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PIPCO investing in a brave new world

The challenging and uncertain patent enforcement environment has wreaked havoc on small/microcap public IP company (PIPCO) valuations. However, the associated volatility has created moneymaking opportunities for public market investors

By Mark Gober and Kevin Rivette

The patent enforcement landscape has undergone significant changes in the last several years. Developing an understanding of this backdrop is critical for investors looking to implement long or short investment strategies in public IP companies (PIPCOs).

In 2010-2011, patent valuations were flying. First, Novell sold its 882 patents for \$450 million. Then, Nortel sold its 6,000 patents for \$4.5 billion out of bankruptcy significantly exceeding the \$3.2 billion it had raised from selling off its operating businesses. This deal was followed by Google's acquisition of Motorola Mobility for \$12.5 billion, largely motivated by its portfolio of tens of thousands of patents. These numbers caught the attention of holders of patent rights and investors. Rights holders began to look for ways to get rich off their patented innovations, while investors with stars in their eyes wanted a piece of the action. This scenario created the perfect conditions for new publicly traded companies, known as PIPCOs, whose business models are driven by collecting licensing fees from parties which they believe to be infringing their patents.

Not all PIPCOs are new. Qualcomm, Tessera Technologies, InterDigital, Rambus, Technicolor SA, Acacia Research Corp and Wi-LAN Inc are examples of well-capitalised, publicly traded IP-centric companies that have generated hundreds of millions (in some cases, billions) of dollars in licensing revenue. This article focuses on newer, smaller and often less experienced PIPCOs which have emerged as a result of booming patent valuations. However, the principles discussed herein can be applied to investing in more established PIPCOs as well.

New legal hurdles in the United States

Since 2010-2011, the patent enforcement environment has changed significantly. The shift has been most pronounced in the United States, where many PIPCOs have traditionally focused their monetisation efforts. It has become increasingly difficult for PIPCOs to successfully enforce their patents, causing many PIPCO valuations to plummet. PIPCO investors should be mindful of important legal changes that have contributed to this shift, including the America Invents Act of 2011 and certain US Supreme Court rulings.

America Invents Act

The America Invest Act introduced the creation of new post-grant patent proceedings which allow third parties to challenge a patent's validity (ie, enforceability) by arguing that the US Patent and Trademark Office (USPTO) mistakenly issued the patent. The proceedings were formally put into effect on September 16 2012 and are heard by the Patent Trial and Appeal Board (PTAB). They are known as:

 inter partes review — a challenge to a patent's validity on the basis that the patent was not novel and/or that it was obvious, both of which are criteria for patentability under 35 US Code §102 and 103, respectively;

- covered business method review a challenge to a patent's validity if it covers the practice, administration or management of a financial product or service; and
- post-grant review a challenge to a patent's validity within nine months of its issuance.

In addition to arguing validity before juries and judges in court, accused infringers have used these new, independent proceedings in parallel to avoid payments to PIPCOs that they believed to be unjust. So far, their efforts have been successful. According to law firm Sterne Kessler Goldstein and Fox, the PTAB has instituted trials for 63% of challenged claims in inter partes reviews and for 66% of challenged claims in covered business method reviews. Where the PTAB has reached a final written decision, over 84% of instituted claims in inter partes reviews have been cancelled (rendered unenforceable). This figure is over 95% for covered business method reviews. PIPCO investors whose patents have been adversely affected are left wondering what happened to the notion in US patent law (35 US Code §282) that "a patent shall be presumed valid".

Even where accused infringers have failed to invalidate patents through these proceedings, they have been able to use them to delay payments and to apply pressure to PIPCOs by increasing their costs. A single *inter partes* review can last between two and three years through appeal, can cost up to \$500,000 to defend all the way through and can distract management from other business activities.

ParkerVision, Inc - the inventor of over 250 worldwide patents relating to radio frequency technologies used in third and fourth-generation cellular communications - is an example of a PIPCO that has faced a number of costly inter partes reviews relating to patents in litigation. Eight months after it won a \$173 million jury verdict against Qualcomm Inc, RPX Corp and a ParkerVision short-seller jointly filed inter partes reviews against the same ParkerVision patent claims that a jury had just ruled as being both valid and infringed. ParkerVision is now facing 10 additional inter partes review petitions, filed by Qualcomm in August 2015, which relate to patents in a separate lawsuit.

Although validity challenges can be damaging and expensive, successfully defending them can enhance a PIPCO's chances of success in the long term. Network-1's defence of its US patent

covering power over Ethernet technology is one such example. Since May 2007 this patent has generated over \$81 million in licensing revenue across 19 companies. Several unlicensed defendants accused of infringing it have attempted to invalidate the patent through multiple inter partes reviews. These challenges have been unsuccessful. Additionally, one defendant filed a covered business method review, arguing that the petition was warranted because the power over Ethernet patent is "broad enough to cover a financial product or service". This argument was rejected and the petition was not instituted. Even though additional challenges can be brought forward, Network-1's patent is now in a strong position, having survived so many different challenges. Network-1's successful defence of its patent is one of the reasons its valuation has remained relatively stable, compared to that of other PIPCOs.

US Supreme Court Rulings

Even before the 2010-2011 era, the Supreme Court issued formative decisions which have created challenges for PIPCOs by limiting remedies available for infringement and creating uncertainty and unpredictability around a patent's enforceability. For example, eBay Inc v MercExchange, LLC (2006) made it more difficult for rights holders to block US shipments of infringing products (known as an injunction). Further, KSR International Co v Teleflex Inc (2007) made it easier to invalidate existing patents on the basis that an invention was obvious and patent protection was mistakenly issued.

Recent Supreme Court decisions have created further uncertainty for PIPCOs. In Alice Corp v CLS Bank (2014), the Supreme Court ruled that many types of software are not patent eligible, even if the patent was previously granted by the USPTO under a different standard of patent eligibility. According to a June 2015 Fenwick & West report, more than 70% of US Federal Circuit and district court decisions have found patents, in whole or in part, to be invalid and unenforceable on the basis of Alice challenges. Also in 2014, the Supreme Court's decision in Nautilus, Inc v Biosig Instruments, Inc altered the standard to argue that a patent is invalid because claim terms are not properly defined (ie, they are indefinite). Finally, through Octane Fitness, LLC v Icon Health & Fitness, Inc (2014) and Highmark Inc v Allcare Health Mgmt Sys (2014), the Supreme Court increased the risk that a rights holder will be forced to pay defendants' legal bills when it loses in court. This potential liability creates a material risk for cash-constrained PIPCOs.

ff Investors should be aware of the dynamics which leave PIPCOs with no choice but to file patent infringement lawsuits

Litigate, or else

Armed with new weapons to challenge patents, potential infringers have less of an incentive to pay PIPCOs for a licence. Litigation is therefore a common tactic that PIPCOs employ in an attempt to induce licensing payments. Investors should be aware of the dynamics which leave PIPCOs with no choice but to file patent infringement lawsuits.

As US Chief Judge Paul Michel stated on a panel in May 2015: "We used to have, for the most part in this country, what I'll call an honour system where companies that were using technologies patented by others willingly took licences without being forced by court orders to do so. The honour system now is largely gone." Now, and particularly when large amounts of money are at stake, accused infringers sometimes opt not to pay and instead take the fight to court. It is a simple economic calculation for accused infringers: the legal bills associated with fighting patent infringement lawsuits might be millions of dollars, but that is often dwarfed by what they would have to pay a PIPCO for a high-priced licence – and all the while the accused infringer can continue to increase its commercial market share by using the patented technology at will and for free. Further, accused infringers do not want to appear weak in the eyes of other PIPCOs, which might also want to collect from them. They would rather be feared than loved, so they often avoid payment unless there is a real threat of court-ordered remedies in litigation.

Litigation initiated by PIPCOs is further encouraged by the Federal Circuit's Hewlett-Packard Co v Acceleron LLC (2009) decision. This case lowered the bar for a potential infringer to file a declaratory judgment action against rights holders. Consequently, if a PIPCO makes even a seemingly benign outreach to a potential infringer, the latter can claim that this is an implicit threat, which it can use as the basis for a lawsuit against the PIPCO. PIPCOs' hands are tied: they cannot talk to parties which they believe are infringing their patents without fear of being sued. So the strategy for PIPCOs is often to file a lawsuit first and then talk about a settlement post-filing.

In spite of the aforementioned forces that encourage litigation, one PIPCO in particular - Inventergy Global Inc has largely shied away from it. Perhaps unsurprisingly, that approach has had limited success thus far. Inventergy holds over 760 patents - acquired from Huawei, Panasonic and Nokia – which it intends to license to other parties in the industry. In its June 2015 investor presentation, Inventergy described its monetisation strategy as "business led, not litigation led". Further, its 2014 10-K Securities Exchange Commission (SEC) filing states that the company "leverages its reputation and relationships to achieve fair and reasonable value". As of June 30 2015. the company reports that it had filed just one lawsuit and faced a declaratory judgment action. This litigation-light approach has generated merely single-digit millions of dollars in revenue, and shareholders have watched the company's market capitalisation drop from \$55 million in June 2014 to under \$7 million in November 2015.

The delay game

However, litigious PIPCOs face challenges also. In litigation, defendants have the ability to file motion after motion, thereby causing delays and driving up costs. Further, inter partes reviews and covered business method reviews cause additional uncertainty and potential delays. An example of a PIPCO that has faced delays in litigation is Worlds Inc, which holds patents relating to massive multi-player online role-playing games. In March 2012 Worlds filed suit against interactive gaming company Activision Blizzard, accusing it of patent infringement. Since then, Activision has filed two separate motions for summary judgement against Worlds. One of those motions attempts to invalidate the patents on the basis of the Supreme Court ruling in *Alice* – a decision handed down over two years after Worlds filed its original complaint. Separately, Worlds is defending inter partes reviews filed against the patents in suit by a third party. If Worlds survives these challenges, the jury trial for patent infringement will not be held until late 2016 at the earliest more than four and a half years after it filed its original patent infringement complaint. In the meantime, the company's market capitalisation has dropped from a high of nearly \$50 million in April 2013 to under \$7 million in November 2015.

Juries overruled and volatility-driven opportunities created

If a PIPCO's patents survive summary judgment, make it to trial and win before

a jury, the game is still far from over. Recently, jury decisions have not carried as much weight for PIPCOs, even though the right to a jury trial is enshrined the Seventh Amendment to the US Constitution. In three recent instances, substantial jury awards granted in favour of PIPCOs have been overturned. Those PIPCOs' valuations dropped precipitously when the jury verdicts were reversed, giving short sellers a reason to celebrate (see Figure 1).

ParkerVision

In October 2013 ParkerVision Inc won a iury award of \$173 million in its patent litigation with Oualcomm. In June 2014 the Florida district court judge overturned the jury's verdict of infringement. The judge agreed with the jury that the patents were valid, but ruled that as a matter of law, the jury could not have found infringement because of an allegedly "fatal admission" made by ParkerVision's technical expert witness at trial. On appeal, the appellate court not only agreed with the district court judge's non-infringement finding, but also overturned the jury and judge's affirmation of validity regarding 10 of the 11 patent claims in suit. ParkerVision's valuation has not yet recovered.

Vringo

Vringo — the holder of over 600 patents that have been either internally developed or acquired from third parties such as Nokia — similarly faced a traumatic jury verdict reversal. A Virginia district court ordered a \$30 million payment from Google and others for the infringement of Vringo-held patents covering internet search technology. However, roughly one year later, the appellate court

reversed the district court jury's verdict in a two-to-one decision, finding that the patents were invalid and should not have been issued because they were obvious (a criterion for patent issuance under 35 US Code §103) and therefore the infringement finding was moot. Vringo then appealed the decision to the US Supreme Court, but its petition was denied. Vringo's valuation has suffered since.

VirnetX

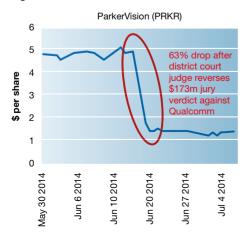
VirnetX — an internet security software and technology company with patented technology for fourth-generation long-term evolution security — sued Apple for patent infringement in 2010. VirnetX claimed that Apple's FaceTime and virtual private network on demand services infringed its patents. In 2012 an Eastern District of Texas jury found infringement and awarded VirnetX \$368 million in damages. However, in 2014 that verdict was thrown out by the appellate court, which concluded that the jury's damages award was "was tainted by the erroneous jury instruction". VirnetX's stock crashed on the news.

Pack your bags: we are leaving the United States

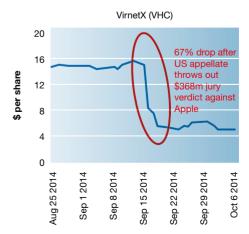
Because of the unfavourable enforcement environment in the United States, some PIPCOs have turned to non-US jurisdictions to enforce their patents, with Germany becoming a preferred venue. Germany represents one of the largest commercial markets in Europe, meaning that a victory by a PIPCO in Germany can, in theory, help to induce a global settlement. Further, the German system is notoriously rights holder friendly:

The courts are fast – an infringement

Figure 1. Juries overruled and stocks crash







Source: CapitallQ

- ruling usually takes between one and two years to obtain;
- The cases are relatively cheap because limited discovery is allowed;
- The cases are heard by a panel of technically savvy judges with experience handling patent cases; and
- Perhaps most importantly, rights holders are regularly awarded injunctions if a defendant is found to be infringing.

These features contrast with those found in the US system, where cases can take many years, involve expensive and time-consuming discovery and are heard by non-technical juries and judges, and where injunctions are difficult to obtain due to the Supreme Court ruling in *eBay*.

Based on these factors, it looks as if Germany should be a highly effective jurisdiction for PIPCOs. But is it? That remains an open question. Two recent examples suggest that Germany is not a panacea for PIPCOs – at least if PIPCO investors expect big dollars quickly. For example, in October 2014 a Dusseldorf district court found that medical device maker Stryker Corp had infringed Marathon Patent Group's two patents relating to kyphoplasty surgery. Over a year later, no settlement with Stryker has been reached and Marathon must next defend its patents' validity through separate nullity (ie, validity) proceedings. In the meantime, Marathon's valuation has dropped significantly and shareholders are still waiting for a meaningful payment from Stryker.

Similarly, Vringo secured a ruling in December 2013 from a Mannheim regional court that global telecommunications provider ZTE Corporation was infringing its patent. Although Vringo was awarded an injunction and paid a \$1.1 million bond to enforce it, its shareholders have not yet seen a return.

However, Vringo's litigation strategy with ZTE has extended beyond Germany. It has filed additional patent infringement suits against ZTE in the United Kingdom, France, the Netherlands, Australia, India, Brazil, Malaysia and Romania. In some of these cases Vringo has already notched up wins. It has obtained favourable rulings against ZTE in the United Kingdom, Romania, Brazil and India, in addition to Germany. Further, ZTE has so far been unsuccessful in challenging Vringo's preliminary injunction 13 times in Romania and 12 times in Brazil. But Vringo has also lost rulings in the Netherlands and in France. Notably, Vringo has stayed away from filing patent infringement suits

against ZTE in the United States, even though it holds counterpart patents there against which ZTE pre-emptively filed *inter partes* reviews (which ZTE subsequently withdrew). Despite its legal victories, Vringo has not yet received payment from ZTE and its valuation has suffered.

It may be that international litigation strategies take time to develop. However, until PIPCOs see substantial pay-outs, investors will be left wondering whether such strategies actually work.

Death by dilution

Obtaining big pay-outs is a costly and lengthy task for PIPCOs in the current environment. Consequently, small PIPCOs are often cash constrained and are looking for new ways to fund their activities. Capital is not free, and investors and attorneys all take a piece of the pie. The resulting dilution hits the bottom line for shareholders and can hamper PIPCO valuations.

Equity and debt financing

One advantage of being a publicly traded IP company is access to the capital markets. Small PIPCOs replenish their often dwindling cash balances through dilutive equity offerings. There has also been an emergence of debt financing made available for the patent licensing universe as an alternative to traditional equity financing. Investment funds which provide this type of financing include Fortress Investment Group LLC, Gerchen Keller Capital LLC, Techquity Capital Management LLC and 1624 Capital LLC.

Because of the risks associated with providing debt financing to speculative, sometimes non-cash flow generating PIPCOs, debt financiers ask for a lot – and deservedly so. For example, Fortress's arrangements with **PIPCOs** such as Marathon Patent Group, Crossroads Systems Inc and Inventergy Global, Inc have included the following types of terms: interest payments, customary events of default (eg, patents as collateral), revenue sharing on patent proceeds, financial covenants (eg, a minimum unrestricted cash balance), warrants to purchase shares of the PIPCO and/or immediate control over certain IP assets.

Contingency fee arrangements with litigators

For US patent cases, some PIPCOs elect to engage lawyers using a contingency fee arrangement. These arrangements allow PIPCOs to significantly reduce their costs unless the accused infringer settles with the PIPCO. In exchange for forgoing some or all of the hourly legal bills, lawyers paid on a contingent basis are entitled to a large portion of eventual proceeds (up to 40%). These arrangements represent yet another hit to the bottom line for PIPCOs and their shareholders.

Lessons learned and strategies for investment

The described contextual backdrop can be used to craft money-making investment strategies in the public markets. Some investors take a long-term view of PIPCOs, meaning that they look for fundamentally over or under-valued companies and go short or long accordingly. Other investors look to capitalise from short-term, event-driven volatility — either by placing well-educated bets on outcomes of important litigation events or by capitalising on temporary market inefficiencies.

Short sellers' paradise

One long-term investment strategy has been to short PIPCOs. Short sellers which have identified the challenges faced by PIPCOs have profited handsomely (see Table 1). In spite of some recent successes, prospective short sellers should be aware of the risks. For example, there is an inherent risk of a short squeeze if a positive development occurs in the PIPCO that is being shorted. Additionally, shorting small-cap stocks can be difficult because they are often thinly traded and certain brokers do not enable short positions in some stocks.

Volatility in litigation outcomes

The outcomes of important court proceedings often result in volatility for PIPCO valuations, thereby presenting opportunities for investors to employ a variety of strategies. They can elect to bet on binary litigation outcomes based on their knowledge of the particular lawsuits and might even attend the court hearings in person. Alternatively, investors may develop hedging strategies to minimise downside risk, allowing them to profit regardless of the litigation outcomes (eg, by employing a 'straddle' options strategy).

US district court verdicts

Jury trials typically span a period of weeks, culminating in a decision on whether the patents at issue have been infringed and whether they are valid. If both infringement and validity are found, the jury also determines the monetary damages that the infringer owes. PIPCO valuations can fluctuate dramatically, depending on the outcomes of these cases (see Figure 2).

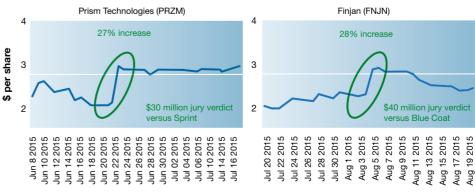
Table 1. One-year market capitalisation changes for exemplary PIPCOs (\$ million)

Company	Ticker	November 3 2014	November 3 2015	One-year change
Blue Calypso, Inc	BCYP	17.4	17.4	-0.1%
Network-1 Technologies, Inc	NTIP	55	48.5	-11.9%
Crossroads Systems, Inc	CRDS	43.2	32.4	-24.9%
VirnetX Holding Corp	VHC	298.1	210	-29.6%
MGT Capital Investments, Inc	MGT	7.5	5.2	-30.9%
ITUS Corporation	ITUS	43.4	28.4	-34.4%
Unwired Planet, Inc	UPIP	163.2	96.8	-40.7%
Finjan Holdings, Inc	FNJN	51.3	29.8	-42%
Prism Technologies Group Inc	PRZM	23	12.8	-44.3%
Document Security Systems, Inc	DSS	22.9	11.1	-51.5%
Worlds Inc	WDDD	16.6	7.9	-52.3%
Vringo Inc	VRNG	93.5	39.2	-58%
On Track Innovations Ltd	OTIV	80.7	31	-61.5%
Marathon Patent Group, Inc	MARA	76	24.1	-68.3%
Spherix Incorporated	SPEX	35.7	11.3	-68.5%
Endeavor IP, Inc	ENIP	0.9	0.3	-70.1%
Inventergy Global, Inc	INVT	31.3	8.4	-73.2%
ParkerVision Inc	PRKR	126.1	21	-83.4%
Walker Innovation Inc	WLKR	52.7	7.3	-86.2%

Source: CapitallQ

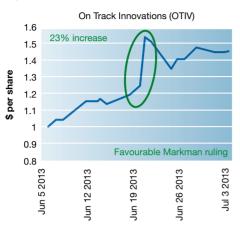
Figure 2. Jury verdicts in patent infringement cases cause volatility



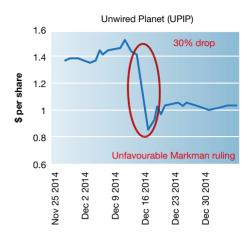


Source: CapitallQ

Figure 3. Markman-induced volatility





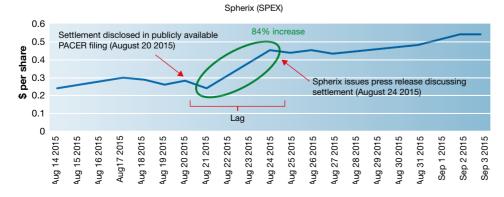


Source: CapitallQ

Markman hearings

A milestone in US patent cases is the socalled 'Markman' hearing, during which the rights holder and defendant both present arguments to the court as to how patent claim terms should be defined (the claim construction). Claim construction influences whether the patents are likely to be found infringed and valid, which is why the Markman result is often viewed as a predictor of success at trial. Moreover, Markman outcomes have caused price volatility for PIPCOs (see Figure 3). Whereas jury trials have a reasonably welldefined duration, investors are less clear about precisely when Markman results will be released by the court. Markman results are sometimes released in a matter of days or weeks, but in some cases the wait can last for months. Therefore, Markmanrelated investments can be tricky because they are typically more difficult to time.

Figure 4. Timelag in Spherix litigation



Source: CapitallQ

Market inefficiencies

Information lags

Many legal filings in the US court system are made publicly available by way of an online repository known as PACER. Sometimes the market is slow to react to PACER-released content. That lag creates an opportunity for vigilant PIPCO investors to act before the rest of the market absorbs the information.

One such example was the market's delay in reacting to an agreed settlement between PIPCO Spherix - owner of ex-Nortel patents it acquired for roughly \$60 million in 2013 – and Huawei Technologies Co. On August 20 2015 a PACER filing revealed that Spherix and Huawei had reached a settlement in mediation relating to the ongoing patent infringement litigation which Spherix was pursuing against Huawei. However, it was not until August 24 2015 that Spherix issued a press release stating that the parties had reached a memorandum of understanding that "favorably resolves" the litigation. The stock spiked dramatically after this press release was issued. Investors that saw the PACER filing days before the press release, recognised its significance and then bought Spherix shares made a substantial return in just a few days (see Figure 4).

Investor misunderstandings

Legal events are often nuanced, which leaves room for misunderstandings and pricing inefficiencies. Worlds Inc's patent litigation against interactive gaming company Activision Blizzard is one such an example. Two Worlds patents were missing references to a provisional application date, which ultimately affected all of the patents in suit. Activision's attorneys identified this error

and argued that the court should render the patents invalid. Worlds then secured a certificate of correction from the USPTO in order to fix the error. After many months of deliberation, the district court judge ruled that "the asserted claims of the Patents-in-Suit are invalid as a matter of law". Investors read this and the stock plummeted.

However, some investors initially missed a critical statement made in the judge's order, which was buried in a footnote. The footnote stated that "nothing about the Court's order prevents Worlds from asserting infringement from the date of the certificate [of correction] going forward". So in fact the patent was not ruled invalid, per se; rather, it was ruled valid with a limitation on potential monetary damages. Because many investors initially missed this nuance, there were buying opportunities for those who saw the irrationally low prices. The price quickly recovered once investors realised what the court order actually meant (see Figure 5).

Recalibrating expectations

In today's brave new world of patent monetisation, investors need to rethink what it takes for PIPCOs to collect large payments from accused infringers of their patents. Without victories in court, settlements typically will not be large. For instance, the aforementioned settlement between Spherix and Huawei was later revealed to be a mere \$295,000 - well shy of the millions that investors were hoping for, especially considering Spherix's \$60 million purchase price for the portfolio containing the patents at issue. Investors with rational expectations could have surmised that the settlement would not be large, given that settlement occurred at the pre-trial stage. In other words, Huawei was not facing a damages verdict from a court, nor was it facing a realistic threat of an injunction. Therefore, it had no incentive at that time to willingly pay a significant amount in lieu of continuing to fight the lawsuit. When the meagre settlement figure was released, Spherix's stock dropped significantly. This drop represented a shorting opportunity, which was foreseeable by investors whose settlement expectations were well informed.

Investors hoping for large settlement amounts must appreciate that the requisite victories in court take time. That means risk and the potential for dilution before PIPCOs see big dollars. Small PIPCOs which can strengthen their balance sheets and diversify their enforcement programmes by patent, technology and jurisdiction will be better equipped to weather the storm that precedes

a potentially substantial pay-out. Larger PIPCOs such as Tessera Technologies, Inc and InterDigital, Inc have been able to use their strong balance sheets and battle-tested licensing programmes to succeed in spite of the challenging enforcement environment.

As a result of these trends, long-term PIPCO investors should attempt to carefully time their entry points into small PIPCOs, depending on where the PIPCO lies in its patent enforcement cycle.

What the future may bring

The IP industry is collectively wondering whether patent valuations are nearing rock bottom and whether the enforcement environment has reached its trough for rights holders. Some PIPCOs may be cheap at existing prices, while others still have room to go down further. It will take time for the enforcement pendulum to shift back to a more favourable state for PIPCOs. One catalyst for this shift could be the Unified Patent Court in Europe, which is expected to open for business within the next one to two years and which could give hope to PIPCOs looking for a more favourable enforcement system if the US environment does not improve. Looking even further ahead, there are signs that a strengthening patent system in China could allow it to become a more preferred patent enforcement option.

In the short term, many PIPCOs are likely to continue facing challenges. Consolidation in the PIPCO space is a possibility as valuations drop. For example, Marathon Patent Group recently announced a merger with Uniloc Luxemborg SA. The

Worlds Inc (WDDD) 0.25 0.2 Market misunderstands 132% increase order (sell-off) 0.15 Order issued 0.1 Market recogni misunderstanding 0.05 March 13 2014 March 13 2014 March 13 2014 March 14 2014 March 12 2014 Market open Mid-day low Market close Market close Market close

Figure 5. Nuances in Worlds Inc litigation

Source: CapitallQ and Nasdaq (for intra-day pricing)

Action plan



Headline patent deals in 2010-2011 drove lofty expectations for patent rights holders and investors, and new PIPCOs subsequently emerged.

However, enforcing patents has become challenging and uncertain for PIPCOs because of legal trends and consequently many valuations have plummeted.

The resulting price volatility has created money-making opportunities for investors, both long term and event driven.

Litigation events, information lags and market misunderstandings represent occasions during which PIPCO investors can consider taking long or short positions.

Going forward, PIPCO investors should recalibrate their valuation expectations, carefully time their investments and track shifts in enforcement environments internationally.

PIPCOs that remain after consolidation can emerge stronger than ever, particularly if their patents are battle hardened by having survived inter partes reviews, covered business method reviews and challenges in court over the course of several years.

Additionally, PIPCOs might shift from licensing-focused models towards hybrid licensing/product models. For instance, on Marathon's August 2015 earnings call discussing its pending merger with Uniloc, CEO Doug Croxall stated that he was looking at opportunities in what "we call the commercialization space, where there's a set of assets and maybe a team of executives that can actually build and commercialize the IP into a product". Similarly, in October 2015 Vringo acquired a revenue-generating product business along with that business's intellectual property. PIPCOs that move to more product-centric businesses can likely access the International Trade Commission in the United States via Section 337 enforcement actions, which opens up the

ability to obtain exclusion orders against infringing products. This shift would give PIPCOs new tools that largely do not exist in the current landscape and would encourage more expeditious payment of licensing fees by accused infringers. Hybrid models will also result in valuation methodologies that are more earnings based, such as that of licensing/product company Qualcomm.

Regardless of where the PIPCO sector goes from here, opportunities will continue to exist for attentive public market investors to devise investment strategies which allow them to profit from upward or downward shifts in PIPCO valuations. iam

Mark Gober is a director and Kevin Rivette is a founding partner at 3LP Advisors, San Mateo, California, United States

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