

CHAPTER 19

INTELLECTUAL PROPERTY STRATEGY FOR TECH START-UPS IN EQUITY CROWDFUNDING

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I INTRODUCTION

President Barack Obama in his State of the Union speech delivered on 5 January 2011 stated that "the first step in winning the future is encouraging American innovation". The essential components of innovation are newly created business (start-ups) and intellectual property rights (IP).¹ Start-ups are a significant source of new ideas, technologies, and processes, while IP rights provide these young enterprises with incentive to invent and the opportunity to successfully commercialize their groundbreaking work. It is apparent that countries that recognize the importance of start-ups and IP in capturing the value of creativity are in a better place to capitalize on innovation, and will thereby be more likely to secure long-time economic prosperity.² In light of the crucial importance of start-ups and IP, IP strategy for countries interested in innovation and sustained growth is therefore crucial whether it will serve the need of their start-ups. For the US, there are two major issues for the US tech start-ups to establish their IP strategy: 1. The disclosure requirement under the new crowdfunding law might impede start-ups' ability to establish their own patent portfolio; 2. Although the US has been pushing for IP harmonization in the Asia-Pacific region and throughout the rest of the world, compared to other countries in the area, US has overlooked the interest

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- 1 Intellectual property rights refer to the legal rights that result from intellectual activity in the industrial, scientific, literary, and artistic fields. As a general matter, IP laws grant IP creators certain time-limited rights to control the use made of those productions. See World Intellectual Property Organisation *WIPO Intellectual Property Handbook: Policy, Law and Use* (2nd ed, WIPO, Geneva, 2004) 3.
- 2 Matthew J Pinkerton "Considering the Next Generation of Innovators: Incorporating the Needs of Start-Ups into the United States Patent and Trademark Office's Intellectual Property Strategy" (2011) 23 Pac McGeorge Global Bus & Dev LJ 313 at 315.

of their own domestic tech start-ups, and have taken approaches overseas not in the favor of their own tech start-ups. This paper aims to identify the issues mentioned and provides recommendation for US in fostering a more tech start-up friendly environment for access to capital as well as IP advices.

II TECH START-UPS AND IP RIGHTS

IP rights play a major role for start-ups, although in the technology sector alone, nine out of ten start-ups will fail, with a protected IP portfolio start-ups can reassure potential investors of their business viability.³ IP rights in the digital age is sometimes the only real assets that a start-up possess. Without key IP assets, the companies may not be able to obtain capital necessary to their survival.⁴ Based on the value investors attach to the IP, it is a resource that can be leveraged for the growth of the company and it therefore regarded as a form of intellectual capital.⁵ In fact, start-ups arguably need patents even more than established firms do. IP provides a critical tool in the David-and-Goliath competition they will have with larger incumbents in the field they seek to disrupt.⁶ According to survey done by University of California at Berkeley (Berkeley survey), start-ups often seek to use patents for competitive advantage, preventing technology copying, secure financing and enhancing reputation.⁷ Patents are most important for the biotechnology start-ups as well as IT hardware companies.⁸ IP rights also is an indicator that a core business technology is not infringing on another's IP and therefore not at risk of litigation.⁹ More importantly, with IP rights a start-up is substantially less exposed to copying or reverse engineering.¹⁰ Start-ups can also derived income from licensing their technology.¹¹ Asides from technology,

3 Ron Corbett "IP Strategies for Start-up E-Commerce Companies in the Post-Dot-Bomb Era" (2002) 8 Tex Wesleyan L Rev 643 at 644.

4 See Stuart D Levi "Open Source Business Plans" in Stephen J Davidson and Stuart D Levi (eds) *Open Source Software Fall 2006: Critical Issues in Today's Corporate Environment* (Practising Law Institute, 2006) 325 at 328.

5 Eran Kahana "Protecting Intellectual Capital in Start-Ups: A Guide for the Entrepreneurial Attorney in the New Economy" (2002) 28 WM Mitchell L Rev 1187 at 1188.

6 See Colleen V Chien "Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents" (2009) 87 NC L Rev 1571 at 1577-87.

7 Stuart JH Graham et al "High Technology Entrepreneurs and the patent system: Results of the 2008 Berkeley Patent Survey" (2009) 24 Berkely Tech LJ 1255.

8 Ibid at 1291.

9 See *3D Systems, Inc v Formlabs Inc* No 13-cv-07973-RWS (SDNY) Dec 1, 2014.

10 Corbett, above n 3 at 644.

11 Ibid at 649.

business models or business methods are also patentable in the US such as Amazon.com's famous One-Click dispute.¹²

However, due to many reasons such as the lack of capital to hire IP counsel to management's ignorance of the potential for IP, the importance of IP has often been overlooked by start-ups, even in the US. According to the Berkeley survey, of the 1,332 start-ups surveyed, 38 percent responded that they believed, without confirmation, that their technology are not patentable, while another 17 percent declared they had no need for legal protection.¹³ Furthermore, start-ups normally do not have advices on IP rights or the expense of obtaining assistance to acquire those rights.¹⁴ Unprotected IP asses may signal the risk of an increased "burn rate" on investment capital due to IP litigation, and thereby negatively impact the credibility of a company's balance sheet.¹⁵ Furthermore, large companies may be motivated in part to use IP litigation as a strategy to test the strength of funding behind a start-up company. This is to test whether the start-up has the financial capability to stand a litigation or will agree a small licensing fee simply to stop the litigation.¹⁶

III TECH START-UPS AND CROWDFUNDING

Usually, new business needed large amounts of capital to cover the substantial costs of manufacturing, distribution and marketing.¹⁷ In the US alone, small business demand for capital far outweighs supply.¹⁸ The demand for new investments is estimated to be around \$13 trillion over the course of the next decade.¹⁹ In 2011, approximately 600,000 small businesses reported being entirely

12 See *Amazon.com Inc v Barnesandnoble.com Inc* 239 F.3D 1343 (Fed Cir 2001).

13 Graham et al, above n 7 at 1312.

14 Pinkerton, above n 2 at 325.

15 Corbett, above n 3 at 649.

16 Ibid at 650.

17 George C Lewis "The Cautionary Tale of Crocs and the New World of Instant Competition" (2008) 37 Colo Law 39.

18 See Paul White "Comments on SEC Regulatory Initiatives under the JOBS Act: Title III-Crowdfunding" (22 July 2013) SEC. GOV <www.sec.gov/comments/jobs-title-iii/jobtitleiii-248.pdf>.

19 Ibid.

shut-off from credit, with an additional 800,000 obtaining less than they desired.²⁰ Traditionally for a start-up there are several funding channels, such as banks, venture capitalists, angels and the three Fs (family, friends and fools). Now, there is a new form of funding portal which is getting much more prominent in the Asia-Pacific Region that is the crowdfunding. Crowdfunding is broadly defined as "efforts by entrepreneurial individuals and groups-cultural, social, and or for-profit-to fund their ventures by drawing on a relatively small contributions from a relatively large amount of individuals using internet, without standard financial intermediaries."²¹

The advantages of using crowdfunding websites are obvious. A creator can generally post on the crowdfunding site for free and the site provides an excellent catwalk to test public reaction to a new concept. The US Security Exchange Commission (SEC) defines crowdfunding as "a new devolving method to raise money using the Internet".²² In its original formats, crowdfunding platforms have focused on four types of funding: (1) donation-based; (2) rewards-based; (3) pre-sale; and (4) peer-to-peer lending.²³ Unlike these four types, equity-based crowdfunding focuses on equity. Since equity is exchange for raising money, equity crowdfunding is a similar to a limited Initial Public Offering (IPO) conducted via internet intermediary, and during this internet-based IPO, companies seeking funds give campaign contributors stakes into their ventures-in the form of shares-in exchange of contributions.²⁴ The equity-based crowdfunding market generated \$116 million in international transactions in 2012, but the market is projected to grow to over \$5 billion following the implementation of the crowdfunding exemption in the US

20 National Federation of Independent Business "Research Foundation, Small Business, Credit Access, and a Lingering Recession" 30 (January 2012) <www.nfib.comIPortals/OPDF/AllUsersresearchstudieslsmall-business-credit-study-nfib-2012.pdf>

21 Ethan R Mollick "The Dynamics of Crowdfunding: An Exploratory Study" (2014) 29 J Bus Venturing 1 at 2.

22 Crowdfunding, 78 Fed Reg 66, 428 (proposed 5 Nov 2013).

23 Thaya B Knight, Huiwen Leo and Adrian A Ohmer "A Very Quiet Revolution: A Primer on Securities Crowdfunding and Title III of the JOBS Act" (2012) Mich J Private Equity & Venture Cap L 135 at 136.

24 Garry A Gabison "Equity Crowdfunding: All Regulated but Not Equal" (2015) 13 DePaul Bus & Comm LJ 359 at 362.

IV EQUITY-BASED CROWDFUNDING AND THE JOBS ACT

The goal of securities regulation is to balance the benefits of capital formation against the cost of allowing the offerings, including potential investor losses.²⁵ This theory is based on the assumption that investors are adequately protected when all relevant aspects of the securities are fully and fairly disclosed.²⁶ It is due to the fact that crowdfunding companies are inherently risky and the on line offerings raise significant fraud concerns.²⁷ Securities trading and IPO involve a lot of risks, thus are heavily regulated. Overtime, these initial and ongoing disclosure requirements have become increasingly demanding, thanks to the accumulation of legislative and regulatory barnacles such as the Sarbanes-Oxley Act of 2002.²⁸ Hence disclosure is necessary to alarm the potential investors with the information necessary to make a fully informed investment decision. However, this might be in practice more difficult than in theory due to the market's infancy. The typical crowdfunding transaction involves financially unsophisticated individuals investing in highly risky start-ups, which are more likely to fail than the average publicly owned company, and even less to become profitable.²⁹

Until the US Jumpstart Our Business Startups Act (JOBS Act),³⁰ it was not legally possible for a new business to sell equity or a share of its future profits over the internet without registering the sale under the Securities Act of 1933.³¹ The JOBS Act includes monetary limitations for both issuers and investors. Issuers may not raise more than \$1,000,000 annually via crowdfunding.³² For investors, the maximum annual aggregate amount of crowdfund securities that any one investor may purchase is limited based on a sliding scale. If an investor's net worth or annual income is under \$100,000, she can invest the greater of \$2,000, or five

25 See C Steven Bradford "The New Federal Crowdfunding Exemption: Promise Unfulfilled" (2012) 40 Sec Reg LJ 195, at 197-98.

26 See Thomas Lee Hazen "Crowdfunding or Fraudfunding? Social Networks and the Securities Laws-Why the Specially Tailored Exemption Must be Conditioned on Meaningful Disclosure" (2012) 90 NC L Re 1735 at 1740-1741.

27 Andrew A Schwartz "Keep it Light, Chairman White: SEC Rulemaking under the CrowdFund Act" (2013) 66 Vand L Rev (EN BANC) 43 at 45.

28 See Sarbanes-Oxley Act of 2002, 15 USC §§ 7201-66 (2006).

29 See Bradford, above n 25 at 196.

30 Jumpstart Our Business Startups Act (JOBS Act), Pub L No 112-106, 126 Stat 306 (2012).

31 See 15 USC § 77e (2012) (outlining prohibitions).

32 Ibid at § 77d (a) (6) (A).

percent of her annual income, in crowdfunded securities each year.³³ If her net worth or annual income is over \$100,000, she can invest 10% of her annual salary, capped at the \$100,000 per year.³⁴ Furthermore, the disclosure requirements provided for in current securities laws are meant to protect investors from fraud and ensure that information provided by businesses is reliable. Therefore, a possible consequence of the limited disclosure associated with crowdfunding is increased fraud and inaccurate information.³⁵

The JOBS Act also expressly authorizes civil actions against an issuer, its directors, and officers.³⁶ If any of these parties "makes an untrue statement of material fact or omits to state a material fact required to be stated or necessary in order to make the statements ... not misleading," they are liable under the Act.³⁷ In addition, the SEC is granted "examination, enforcement and other rulemaking authority" over funding portals,³⁸ and presumably retains authority to enforce the various statutory and regulatory mandate for both issuers and intermediaries. Finally, the Act recognizes that state authorities retain jurisdiction over issuers or intermediaries that engage in fraud, deceit, or unlawful conduct.³⁹ As will be discussed infra, the proposed disclosure requirements are overly burdensome because the expense of compliance is likely to render small offerings infeasible.⁴⁰ This problem is even more troublesome if the offering involves a significant IP component, as they must disclose sensitive information about their innovation and, in doing so, risk another founder imitating their concept.

33 Ibid at § 77d (a) (6) (B) (i).

34 Ibid at § 77d (a) (6) (B) (ii).

35 See Jonathan Weisman "Final Approval by House Sends Jobs Bill to President for Signature" *The New York Times* (27 March 2012) at A12 (reporting that crowdfunding "detractors worry that the measure will bring back the 'boiler rooms' of the 1990s Internet stock bubble, where hucksters peddle stock tips to unwitting amateur investors. Pension funds, the lobby for older Americans AARP, and the chairwoman of the securities commission had opposed aspects of the bill. [A] spokeswoman for the Council of Institutional Investors, an investor watchdog group, said ... 'We may rue the day this bill passed'").

36 See 15 USC, above n 31, § 77d-1 (c) (1) (A), (c) (3).

37 See 15 USC, above n 31, § 77d-1(c) (2) (A).

38 See 15 USC, above n 31, § 78c (h) (1) (A).

39 See 15 USC, above n 31, § 77r (c) (1).

40 See Schwartz, above n 27 at 46.

V **EQUITY-BASED CROWDFUNDING AND DISCLOSURE ISSUES FOR START-UPS**

Equity-based crowdfunding has presented start-ups with more IP issues. Many inventors turn to crowdfunding because they don't have the funds for the prototype. However, while showcasing their ideas or potential products online, they are falling into one of the oldest traps in IP: disclosure before they protect. While projects might be potentially un-patentable, they are at least copyable, reducing any attraction for investors and prejudicing the survival of the associated business.⁴¹ Furthermore, few innovators will have checked whether there's IP out there already.⁴² These two main issues usually arise due to the lack of IP knowledge of the innovators regarding to: how much to disclose, how to disclose and what should be kept as confidential. By using the non-equity type crowd funding portals, these are decided by the innovators themselves, however, in the case of equity-based crowdfunding, due to its mini-IPO nature, countries like the US have made special laws and regulations in relation to disclosure, while some countries like Australia merely made additional exemptions to existing rules.

5.1 *The US*

The US JOBS Act is intended to "increase American job creation and economic growth by improving access to public capital markets for emerging growth companies"⁴³ and outlines crowdfunding's general regulatory framework. Title III adds Section 4(a)(6) to the Securities Act, creating an exemption from the registration requirements of Securities Act Section 5 for equity-based crowdfunding offerings.⁴⁴ The Securities & Exchange Commission (SEC) must promulgate the final regulatory regulations, implementing rules that will strike the proper balance between (1) improving access to capital and (2) protecting the interest of investors.⁴⁵ Aside from the financial disclosures, issuers are subject to more extensive disclosure requirements in order to provide investors with sufficient

41 Gwilym Roberts & Mark Nowotarski "The IP Issues of Crowdfunding" (2013) 229 *Managing Intell Prop* 36, at 37.

42 Ibid.

43 JOBS Act § 101, 126 Stat at 306.

44 See Crowdfunding, above n 22 at 66, 428, 66, 429-30 (proposed Nov. 5, 2013) (to be codified at 17 CFR pts 200, 227, 232, 239, 240 and 249).

45 See Crowdfunding, above n 22 at 66,428.

information to form an educated opinion regarding the quality of the investment.⁴⁶ In Signaling in Equity Crowdfunding, Ahlers and others investigate which signals by small start-up companies lead investors to purchase equity securities through crowdfunding.⁴⁷ The signaling by these companies is equivalent to the disclosure required under the CrowdFund Act exemption.⁴⁸ Disclosure has, at its core, the goal of ensuring that investors are well informed about the company in which they may choose to purchase securities and, as such, presents a signal of their value.

Offerings that involve a significant IP component face an additional deterrent, as they must disclose sensitive information about their innovation and, in doing so, risk another founder imitating their concept.⁴⁹ The disclosure requirement proposed by the SEC is particularly challenging to the first time entrepreneurs and the mandated disclosure will be made public through the Electronic Data-Gathering, Analysis, and Retrieval (EDGAR) system requiring enough information to be made to the public about the issuer that a large number of potential investors can share, and that they may use to compare the details of its finances, management, business plan, and employees.⁵⁰ These disclosure requirements turn start-ups into junior reporting company, yet without the experience and legal counsel of a company that makes it into a traditional public offering.⁵¹ Firms without those counsel risk disclosing patentable inventions—especially business methods—before application have been filed and rights preserved.⁵² Descriptions of the company proposed products or services of soliciting support in the crowdfunded offering may also risk destroying patent rights.⁵³ A potentially disruptive start-up that needs to detail about its model and plans through public disclosures beginning at the earliest

46 R Kevin Saunders "Power to the People: How the SEC Can Empower the Crowd" (2014) 16 Vand J Ent & Tech L 945 at 954.

47 Gerrit KC Ahlers et al "Signalling in Equity Crowdfunding" (14 October, 2012) 6 (unpublished manuscript) <<http://ssrn.com/abstract=2161587>>.

48 Stuart E Smith "Comments: The Securities and Exchange Commission's Proposed Regulation under the CrowdFund Act Strike a Necessary Balance Between the Burden of Disclosure Placed on Issuers of Securities and Meaningful Protection for Unsophisticated Investors" (2014) 44 U Balt L Rev 127 at 140.

49 Ajay K Agrawal et al "Some Simple Economics of Crowdfunding" (June 2013) The National Bureau of Economic Research Working Paper Series, Working Paper 19133, 12 <www.nber.org/papers/w19133>.

50 Sean M O'Connor "Crowdfunding's Impact on Start-Up IP Strategy" (2013) 21 Geo Mason L Rev 895 at 912.

51 Ibid at 912.

52 See *State Street Bank & Trust Co v Signature Financial Group Inc* 149 F.3D 1368 (Fed Cir 1998) for the patenting of business methods.

53 See O'Connor, above n 50 at 913.

stages of the firm is likely to lose much of that element of surprise and find its ability to successfully disrupt an industry limited.⁵⁴ In the event that potentially enabling disclosures of business methods or other inventions are made, the company will have to accelerate patent filing decisions. But without the funding to prepare and file a strong application, the company may have to file an inferior application, or no application at all. Thus, the crowdfunding effort may negatively alter the company's IP strategy timeline.⁵⁵ Thus, the JOBS Act may unintentionally penalize the very firms that need its help the most.⁵⁶

5.2 Australia

Unlike the US, Australia did not add any new exemptions to accommodate equity-based crowdfunding, but instead issued guidance on crowdfunding.⁵⁷ The Australian Securities and Investment Commission (ASIC) requires crowdfunding to comply with disclosure document⁵⁸ and are regulate under the Corporations Act of 2001⁵⁹ and the ASIC Act.⁶⁰ Companies fundraising through equity shares usually need to produce disclosure documents in the form of prospectus under the Product Disclosure Statement.⁶¹ This Statements requires that the disclosure document be timely, relevant and complete, promote product understanding, product comparison, highlight important information, and have regards to consumer's needs.⁶² Section 708 of the Australian Corporations Act exempts small scale offerings from disclosure requirements.⁶³ However, based upon the

54 See O'Connor, above n 50 at 915.

55 See O'Connor, above n 50 at 914.

56 See O'Connor, above n 50 at 914.

57 Australian Securities & Investments Commission "12-196MR ASIC Guidance on Crowd Funding" (13 August 2012) <<http://asic.gov.au/about-asic/media-centre/find-a-media-release/2012-releases/12-196mr-asic-guidance-on-crowd-funding/>>.

58 Ibid.

59 Corporations Act 2001 (Cth) s 761G (Aust).

60 Australian Securities and Investments Commission Act 2001 (Cth) s 12BC.

61 See Corporations Act, above n 59 at ss 706–707.

62 Australian Securities and Investment Commission "Regulatory Guide 168: Disclosure: Product Disclosure Statements (and other disclosure obligations)" (October 2011) <<http://download.asic.gov.au/media/1240931/rg168-published-28-october-2011.pdf>> at 17-25.

63 Section 708 of the Australian Corporations Act exempt-three investor groups from the prospectus requirement: (1) personal offers made to no more than 20 investors with an aggregate investment of less than \$2 million in any given 12 months period, (2) sophisticated investors, and (3) professional investors.

Australian Small Scale Offerings Boards (ASSOB) data, start-ups with a larger number of board members, higher levels of education, and better networks were more likely to have successful offerings.⁶⁴ In addition, companies signaling their intention to offer an IPO in the future or seek acquisition by another company, as opposed to other exit strategies, had an increased likelihood of attracting investors. Companies who did not provide financial forecasts were less likely to attract investment and tended to raise less overall capital over an extended period of time. Finally, companies that had been in business for some time prior to entering the equity crowdfunding market were more likely to reach their capital goals. This suggests that new small businesses and recent start-ups could, regardless of disclosure, face a difficult time generating capital through equity crowdfunding.

Hence, companies seeing funds must produce one of the following three documents: the required prospectus,⁶⁵ offer information statement⁶⁶ and profile statement.⁶⁷ In order to avoid these expensive disclosure requirements and having to file with the ASIC, fundraising companies can take advantage of an exemption. The most notable exemption requires that the securities offering involves less than twenty non-qualified investors and less than AU\$ 2\$million (\$1.79 million) valuation within the last twelve months.⁶⁸ Companies may still fundraise from qualified investors without limits.⁶⁹ Thus, the Australian approach distinguishes investors into two categories: qualified and non-qualified investors. This exemption offers a small window for crowd investors to invest in new (and old) ventures.⁷⁰ Hence, regulators in Australia have used existing regulations to set limits for the equity-based crowdfunding platforms, along with issuance of advisory opinions and discussion papers about developing equity-based crowdfunding market

⁶⁴ See Smith, above n 48 at 140-141.

⁶⁵ The Corporations Act section 705 explains the three different documents. For prospectus: "[t]he standard full-disclosure document"; or short form prospectus: "[m]ay be used for any offer. Section 712 allows a prospectus to refer to material lodged with ASIC instead of setting it out. Investors are entitled to a copy of this material if they ask for it."

⁶⁶ Ibid. (offer information statement: "Section 709 allows an offer information statement to be used instead of a prospectus for an offer to issue securities if the amount raised from issues of securities is \$10 million or less").

⁶⁷ Ibid (profile statement: "Section 721 allows a brief profile statement (rather than the prospectus) to be sent out with offers with ASIC approval. The prospectus must still be prepared and lodged with ASIC. Investors are entitled to a copy of the prospectus if they ask for it").

⁶⁸ See Corporations Act, above n 59 at s 708(2).

⁶⁹ See Corporations Act, above n 59 at s 708(8).

⁷⁰ See Gabison, above n 24 at 374.

practices. The Australian case seems more lenient than the US approach by not accidentally disclosing patentable materials.

VI IP STRATEGY FOR START-UPS AND THE ROLE OF PATENT OFFICES

6.1 The US

In light of these uncertainties in disclosure and the potential harm that might hurt the interest of the start-ups, the United States Patent and Trademark Office (USPTO) has not paid particular attention to the needs of start-ups. In comparison to the current uncertainties on the regulation of equity-based crowdfunding, IP protection has been a more established issue within the Asia-Pacific Region. The US has been trying to harmonize the international IP standards via different means, although it has paved the way to protect US IP rights aboard. It has not done much to help its domestic start-ups in realizing the importance of securing IP rights whether domestically or abroad. Although the harmonization process enables start-ups to decrease the amount of hurdles in doing business in different jurisdictions, hence to strengthen their competitiveness and effectiveness. Specifically, the USPTO does not encourage start-ups to acquire IP rights or help start-ups capitalize on any IP rights they may hold.⁷¹

Indeed, the harmonization process for IP standards has been conducted by the USPTO with different levels of success in various areas within Asia-Pacific region. There have been attempts to simplify the patent application process, harmonize the IP standards and collaborative efforts to combat IP infringement. However, while the US is at the forefront of this IP harmonization effort, interestingly, the US seems to have overlooked the need of IP rights for its tech start-ups. Although it is commendable that the USPTO fervently seeks to promote USIP interests abroad, its current efforts are too unilateral to be of benefit to US start-ups.⁷² At this point, the USPTO has not offered much support of international IP protection discussions in collaborative, multilateral settings. The problem with this unilateral approach is that it is unlikely to encourage the enforcement of IP rights in foreign countries, and consequently is not helpful to start-ups.⁷³

71 See Pinkerton, above n 2 at 316.

72 US Patent and Trademark Office "2007-2012 Strategic Plan" (2007) <www.uspto.gov/web/offices/com/strat2007/stratplan2007-2012.pdf> [hereinafter 2007-2012 Strategic Plan] at 22-25.

73 See Pinkerton, above n 2 at 316.

USPTO also have not encourage start-ups to acquire IP rights or help start-ups to capitalize on any IP rights that they might hold.⁷⁴ In order to obtain IP rights, a start-up must first successfully identify its IP assets, then search the USPTO database to determine the appropriate fees, meet the filling requirements, provide the appropriate fees and complete the application documents.⁷⁵ Start-ups normally pay more than larger business for their IP prosecuting because start-ups tend to file for patents relating to their core business model. And usually rely on outside counsel to complete the process.⁷⁶ It is surprising how little attention IP law pays to small firms in general and especially to small innovative firms⁷⁷. If the US wishes to remain its economy strong by relying on start-ups and innovation, alternative strategy to tech start-ups is needed to solve the current issue, and this issue will be more urgent when equity-based crowdfunding has become the trend in raising capital.

6.2 Japan

In comparison, the Japan Patent Office (JPO) offers step-by-step guidance to start-ups for obtaining IP.⁷⁸ Japan's comprehensive IP strategy was initiated in 2002 as part of a determined effort to transform the nation's approach to IP.⁷⁹ Then Prime Minister, Junichiro Koizumi, stated his plan to turn Japan into a "nation ... built on the platform of intellectual properties."⁸⁰ The subsequent IP strategy incorporated far-reaching measures to assist individuals and businesses obtain and benefit from IP rights.⁸¹ A start-up is first guided through the IP process by first being introduced to IP rights at JPO seminar. Next, a start-up has the opportunity to meet with IP specialists and application advisors to help it through the registration process. Finally, third party organizations are available to conduct complimentary prior art searches. This exhaustive service has contributed to Japan's impressive patent application rate. Between 2002 and 2006, Japanese individuals and

74 See Pinkerton, above n 2 at 316.

75 See US Patent and Trademark Office "Process for Obtaining a Utility Patent" (18 November 2015) <www.uspto.gov/patents/process/index.jsp> (providing a diagram explaining the steps to obtaining a patent).

76 See Graham, above n 7 at 1311.

77 Michael J Meurer "Inventors, Entrepreneurs and Intellectual Property Law" (2008) 45 Houston L Rev 1201 at 1205.

78 See Japan Patent Office "Annual Report 2009" (Japan Patent Office, Tokyo, 2010) <www.jpo.go.jp/shiryou_e/toushin_e/kenkyukai_e/annual_report2009.htm>.

79 Andrew W Carter et al "Who cares about Japan?" (2007) 8 No 2 Pat Strategy & Mgmt 1.

80 Ibid.

81 Ibid.

businesses filed over 700,000 patents worldwide, representing 23.8 percent of all filings completed within the period.⁸²

In addition, JPO has also created an IP market for start-ups to offer their IP for purchase and licensing called National Center for Industrial Property Information and Training (INPIT). INPIT organizes patent market fairs where companies who seek forms of cooperation and licensing can present their ideas and technological developments and business plans.⁸³ INPIT also has experts available to mediate and provide information for patent licensing and technology transfers. Further still, INPIT has experts available to mediate and provide information for patent licensing and technology transfers.⁸⁴ In total, the JPO publishes 71 million gazettes and relevant information of patents, utility models, designs and trademarks, which are also retrievable by a search system.⁸⁵ By establishing both a virtual and physical marketplace for businesses to trade IP, the JPO has vastly improve connections between start-ups and the IP market. Unlike USPTO's hands off policy, JPO is making sure that the start-ups will not let their value IP gone to waste. Japan's IP strategy, offers start-ups support from the conception of an idea all the way to its commercialization.⁸⁶

VII CHALLENGES AND SOLUTIONS

Equity-based crowdfunding is here to stay and if it is to become a viable investment vehicle, the challenge is undoubtedly lies in the speed and convenience of the internet as a vehicle for liquidity, with the safeguards and diligence that investors require before putting their money.⁸⁷ From the IP perspective, start-ups can destroy its patent prospectus before even get to the market and start-ups can also invest a lot of time in an area already that has been fenced off.⁸⁸ In many case,

82 See World Intellectual Property Organisation "World Intellectual Property Indicators" (World Intellectual Property Organisation, Geneva, 2009) 23 <www.wipo.int/freepublications/en/intproperty/941/wipo-pub_941.pdf>. (using a Relative Specialization Index (RSI) to correct for "the effects of country size and focuses on the concentration of patent families at a specific patent office").

83 Ibid at 81.

84 National Center for Industrial Property Information and Training "Strategic Use of Intellectual Property" (2014) <www.inpit.go.jp/english/util/index.html> [hereinafter Utilization].

85 Japan Patent Office "Annual Report 2009", above n 78 at 84.

86 See Pinkerton above n 2 at 328.

87 See Roberts and Nowotarski, above n 41 at 38.

88 See Roberts and Nowotarski, above n 41 at 38.

the first challenges in protecting intellectual capital can come from not from competitors but from the company's managers.⁸⁹ Like the JPO example, in light of the lack of tech start-ups taking commercial advantage of their IP rights, the USPTO should intercede to educate start-ups on the benefits of commercializing IP rights as well as to help establish a market where the exchange may occur.⁹⁰ In addition, aside from enforcing IP rights aboard, probably the USPTO should look back to how it can protect the interest of the tech start-ups domestically, the JPO also provides a good example in this regard.

When equity-based crowdfunding has blurred the line between traditional fund raising activities limited to particular groups, once online, the project could be seen instantly around the globe. Hence, the value of policy interventions that help high-tech entrepreneurs may be greater today than in the last century.⁹¹ Equity-based crowdfunding is bringing new challenges to start-ups seeking the funds and protecting their IP assets. As this paper shows, the potential damage of the current disclosure requirements might do more harm than good for the tech start-ups. However, the relatively small maximum offering amount does not justify extensive disclosure.⁹² The annual investment limitation functions as the fundamental investor protection in crowdfunding.⁹³ However, the self-certification procedure is too easy for investors to circumvent when they discover a "can't miss" project, but an additional investment would exceed their annual limit.⁹⁴ Some author has suggested a competently managed portal can hire third-party providers to verify individuals' investment sums, and then distribute these costs among market participants.⁹⁵ In light of the current practice, Australia has also provided an alternative approach that the US might look into. With the experience of promoting IP rights, now countries within the Asia-Pacific region should also start to collaborate to address the issue on how to foster equity-based crowdfunding without disclosing valuable IP rights of tech start-ups away, this is an issue that needs to be further addressed.

89 See Kahana, above n 5 at 1208.

90 See Pinkerton, above n 2 at 325.

91 See Meurer, above n 77 at 121.

92 See Saunders, above n 46 at 971.

93 See Schwartz, above n 27 at 60.

94 See Schwartz, above n 27 at 60.

95 See Lora Kolodny "Crowdentials Wants to Make Investor Verification 'TurboTax Easy' Online" The Wall Street Journal Blog (13 January 2014) <<http://blogs.wsj.com/venturecapital/2014/01/13/crowdentials-wants-to-make-investorverification-turbotax-easy-online>>.

VIII CONCLUSION

With the advent of equity-based crowdfunding, it fulfills the gap for start-ups who will otherwise not able to secure capitals from banks or venture capitalists. However, placing and issuing securities online also raises new issues on how should the government regulate this type of mini-IPO and how much of the company's information should be disclosed for investors to make informed decision. As seen in this paper, there are a number of IP issues surrounding equity-based crowdfunding with different tech start-ups has been compared with Australia and Japan. With the inadequacies that US has faced, it will be wise to learn from the examples from these countries. As the value of equity-based crowdfunding will be here to stay, a secure and clear policy from the government will foster the growth of this financial vehicle as well as to keep US as the leader in innovation and economic growth. Countries in Asia-Pacific region should collaborate to resolve the IP issues that arise from equity-based crowdfunding. It is still too early to talk about harmonization or the unification of laws but collaboration will set the step forward.

