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The whys and hows of patent landscaping
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Patent landscaping as a proactive business strategy

In an increasingly competitive and global marketplace, it is more important than ever to capture the full benefits of innovation by making IP considerations a core part of a company's strategic planning. Too often, intellectual property is a legal afterthought. The typical approach is to form a strategic plan, invest in research and development, produce and launch products and only then consider IP issues such as patentability and freedom to operate. To be effective, strategic planners and business managers must identify and secure the opportunities afforded by intellectual property much earlier in the innovation cycle, and then formulate and implement business strategies to handle potential IP risks before those risks are realised.

One key to effective innovation planning and management is patent landscaping. Although the marketing of patent landscaping services often dilutes the term to mean all things to all people, we define a 'patent landscape' as a competitive view of a technology area as seen through the lens of patent ownership and patent coverage or scope. Clients can use an effectively constructed patent landscape to identify risks and opportunities posed by IP-based issues, and to formulate responsive business strategies early in the innovation cycle.

A patent landscape has four common features:

- It organises technology in a particular area;
- It maps patent assets (eg, granted patents, published applications and unpublished applications) to the organisation so that the client can identify areas of interest;
- It correlates patent data with non-patent data to provide context; and
- It provides some factual basis for a client to choose a business course of action.

Organising technology

At its core, patent landscaping is a review of the technology related to a particular field of interest to

a client. This brings us to the first feature of a patent landscape: it organises technology.

Technical organisation comes in many forms. The most common technique is to organise technology with an index. Some patent landscape providers make use of a public index such as the US Patent and Trademark Office's technical classifications or the International Patent Classification. Other landscape providers construct their own proprietary index, allowing them to view the technological world from their unique perspectives and lexicon.

Mapping patent assets

The second feature of a patent landscape is that it maps patent assets to the organisation or index to provide a patent-inspired view of the technology. The patent assets may include both domestic and foreign patents and applications. They may be limited to those of a single company (often the client) or, better yet, include those owned by the company's competitors and relevant third parties.

A landscape should allow a client to ascertain areas of interest quickly and provide clarity as to which patents are owned by the client, its competitors and other parties. Suitable approaches vary in size and complexity depending on the organisation's needs. One relatively simple approach is to present the data in a spreadsheet, with an area of interest to the client being noted as a flagged record. In situations where patent landscapes include a large amount of data, more sophisticated tools may be used to manage the patent landscape and to apply statistical analysis to the identified patents and patent-related data (known as 'patent analytics'). As analysis increases in sophistication, a landscape provider is increasingly likely to deliver a landscape via computer automation involving a computer-generated visual representation of the patent data.

Correlating patent data

Since patent data alone is usually insufficient for a client to make a business decision, a third feature of a

patent landscape is that it may include non-patent data. For example, patent landscapes often identify companies, technical literature, key engineers/scientists and related products to provide context to the patent data. In fact, inclusion of non-patent data is critical in some fields, such as open source software development, where patents are often disfavoured.

Helping to suggest a course of action

The fourth feature of a patent landscape is that it suggests a course of action that provides a competitive advantage. A landscape does this, in large part, by enabling clients to identify patent issues and opportunities quickly, and by shortening the time required to perform responsive actions. For example, a patent landscape may enable a more efficient and effective prior art search during patent preparation. It may be used to identify areas to be addressed by a development team quickly during product design, and even to suggest an appropriate response to a potential problem, such as designing around a patent or acquiring a licence. Conversely, a patent landscape may help a client to identify and prioritise quickly potential acquisition targets or patent assertion targets.

Some patent landscaping vendors provide patent analytics tools to assist a client in identifying potential opportunities and risks. Most such vendors, including patent analytics tools vendors, are not licensed to practise law. Thus, while they can provide information to support factual findings, they cannot provide legal findings or advice. Typically, a client should consult a lawyer for actual patent analysis.

Specific reasons to perform a patent landscape

Having established the broad attributes of patent landscaping, the accuracy and value of a particular landscape are often difficult to determine without applying the data to a specific business problem. Landscapes that are not designed to answer a specific question generally end up answering no questions at all.

Clients can mitigate this risk by dividing a patent landscape project into multiple phases. For example, a first phase of the project might be designed to address specific preliminary questions, followed by one or more focused phases to address subsidiary issues identified as a result of the first phase. In this way, knowledge of the relevant objectives and appropriate structure of the landscape can be accumulated and refined across phases, avoiding errors and irrelevancies that might otherwise occur.

While patent landscapes can be performed for essentially any business operation, the most common

scenario is in the context of supporting the development and release of a new product. The following is a non-exhaustive discussion of representative uses of a patent landscape.

Initial product planning

Rare is the lawyer who is looped into a product development cycle early and able to perform a patent review proactively. The unlucky majority often perform patent reviews reactively.

Regardless of whether it is performed before a product is developed or after the fact, a patent landscape can provide an initial competitive analysis of the companies that are active in a technical field from a patent perspective. At this point, a product may not be well defined enough to perform a freedom to operate or product clearance analysis. The goal of a competitive analysis may simply be to identify the competitors in the product field and to identify areas in which the client may be able to differentiate its product.

Mid-product reviews

Another use of patent landscaping and review is during product development, where a primary goal is likely to be the creation and implementation of a successful defensive patent strategy. The following is a short summary of how patent landscapes can be used during this stage to identify and resolve threats and to assist the client in other ways.

Freedom to operate:

Once a product is sufficiently designed to assess the risk that it might infringe some third-party patent or patents, a landscape can be used proactively to identify potentially relevant patents. The efficiency of landscaping, when undertaken proactively, increases the time available to, for example, design the product to avoid infringement and to obtain legal non-infringement or patent invalidity opinions. Alternatively, a company may seek to license or acquire a potentially threatening patent.

Patent procurement:

A landscape may enhance a client's procurement of its own patents in a number of ways. A patent landscape puts each patent filing in the context of the company's broader patent portfolio, better enabling managers to ensure that each patent has a specific business purpose. A patent landscape can also help to identify potential prior art to be cited during prosecution. In a technical area that has relatively few patents associated with it (known as 'whitespace'), a company may sense a

competitive opportunity and opt to be more aggressive in filing patents in that space. A landscape helps to identify these patent gaps as part of a process known as ‘whitespace analysis’. A client may also use a landscape as a basis for deciding whether and how to refine the prosecution of its pending applications in order to target the anticipated product activity of competitors better (known as ‘directed prosecution’), or file patents in technical areas that hold the greatest potential for long-term innovations to be made in the near term (known as ‘forward patenting’).

No patent landscape can completely eliminate risk from patent suits. However, patent landscapes do allow a company to identify and neutralise risks proactively. All too often, non-US companies ship products into the United States only to be stopped by an International Trade Commission patent action. Such actions, which take place after factories have been tooled and inventory manufactured, are very costly. The tragedy is that they are all too often avoidable by patent landscaping.

Patent landscaping can also suggest solutions that might not otherwise present themselves. For example, suppose a client receives a patent assertion from another company. Information from a previously developed landscape may allow the client to identify and assert its own patents quickly. In this way, a one-way assertion can be rapidly converted into a patent cross-licence discussion. This is where patent landscapes can shine. Collecting information proactively greatly reduces reaction time to patent events.

Reasons not to perform a patent landscape

For all the advantages of performing patent landscapes, there are also reasons not to do so. The first reason is known as ‘notice risk’, although recent case law has substantially reduced this risk. The second is more serious – the way that a patent landscape is performed may not provide the expected or needed advantages. Both are discussed below.

Notice risk

A person does not need actual knowledge of a patent in order to infringe it. However, if a person is found to have wilfully infringed a patent, the Patent Act provides for the possibility of enhanced damages. For this reason, many companies choose not to research patents directly for fear of being tainted by knowledge of the patents and then being forced to pay up to treble damages. When handling patents, companies often feel obliged to obtain opinion letters from counsel. These letters would not necessarily defend a company from a finding of infringement, but they could defend it from treble damages.

In 2007 the Court of Appeals for the Federal Circuit (CAFC), which has exclusive jurisdiction for primary patent appellate claims, ruled in *In re Seagate Technology, LLC* that wilful infringement required, in part, a showing of “objective recklessness”. Since this was a much higher bar than previously applied, *Seagate* substantially reduced the threat that a finding of wilful infringement and enhanced damages would result from a review of third-party patents designed to avoid infringement altogether. Since *Seagate* the CAFC has issued a number of opinions favourable to the proactive review of patents in order to avoid infringement and reinforce the lessened risk of wilful infringement and treble damages (eg, see *SEB v Montgomery Ward* CAFC 2010)).

Even with the reduced risk of treble damages, clients have further options for controlling any such risk associated with landscapes. The lowest risk option is to obtain a patent landscape with no patents identified, but rather an aggregation of the patent information into counts (eg, 30 patents in technology area x). An incremental risk is undertaken where a few representative patents are provided. However, where the landscape is performed before product design, there should be ample time to design around such patents. A further incremental risk is undertaken where a larger number of patents are identified in a search. If outside counsel is aware of the present product design, counsel may take appropriate action to reduce or neutralise the risk. And here is the key benefit of the *Seagate* line of cases: patent risk can be faced and managed directly, rather than avoided for fear of treble damages.

Efficacy of patent landscapes

A better reason not to perform a patent landscape is that the particular landscape does not provide value. Many patent landscapes are expensive, with some running to tens of thousands of dollars. There must be a commensurate rate of return. Accordingly, many companies have bought a first landscape from a vendor, but have refused to buy a second landscape.

As with any service, patent landscape providers and their products should be closely evaluated. Some issues to consider are as follows.

Clear identification of areas of interest

A patent landscape should clearly identify risk areas and whitespace in the context of the technology that is important to the client. The landscape should also be of sufficient granularity to be valuable; some landscapes provide such broad technical categories that it is difficult to determine, for example, the precise risk areas for a particular product.

Payment only for analysis used

The more detail that a patent landscape provides, the more expensive it is. As a result, the detail should be in depth, rather than breadth. All too often, a company pays for a broad landscape but only a narrow portion of technology is relevant. Additionally, a patent landscape should answer a company's particular questions. If a company simply seeks to know who is participating in a field, analytics tools may not be necessary. If a company has more precise questions, the data need cover only those areas.

Accumulation of information

Because patent landscapes can be expensive, ideally the information should be used again and again. Patent landscapes can be used as starting points for subsequent searches. The searches can be refined and previous errors detected and corrected. For example, saving patent landscape data and subsequent search strategies

can provide the basis to institutionalise patent knowledge in a particular area.

Conclusion

Patent landscaping broadly covers many types of patent data gathering and presentation services, including broad patent searches and patent analytics. Patent landscaping provides an organising principle for technology and presents information in a way that quickly identifies patent risks and opportunities. Given the potential expense, patent landscaping vendors should be closely evaluated in order to determine how actionable the information provided is, and how well that information can be cumulated into institutional knowledge. Patent landscaping provides a tremendous opportunity to identify and neutralise patent risks proactively. Every company that makes, sells, offers to sell or imports technology should consider the benefits of a patent landscape.



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