Intellectual property and venture capital

There are significant opportunities for venture capital investment in start-up businesses seeking to exploit developments in the IP marketplace

By **Jorge M Torres**

Intellectual property, as a business concept and a legal construct, is no longer the domain of a handful of specialists and champions who intrinsically understand the contributions that intangible assets make to the bottom line and the risks that they pose to the uninitiated. Without a doubt 2011 has been a watershed year in the development of public awareness of intellectual property. Headlines about the uses and perceived abuses of IP rights regularly capture the attention of businesspeople, technologists and governments around the world.

It was not always so. A decade ago, IP evangelists struggled to convince business elites of the opportunities that flowed from wise stewardship of intangible assets. Businesses that ignored the new realities of the information economy, they argued, would miss the opportunity to own the intellectual capital required to compete on a global scale.

Some who heard this gospel came to believe that the true value of intellectual property lay in its assertion for profit. This resulted in a boom in patent secondaries sales and a rise in the number of patent infringement lawsuits filed in the United States by firms whose sole business purpose is licensing and enforcing intellectual property. In the 10 years that followed, trolls replaced Rembrandts in the attic as the operative metaphor in the marketplace. The exuberance of the gold rush gave way to a dynamic in which peril, not opportunity, governed the way in which managers of both large and small businesses thought about intellectual property.

The patent peril dynamic comes to dominate when risk overtakes opportunity as the primary lens through which managers view complex business problems involving intellectual property. Patent peril hangs over businesses despite increasing challenges to the accepted wisdom that strong patent rights are critical instruments of innovation policy. In the United States, a reformist agenda has taken shape around new legislation and judicial advocacy that aims to curb the profitability of the patent licensing and enforcement model.

Attempts to reform government policy have failed to displace the peril dynamic that characterises IP discourse and strategy. Tenets of Cold War doctrine, such as weapon stockpiling and mutually assured destruction, have achieved currency at the highest levels of corporate decision making. Mudslinging over patent disputes was once confined to the courtroom, but now seems to have emerged as an accepted form of public discourse. All this is despite the most extensive patent law changes in over a decade, which are aimed at fixing an ostensibly broken system.

Approaches that emphasise entrepreneurship and capital formation as possible solutions for doing business in the midst of this dynamic remain largely underdeveloped. This article shows what active investment of venture capital in the IP marketplace might look like, opening a new thread in the conversation about patent reform and the role that patent rights should play in a modern economy.

IP megatrends

As innovation has become more open and

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Figure 1. **IP megatrends. There are three key market trends that should guide venture capital investment in the IP marketplace in the coming years**

Fragmented patent ownership	Multiple parties own the patent rights to most technologically complex and valuable products. The proliferation of fractional property rights is generating more disputes and increasing the costs of doing business in industries where technology is rapidly evolving.
Big data	The development and adoption of software for the organisation and analysis of massive amounts of data will unlock insights about patents that will remake the way people search for prior art, when they choose to assert patents in court and how much they pay for a license.
Convergence of IP and financial services	Analysts will use patent data to identify the key drivers of patent risk, which will support the development of new strategies that technology investors will use to generate returns and new financial products that businesses will use to transfer patent risk to the capital markets.

technology more complex, it has become difficult for a single company to appropriate the value of all the patentable innovation that is embodied in a single product. For example, mobile phone handsets often contain thousands of patented technologies that must work together in order to provide a product the consumer wants. None of these technologies comes from the mind of a single engineer working at a single technology company. Rather, innovation around complex technologies of this kind tends to develop at many places simultaneously.

Increasing technological complexity has fragmented the ownership of patent rights. Businesses that operate in high technology, biotechnology and other rapidly evolving sectors must navigate patent thickets and sometimes must transact with one another. Fractional ownership of the rights that companies need to do business has increased the supply of patents that may fall into the hands of a competitor, or a company whose sole business is licensing and enforcement. Some of the patents in question may be invalid, but this is irrelevant – a growth in the number of rights holders in key innovation markets has led to more disputes, many of which end in litigation. The landscape of IP rights starts to look like what legal scholar Michael Heller calls an anti-commons, one populated by too many rights holders who are unable to trade efficiently with one another. Fear, chronic litigation and calls for patent reform are the result.

Big data is a significant market trend that includes the development of software tools for the organisation and analysis of extremely large and complex data sets. At present, patent databases are mostly proprietary, disaggregated and incomplete. Big data advances will give anyone the ability to assemble large databases, hosted using cloud computing technology, that contain information on every patent ever issued, litigated, bought or sold. Armed with increased storage capacity and processing bandwidth, businesses will be able to mine such databases quickly, gaining insights into how to search for prior art, when to assert patents in court and how much to pay for a licence. IP attorneys will be among the first to feel the impact of big data, as the practice of law becomes informed more by data analytics and less by the vagaries of human judgement. As big data tools become more widely adopted, businesses of all types will integrate insights from patent analytics into an ever-broader range of organisational decisions.

The convergence of intellectual property and financial services – a trend in its early stages – has the most transformational potential. The scarcity of data makes today's IP markets opaque; as a result, price discovery remains more of an art than a science. These markets will become more transparent when large caches of patent data come online, along with the analytical tools required to mine them. Much as data analytics firm Risk Management Solutions models the key risk drivers for perils such as earthquakes and hurricanes, insights from patent data analytics will help investors to pinpoint the small number of issued US patents that account for the majority of patent value. This will encourage the development of new trading strategies which will allow technology investors to generate better returns. It will also allow for the creation of new insurance

Figure 2. **Emerging IP companies. Several emerging companies are capitalising on megatrends that will shape the evolution of the IP marketplace**

Company	Stage	Venture capital investors	IP megatrend	Business
RPX RATIONAL PATENT®	Public	Charles River Ventures Index Ventures Kleiner Perkins Caufield & Byers	Fragmented IP rights and ownership; convergence of IP and financial services	Patent risk management and advisory.
INNOGRAPHY	Early	Austin Ventures Covera Ventures	Big data	SaaS-delivered business intelligence for management, protection and monetisation of patent portfolios.
LEX MACHINA REINVENTING IP	Seed	Ulu Ventures	Big data	Legal intelligence and tools for patent litigation.

products (and a new reinsurance market), enabling technology companies to transfer downside patent risk to the capital markets.

These are the three most important trends that will shape the IP market in the coming years. Start-ups that are building businesses to exploit one or more of these trends will represent the best opportunities for early-stage investors that are looking to enter the IP sector.

Intellectual property and venture capital

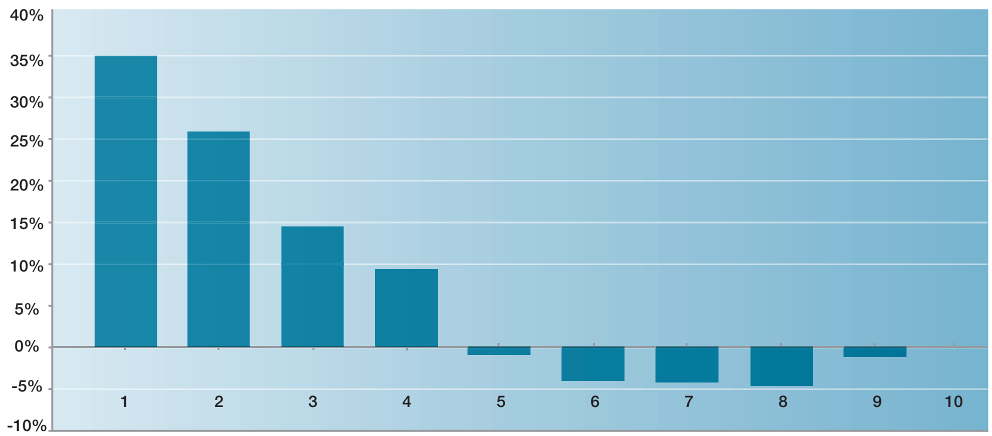
According to the National Venture Capital Association, the 10-year returns for the venture capital industry measured at the end of the first quarter of 2011 were -0.1%. During the same period, the Dow Jones Industrial Average returned 4.7%. There are many reasons why the venture capital industry as a whole has performed poorly over the past decade, including over-allocation to the asset class by investors and the bursting of the dotcom bubble. Poor performance has prompted a flight to quality among the pension funds, family offices and other institutions that invest in the asset class. As fund-of-funds TrueBridge Capital reported in Summer 2011: "A clear trend in the fundraising market has been a concentration of capital with the very best firms – those that have been able to generate attractive returns and distribute capital to limited partners, even during difficult periods such as the past 10 years."

Fundraising has become more competitive for all except the most successful money managers with marquee platforms who are investing in the hottest sectors. In this environment, pursuing an investment thesis in which a venture whitespace figures prominently is a smart strategy. A venture whitespace is an emerging area of innovation and entrepreneurship in which little or no risk capital has been invested and where there are fewer start-ups and investors clamouring for deals than in areas where venture capital is plentiful. The relative lack of competition for deals in venture whitespaces disciplines valuations, allows new entrants to scale quickly and enhances returns for the investors that enter the space first.

The IP sector is a venture whitespace. According to one estimate, the combined market for legal services and transactions involving intellectual property is more than US$60 billion. In 2011 two transactions alone accounted for nearly US$17 billion in market value: Nortel Network sold its mobile telecommunications portfolio and Google acquired Motorola Mobility (in what was largely viewed as a defensive patent play). However, there are probably little more than 10 US start-ups that are building high-growth businesses to capitalise on an IP megatrend. There is clearly room for development, in terms of the number of new start-ups and the amount of investment.

Growing venture investment in the IP sector will present several challenges. Early adopters of a venture capital thesis for intellectual property will struggle to establish the sector's legitimacy among most of their peers (and their limited partners). They will have to overturn the belief that investing in intellectual property amounts to bankrolling patent licensing and enforcement by non-operating companies – or patent trolling, as its detractors call it – which has more than its share of

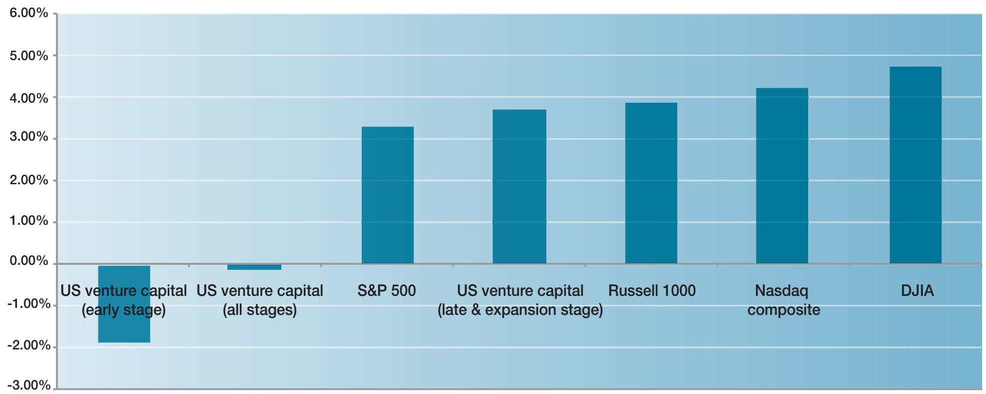
Figure 3a. **10-year returns of US venture capital firms**



Quarter	Quarter end date	10-year returns
1.00	31/12/2008	35%
2.00	31/03/2009	25.8%
3.00	30/06/2009	14.3%
4.00	30/09/2009	8.4%
5.00	31/12/2009	-0.9%
6.00	31/03/2010	-3.7%
7.00	30/06/2010	-4.1%
8.00	30/09/2010	-4.6%
9.00	31/12/2010	-2%
10.00	31/03/2011	-0.1%

Source: Cambridge Associates LLC and National Venture Capital Association

Figure 3b. **10-year returns of US venture capital v other indices**



Index	10-Year returns as of March 31, 2011
US venture capital (early stage)	-1.79%
US venture capital (all stages)	-0.001
S&P 500	3.29%
US venture capital (late & expansion stage)	3.75%
Russell 1000	3.83%
Nasdaq composite	4.22%
DJIA	4.73%

Source: Cambridge Associates LLC and National Venture Capital Association

reputational pitfalls. A prime example of why that belief is misguided is provided by RPX Corp, a patent risk management start-up which does not assert the patents that it acquires. Founded in 2008, RPX attracted approximately US$100 million in venture capital before its initial public offering on 4th May 2011. By early September 2011 shares in RPX were trading at a 23% premium to their initial public offering price and the company had earned a market capitalisation of over US$1 billion. One venture capital firm that backed RPX when it was a private company has seen a return of between 12 and 13 times its investment (unrealised as of June 2011). The RPX story demonstrates how a non-litigation play in the IP sector can generate superior returns. RPX and its venture investors have begun to highlight intellectual property as a venture-ready area of investment.

Even when early-stage investments in intellectual property start to gain traction, it will be difficult to build momentum because new venture formation will be sporadic at first. In addition, all but the most highly regarded venture capital firms will find it difficult to attract syndication partners. The same attributes that make intellectual property an enticing venture whitespace – particularly the paucity of investors – will be a challenge for pioneering dealmakers.

Given the inherent barriers to success, not everyone will want to seize the opportunity. However, investing in IP start-ups makes strategic sense for some. Consider the corporate venture groups at technology companies that are frequently sued for patent infringement. They are more likely than their counterparts at traditional venture capital firms to have first-hand experience of managing through infringement lawsuits, helping them to identify the main points that entrepreneurs should address and the solutions that are likely to create the most value for market participants. This gives corporate venture groups an advantage when picking the start-ups that are most likely to succeed in the IP sector.

Corporate venture groups are backstopped by cash-rich organisations that commit capital to emerging companies primarily for strategic reasons. As such, they can tap the balance sheets of their parent companies in order to help start-ups to grow at times when fundraising is tight and syndication partners are scarce. Thus, corporate venture investors that enter the sector early stand the best chance of securing outright ownership of new technologies and business processes for identifying, measuring and mitigating patent risk. Through acquisitions, technology companies can translate these gains into operational improvements throughout the organisation that will yield better outcomes relative to their peers in licensing transactions and in litigation.

Investing in new venture formation in the sector also gives corporations another channel through which they can shape national innovation policy. Their investment choices communicate their judgements regarding the most important business problems involving intellectual property – and their solutions. As the technology sector will remain a critical driver of US competitiveness, policy makers and the public at large will listen.

Yielding quicker improvements

On 8th July 2011 venture capital investor John Doerr asked his Twitter followers how they would fix the patent system and whether they favoured a term limit or a ban on software patents. The question has rightly attracted vigorous debate, but it artificially constrains the ways of approaching business challenges involving IP risk.

Established firms will always look to Congress and the courts for substantive change to innovation policy. However, venture capital investment in the IP sector has some unique advantages. It is less contentious: entrepreneurship is as close to an absolute good as one can find in public discourse these days, and it is hard to object on moral or economic grounds to supporting the success of emerging companies that are trying to improve the efficiency of markets for IP assets and risk.

Given the political gridlock gripping Washington and the pace at which the courts make substantive changes to the law, entrepreneurship and venture capital investment in and around the IP sector may yield quicker and more fundamental improvements to the system. Most importantly, venture capital investment has a particular capacity to drive wealth creation in ways that have a lasting effect on the economy. As such, it gives its practitioners the unique ability to carve out islands of opportunity in the midst of patent peril. *iam*

Action plan

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Investors considering financing an emerging company operating in the IP sector should consider the following:

- There are three principal trends currently shaping the evolution of market opportunities in the IP sector: (i) ever - increasing technological complexity is fracturing the ownership of patent rights, thereby fuelling conflict and fostering a business culture around Intellectual property that is dominated by risk aversion; (ii) advances in big data are enabling new and powerful analytical approaches to gathering business intelligence and managing risks related to Intellectual property; and (iii) the convergence of Intellectual property and finance is opening up the possibility of new categories of financial products and services that facilitate the arbitrage of patent risk.
- Investing in emerging companies in the IP sector is not synonymous with funding litigation. Litigation is fuelling demand for new businesses that help customers accurately measure and manage patent risk, and it is creating opportunities for venture investors to help entrepreneurs build them.
- Intellectual property is a venture whitespace. Far fewer startups exist than the size of the market opportunity suggests. This gives early entrants into the space several first-mover advantages (eg, attractive valuations), but it also presents several challenges (eg, finding syndication partners).
- Corporate venture capital groups at technology companies are ideally poised to make early-stage investments in the Intellectual property sector. Their parents typically have experience with patent litigation and cash-rich balance sheets that can support strategic investment in a new sector over the long haul.

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