvention that could reduce the value of the patent to zero)
- Degree of patent subject development (an idea, prototype, accomplished technology, market research, know-how, etc.)

Typically, a patent strategy is part of a company's general strategy for managing intellectual property, which is in turn a part of the business strategy, which usually depends on:

- Area of industry
- Company business type (production, service, trade, etc.)
- Company size
- Market share
- Company culture, etc.

Besides single patents, certain combinations of patents play an important role in a patent strategy, in particular:

- Patent fence – a set of patents that protect a product and/or technology, preventing and repelling attacks from competitors. A patent fence is a passive protection method.
- Patent block – a set of patents that protect a company's market, preventing attacks on the market by competitors and allowing a company to profit from a competitor's success (through licensing agreements, etc.). A patent block is proactive protection method.

Given the above, it is obvious that patent strategies will differ among different companies. They may also differ for different products or services within the same company, depending on novelty, competing products/services, etc.

Typical patent strategies

Haphazard strategy

A company patents everything invented by company personnel as long as it has some measure of value and fits the allocated budget. This is the most frequent strategy of small and medium-sized companies, though some large companies have used it as well (including, for a long time, General Motors). The main drawbacks associated with this strategy are the lack of control over the evolutionary process and the high expense of patenting.

Attacking strategy

A company files many overlapping patents to build powerful (and expensive) patent fences and blocks to discourage and stop competitors.

Protective strategy

A company tries to patent ideas that protect an existing product line from competitors, and sometimes to obtain a monopoly for selected products. The main drawback of this strategy is that it is more passive than proactive, leaving all initiative for development to others.

Selective strategy

A company screens ideas for patenting according to certain criteria. Typically, a special committee is established for this purpose (Chrysler follows this strategy). This approach also helps provide guidance to a company's technical personnel in searching for ideas that have value for the company. The effectiveness of this strategy depends on the criteria. For example,



if the company does not have a clear understanding regarding the future, engineers might be misled and reject ideas that have real promise.

Futuristic strategy

A company patents ideas capable of providing a monopoly for certain products in the near future (5-15 years). This strategy has been more or less successful for certain high-tech companies.

Preventive strategy

A company patents ideas that it does not plan to implement, but which might be dangerous should other companies do so. This strategy creates many “on the shelf” patents, which are costly and rarely able to hold their evolutionary value.

“Mine field” strategy

Important ideas for certain leading industries are patented in anticipation that, eventually, someone will be forced to buy the patent or will infringe it and become vulnerable to a lawsuit. This strategy is utilized by individuals as well as small companies. It requires a certain initial investment, which is usually paid off if even one patent is infringed or becomes an obstacle for a large company.

Disclosure strategy

Instead of patenting them, ideas are disclosed to prevent their being patented by someone else. This strategy is exercised by large companies having substantial financial, production and intellectual resources that allow them to beat the competition without establishing a monopoly. The main goal of this strategy is to counteract the “mine field” strategy that can hurt large companies. Xerox, for example, published new ideas in a special journal to disclose them and prevent them from being patented. (This strategy might well have contributed to the Xerox catastrophe.)

Camouflage strategy

A company tries to patent or disclose erroneous (at least partially) information, or accurate information with important details missing. The goal is to mislead competitors, and sometimes investors or even customers. A variation of this strategy is the creation of informational “noise” – the patenting of important patents together with numerous others containing unproven or infeasible directions, making it difficult to recognize the direction the company intends to pursue. In other situations, the act of patenting itself might trigger unwanted and premature attention from competitors. For this reason, this strategy might include patenting through other companies or individuals likely to go unnoticed (with appropriate precautionary measures, of course).

Exchange strategy

A company creates a patent fund to offer competitors in exchange for their patents.

Licensing strategy

A company obtains patents that can be sold (licensed) to other companies. The selected patent area depends on the prospective customers.



“Edison strategy”

This strategy focuses on creating entirely new products and services for new market sectors. In addition to generating and patenting ideas, this strategy includes R&D, building prototypes and samples, organizing production, marketing research, etc. The goal is to create new companies (or divisions) that will produce or license new products or services. Until recently, this strategy required the leadership of an extraordinary individual having both a clear vision of the future and a talent for business (like Edison, Westinghouse, Gates, etc.). Nowadays, I-TRIZ make this strategy available to a wide range of companies.

In reality, many companies exercise various combinations of the above strategies.

Specifics of the attacking patent strategy

Clearly, many Japanese companies follow the attacking patent strategy. These “patent attacks” have certain common features that make them very dangerous for American companies. Our attempts to alert IP executives in the U.S. to the dangerous patent practices of Japanese companies have typically prompted such responses as: “Yes, we know that they patent a lot, but our engineers have looked through their patents and found that they are mostly garbage. We are not interested in that type of patent.” Questions as to why the Japanese are obtaining these patents usually result in speculation about business mentality, traditions, etc. However, as this is a relatively new trend (late 1990s), tradition has nothing to do with it.

Expanding the subjects of patent infringement

A company whose patent is infringed can sue not only the company producing the infringing product but also the product distributors and/or consumers. For example, Ford or GM can be sued for patent infringement even if it is their vendor who is responsible. Similarly, Wal-Mart can be held responsible for patent infringement involving a consumer product they sell. This means that a Japanese company can send Wal-Mart a warning letter, forcing them to change their purchasing policy and abandon preferred products to avoid expensive patent litigation.

Capitalizing on the typical practice of U.S. patent lawsuits

- Patent processes are usually very expensive; the preparation alone can cost as much as \$3M.
- Verdicts are rendered by judges or juries who typically have little or no technical background and are incapable of an in-depth understanding of technical details. Thus, even in clear cut cases the probability of success is 75% or less.
- Patent lawsuits can take up to 3-5 years, during which time an infringing company can be placed under an injunction – i.e., they cannot sell the product without risking huge financial penalties should they lose the case.

Capitalizing on specifics of the U.S. patent formula

Unlike the European patent formula, the American formula does not emphasize (separate) the new elements introduced by an inventor versus the prior art.¹ In fact, the independent claim of a U.S. patent describes the whole system (including design, processes and other important issues) for which the inventor claims authorship. This structure allows for significant overlapping such that different patents often contain the same description with slightly modified details. For example, the claims belonging to different patents might contain:

- A general description of a device, including elements that explain its operating principle, particular subsystems and details, elements of the associated production method, etc.
- The operating principle of the device, including elements of its general design and other details.
- The method by which the device is manufactured (produced), including design and process elements.
- A group of patents describing particular subsystems and auxiliary processes, including elements of the above.

Given the typical patent practices of the U.S. legal system mentioned earlier, we maintain that a patent fence built from dozens of overlapping patents is very difficult or enormously expensive to break in court.

How to win the patent war

The main rules for victory are no different than for any war:

- Have a clear, consistent and proactive strategy; avoid situations (“battlefields”) favorable for your counterpart.
- Have enough information about your counterpart’s actions to allow you to react in a timely fashion and avoid your counterpart gaining a key advantage.
- Don’t wait for your counterpart to force you into an expensive lawsuit where the outcome is uncertain.
- Use better weapons and ammunition. Smart weapons for successful patent wars include various techniques utilized by IPBI, including a patent strategy based on the Directed Evolution methodology (see below).

Patent strategy based on Directed Evolution methodology

This strategy should be developed on the basis of:

- Directed Evolution and the I-TRIZ methodology
- The goals, general strategy, resources and culture of the company

The basic elements of the strategy should be:

- Utilization of DE to reveal promising evolutionary directions

¹ European independent claim includes two parts – one describes the known elements of the system (prior art) and the other contains new elements only.

- Selection of the best directions by top management, based on the results of DE.
- Development of detailed scenarios for achieving goals. Scenarios should address all necessary issues, including the evolution of technologies, markets, patenting, etc.
- Patenting (or disclosure of) specific ideas for:
 - Increasing the company's value in the eyes of its shareholders
 - Protecting the market position from potential competitors
 - Controlling potential competitors (directing them toward certain areas, deterring them from others)
 - Controlling market growth

In addition to DE techniques, other general I-TRIZ techniques related to intellectual property management can be utilized.