

Original Article

Where is the eBay for intellectual property?

Matthew B Klusas

is Senior Director of Corporate and Business Development for the American Type Culture Collection, an independent, private, non-profit biological resource center.

Raymond H Cypess

Chairman and CEO of the American Type Culture Collection.

Seth Rosenfield

is Managing Partner at Genesis Revenue Partners.

Adam Gerstein

is Managing Partner at Genesis Revenue Partners.

ABSTRACT

This paper is an examination of the economics, organizational dynamics and structural factors inhibiting an electronic market for intellectual property. Several intermediaries exist to facilitate the transition of intellectual property (IP) from sellers to buyers. Over the past 20 years, a number of companies attempted to create an online “eBay for IP.” These IP Exchanges (IPEs) failed to gain traction in competition with other mediums that provide channels to facilitate IP transactions. Compounding the problem is the concentration of intellectual property assets amongst a small group of institutions and within those institutions as well as organizational hurdles inherent in academic technology transfer offices. As a result, the business model for an online IPE market is fundamentally challenging, and no successful IPE exists to date.

Journal of Commercial Biotechnology (2014) 20(2), 41–47. doi: 10.5912/jcb646

Keywords: market orientation; intellectual property; technology transfer; intellectual property exchanges

INTRODUCTION

THE BUSINESS PRESS remains awash in discussions about innovation. Yet, there is little discussion about the journey from innovation to commercialized asset. In some cases, innovation—typically manifested in intellectual property—is organically developed for a specific commercial purpose. In many cases, such as academic/non-profit research, intellectual property must be paired with the right commercialization entity to thrive. Technology creates opportunities for more efficient markets for a wide range of goods and services. Electronic markets enlarge the number of market participants and enable pricing transparency, reputation feedback mechanisms, and transactional support. With

so many advantages on offer, why do we lack a significant electronic market for intellectual property?

The value proposition for buyers and sellers is clear: commercial organizations maintain significant investments in business development resources to “hunt” for new intellectual property. Academic and non-profit institutions are looking to offset a portion of decreasing budgets through royalties from commercialized IP. Despite these motivations, intellectual property transactions are still characterized by the same activities from twenty years ago: in-person meetings, industry conferences, telephone calls, and more recently, e-mail.

METHODOLOGY AND THESIS

The seminal questions we addressed through our research are as follows:

- Why has no dominant IPE technology platform emerged?

Correspondence:

Matthew B Klusas, American Type Culture Collection, US. Email: mbklusas@gmail.com

- Is the IP market evolving and elusive, or simply difficult to serve for many for-profit businesses?
- Were the strategies of IPEs flawed or poorly executed?
- Are there other factors to success that participants failed to address?

Our primary thesis was that there were several potential reasons why IPEs failed to fulfill the promise of being powerful platforms for connecting innovators and commercial users:

- Structural and organizational limitations—such as complex calculations for sellers involving more variables than total financial consideration, as well as the incentives of buyers and sellers to monetize all IP assets—are not aligned with IPEs
- The more innovative institutions did not require IPEs to commercial their most valuable, and by extension prominent, intellectual property assets
- IPEs struggle to create enough value to justify a margin that could self-sustain the business model, especially in low value, low margin transactions

We addressed these questions from the vantage point of agnostic commercialists:

- Mapped the IP landscape to understand the dominant business models and players and how the landscape has evolved over the past 15 years;
- Conducted economic and statistical research of the patent licensing market to understand which industries provide the greatest revenue potential for Technology Transfer Offices (TTOs), and to identify the dominant TTOs in terms of commercial licensing revenues;
- Conducted qualitative research of both the conventional and non-conventional literature (journal article review, media scanning and expert perspectives);
- Historical data of the non-profit TTO market was also performed to quantify the growth, industry focus and staffing model trends
- Generated and tested hypotheses to develop an analytically-driven point

of view on the condition of the IPE marketplace.

In addition to the research above, study and analysis of past and existing players in the IPE market was conducted in order to address the viability and challenges of the various business models, including the following business types:

- 14 IP exchanges
- 6 IP consulting service providers
- 3 TTO service providers
- 2 IP software providers

FINDINGS AND RESULTS

The chasm between IP generators and IP end-users is wide and rough terrain. A number of intermediary and capitalist organizations serve the intellectual property market. Figure 1 illustrates the different types of participants:

Within this landscape, intermediaries help sellers value and promote their IP portfolios. Financiers construct instruments to monetize and collect revenue, while litigation specialists lead the legal prosecution in court or seek to avoid prosecution in the case of defensive patent pools.

The notion of a platform IP Exchange is at least a couple of decades old. Initially, the online IP exchange market was a “virtual Potemkin village”: propped-up storefronts with limited inventories, few desirable features and substantial up-front investments. We studied more than two dozen players in the IPE market, and within this group, numerous variations of the business models evolved, yet no sustainable model for the online IP market emerged.

One current IPE founded in 2011 clearly states its goal to “accelerate the commercialization of global R&D through a marketplace that uniquely surfaces ideas, technologies and inventors; and quickly catalyze the connection between buyers and sellers of these assets.” Many of the IPE’s we studied stated similar goals, finding little success along the way. This article attempts to dissect both the simple assumption behind IPE’s and the structural challenges that make achieving this goal so difficult.

In general, IPEs extracted limited value through subscription fees or transaction fees for completed deals. Academic institutions did not respond to either a flat subscription fee nor a percentage of a deal’s value as compensation, and IP buyers were hesitant to pay for additional functionality or more formal finders fees. While subscription models have generated revenue for

IP Developers	Intermediaries	Capitalists	IP End Users
<ul style="list-style-type: none"> - IP Technology Development Firms - Universities - Government - NGO's - Individual Inventors 	<p>Direct Intermediaries</p> <ul style="list-style-type: none"> - IP Brokers - IP Licensing Agents 	<p>Financiers</p> <ul style="list-style-type: none"> - Institutional IP Aggregators - IP Backed Lending Firms - Royalty Stream Securitization Firms - IP Spinout Financing - IP Trading Platforms - IP Insurance Carriers 	<ul style="list-style-type: none"> - R&D Companies and Functions - Technology Companies - Consumer Goods Companies - Pharmaceutical Industry - Medical Industry - Government Agencies
	<p>Platform Providers</p> <ul style="list-style-type: none"> - Online IP Exchanges - IP Innovation Portals 		
	<p>Advisors</p> <ul style="list-style-type: none"> - IP Consultancy Agencies - IP Service Providers - University Technology Transfer Providers - IP M&A Advisors 		
	<p>Software Developers</p> <ul style="list-style-type: none"> - IP Database Management - IP Analytics 		

Figure 1: Intellectual property market map (Millien, 2013)

IPEs over the years, the lack of any IPE to maintain subscription fees over a long period (>5 years) suggests that members did not find enough value to merit renewal of the subscription.

Case Study — SparkIP: SparkIP formed in 2007 with seed money from former-Morgan Stanley CEO John Mack. At the time, CEO Ed Trimble said, “there’s too much inefficiency from the time an idea is hatched to when it can be productized and sold. By creating a marketplace the links new technologies with potential investors, SparkIP aims to make the process more efficient.”¹ After creating strong search algorithms and boasting 40,000 “Sparks Clusters,” SparkIP struggled to form a sustainable business. Even after signing MIT, Stanford, JHMI and NIH, SparkIP could not consistently monetize the listing fees charged to institutions. In the end, SparkIP created exposure for the institutions represented, but it failed to convince buyers or sellers of the value SparkIP provided in transactions. SparkIP became “PriorIP” in 2011, with a focus on its ‘cluster visualization’ technology, before closing its doors shortly after.

None of the IPE’s were able to successfully automate the development and maintenance of an IPE market. In almost every case, significant amounts of manual time—from both the IP seller and the IPE itself—are required to complete and service the otherwise automated delivery model. Other players attempted a different approach to the business model.

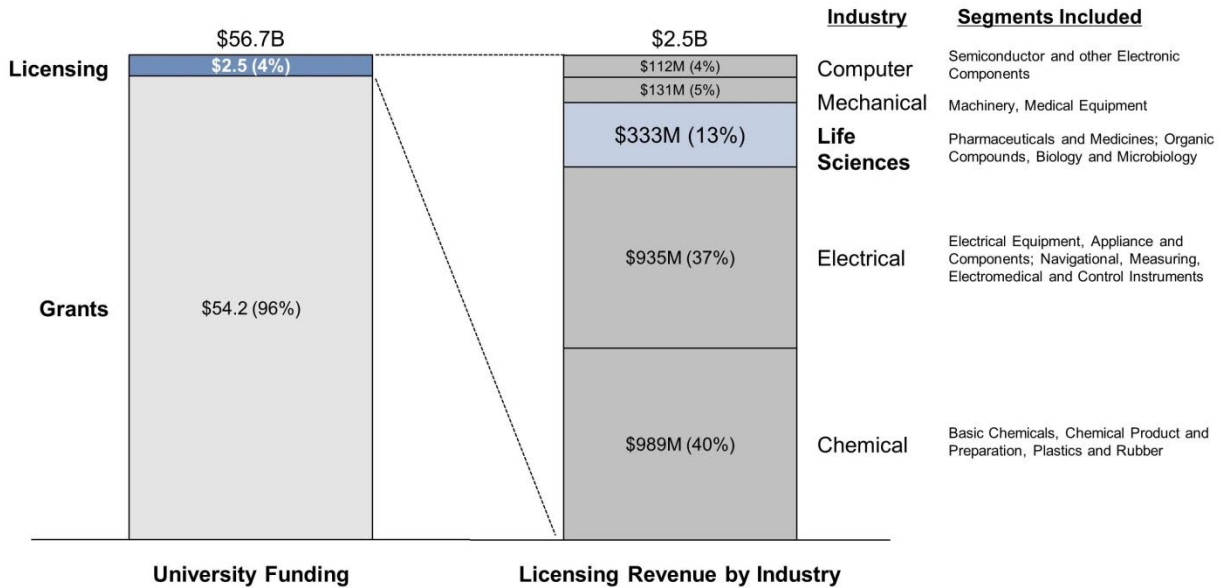
Case Study — The Dean’s List: The Dean’s List, established in 2003, became the first company to do live IP auctions in 2006. Despite a forecast of \$170M in revenue and 200 members paying \$100K each by 2012, The Dean’s List (also known as Ocean Tomo) never came close to those goals, completing only 8 auctions in the first 3 years. Few buyers accounted for the majority of the volume, and the poor quality of the IP led to a sale of the business and rebranding in 2009. The company reformed under the name Intellectual Property Exchange International, Inc. (IPXI) in 2012.

IPXI bills itself as the world’s first financial exchange that facilitates non-exclusive licensing and trading of intellectual property (IP) rights with market-based pricing and standardized terms. Despite a significant investment to launch—including investment from U.S. and European investors, including CBOE Holdings, Inc. and Koninklijke Philips N.V.a, IPXI is struggling to gain traction beyond a small network on founding institutions.² In 2013, the organization had a staff of 16 people with 45 members paying \$5K each. Holding the membership fee constant, membership would need to more than quadruple just to support the headcount expenses associated with the business.

Other players, like Tyna, formed explicitly around the eBay theme, but never took off. Tyna still has an online marketplace, but is now essentially a patent broker, with no transactions completed online. Perhaps the longest continuous IPE in the mind of TTOs is

1 <http://www.informationweek.com/applications/spark-ip-an-ebay-for-ideas/d/d-id/1060340/>, Accessed March 3, 2014.

2 <http://www.forbes.com/sites/tomgroenfeldt/2013/12/06/new-ip-exchange-promises-transparency-in-patent-pricing/> Accessed March 3, 2014.



Note: TTO licensing revenue by industry estimated based on distribution of patent applications for included segments

Figure 2: University Intellectual Property Size and Segments – 2011

the iBridge Network, which is a non-profit organization founded in 2005 by the Kauffman Foundation's Kauffman Innovation Network. With a goal of serving as a web-based network for the gathering of and dissemination of innovations such as research results, reports, innovations, intellectual property, and patents, the iBridge Network maintains a significant database of technologies. Yet, the technologies are not updated with any regular frequency, resulting in significantly out-dated "tired" listing that are not practical for many applications.

Taken together, none of the players examined cracked the code to a successful IPE business model. A few adept operators emerged with extensive databases, sophisticated search algorithms and clever IP ranking tools, but none have developed a significant IP exchange model. Of the more than two dozen companies analyzed, the vast majority have either changed their business models away from a pure IPE play, been acquired for less than the investment put in, or have gone out of business completely. Those that remain do not publicly comment on financial performance, but rather comment on the size of their networks. We found very few—if any—references to technologies successfully licensed through—and monetized by—an IPE. We were unable to find P&L statements for any current IPE to suggest that the business model has either broken even or is on course to be profitable in the immediate future.

A quantitative perspective of the problem revealed that the intellectual property market is more skewed than most rational markets. In 2011, the revenue for

intellectual property from academic and non-profit institutions was greater than \$2.5B³ (Figure 2).

Critics of TTOs have long wondered whether TTOs can successfully maximize the value of innovation assets. There are many examples of private IP management firms successfully monetizing "tired" assets for significant sums through tactics that include identifying the ideal buyers and skillful pricing negotiations.

THE TECHNOLOGY TRANSFER OFFICE DILEMMA

The vast majority of intellectual property licensing revenues tend to be concentrated across institutions and within individual institution portfolios⁴. Figure 3 illustrates the concentration of distribution of license revenue by TTO⁵:

Several conditions can foster success in an electronic market, including liquidity (inventory has a high probability of finding a buyer) and low transaction costs relative to the return on investment. In the market for intellectual property, significant amounts of intellectual property inventory either go unsold or are purchased/licensed for a very small amount. The transaction costs are typically high for each intellectual property asset:

3 (AUTM, Association of University Technology Managers, 2011)

4 (The IP Spinout Model, 2001)

5 (AUTM, Association of University Technology Managers, 2011)

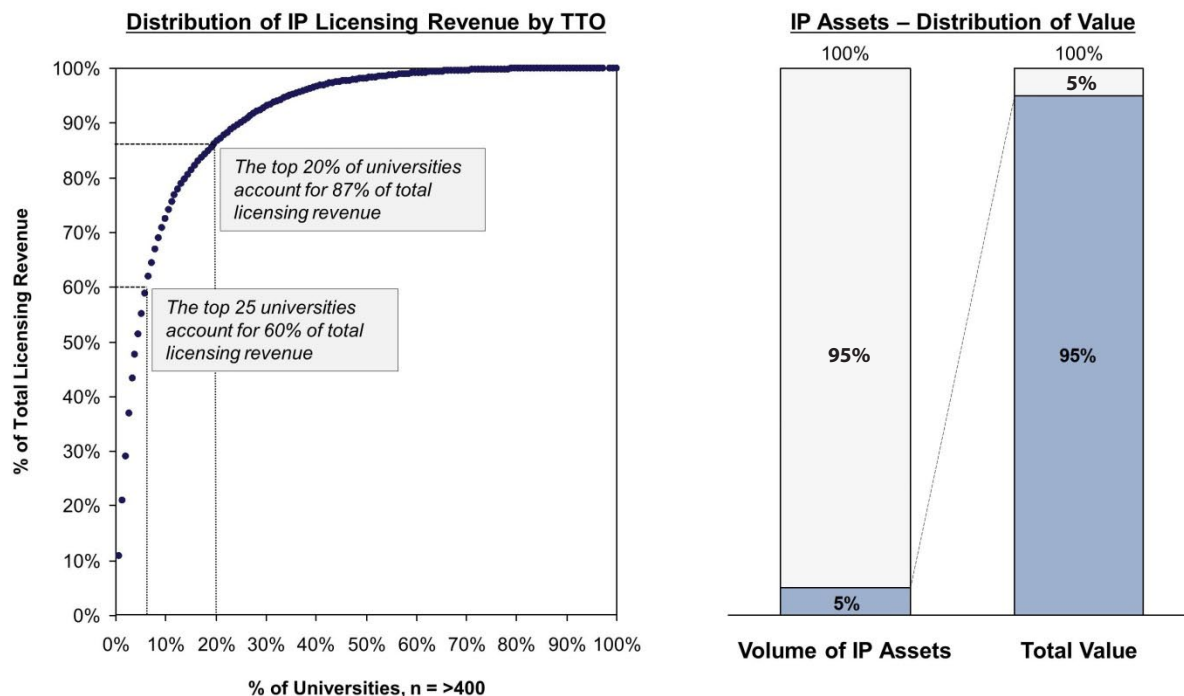


Figure 3: Distribution of IP Revenue and Asset Value

the seller usually needs to provide significant amounts of information and supporting data for an innovation.

Across portfolios of hundreds (or more) of assets, the initial investment is significant and there are maintenance costs that must be offset to keep information current. In addition, the lack of a point of aggregation increases the investment as sellers consider multiplying the investment across several IPE platforms. Once the assets are populated in an IPE, the sales cycle can be long, requiring additional discussions with inventors, experimental trials, and protracted negotiations in some cases.

Additionally, the quality of a patent—including whether it is enforceable and the reach of its claims—is hard to judge. These factors increase the time it takes for buyer and seller to reach agreement on a price. In addition to price, many TTOs take time to consider the value of the partnership with a particular commercialization entity. In some cases, the post-licensing investment in the technology becomes more important than the initial consideration provided for the technology. TTOs placing significant emphasis on post-licensing investment can result in sub-optimal matching in a strict, auction-based, *ex ante* financial sense. The risk-adjusted calculation for successfully commercializing a technology may differ than the *ex ante* consideration, making the notion of a marketplace even more challenging through the introduction of new variables. It also shifts the purpose of the marketplace from the highest bidder to the best

commercialization partner, making a single IPE to serve the entire market more challenging.

Yet, in light of this time commitment, licensing only represents a portion of total activities for TTOs. Most TTOs maintain a lean staff (~4 FTEs)⁶ and are not inclined to dedicate limited resources to address commercial functions relative to serving their academic communities. Figure 4 illustrates the various activities taking place in TTO offices⁷:

Given these dynamics, TTOs choose to spend their time licensing the top 5% of assets that generate the majority of the revenue. If the remaining assets find their way to an institutional web portal or IPE, the records are typically not updated and seldom promoted.

While full transparency is counter to the prevailing logic in hyper-competitive markets, un-willingness to embrace a more open or crowd-sourcing environment for innovation is resulting in inefficiencies across the IP landscape. It is also reducing the potential for breakthrough development, resulting in a significant opportunity cost for society. Related to this mindset are structural and operational factors such as resourcing/staffing models, metrics and rewards, and maladaptive interfaces between the innovation community and business leaders.

6 (AUTM, Association of University Technology Managers, 2011)

7 (AUTM - Association of Technology Managers, 2009)

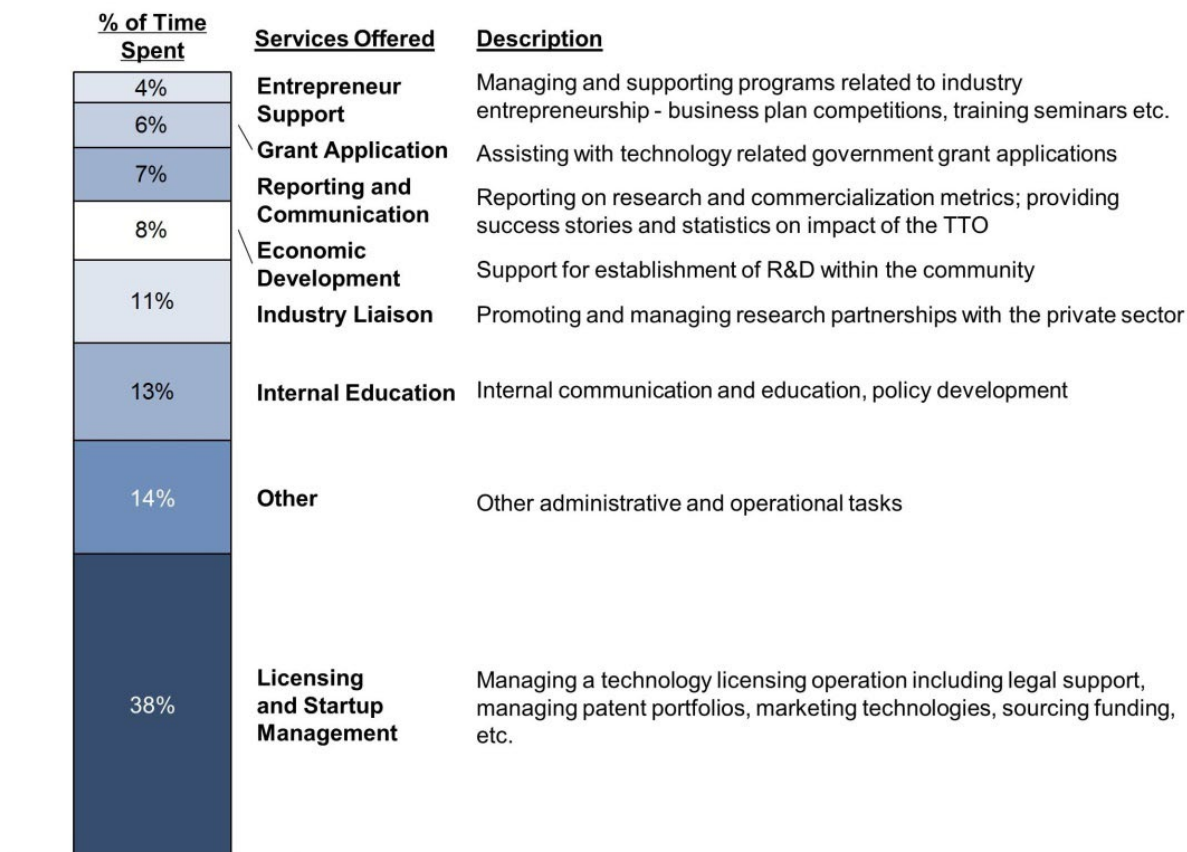


Figure 4: TTO Activities (% of total time spent)

CONCLUSIONS

So would the “Killer App” for IPEs be sufficient to connect innovators with the R&D functions of large corporations, whose success depends on effective identification and commercialization of emerging technologies? Our research on the different players across the IP landscape (e.g., business and revenues models, relative strengths and weaknesses, criticality to IP licensing and commercialization) suggests there is something more profound at play⁸.

It’s been nearly 20 years since the emergence of intellectual property exchanges. Despite increasingly sophisticated technology platforms, well-funded and experienced management teams, and a relatively well-accepted market need, no IPE emerged as a point of aggregation. The greatest inhibitors to successful IPEs may not be limits on capital, imagination or competence, but rather structural factors that may be difficult to overcome.

⁸ (Are there “Institutional Failures” in Intellectual Marketplaces?, 2013)

Specifically, a bifurcation between technologies that could be auctioned to the highest bidder relative to more nuanced opportunities could help define the true addressable market for an “eBay” marketplace. It would be interesting to see whether TTOs or other IP holders would make technologies of significant commercial value available in this format. If TTOs would only make “tired” technologies available in a pure auction format, then the process would have to be extremely efficient for the IPE to profit from the thin margin likely to be generated for those transactions. However, even with an efficient process, it is not clear that the volume in a low margin format would be significant enough to support a self-sustaining, for-profit business model.

Already there are signs that some of the more recent IPEs are experiencing IP holders carving out certain high value IP from the market place. IPXI will make a suite of patents around display screen applications from Philips available, while Philips will retain IP around lighting for the technology. Questions around quality and value are likely to remain until several high-profile examples prove the model.

For more nuanced technologies, which will be defined by significant dialog between the TTO and the buyer, it is difficult to see how an IPE will create enough value for all parties to justify a margin significant enough to support the IPE business model. In these cases, one of the only value drivers the IPE creates is connecting the parties. Once buyer and seller are matched and communicating, using an IPE as an intermediary would in theory only complicate the negotiation, which is likely to be defined by phone calls, in-person meetings, and e-mails.

Other channels may already substitute for IPEs by matching sellers with potential buyers. Industry journals and poster sessions at conferences could be the oldest, and perhaps the most viable “channels” for promoting intellectual property. For assets that have significant potential, TTOs are happy to assign resources to promote the asset and field discussions from potential purchasers or licensees. These interactions tend to drive the highest value for TTOs as opposed to an IPE model.

While the concept of an IPE can be compelling, numerous attempts highlight the reasons why an eBay for intellectual property does not exist. The IPE business model is confounded by the difficulty of valuing the contribution of IPEs to the transaction. Long sales cycles combined with robust amounts of data create high transaction costs, especially initially to add an intellectual property asset to an IPE database. The concentration of high value assets—both across institutions and within individual institutions—lends itself toward targeted promotional campaigns for high value assets as opposed to an open market approach, where high value assets could be lost in the noise. A successful IPE could eventually emerge, but a number of structural challenges need to be

addressed to enable success. IPEs in their current form have exhausted themselves and the best hope for future models will help predict or even create new innovation opportunities as a way of connecting the innovators with the consumers of technology.

ACKNOWLEDGEMENTS

The authors wish to thank Paul Schneck for helpful comments and guidance, as well as the Association of Technology Managers (AUTM).

REFERENCES

Are there “Institutional Failures” in Intellectual Marketplaces? Anderson, Rosli, Rossi & Yangsap. 2013. No. 2, 2013, Vol. Vol. 30.

AUTM - Association of Technology Managers. 2009. *AUTM Transaction Survey*. 2009.

AUTM, Association of University Technology Managers. 2011. *AUTM Transaction Survey*. s.l. : AUTM, 2011. Industry Survey.

Millien, Raymond. 2013. Landscape 2013: Who are the Players in the IP Marketplace? *IP Watchdog*. January 23, 2013, pp. 2-12.

The evolution of science-based business: innovating how we innovate. Pisano, Gary. 2, s.l. : Industrial and Corporate Change, Vol. 19.

The IP Spinout Model. Houghton, Lalande, Miller and Redmond. 2001. s.l. : Harvard Business School, 2001.