What venture capitalists should look for in start-up IP

This text first appeared in the IAM magazine supplement
'From IP to IPO' January 2005
For further information please visit www.iam-magazine.com

From IP to IPO

Key issues in commercialising university technology

A supplement to ***Intellectual Asset Management*** *magazine*
www.iam-magazine.com

What venture capitalists should look for in start-up IP

Too often the evaluation of a start-up's IP position is disassociated from its product development plan. Such evaluation in the abstract, however, can lead to problems further down the line. ***Christopher Braidwood*** *and* ***Patrick Ertel*** *of* ***Marshall, Gerstein & Borun LLP*** *in Chicago, IL, explain how an integrated, claim-based approach to IP due diligence can benefit both venture capitalists and start-ups alike*

Intellectual property is a subject seldom ignored during the venture capital investment process. The business plans presented to VC firms investing in high-technology areas frequently contain a section entirely dedicated to the subject. Moreover, this emphasis on intellectual property is not to be confused with the obvious task of evaluating the technology of the start-up company. Rather, the subject of IP refers to how such technology is legally protected through IP assets, such as patents, trademarks and trade secrets.

All too often, IP assets are the only significant legal assets possessed by early-stage, high-technology companies. The importance of these assets at this stage of a start-up's development is indisputable. From the perspective of the VC firm, these assets generally provide tools to mitigate business risks to future growth and, in some cases, to create future business opportunities. For instance, the exclusive rights provided by patents address the business risk of third parties (ie, the competition) commercialising the technology under development.

Despite its critical role, IP is usually a second-tier concern for VC firms because their expertise drives the areas of primary focus and attention. Successful VC firms generally have expertise in three areas: (i) evaluating product potential; (ii) evaluating market potential; and (iii) evaluating management and other personnel for leadership and other skills. Thus, products, markets and personnel are the first-tier concerns for VC firms. And of those three concerns, the evaluation of the proposed products may take top billing, if for no other reason than the complexity of the challenge. The VC firm must first gather information relating to each product, including its features and manufacturing processes, and then must evaluate such information to determine whether the product can be manufactured at reasonable cost and yield and will operate satisfactorily. Perhaps these complexities underlie the adage that the three most important things for fundraising start-ups are products, products and products.

Start-ups without a good product pitch will have a very difficult time raising VC funds. As a first-tier concern, the product pitch is extensively scrutinised by VC firms. To that end, a typical VC firm may have multiple individuals with the technical and other requisite skills to gather and evaluate product information. In fact, VC firms are often instrumental in generating the product development plan. As a result, by the time the investment deal moves towards the second-tier analyses, VC firms have a wealth of product information at hand, usually in-house.

The interrelationship between the products receiving first-tier emphasis and the IP receiving second-tier attention can be viewed and utilised in various ways. At a most basic level, the product information simply can provide a context for the IP evaluation to prioritise and focus the effort. For example, IP related to the more important products proposed in the product development plan should get the most attention. This paper, however, is directed to a deeper level, where the entirety of the product information gathered in the first-tier analysis is recognised as essential to an accurate and comprehensive IP portfolio evaluation. In other words, characterising the first and second tiers of analysis is not an attempt to determine whether IP should be evaluated, but rather to indicate how it should be evaluated.

Unfortunately, a disconnect often arises between these first and second tiers of analysis, and the necessary product information for evaluating the IP is not adequately communicated to the IP professional, who is in a need-to-know position. For many VC firms and the start-ups in which they invest, this IP disconnect is where the seeds of later discontent are planted. As explained below, without the product knowledge, the ability to evaluate the IP accurately is undermined. Both the VC firms and the start-ups then run the risk of entering into partnerships with mistaken impressions and false expectations. The alternative is to close the IP disconnect through an IP analysis by an IP professional armed with the wealth of product information already gathered by the VC firm.

IP due diligence

VC firms typically engage an IP professional to conduct the IP evaluation of a start-up, an effort commonly referred to as IP due diligence. Before incurring the costs associated with IP due diligence, usually the VC firm has previously conducted the first-tier analyses. The start-up will have generally passed those tests to move on to the next stage. In fact, the VC firm and start-up may have already signed a term sheet, virtually locking in a valuation of the company (ie, the pre-money or pre-investment valuation). This timing may seem surprising given that the goals of IP due diligence include determining the value of the IP portfolio to the start-up, which may be quite significant. However, the purpose of IP due diligence is often not to help the VC firm arrive at a numerical valuation of the start-up. VC firms typically want a more qualitative analysis, including instead assessments of how much the start-up's IP will help or hinder the execution of the business plan. Another goal of IP due diligence is to determine the potential for any IP-related disputes or conflicts, which may also impede progress under the business plan.

The attention paid to each of the three following areas of IP due diligence (IP agreements, IP filings and IP disputes) helps make better investment deals and, ultimately, better start-ups. Investment deals are rarely cancelled as a result of something uncovered during IP due diligence. Usually the first-tier analyses of products, markets and personnel (and especially products) have looked sufficiently promising to provide the incentive for correction rather cancellation. Problems are then uncovered and addressed as conditions for closing. In this way, IP due diligence benefits both the VC firm and the start-up despite its second-tier status.

Arguably the most visible and common aspect of IP due diligence involves evaluating the start-up's IP-related transactions and agreements. IP-related agreements include licence and development agreements, as well as many other types of agreements or contracts. Each licence, development or other agreement will be scrutinised for good reason. These and other contracts may transfer IP rights under terms that may dramatically affect whether the start-up will ever turn a profit. VC firms are well aware of the importance of these agreements and one will often see venture capitalists scrutinising the business terms (ie, numbers) of each agreement themselves. In any event, the IP professional retained by the VC firm will evaluate the terms of these and other IP-related agreements for a wide range of problems. Other IP-related agreements typically evaluated include: (i) employment and consulting agreements that, among other things, establish IP ownership in the start-up; and (ii) non-disclosure agreements to protect trade secrets both of the start-up and of those with whom the start-up may have worked in developing the technology.

In addition to evaluating each IP-related agreement, VC firms also usually want to see distinct steps that either have been, or will be, taken to protect the start-up's IP through various legal filings. These steps include, for example: (i) filing patent applications on patentable developments; (ii) recording ownership (ie, title) and other interests in those patentable developments; and (iii) registering trademarks. The foregoing is by no means an exhaustive list, and dozens of papers and articles have been written to identify all of the various IP documents and filings that should be covered in IP due diligence. More specifically, the IP filings should be made in accordance with a coherent IP strategy aligned with the business plan. That such strategic analysis is often not done is one general instance of the IP disconnect to be described below.

Yet another common aspect of IP due diligence involves analysis of third-party patents. The search for, and evaluation of, all relevant third-party patents can be a huge endeavour, such that so-called clearance searches are often not feasible. In such cases, VC firms may limit the scope of the effort to patents known to the start-up or to patents held by certain key competitors. In any event, the goal of such analyses is to confirm the absence of any blocking patents, ie, patents that would be infringed by the start-up.

The IP disconnect

Unfortunately, in far too many cases, an IP

disconnect between the first and second tiers of analysis frustrates efforts in each of the three IP due diligence areas introduced above and, more generally, impairs the VC firm's ability to screen for unwise investments and uncover problems. IP due diligence then provides a false bill of good health, and both the VC firm and the start-up proceed with misguided expectations and understandings of the IP. In fact, the potential for disconnect will arise in virtually every IP due diligence effort with the exception of those limited to confirming IP portfolio ownership.

Instances of the IP disconnect are set forth below in connection with each IP due diligence area. In each case, the IP disconnect involves a failure to evaluate the claims of relevant patents in light of the product information gathered in the first-tier evaluation work by the VC firm. This failure may not be the fault of any one individual. Rather than point fingers at ultimate responsibility, suffice it to say that both the VC firm and its IP professional must remain engaged such that the product information is communicated and utilised appropriately. With the product information in hand, proper IP due diligence then involves detailed patent claim analysis of both third-party patents and the start-up's filings. While such claim analysis should always be delegated to an IP professional, the key to closing the disconnect is the continued involvement of the VC firm to ensure that the analysis incorporates the product information.

First, by way of background, a patent generally has two parts: (i) a detailed description of the invention; and (ii) a number of claims defining the legal scope of the invention. Once the patent issues, the start-up may exclude others from making, using, selling, etc, any product that falls within this legal scope. Throughout the patent application process, the applicant and patent office typically debate the proper scope of the claims, with the applicant often narrowing the scope of the claims to avoid having them read on the prior art. At the end of this process, it is the claims that count. The title, abstract, drawing figures and other parts of the patent only play supporting roles.

The IP agreement disconnect

An inbound licence agreement provides an illustrative example of the IP disconnect. As mentioned above, the royalty rate and other numbers specified in the licence may be dramatically important because exorbitant royalty obligations may restrain or prohibit the start-up's growth. Knowing this as well as anyone, VC firms may even force the renegotiation of these licence terms.

However, the way in which these licence agreements are scrutinised offers a first example of the IP disconnect. In short, care should be taken to understand, first, what IP the licence covers and, second, which products are covered by that IP.

On one level, the answer to the first question is simple – the licence covers the patents identified in the licence grant. But all too often during due diligence and beyond, the scope of a licence is characterised, without reference to the patents, as covering, simply, a certain X or Y technology. Or equivalently, the licence is characterised by acknowledging that it covers the patents identified in the licence grant, but it is then concluded that the licensed patents cover the X or Y technology. Either way, the characterisation is often not grounded in a proper analysis of the licensed patents and, specifically, the respective claims of those patents in relation to the products.

Without knowing the scope of the licence, the evaluation of the licence agreement is, at best, incomplete. At worst, when the licence actually covers something unexpected, the due diligence conclusions reached may be completely incorrect. The royalty and commercialisation obligations may then be evaluated in view of subject matter that is irrelevant. For instance, the royalty rate may be appropriate for one IP type, but not for the type actually covered by the licence. The licence may also require the start-up to create a prototype embodying the licensed subject matter within a specified time-frame. Assessing the feasibility of that requirement obviously depends on understanding what needs to be created. That understanding is only found by defining the scope of the licence which, in turn, is defined by the scope of the claims of the licensed patent(s).

Not addressing the second question (what products are covered by the IP?) is even more dangerous. Unfortunately, this failure occurs much more insidiously. An unstated assumption often rules the roost during the evaluation of IP agreements – ie, that the product(s) of the start-up will practise the licensed IP. This assumption occurs frequently when the licence is characterised as covering the core technology of the start-up. But regardless of the underlying reason for the mistaken assumption, the IP due diligence cannot stop after determining the nature of the licensed IP. The IP professional must continue to determine which products, or aspects of the product development plan, will involve the licensed IP. And to avoid this IP disconnect, the product information must be viewed in relation to the scope of the respective claims of the licensed IP.

Such erroneous simplifications of the licence scope often lead to gross errors in the calculations of the cost of the licence. For instance, the start-up may have multiple products, not all of which require a royalty payment. The disconnect then leads the VC firm to overestimate the future royalty obligations. Moreover, the calculation of the cost of the licence may have been made prior to the IP due diligence phase. Therefore, the IP due diligence should confirm that the prior calculations are accurate. Such confirmations rarely occur.

Apart from incorrect royalty calculations, the licence agreement may be totally unnecessary if none of the licensed patents covers the products identified in the business plan. Such unnecessary licences happen more frequently than one would expect. For one thing, change is constant for start-ups and what was once relevant may soon be history. With these licences, the commercialisation terms will then never be met. All of the parties will then struggle to terminate the licence (often at substantial cost) at some point in the future. In the meantime, the start-up may pay minimum royalties and reimburse patenting costs for a licence grant it does not need.

Failing to review the scope of the claims in view of the product information can also lead to viewing the licence rights too narrowly. All it takes is a single, broad claim of one patent. While on balance, misguided licence analyses tend to overestimate the licence scope, licences, on occasion, may have titles, descriptions and layperson characterisations that are misleadingly narrow. So when the licensed patent has one or more claims broad enough to cover multiple technologies and products, such broad coverage should be recognised and valued accordingly during IP due diligence.

The IP filing disconnect

Each patent or patent application filing should be analysed to determine its relevance to the start-up. With relatively small patent portfolios to analyse, there is usually little reason (or excuse) to stop after simply concluding that the start-up has routinely filed patent applications on patentable work. Moreover, the analysis should not stop at the point of confirming that the start-up has dutifully followed patent office procedures and recorded IP assignments. At the end of the day, following such minimal, mechanistic procedures will not help a start-up if the patents are directed to inventions irrelevant to the product development plan.

Analysing IP filings is similar to the review required with licence agreements. In short, a comparison of the claims and the product information is essential. To this end, many due diligence questionnaires ask the start-up for an identification of each product related to each patent or patent application. While this is a start, the inquiry and analysis cannot stop there. For one thing, the individual responding to the due diligence request may have a misguided impression of the scope of the patent. Furthermore, mere confirmation of those product identifications is not sufficient to value the patents in the portfolios fully. Some products may be more important than others to the business plan, others may be missing and the future product development plans are often not addressed. In summary, the claims of each patent need to be analysed with all of the product information gathered by the VC firm at hand to understand and assess the value of the IP filings.

The IP dispute disconnect

Analyses searching for third-party patents frequently focus on the technological innovations of the start-up. But this focus misses the point. Third-party patents are relevant to the start-up's freedom to practise its product development plan, of which the innovations are only a part. The patent searches need to focus on the start-up's products and product plans instead.

As a preliminary matter, VC firms often ask a technical consultant to conduct the patent database searching. Such consultants may have considerable experience reading patents but, for this task, VC firms should only retain IP professionals, despite the potential for added cost. Only those IP professionals with the training and expertise regarding how the courts have construed patent claims are qualified to evaluate the third-party patents and determine whether a blocking patent exists.

The VC firm wants to hear that no blocking patent was found that will prevent the execution of the business plan. Unfortunately, what the VC firm often gets are conclusions relating to patentability of the start-up's core technology. The reason lies in the IP disconnect and, more specifically, the failure to base the patent search on product information.

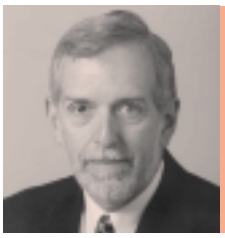
The individual performing the search is typically the same person performing other aspects of the IP due diligence, such as evaluating the patent portfolio. As a result, the individual becomes well versed in the technology being patented by the start-up. But that core technology is only one of many that the products will use. Therefore, limiting the search for third-party patents to those relating to the core technology will provide patentability feedback (at times, a legitimate

inquiry), but not much in the way of freedom to practise the product development plan. It fails, for instance, to determine whether other aspects of the products (present or future) will infringe patents of the competition. Suffice it to say that tempers flare when the start-up and the VC firm later realise that a licence from a competitor (if one is even available) will be necessary for some other aspect of the product even though the start-up obtained patents on the advances. The only way to avoid this IP disconnect is to consider carefully the product information to determine the salient aspects or components of each product. These aspects of the product will likely be the ones noticed by the competition and evaluated for possible infringement.

It should be noted that a freedom to practise search that attempts to clear every aspect of each product of the start-up is obviously an impossible task given the time and resources available. But in cases where the portfolios of the competition are too extensive, VC firms and the start-ups should take care to acknowledge where the analyses begin and end. Given that knowledge, future patent searches can be conducted appropriately. Moreover, the VC firms and start-ups can decide which areas to exclude or include in the search based on a reasonable review of the facts. Perhaps most importantly, expectations that no blocking patent will ever turn up are managed.

Conclusions and practical advice

The IP disconnect can be closed through an integrated analysis of patent claims and product development information. These analyses are likely to require the co-operation and involvement of multiple individuals with differing skill sets. Specifically, the venture capitalist and IP professional must communicate effectively to incorporate the venture capitalist's product-related knowledge into the IP due diligence effort. IP professionals should not be content with reviewing the business plan to obtain such information. For one thing, the business plan often reflects the start-up's vision rather than the product development plans favoured by the VC firm. Instead, frequent communication with those possessing the product knowledge is essential during each phase of IP due diligence. Integrating such product knowledge into IP evaluations having a claim-based analysis is the only way to ensure comprehensive and accurate review of the start-up's IP agreements, patent applications and other IP filings, and potential for IP disputes.



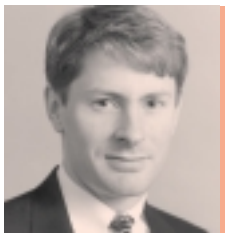
Marshall, Gerstein & Borun LLP
6300 Sears Tower, 233 South Wacker Drive,
Chicago, Illinois 60606, USA
Tel: +1 312 474 6300
Fax: +1 312 474 0448

www.marshallip.com

Patrick D Ertel
Partner
pertel@marshallip.com

Patrick D is a senior partner in the Licensing and Business Transaction Group at Marshall, Gerstein & Borun LLP and a former member of the firm's Executive Committee. He holds a BS in aerospace engineering from the University of Notre Dame and a JD from the Northwestern University School of Law. Patrick has been licensed to practise law since 1973, and is also registered to practise before the US Patent and Trademark Office.

With over 30 years of private law practice, Patrick has a broad range of experience in every aspect of intellectual property law including litigation, prosecution, and opinions and counselling in addition to his extensive licensing experience. He also has developed a specialised expertise and has written on administering both large and small joint defence groups for companies wanting to align against so-called nuisance patents. Further, Patrick was appointed by the Governor of the State of Illinois to the Technology Innovation and Commercialization Grants-in-Aid Council to advise on the development of technology-based businesses within the state.
Patrick is a member of the Licensing Executives Society, the American Intellectual Property Law Association and the American Bar Association.



Christopher Braidwood
Associate
cbraidwood@marshallip.com

Christopher first joined Marshall, Gerstein & Borun LLP in 1995, focusing on patent prosecution, litigation, and opinions and counselling primarily in the electrical, electromechanical and computer software areas. He received his BSE in electrical engineering and his JD degree from the University of Michigan.

After over six years of practice with the firm, Christopher left to serve as Vice President of Intellectual Property of Ardesta, LLC, a venture capital firm providing management services to its portfolio of start-ups in the microsystems and nanotechnology areas. During his three years there, Christopher was responsible for managing the IP portfolios of the start-ups, assisting with licensing and other transactions and conducting IP due diligence.

Christopher is licensed to practise in the states of Illinois and Michigan, as well as before the United States Patent and Trademark Office. His practice now involves patent prosecution, IP transactions, IP portfolio management, and opinions and counselling in a variety of technical areas including wireless communications, semiconductor devices and device fabrication, microelectromechanical systems (MEMS) and other microsystems, RF filters and other RF devices, microfluidics, optical and photonic devices, gas turbine engine controls, medical devices, power electronics, power generation systems, process control systems and pump-motor systems.